KUMAR SHELL GAS STATION
SERVICE/ GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236
SITE DEVELOPMENT PLAN
PARCEL 601

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY:	1-410-954-6281
HOWARD COUNTY BUREAU OF UTILITIES:	313-2366
AT&T CABLE LOCATION DIVISION:	393-3553
B.G.&E. CO. CONTRACTOR SERVICES:	850-4620
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL:	787-4620
STATE HIGHWAY ADMINISTRATION:	531-5533

4. SITE ANALYSIS:
   TOTAL AREA OF PARCEL 601: 0.8081 AC.
   PRESENT ZONING: CAC-CLI
   USE OF STRUCTURE: CAR WASH, CARRY OUT RESTAURANT, OFFICE (560SF)
   BUILDING COVERAGE: 5819 SF (0.087 AC. OR 10.85% OF GROSS AREA)
   PAVED PARKING LOT/AREA WITHIN LOD: 0.44 AC. OR 54.44% OF GROSS AREA
   EXISTING BUILDING 2166 SF(0.05 AC OR 6.15 % OF GROSS AREA) CONVENIENCE STORE
   PROP. CARRYOUT RESTAURANT 800 SF (0.02 AC OR 2.27% OF GROSS AREA)
   PROP. CARWASH 560 SF (0.013 OR 1.60% OF GROSS AREA)
   PROP CARWASH EQUIP RM 190 SF (0.004 OR 0.54% OF GROSS AREA)
   LIMIT OF DISTURBED AREA: 0.49AC.
   CUT: 516 CY. FILL: 34 CY.
   PUMP CONTROL ROOM, 103SF (0.002% AC OR 0.29% OF GROSS)
5. PROJECT BACKGROUND:
   LOCATION : COLUMBIA, MD.; TAX MAP 43, BLOCK 9, PARCEL 601
   ZONING : CAC-CLI
   SUBDIVISION: N/A
   SECTION/AREA : N/A
   SITE AREA : 0.8081 AC.
   DPZ REFERENCES : DEED 8863/236, BA-06-023N
6. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
7. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
8. EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
9. ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I.
10. 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.
11. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLEY FOR THE PURPOSE OF CALCULATING FEES.
12. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST PRIOR TO CONSTRUCTION.
13. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED OCTOBER 2005. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
14. THE PROPERTY LINES SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC.; DATED OCTOBER 2005.
15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
16. ALL PAVING TO BE F-2 UNLESS OTHERWISE NOTED. GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION. (SEE DETAILS, SHEET 2)
17. ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL 3.01 UNLESS OTHERWISE NOTED. (SEE DETAILS, SHEET 3)
18. CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP RAMPS AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
19. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
20. ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
21. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
22. PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 36-W&S.
    PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. 36-W&S.
23. STORMWATER MANAGEMENT BEING IS PROVIDED BY A STORM CEPTOR (SEE DETAIL SHEET 4), AND IS TO BE PRIVATLY OWNED AND MAINTAINED.
24. GEOTECHNICAL REPORT IS NOT REQUIRED FOR THIS PROJECT.
25. ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
26. THE SUBJECT PROPERTY IS ZONED CAC-CLI PER THE COMPREHENSIVE ZONING PLAN, DATED 7/28/06.
27. BUILDING TO HAVE INSIDE WATER METER SETTINGS.
28. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
29. LANDSCAPE SURETY IN THE AMOUNT OF $7,500.00 SHALL BE POSTED AS PART OF THE GRADING PERMIT (17 SHADE TREES @ $300.00 PER TREE, 1 EVERGREEN @ $150.00 PER TREE, 75 SHRUBS @ $30.00 PER SHRUB).
30. THE APFO TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED APRIL 17, 2007.
31. ALL STORMDRAIN PIPE BEDDING IS TO BE CLASS 'C'.
32. THIS PLAN IS SUBJECT THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PER COUNCIL BILL 45-2003 AND THE ZONING REGULATING AS AMENDED BY CD 75-2003.
33. A KNOX BOX IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. IT'S LOCATION IS SHOWN ON THESE PLANS. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM).
34. THERE ARE NO 100-YEAR FLOODPLAINS, WETLANDS, FCE AREAS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS, SLOPES 15-24.9%, OR SLOPES 25% OR GREATER LOCATED ON PARCEL 601.
35. THIS PROJECT IS EXEMPT FROM THE REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THIS PROPERTY IS LESS THAN 40,000 SF.
36. THIS PROJECT IS SUBJECT TO BA-06-023N, FILED PURSUANT TO SECTION 129 OF THE HOWARD COUNTY ZONING REGULATIONS; APPROVED SEPTEMBER 6, 2006; FOR THE ENLARGEMENT AND EXTENSION OF A NONCONFORMING GASOLINE SERVICE STATION, IN A B-1 ZONING DISTRICT, USE BY REPLACING FOUR EXISTING FUEL DISPENSERS WITH SIX FUEL DISPENSERS; REMOVING THE EXISTING CANOPY AND REPLACING IT WITH A NEW CANOPY MEASURING 46 FEET BY 54 FEET; CONSTRUCTING A 450 SQUARE FOOT CAR WASH; AND INSTALLING A 10-FEET WIDE CAR WASH DRIVE AND STACKING AISLE. THIS CASE ALSO CONCLUDES THAT THE SETBACK REQUIREMENT IS TO BE MEASURED FROM THE EXISTING ROUTE 1 RIGHT-OF-WAY LINE. USING THIS MEASUREMENT, THE PROPOSED ENLARGEMENTS DO NO VIOLATE THE BULK REGULATIONS BECAUSE THEY ARE ALL SITUATED MORE THAN 30 FEET FROMTHE EXISTING ROUTE 1 RIGHT-OF-WAY LINE, IN COMPLIANCE WITH SECTION 129.E.1.d. PROVIDED THAT, HOWEVER, THE ENLARGEMENT AND EXTENSION WILL APPLY ONLY TO THE LAND AREA, USES AND STRUCTURES AS DESCRIBED IN THE PETITION SUBMITTED, AND NOT ANY OTHER ACTIVITIES, USES, STRUCTURES, OR ADDITIONS ON THE PROPERTY.
37. ANY DAMAGE TO THE PUBLIC RIGHT OF WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
38. A MINIMUM CANOPY HEIGHT OF 13'-6" FOR EMERGENCY EQUIPMENT ACCESS.
39. SIGNAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS, AND EACH SUITE SEPARATED BY LETTER.
40. ALL OUTDOOR LIGHTING SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF ZONING REGULATIONS SECTION 134.
41. 560 SF OFFICE FOR GAS STATION EMPLOYEE USE ONLY.

PARKING TABULATION

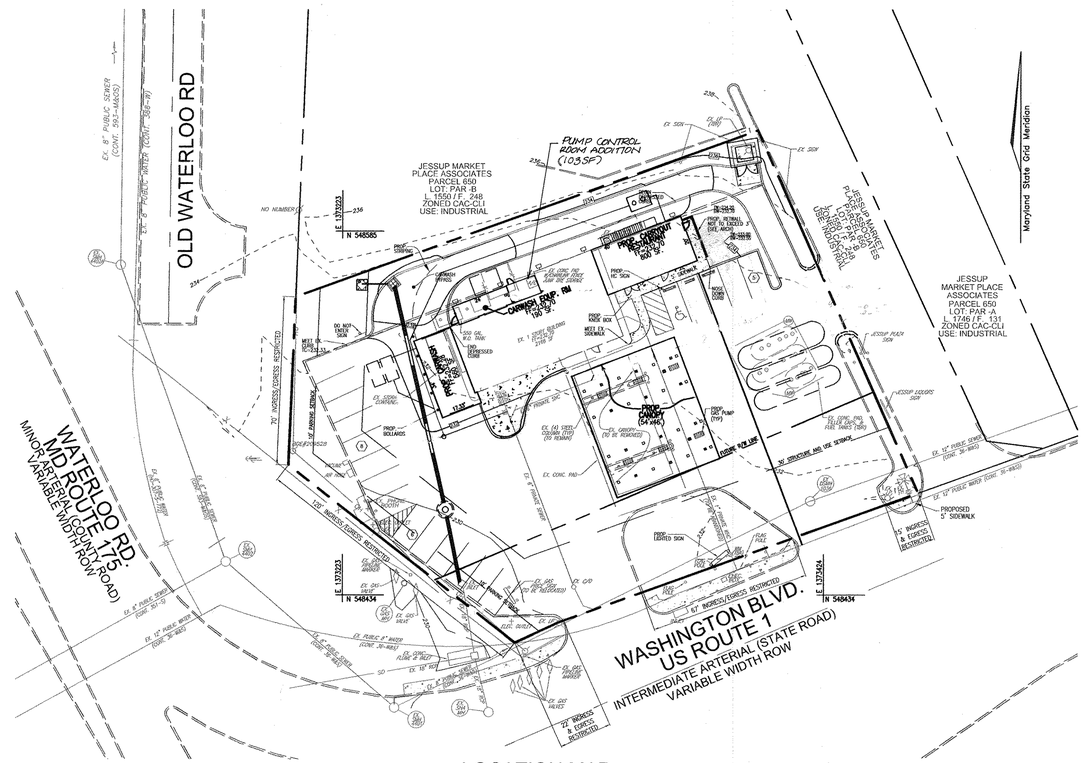
PARKING SPACES REQUIRED:

560 SF CARWASH (1 STAFF + 1 CUSTOMER) 2 SPACES

2,166 SF CONVENIENCE STORE (5/1000 SF) 11 SPACES
800 SF CARRYOUT RESTAURANT (6/1000 SF) 5 SPACES
420 SF BASEMENT STORAGE; & 560 SF OFFICE NOT REQUIRED
TOTAL PARKING SPACES REQUIRED: 18 SPACES
TOTAL PARKING SPACES PROVIDED: 19 SPACES

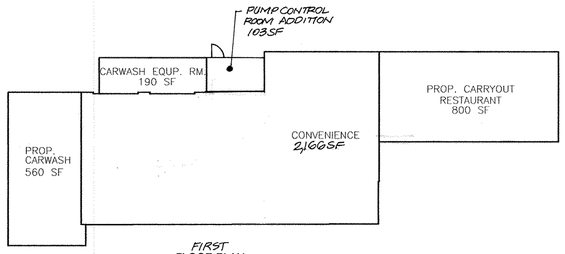
CAR WASH STACKING SPACES:

10 CARS REQUIRED
10 CARS PROVIDED

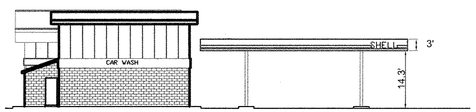


LOCATION MAP
SCALE: 1"=30'

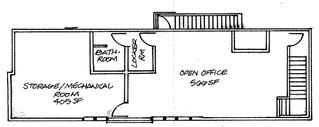
ROUTE 1 - FRONT ELEVATION - 2 STORY OFFICE
NOT TO SCALE



FIRST FLOOR PLAN
NOT TO SCALE



ROUTE 175 - SIDE ELEVATION
NOT TO SCALE



SECOND FLOOR PLAN
NOT TO SCALE

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
601	7894 WASHINGTON BLVD. (GAS STATION & CAR WASH)
601	7892 WASHINGTON BLVD. (CARRYOUT & RESTAURANT)

PERMIT INFORMATION CHART					
SUBDIVISION NAME			SECTION/AREA		PARCEL NUMBER
N/A			N/A		601
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR. #
8863/236	9	CAC-CLI	43	1ST	6012.02
WATER CODE: B02			SEWER CODE: 2420000		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/7/08
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/23/08
DIRECTOR — DATE 4/23/08

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 4/23/08

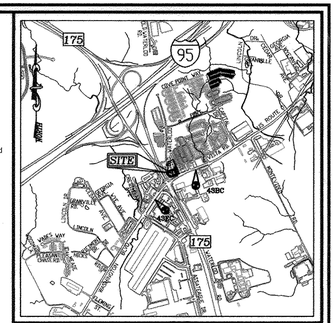
LEGEND

Existing Contour 382
Proposed Contour 82
Existing Spot Elevation 382.56
Proposed Spot Elevation +82.53
Direction of Flow
Existing Trees to Remain
Light Poles ⊖ Single Overhead ⊖⊖ Double Overhead
Concrete

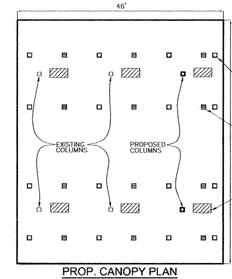
BENCHMARKS

HOWARD COUNTY BENCHMARK 43BC
N 549592.1032 E 1375466.6548 ELEV. 214.112

HOWARD COUNTY BENCHMARK 43EC
N 547821.2715 E 1372882.448 ELEV. 219.706



VICINITY MAP
SCALE 1"=2000'
ADC MAP COORDINATES: 20 H1



PROP. CANOPY PLAN
NOT TO SCALE

SHEET INDEX

OWNER & DEVELOPER
DURGE LLC
6804 CREEKWOOD CT
CLARKSVILLE, MARYLAND 21029
410-903-7898

NO.	REVISION	DATE
4	ADD PUMP CONTROL ROOM, REMOVE SERVICE BAY, INCREASE SIZE OF CONVENIENCE STORE	11/27/17
3	REVISE SEWER SERVICE AND RELOCATE GREASE INTERCEPTOR	4/17/09
2	ADD GRINDER PUMP FOR NEW SANITARY SERVICE CONNECTION	1/6/09
1	ADD STAIRCASE TO REAR OF BUILDING	

SITE DEVELOPMENT PLAN

COVER SHEET

KUMAR SHELL GAS STATION
SERVICES/GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236

TAX MAP 43 BLOCK 9 PARCEL 601
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY:	DZ
DRAWN BY:	DZ
CHECKED BY:	RHV
DATE:	MARCH 2008
SCALE:	AS SHOWN
W.O. NO.:	05-46

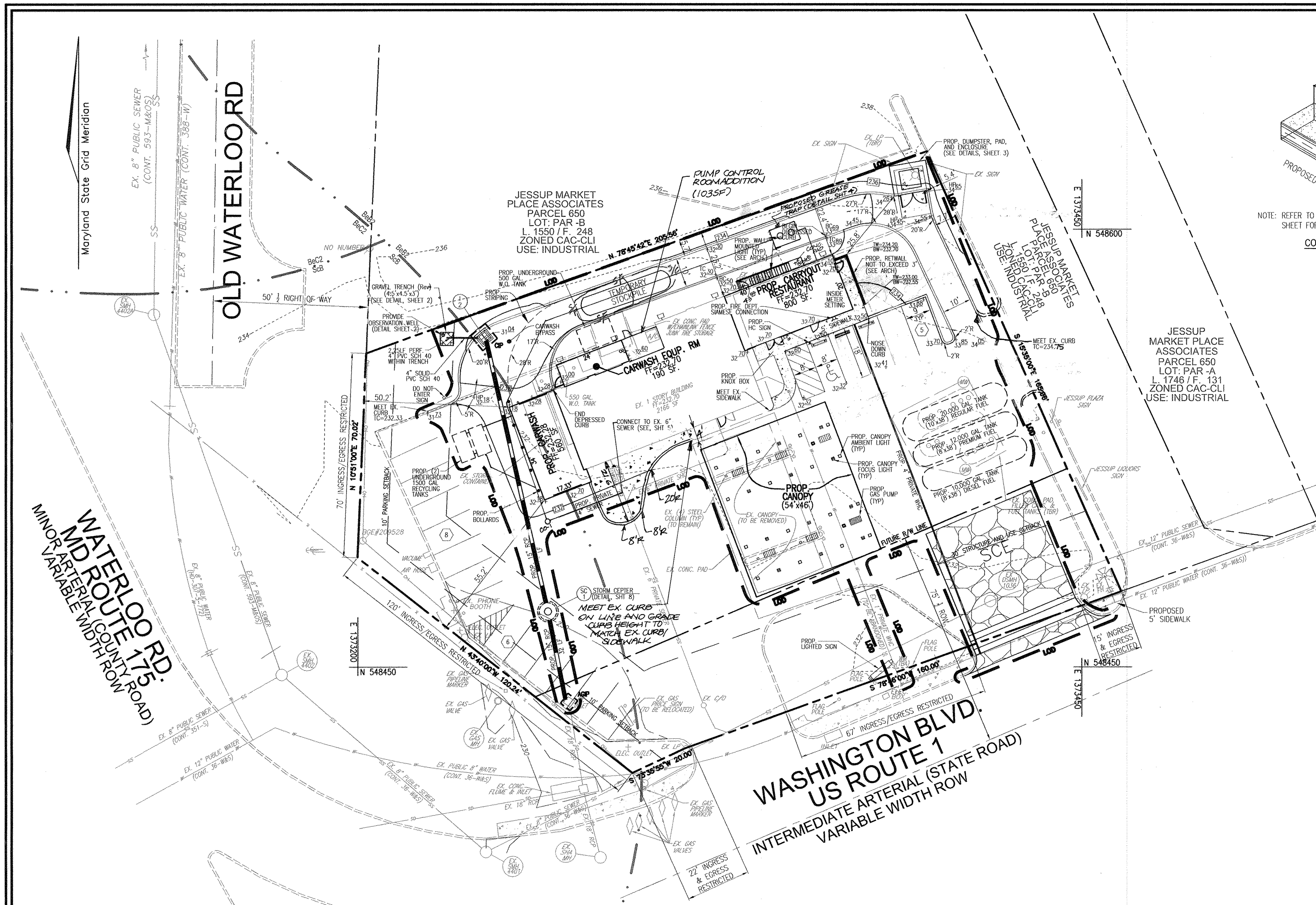
PROFESSIONAL CERTIFICATE

I HEARBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENCE NO. 16193 EXPIRATION DATE: 09-27-2008

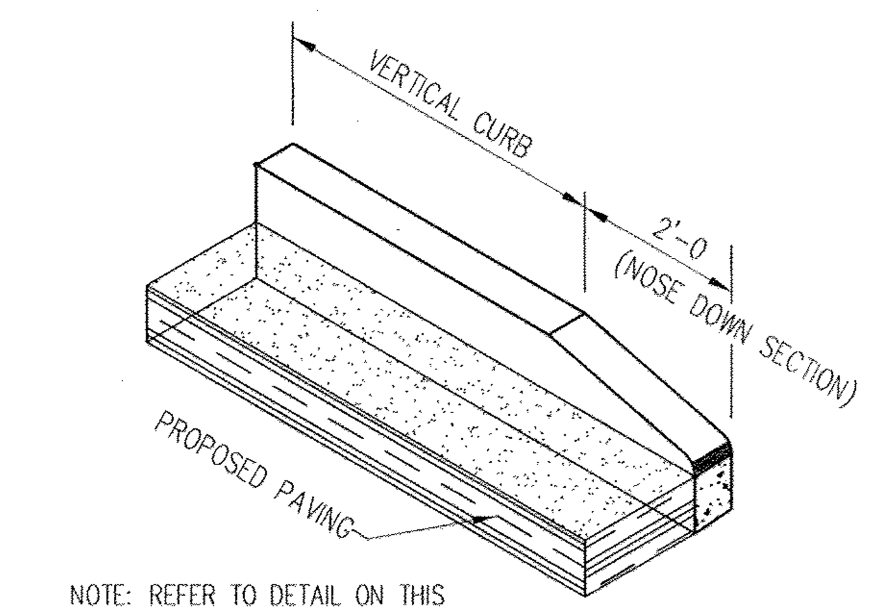
SHEET 1 OF 5

SDP 07-120

K:\Projects\05-46\ENGR\dwg\SDP\COVER.dwg, 3/27/2008 4:25:4 PM



PLAN VIEW
SCALE: 1"=20'

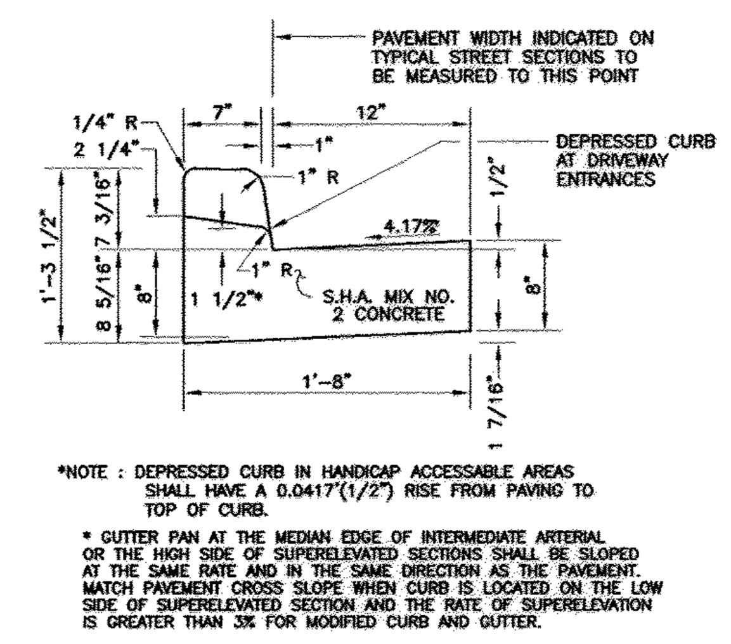


NOTE: REFER TO DETAIL ON THIS SHEET FOR VERTICAL CURB DETAIL.

CONCRETE CURB - NOSE DOWN
NOT TO SCALE

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES (FIELD LOCATED)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- PROPOSED SIDEWALK
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- AGIP AT GRADE INLET PROTECTION
- CIP AT CURB INLET PROTECTION
- PROP. CANOPY FOCUS LIGHT (SEE DETAIL, SHEET 3)
- PROP. CANOPY AMBIENT LIGHT (SEE DETAIL, SHEET 3)
- PROP. WALL MOUNTED LIGHT (SEE ARCH. PLANS)
- PROP. GAS PUMP

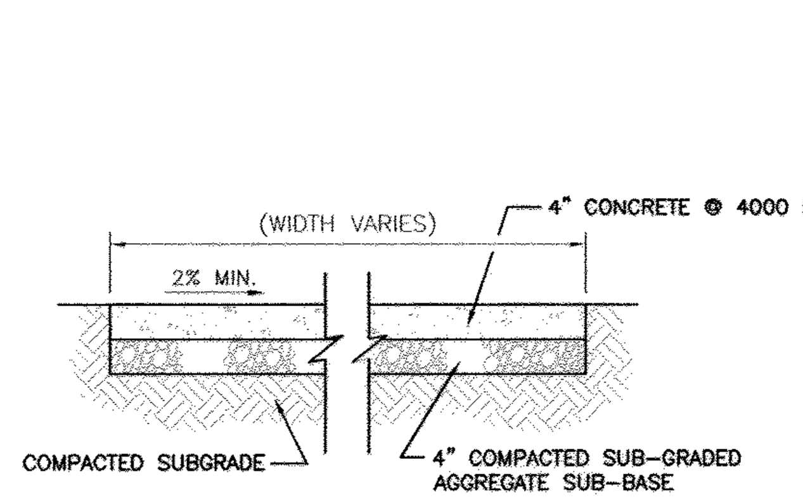


*NOTE : DEPRESSED CURB IN HANDICAP ACCESSABLE AREAS SHALL HAVE A 0.0417'(1/2") RISE FROM PAVING TO TOP OF CURB.

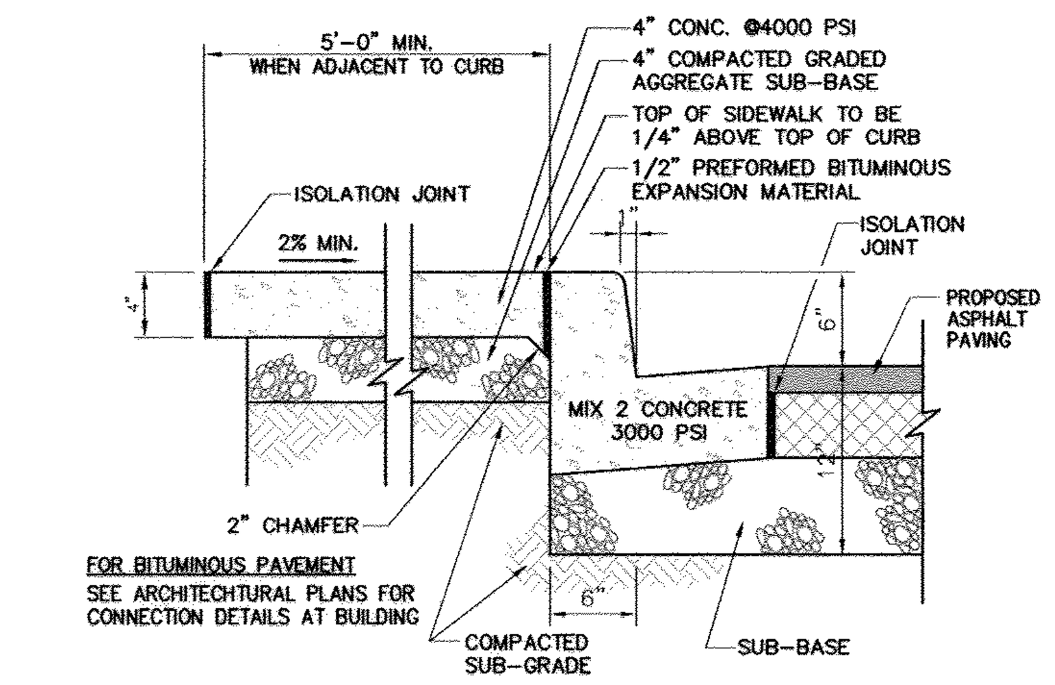
* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIAL OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

STANDARD COMBINATION CURB AND GUTTER
HOWARD COUNTY STANDARD R-3.01
(NOT TO SCALE)

STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND MAINTAINED



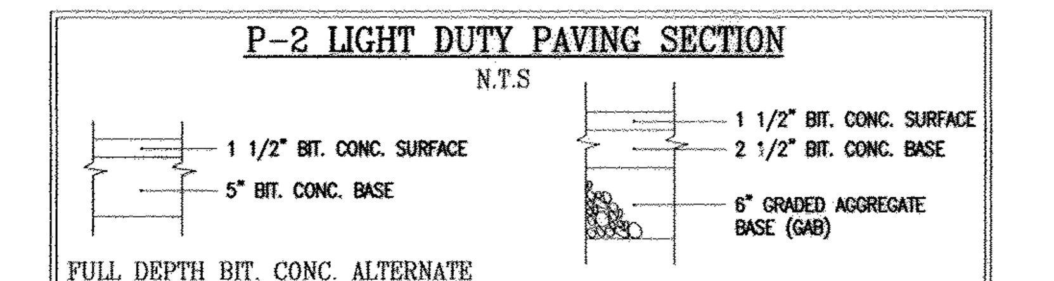
HO. CO. STD. R-3.05
TYPICAL SIDEWALK DETAIL
(N.T.S.)



FOR BITUMINOUS PAVEMENT
SEE ARCHITECHTURAL PLANS FOR CONNECTION DETAILS AT BUILDING

HO. CO. STD. R-3.05
TYPICAL SIDEWALK AT BUILDING
(N.T.S.)

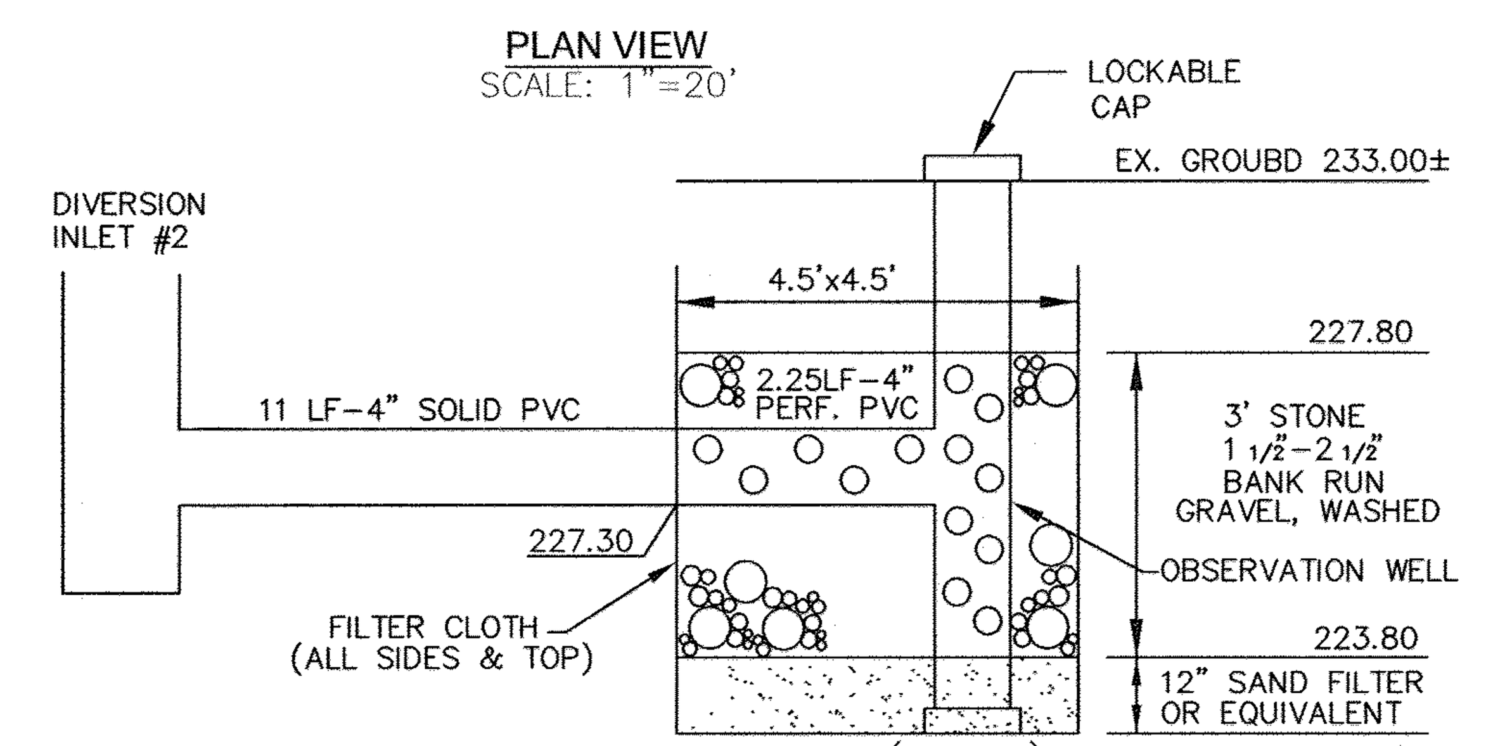
P-2 LIGHT DUTY PAVING SECTION
N.T.S



FULL DEPTH BIT. CONC. ALTERNATE — GRANULAR BASE ALTERNATES

OWNER & DEVELOPER
DURGE LLC
6804 CREEKWOOD CT
CLARKSVILLE, MARYLAND 21029
410-903-7898

NO.	REVISION	DATE
4	ADD PUMP CONTROL ROOM, REMOVE SERVICE BAY, AND INCREASE SIZE OF CONVENIENCE STORE	11/27/11
3	REVISE PLAN TO REFLECT THE EXISTING OPENING TO THE ADJACENT DRIVEWAY	8/31/16
2	REVISE SEWER SERVICE AND RELOCATE GREASE INTERCEPTOR	4/17/09
1	ADD GRINDER PUMP FOR NEW SANITARY SERVICE CONNECTION	1/6/09
	ADD STAIRCASE TO REAR OF BUILDING	



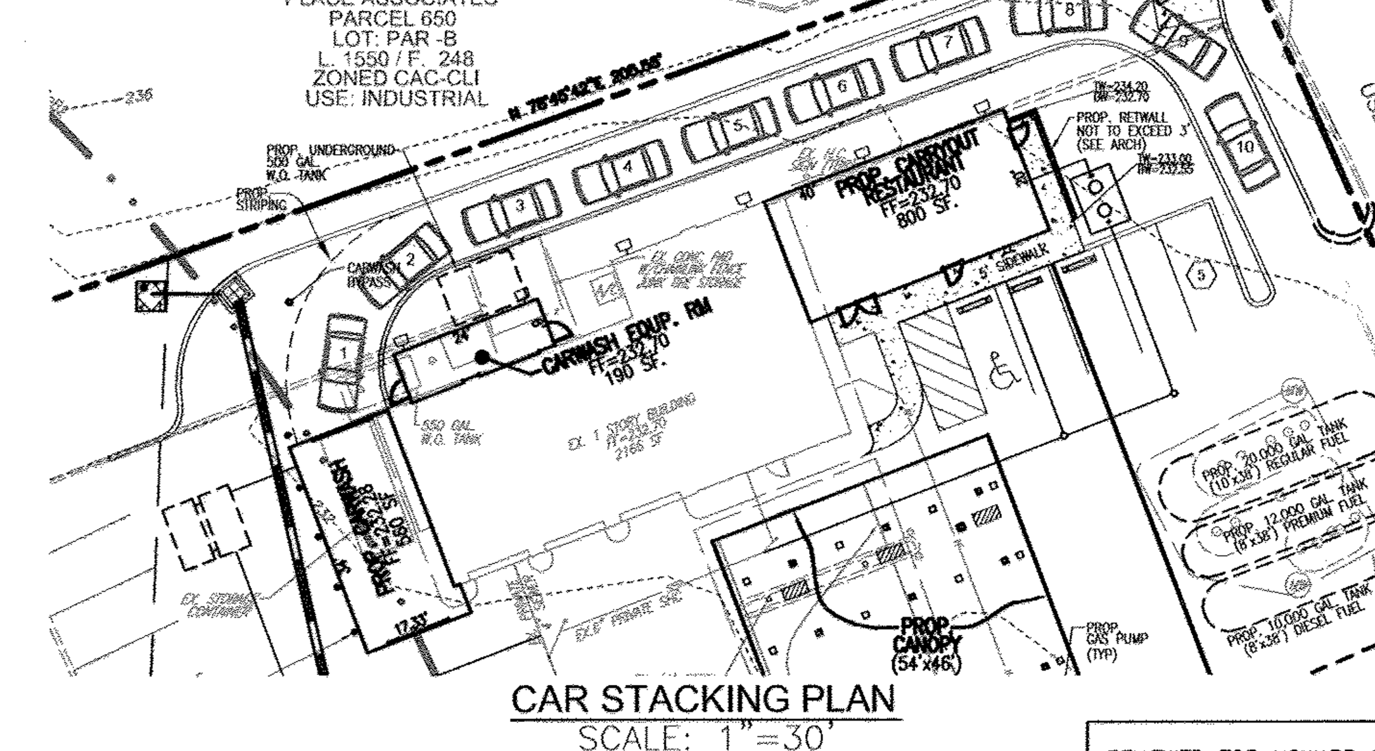
GRAVEL TRENCH (REV)
NOT TO SCALE

NOTE:
1. NO ACTUAL GRADING IS TO OCCUR OTHER THAT NEEDED FOR THE INSRALLATION OF THE PROPOSED 15" RCP.
2. SPOIL FROM THE TRENCHING OPERATION IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

SOILS LEGEND

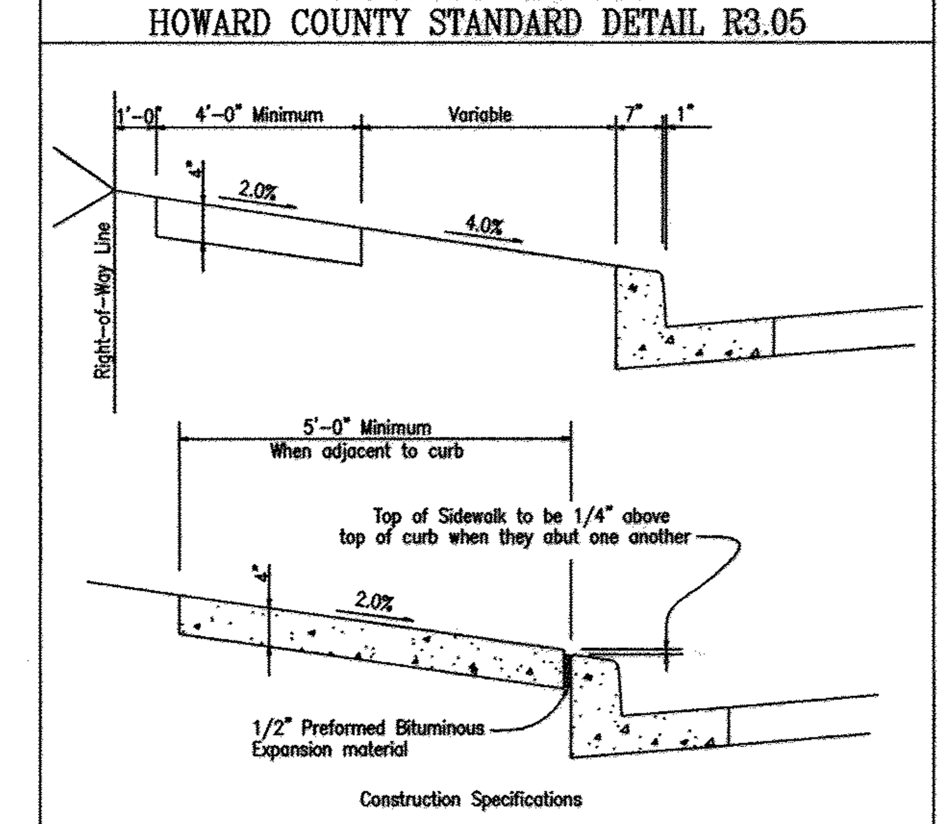
SYMBOL	NAME / DESCRIPTION	GROUP
BeB2	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY	C
ScB	SANDY AND CLAYEY LAND, GENTLY SLOPING	C

NOTE: BASED ON HOWARD COUNTY SOIL SURVEY



CAR STACKING PLAN
SCALE: 1"=30'

CONCRETE SIDEWALK
HOWARD COUNTY STANDARD DETAIL R3.05



Construction Specifications

1. Sidewalk to be scribed in 5'-0" maximum squares.
2. Expansion joints across the sidewalk not to be more than 15' apart.
3. 1/2" Preformed Bituminous Expansion material in expansion joints to be kept 1/4" below surface of sidewalk.
4. Concrete to be mix number 2.
5. Where sidewalk abuts curb, sidewalk shall be 1/4" above curb with 1/2" Preformed Bituminous Expansion material between sidewalk and curb.
6. On longitudinal sidewalk grades of 5% or greater, a concrete header, 6' thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48 feet. The headers shall be placed at expansion joint locations and shall be monolithic with the curb.
7. Sidewalk width adjacent to curb shall be 5'-0" minimum except sidewalk adjacent to curb in cul-de-sac bulbs may be 4'-0" wide.
8. Sidewalk located 2' or more from curb may be 4'-0" in width with a 5'x5' paved section placed 200' apart.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] — 4/7/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] — 4/4/08
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] — 4/29/08
DIRECTOR — DATE

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

[signature]
USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

John R Robertson 4/3/08
HOWARD S.C.D. — DATE

BY THE DEVELOPER:

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

[signature] — 3-26-08
SIGNATURE OF DEVELOPER — DATE

BY THE ENGINEER:

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

[signature] — 3/26/08
SIGNATURE OF ENGINEER — DATE

SITE DEVELOPMENT PLAN

SITE LAYOUT GRADING AND SEDIMENT CONTROL PLAN, SOILS MAP

KUMAR SHELL GAS STATION

SERVICES/GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236

TAX MAP 43 BLOCK 9 — PARCEL 601
1ST ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

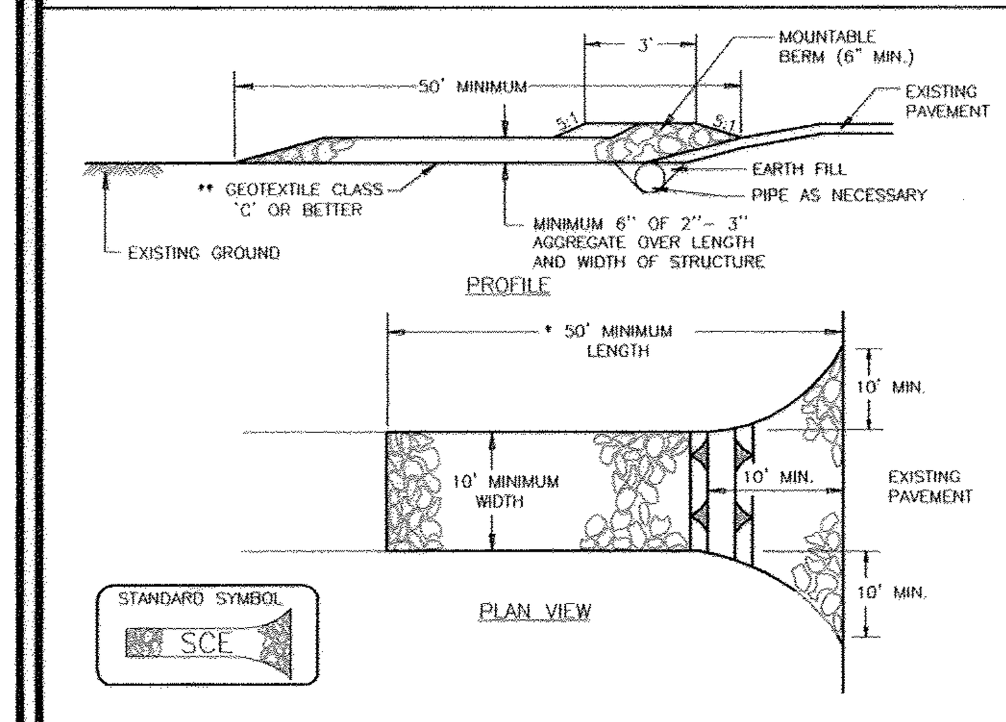
STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY: DZ
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2008
SCALE: AS SHOWN
W.O. NO.: 05-46

PROFESSIONAL CERTIFICATE
I HEARBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENCE NO. 16193 EXPIRATION DATE: 09-27-2008

SDP 07-120

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE

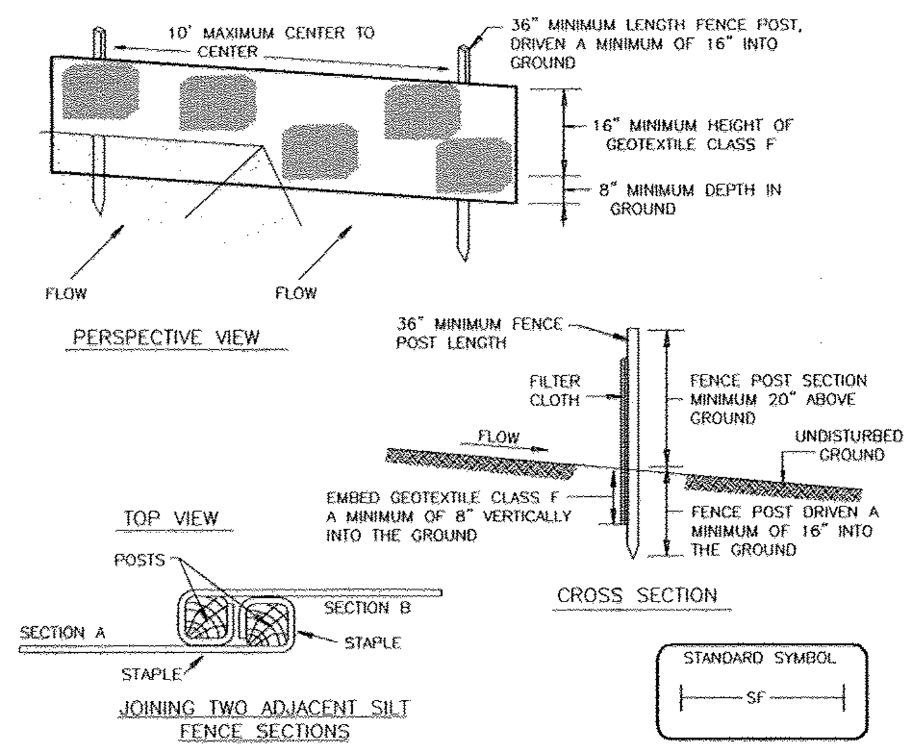


CONSTRUCTION SPECIFICATION

1. LENGTH – MINIMUM OF 50' (* 30' FOR A 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 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 22 – SILT FENCE



CONSTRUCTION SPECIFICATIONS

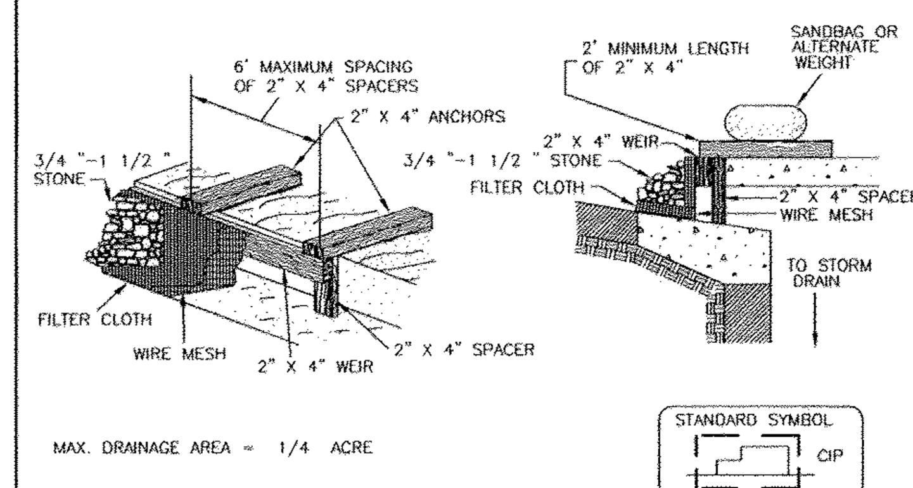
1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG, DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" X 1 1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
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 FT ²/MINUTE (MAX.)	TEST: MSMT 322
FILTERING EGGECIENCY	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 REACHES 50% OF THE FABRIC HEIGHT.

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

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

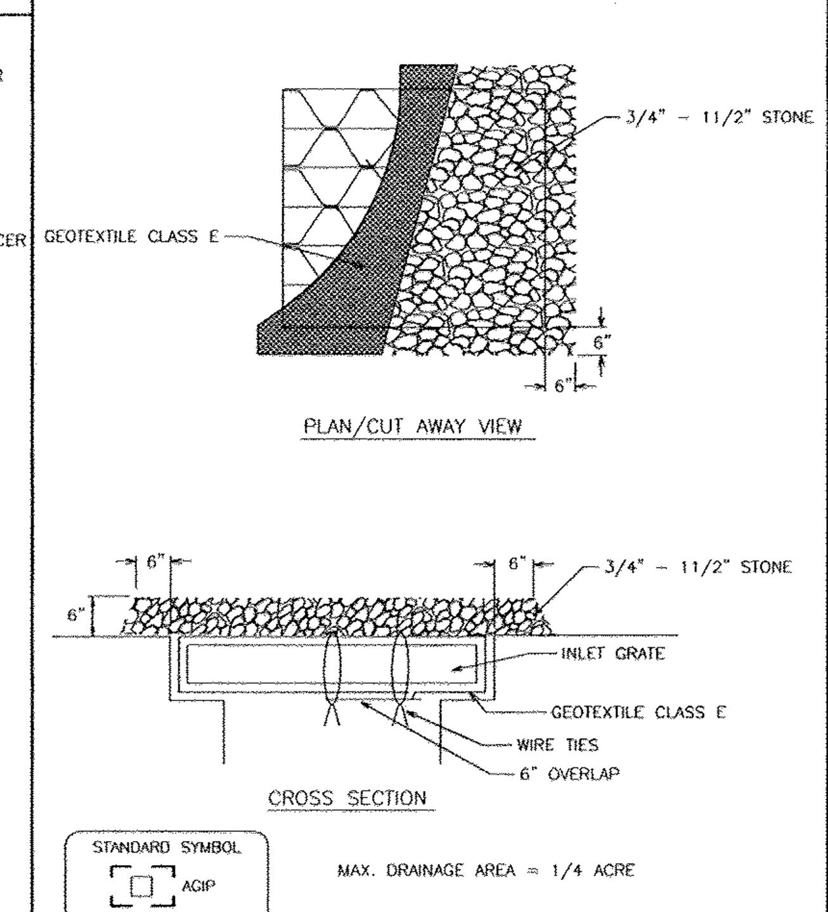


CONSTRUCTION SPECIFICATIONS

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

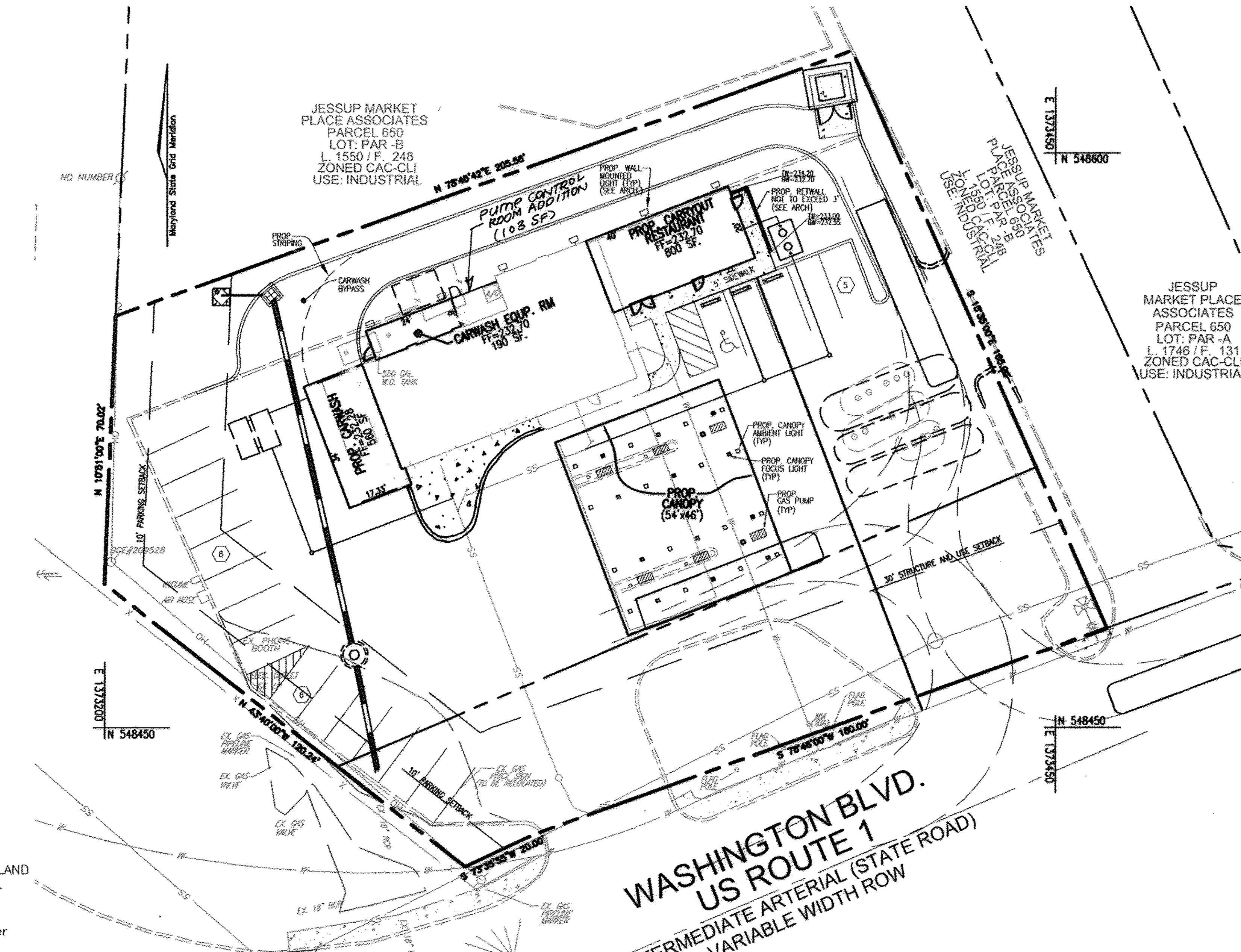
DETAIL 23B – AT GRADE INLET PROTECTION



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



FUEL TANKER & DUMPSTER TRUCK TURNING TEMPLATE

SCALE: 1"=30'

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of

1) Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs/ 100 sq.ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./ 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq.ft.)

2) Acceptable-Apply 2 tons per acre dolomatic limestone (92 lbs/ 1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10- fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons

MAINTENANCE: Inspect all seeded areas and make needed repairs,

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer
SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT
SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

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. Areas having slopes steeper than 2:1 shall have the appropriate shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland

II. Topsoil Specifications – Soil to be used as topsoil
 i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, Section I – Vegetative Stabilization Methods and Materials. roots, trash, or other materials larger that 1 and 1/2" in
 ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison
 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 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described

II. For sites having disturbed areas under 5 acres:
 i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization –

iii. For sites having disturbed areas over 5 acres:
 i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 b. Organic content of topsoil shall be not less than 1.5 percent by weight.
 c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 d. No sod or seed shall be placed on soil soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

NOTE: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. 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 distributed in a 4" – 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the 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 be place 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN HOWARD COUNTY GRADING PERMIT.
2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. (WEEK 1)
3. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (WEEK 1)
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (WEEK 2)
5. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB SITE. (WEEK 3)
6. BEGIN GRADING OF SITE. (WEEK 5)
7. BEGIN UTILITY CONSTRUCTION .
8. BEGIN BUILDING CONSTRUCTION. (WEEK 9)
9. INSTALL ON-SITE CURB AND GUTTER. (WEEK 21)
10. COMPLETE BUILDING CONSTRUCTION. (WEEK 18)
11. BEGIN PAVING AND INSTALL ALL SIDEWALKS. (WEEK 23)
12. FINE GRADE AND STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOD. REMOVE ALL TRASH JUNK AND DEBRIS FROM ENTIRE PARCEL. (WEEK 24)
13. INSTALL SITE LANDSCAPING. (WEEK 25)
14. REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (WEEK 26)

NOTES:
1. DUE TO THE DIFFICULTY OF MAINTAINING INTERNAL EARTH DIKES, CONTRACTOR SHALL LIMIT GRADING AND FILL TO AREA BETWEEN SUPER SILT FENCE AND DIKE.
2. DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.
3. FOLLOWING INITIAL SOIL DISTURBANCES OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 A. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES AND ALL SLOPES GREATER THAN 3:1.
 B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.
4. NO ACTUAL GRADING IS TO OCCUR OTHER THAT NEEDED FOR THE INSTALATION OF THE PROPOSED 15" RCP.
5. SPOIL FROM THE TRENCHING OPERATION IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

SEDIMENT CONTROL NOTES

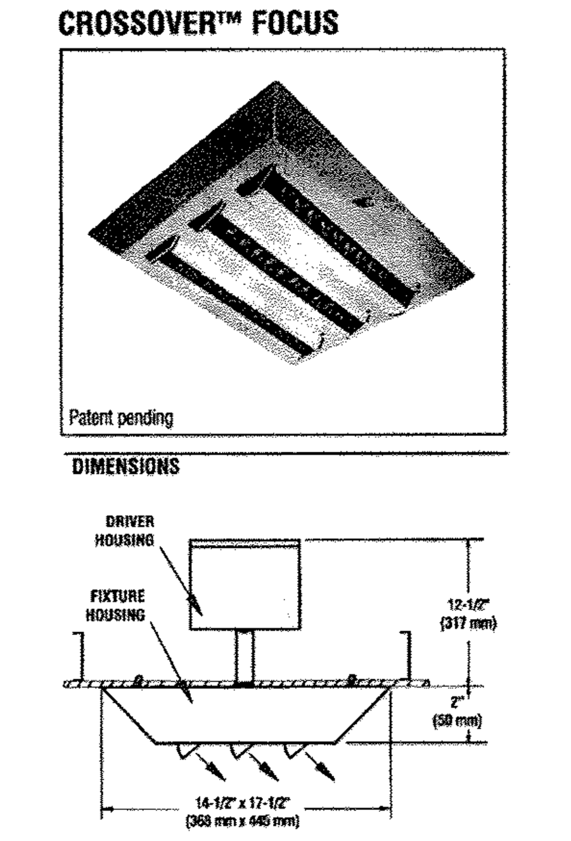
1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. and revisions thereto.
3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes 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 their perimeter in accordance with Vol. 1, Chapter 7, 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, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall 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 the Howard County Sediment Control Inspector.
7. Site Analysis :

Total Area	0.8081 Acres
Area Disturbed	0.49 Acres
Area to be roofed or paved	0.44 Acres
Area to be vegetatively stabilized	0.05 Acres
Total Cut	516 CY
Total Fill	34 CY
WASTE/BORROW LOCATION	N/A

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment 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 construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

* To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit

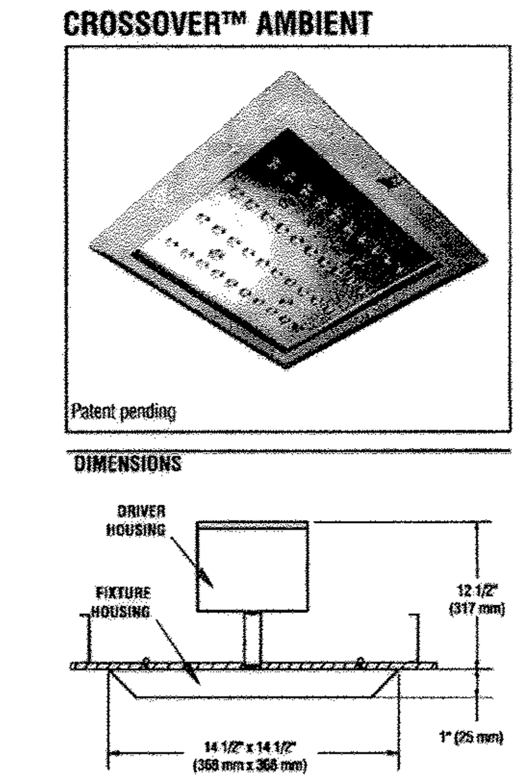
CROSSOVER™ FOCUS



CANOPY LED FOCUS LIGHTING FIXTURE

(SEE ARCH. PLANS)

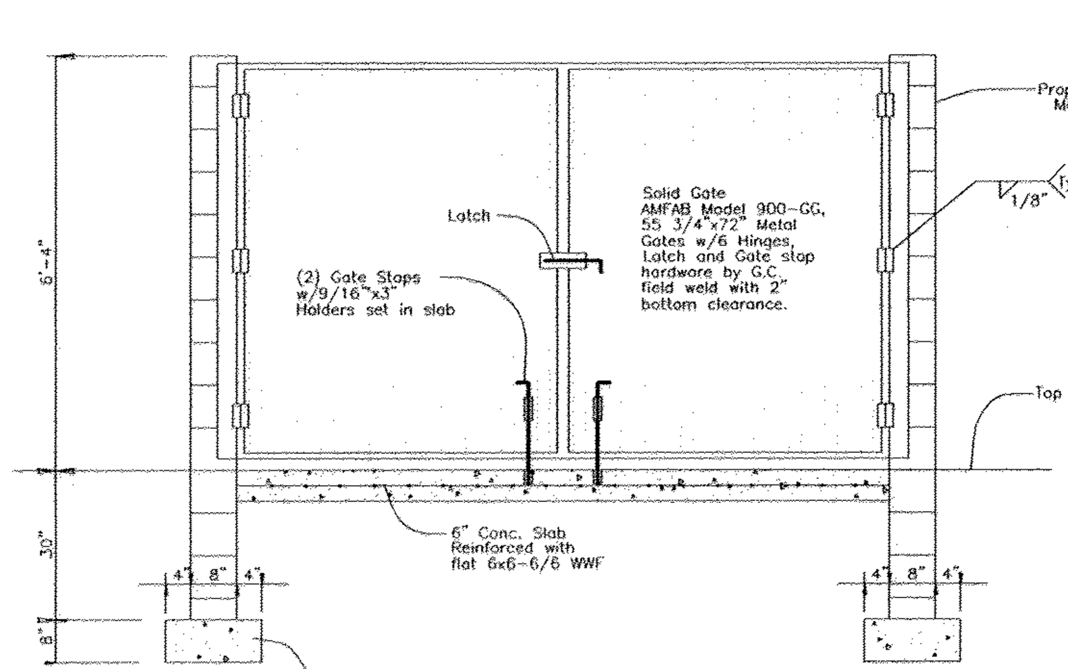
CROSSOVER™ AMBIENT



CANOPY LED AMBIENT LIGHTING FIXTURE

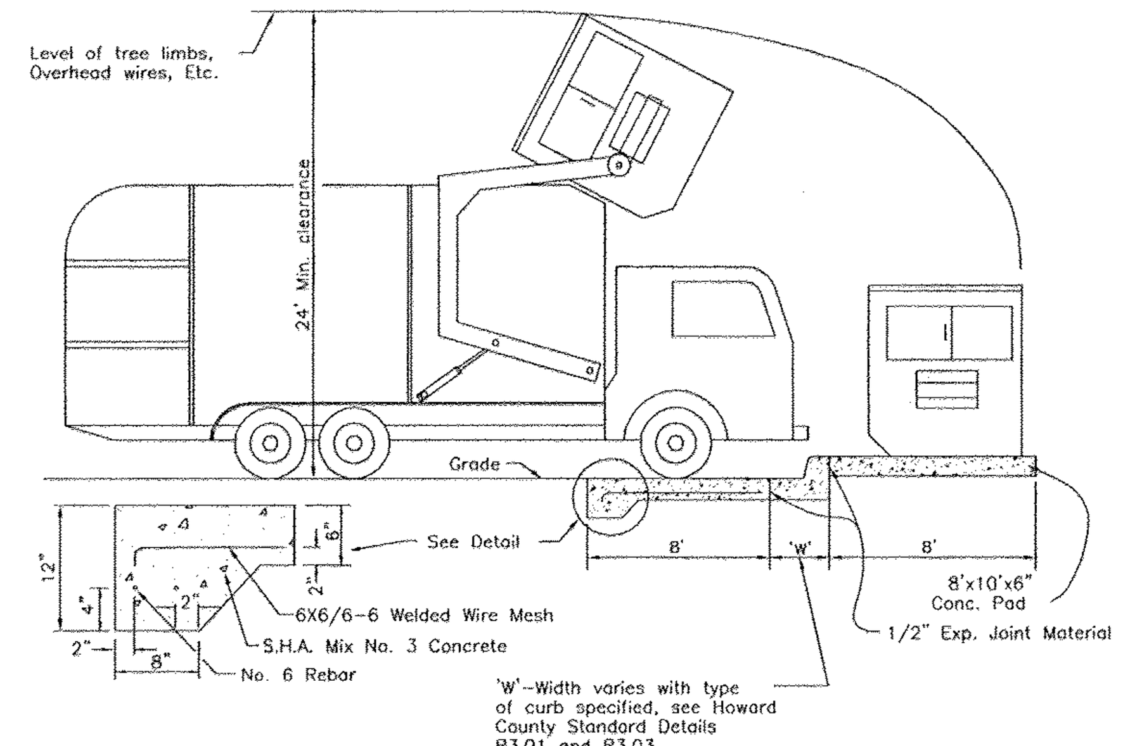
(SEE ARCH. PLANS)

OWNER & DEVELOPER
DURGE LLC
6804 CREEKWOOD CT
CLARKSVILLE, MARYLAND 21029
410-903-7898



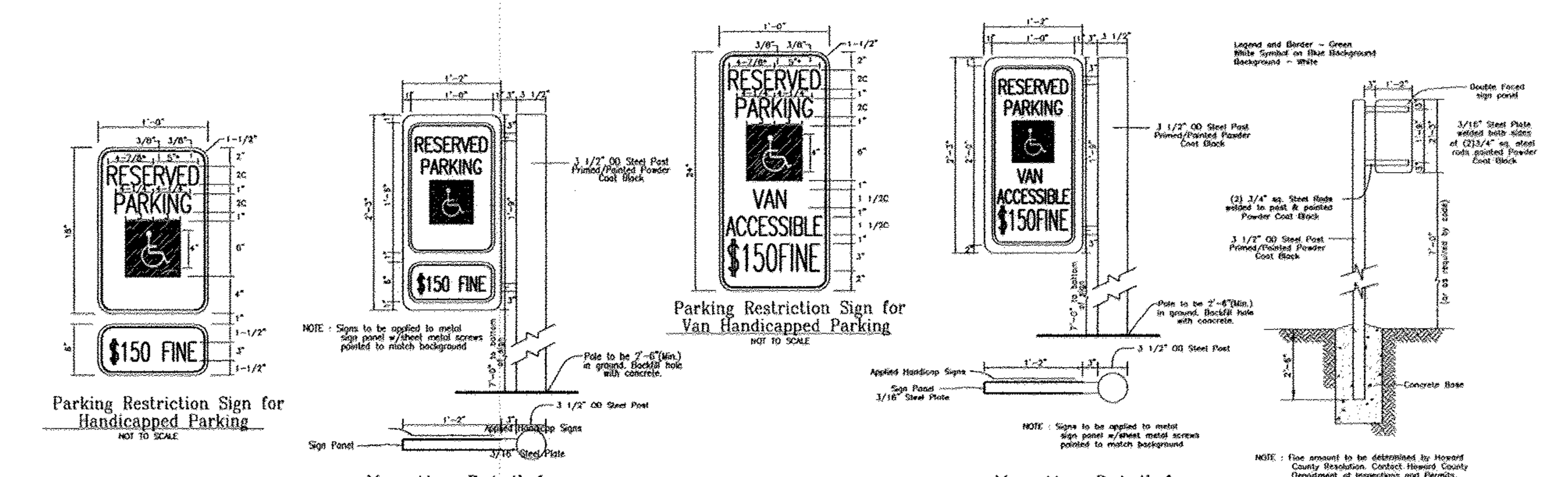
TRASH ENCLOSURE GATE DETAIL

NO SCALE



SOLID WASTE SERVICE PAD

HOWARD COUNTY STD. R 11.01
NOT TO SCALE



HANDICAP PARKING SIGNS

(NOT TO SCALE)

NO.	REVISION	DATE
4	ADD PUMP CONTROL ROOM, REMOVE SERVICE BAY, AND INCREASE SIZE OF CONVENIENCE STORE	11/27/17
3	REVISE PLAN TO REFLECT THE EXISTING OPENING TO THE ADJACENT DRIVEWAY	8/31/16

SITE DEVELOPMENT PLAN

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

KUMAR SHELL GAS STATION

SERVICES/GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236

TAX MAP 43 BLOCK 9 — PARCEL 601
1ST ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY:	DZ
DRAWN BY:	DZ
CHECKED BY:	RHV
DATE:	MARCH 2008
SCALE:	AS SHOWN
W.O. NO.:	05-46

PROFESSIONAL CERTIFICATE

I HEARBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENCE NO. 16193 EXPIRATION DATE: 09-27-2008

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/7/08
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/24/08
DIRECTOR — DATE 4/29/08

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

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

HOWARD S.C.D. — DATE 4/3/08

BY THE DEVELOPER:

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

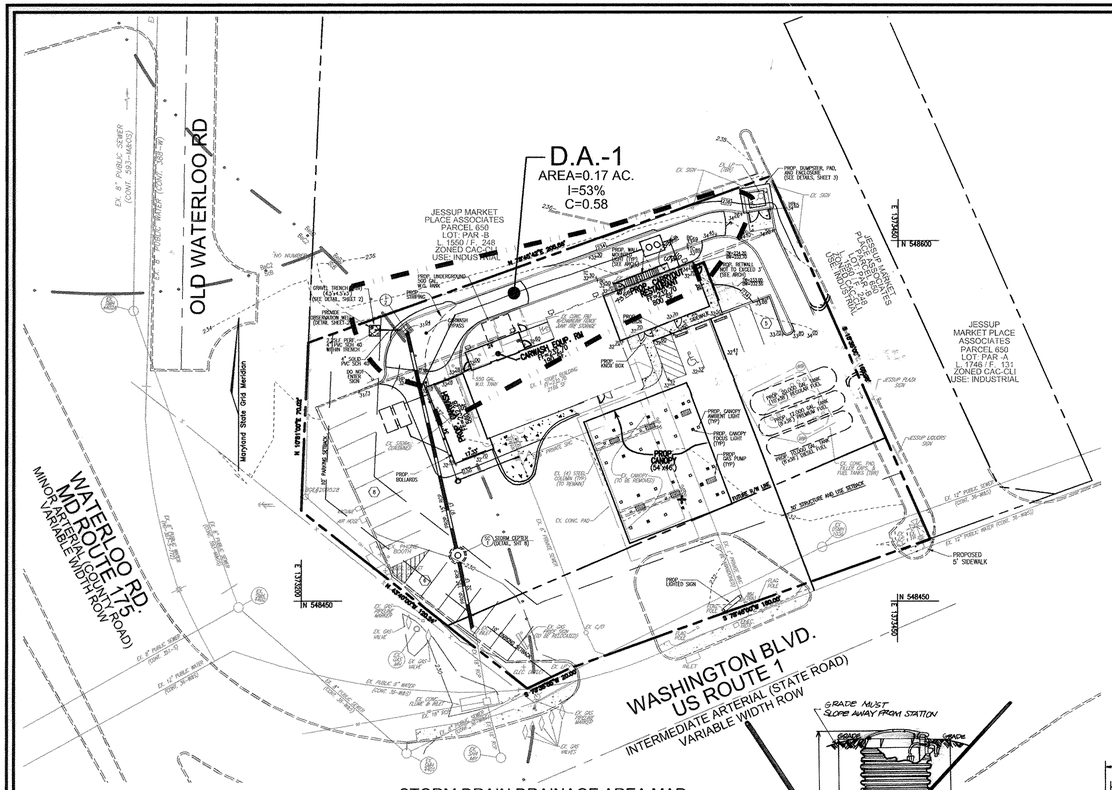
SIGNATURE OF DEVELOPER — DATE 3-26-08

BY THE ENGINEER:

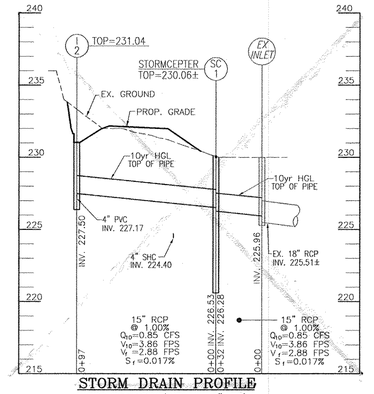
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER — DATE 3/26/08

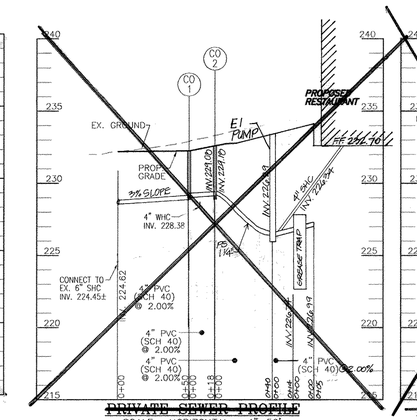
SDP 07-120



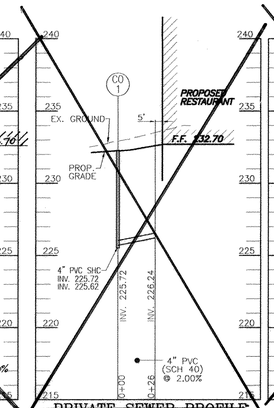
STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=30'



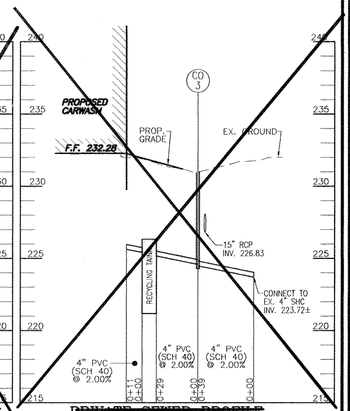
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



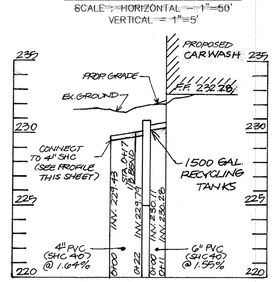
PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



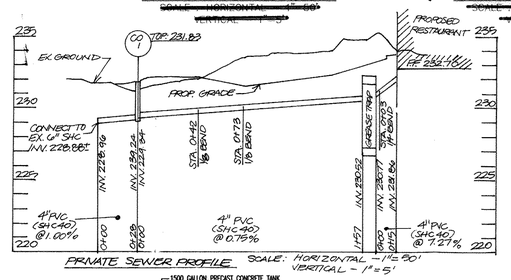
PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



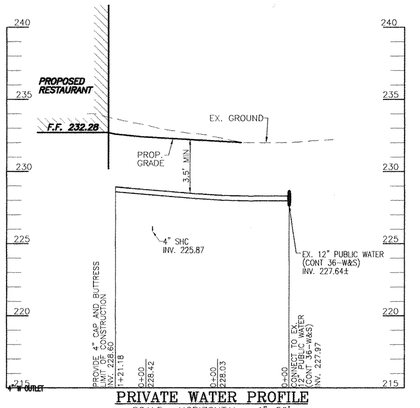
PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



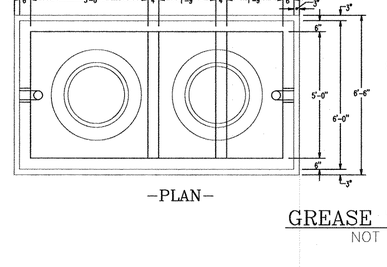
PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

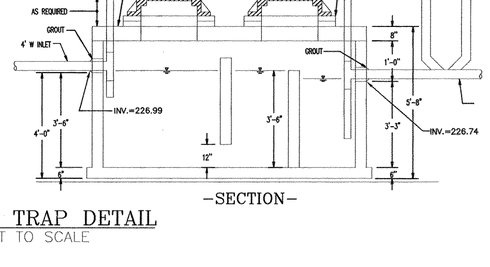


PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

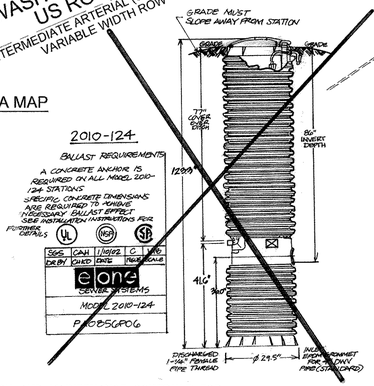


PRIVATE WATER PROFILE
SCALE : HORIZONTAL - 1"=50'
VERTICAL - 1"=5'





GREASE TRAP DETAIL
NOT TO SCALE



2010-124

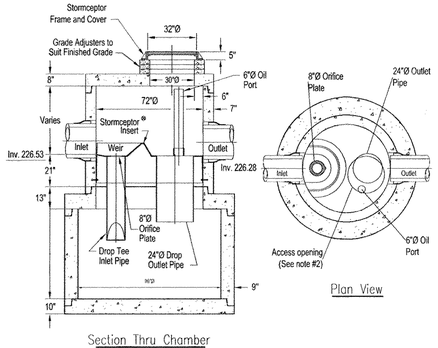
BALLAST REQUIREMENTS
A CONCRETE ANCHOR IS REQUIRED ON ALL MODEL 2010-124 STATIONS. SPECIFIC CONCRETE DIMENSIONS ARE REQUIRED TO ENSURE NECESSARY BALLAST EFFECT. SEE INSTALLATION INSTRUCTIONS FOR FOOTING DETAILS.

SDC	CAH	1/16/02	C	1100
DRBY	CHKD	DATE	REVISIONS	

elong
SEWER SYSTEMS
MODEL 2010-124
P.#05GR06

Rinker MATERIALS
Concrete Pipe Division

STC 2400 Precast Concrete Stormceptor
(2400 U.S. Gallon Capacity)



Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 03.1

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY STRUCTURE

A. The Stormceptor Water Quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor inspection/monitoring form. Inspections shall be done by using a clear Plexiglass tube ("sludge/judge") to extract a water column sample. When the sediment depths exceed the level specified in table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
B. The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
C. The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
D. The inlet and outlet pipes shall be checked for any obstructions at least once ever six months. If obstructions are found the owner shall have them removed. Structural parts of the the Stormceptor unit shall be repaired as needed.
E. The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available to the Howard County officials upon their request.

PIPE SCHEDULE – PRIVATE

SIZE	TYPE	LENGTH
15"	RCP, CL.IV	129 LF
4"	PVC, SHC	135 LF
4"	DIP, WHC	125 LF

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
1-2	TYPE 'S' INLET	N 548563 E 1373244	231.04		227.50	HO. CO. STD SD-4.32
SC	STORM CEPTER	N 548469 E 1373266	230.06	226.53	226.28	STC 450i (SEE DETAIL, THIS SHEET)

NOTE : 1. TOP ELEVATIONS ARE AT CENTER TOP OF HEADPIECE FOR TYPE 'A-5'. INLETS AT CENTER TOP OF GRATE FOR DOUBLE TYPE 'S' AND YARD INLETS AND TOP OF MANHOLE COVER FOR PRECAST MANHOLES.
2. FOR TOP SLAB SLOPES SEE GRADING PLAN.
3. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DETAILS.
4. ALL CUSTOM AND NON-STANDARD STRUCTURES TO BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.

SUMMARY TABLE

AREA A 0.81 AC.	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME, WQV	2264 CF	–	2264 CF	STORMCEPTOR ENTIRE SITE
2	RECHARGE VOLUME REV	22.2 CF	N/A	22.2 CF	FOR NEW IMPERVIOUS ONLY
3	CHANNEL PROTECTION VOLUME, CPV	N/A	N/A	N/A	REDEVELOPMENT
4	OVERHEAD FLOOD PROTECTION, Q10P	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, Q100P	N/A	N/A	N/A	

NOTE: WQV PROVIDED BY STORMCEPTOR.
REV PROVIDED BY GRAVEL TRENCH.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/1/08
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/24/08
DIRECTOR — DATE 4/29/08

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

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

HOWARD S.C.D. — DATE

BY THE DEVELOPER:

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

SIGNATURE OF DEVELOPER — 3-26-08 DATE

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — 3/25/08 DATE

STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND MAINTAINED

OWNER & DEVELOPER
DURGE LLC
6804 CREEKWOOD CT
CLARKSVILLE, MARYLAND 21029
410-903-7898

NO.	REVISION	DATE
4	ADD PUMP CONTROL ROOM, REMOVE SERVICE BAY, ADD INCREASE SIZE OF CONVENIENCE STORE	
3	REVISE PLAN TO REFLECT THE EXISTING OPENING TO THE ADJACENT DRIVEWAY	8/31/16
2	REVISE SEWER SERVICE AND RELOCATE GREASE INTERCEPTOR	4/17/09
1	ADD GRINDER PUMP FOR NEW SANITARY SEWER CONNECTION; ADD STAIR CASE TO REAR OF BUILDING	1/6/09

SITE DEVELOPMENT PLAN

STORM DRAIN DRAINAGE AREA MAP
KUMAR SHELL GAS STATION

SERVICES/GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236

TAX MAP 43 BLOCK 9 — PARCEL 601
1ST ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

PROFESSIONAL CERTIFICATE
I HEARBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2008

DESIGN BY:	DZ
DRAWN BY:	DZ
CHECKED BY:	RHV
DATE:	MARCH 2008
SCALE:	AS SHOWN
W.O. NO.:	05-46

SHEET 4 OF 5

SDP 07-120

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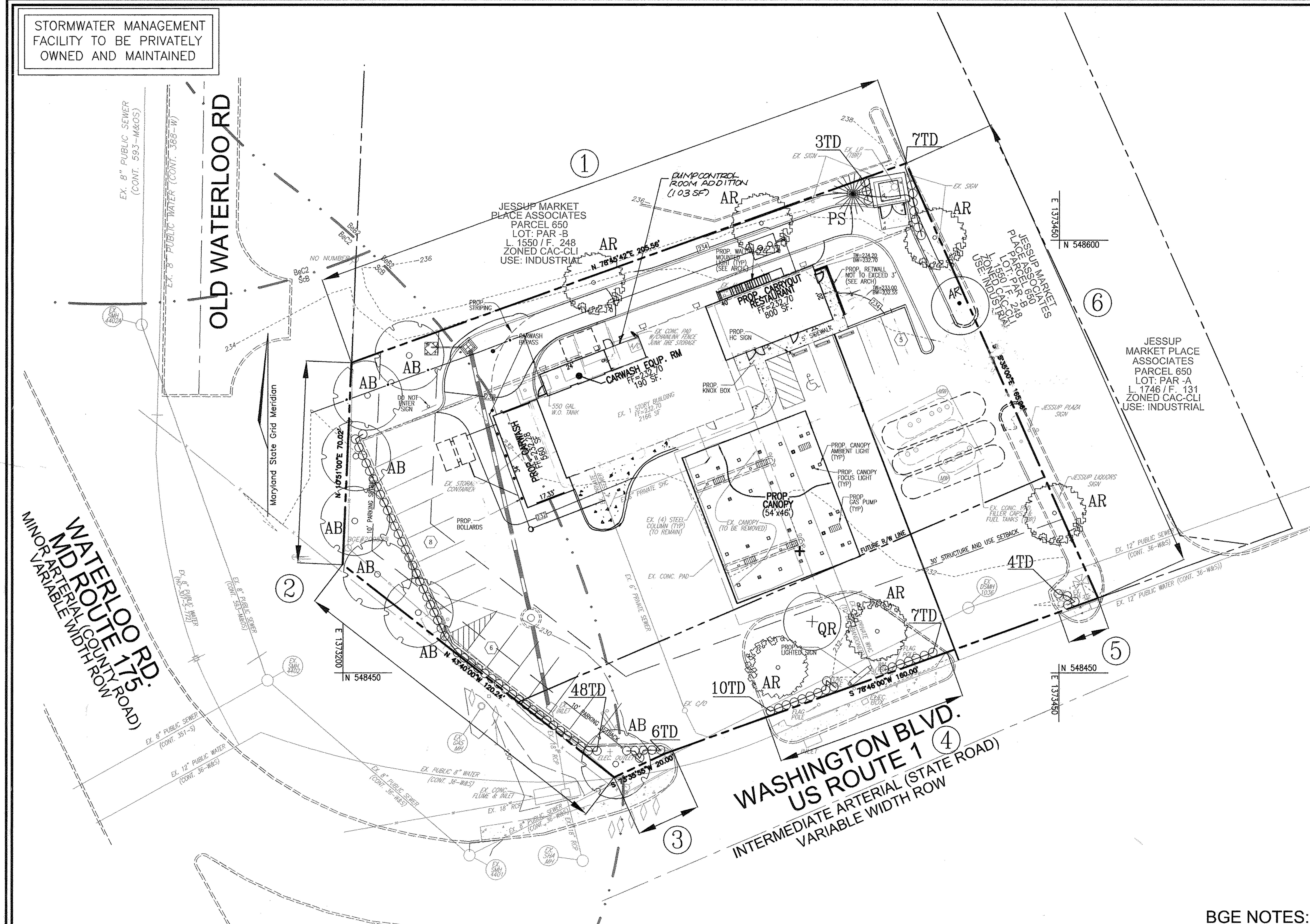
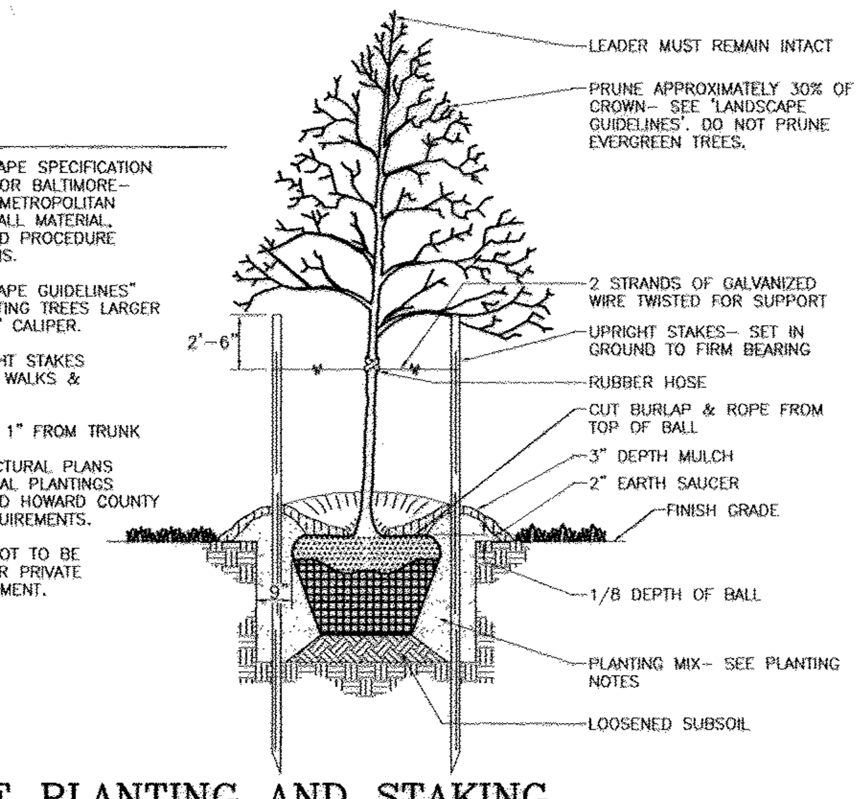
STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND MAINTAINED



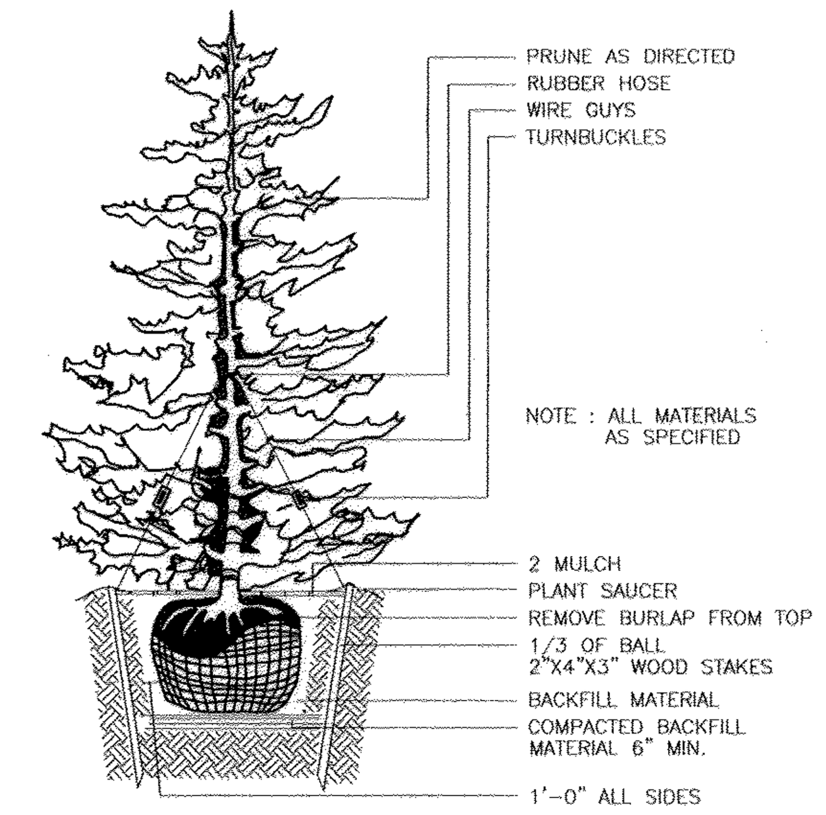
PLAN VIEW
SCALE: 1"=20'



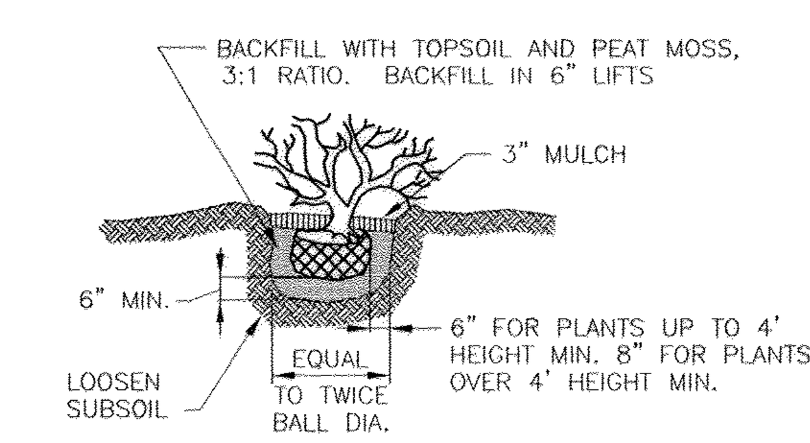
NOTES

1. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP MULCH 1" FROM TRUNK
5. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
6. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.

TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER — NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES (FIELD LOCATED)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- PROPOSED SIDEWALK
- QP / AR — PROPOSED SHADE TREE
- PS — PROPOSED EVERGREEN TREE
- TD — PROPOSED SHRUBS
- (2) — LANDSCAPE PERIMETER
- PROP. CANOPY FOCUS LIGHT (SEE DETAIL, SHEET 3)
- PROP. CANOPY AMBIENT LIGHT (SEE DETAIL, SHEET 3)
- PROP. WALL MOUNTED LIGHT (SEE ARCH. PLANS)
- PROP. GAS PUMP

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER — DATE 3-26-08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/7/08
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/24/08
DIRECTOR — DATE 4/29/08

SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS AND PERIMETER PROPERTIES						ADJACENT TO DUMPSTER
PERIMETER/FRONTAGE DESIGNATION LANDSCAPE TYPE	1 A	2 E	3 E	4 E	5 E	6 A	7 C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	206	190	22	67	15	165	35
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No	No	No
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No	No	No
NUMBER OF PLANTS REQUIRED SHADE TREES / EVERGREEN TREES / SHRUBS	1:60 3 / – / –	1:40 5 / – / 1:4 48	1:40 1 / – / 1:4 6	1:40 2 / – / 1:4 17	1:40 0 / – / 1:4 4	1:60 3 / – / –	1:40 1 / 1:20 1 / –
NUMBER OF PLANTS PROVIDED SHADE TREES / EVERGREEN TREES / OTHER TREES (2:1 SUBSTITUTION) / SHRUBS (10:1 SUBSTITUTION) DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	3 / – / – / –	5 / – / – / 48	1 / – / – / 6	2 / – / – / 17	– / – / – / 4	3 / – / – / –	– / 1 / – / 10*

* Substitute 10 shrubs for one shade in Perimeter 7.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	19
NUMBER OF TREES AND ISLANDS REQUIRED	1
NUMBER OF TREES AND ISLANDS PROVIDED	
SHADE TREES AND ISLANDS	1
OTHER TREES (2:1 SUBSTITUTION)	–

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	7	ACER RUBRUM OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
QR	1	QUERCUS PHELLOS WILLOW OAK	2 1/2"-3" CAL.	B & B
PS	1	PINUS STROBUS EASTERN WHITE PINE	6'-8' HT.	B & B
TD	75	TAXUS MEDIA 'DENSIFORMIS' DENSIFORMIS YEW	2 1/2' -3' HT.	B & B
AB	7	ACER PALMATUM 'BLOODGOOD' BLOODGOOD JAPANESE RED MAPLE	4'-6' HT. (MAX. HEIGHT=20')	B & B

BGE NOTES:

1. THE PROPOSED LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS, AS SHOWN ON THIS PLAN.
2. BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
3. THE CONTRACTOR IS TO CALL "MISS UTILITY" PRIOR TO THE INSTALLATION OF ANY LANDSCAPING TO LOCATE THE UNDERGROUND GAS LINES LOCATED ALONG OLD WATERLOO ROAD AND THE NORTH SIDE OF US. ROUTE 1. PLANTING SHOULD NOT BE INSTALLED ANY CLOSER THAN 10' FROM THE GAS LINE IN EITHER DIRECTION.

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
2. LANDSCAPE SURETY IN THE AMOUNT OF $7,500.00 SHALL BE POSTED AS PART OF THE GRADING PERMIT (17 SHADE TREES @ $300.00 PER TREE, 1 EVERGREEN @ $150.00 PER TREE, 75 SHRUBS @ $30.00 PER SHRUB).

LANDSCAPE SCHEDULE NOTE:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

OWNER & DEVELOPER
DURGE LLC
6804 CREEKWOOD CT
CLARKSVILLE, MARYLAND 21029
410-903-7898

NO.	REVISION	DATE
4	ADD PUMP CONTROL ROOM, REMOVE SERVICE BAY, AND INCREASE SIZE OF CONVENIENCE STORE	11/27/17
3	REVISE PLAN TO REFLECT THE EXISTING OPENING TO THE ADJACENT DRIVEWAY	8/31/16
2	REVISE SEWER SERVICE AND RELOCATE GREASE INTERCEPTOR	4/17/09
1	ADD GRINDER PUMP FOR NEW SANITARY SERVICE CONNECTION ADD REAR STAIR CASE	1/6/09

SITE DEVELOPMENT PLAN

LANDSCAPE PLAN

KUMAR SHELL GAS STATION

SERVICES/GAS STATION, CARWASH, CARRYOUT
DEED: 8863/236

TAX MAP 43 BLOCK 9 — PARCEL 601
1ST ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

STATE OF MARYLAND ROBERT HARRIS VOGEL No. 16193 PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY: DZ
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2008
SCALE: AS SHOWN
W.O. NO.: 05-46

PROFESSIONAL CERTIFICATE
I HEARBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENCE NO. 16193 EXPIRATION DATE: 09-27-2008

SHEET 5 OF 5

SDP 07-120

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