

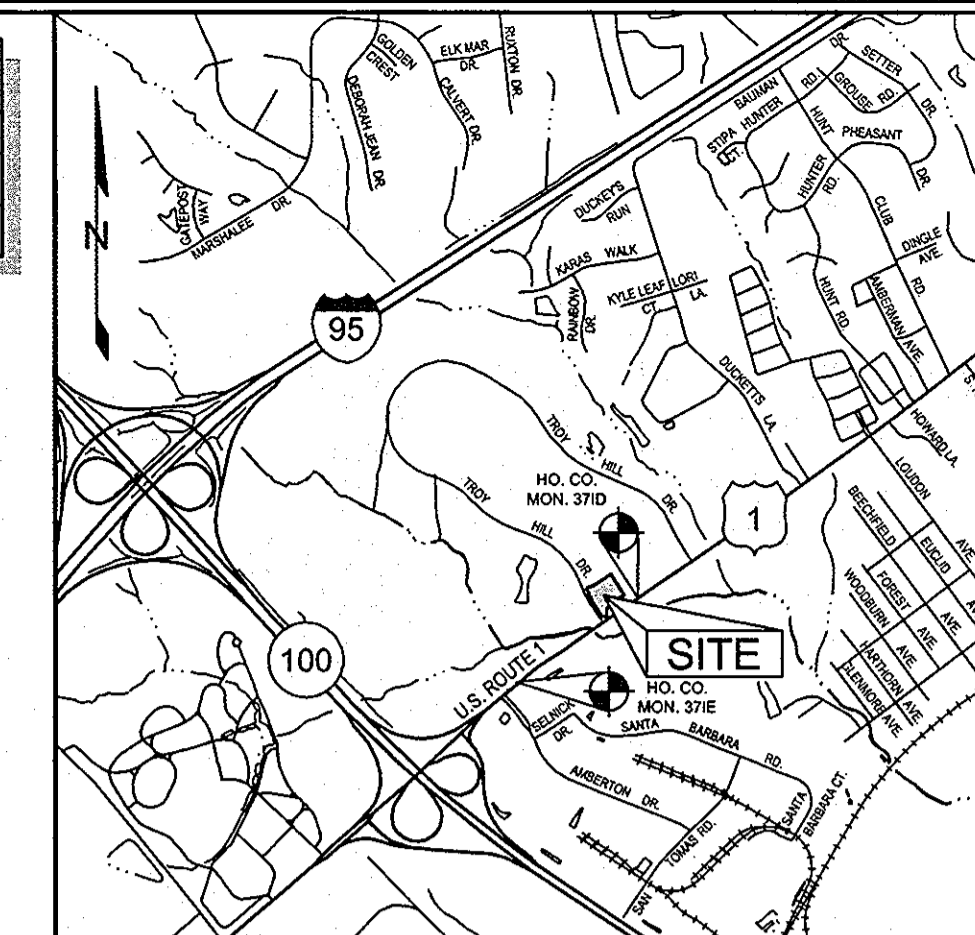
**GENERAL NOTES**

- 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 LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 06, 2009
- THIS PROPERTY IS ZONED B-2 PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND THE "COMP-LITE" ZONING AMENDMENTS EFFECTIVE 07/28/06
- THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- GROSS AREA OF PROPERTY = 2.00 AC.
- THIS PROPERTY IS IN THE METROPOLITAN DISTRICT.
- PUBLIC WATER AND PUBLIC SEWER WILL BE USED WITHIN THIS SITE. PUBLIC WATER AND SEWER WILL BE PROVIDED BY CONTRACT NUMBER 14-3715-D.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
  - STATE HIGHWAY ADMINISTRATION 410.531.5533
  - BGE(CONTRACTOR SERVICES) 410.850.4620
  - BGE(UNDERGROUND DAMAGE CONTROL) 410.787.6068
  - MISS UTILITY 800.257.7777
  - COLONIAL PIPELINE COMPANY 410.795.1390
  - HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 410.313.6900
  - HOWARD COUNTY HEALTH DEPARTMENT 410.313.2640
  - AT&T 800.252.1133
  - VERIZON 800.743.0033/410.224.9210
- BOUNDARY SHOWN HEREON IS BASED ON HOWARD COUNTY RECORD PLAT NO. 16141, DATED AUGUST 2003.
- TOPOGRAPHY IS BASED ON A FIELD RUN TOPOGRAPHICAL SURVEY PERFORMED BY SILL, ADCOCK & ASSOCIATES, L.L.C. DATED JULY 2007.
- SOILS SHOWN HEREON ARE BASED ON THE HOWARD COUNTY SOIL SURVEY, MAP 26.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S 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 THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. PAVING TO BE HOWARD COUNTY STANDARD P-2 OR P-3 PAVING SECTION (SEE DETAILS ON SHEET 2).
- GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST, PRIOR TO CONSTRUCTION.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- ALL TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT 3710 AND BENCHMARK 371E WERE USED FOR THIS PROJECT.
- ALL PROPOSED SPOT ELEVATIONS ALONG CURB AND GUTTER ARE SHOWN TO THE FLOW LINE UNLESS OTHERWISE NOTED.
- SEWER HOUSE CONNECTION (SHC) TO BE AT 2.0% UNLESS OTHERWISE NOTED. CLEANOUTS ARE TO BE PROVIDED AT ALL ALLEYS.
- THERE ARE NO FLOODPLAINS, HISTORIC STRUCTURES OR CEMETERIES LOCATED ONSITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (50 SHADE TREES AND 118 SHRUBS) WILL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$12,540.00.
- THIS PROJECT IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS IN ACCORDANCE WITH SECTION 16.1202(b)(1)(v) OF THE HOWARD COUNTY CODE FOR A PLANNED BUSINESS PARK OF AT LEAST 75 ACRES THAT RECEIVED PRELIMINARY PLAN APPROVAL PRIOR TO DECEMBER 31, 1992.
- ALL STORMWATER MANAGEMENT REQUIREMENTS FOR THIS SITE HAVE BEEN ADDRESSED UNDER F-96-136, AND LATER MODIFIED UNDER SDP-03-115.
- A WETLAND DELINEATION WAS PERFORMED BY SILL, ADCOCK & ASSOCIATES, L.L.C. DATED SEPTEMBER 2007. NO WETLANDS WERE LOCATED ONSITE.
- A FREE FLOW SPEED DETERMINATION WAS PERFORMED BY MARS GROUP, DATED JUNE 2007.
- AN INTERSECTION SAFETY ANALYSIS WAS PERFORMED BY MARS GROUP, DATED JUNE 2007.
- AN ADEQUATE ROAD FACILITIES TEST EVALUATION WAS PERFORMED BY MARS GROUP, DATED JUNE 2007. AN UPDATED REPORT WAS PERFORMED BY MARS GROUP, DATED JUNE, 2011.
- A GEOTECHNICAL STUDY WAS PERFORMED BY HERBSTENSON & ASSOCIATES, DATED AUGUST 2007.
- THIS PROJECT COMPLIES WITH THE ROUTE 1 MANUAL REQUIREMENTS FOR THE B-2 ZONE.
- THE ENTRANCE LOCATED ON THE SERVICE ROAD SHALL BE PER HOWARD COUNTY DESIGN MANUAL VOLUME IV, DETAIL R-6.09. THE CONTRACTOR SHALL MATCH EXISTING PAVING AND CURB ELEVATIONS AT ENTRANCE FILLETS.
- THIS PROJECT IS SUBJECT TO THE FOLLOWING DPZ FILES: S-90-05, P-90-23, WP-91-89, F-91-24, F-96-136, F-98-169, F-01-077, F-03-103 AND SDP-03-115. WP-11-110, WP-12-115.
- ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- A KNOX BOX (FIRE DEPARTMENT ACCESS BOX) IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTERGRATED WITH THE FIRE ALARM SYSTEM).
- SIGNAGE SHALL BE PLACED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS AND IDENTIFYING EACH SEPARATE SUITE BY A LETTER.
- ANY EXISTING TREES REMOVED ON ADJACENT PARCEL A-18 WHILE GRADING SHALL BE REPLACED ONCE GRADING HAS BEEN COMPLETED AND THE AREA STABILIZED.

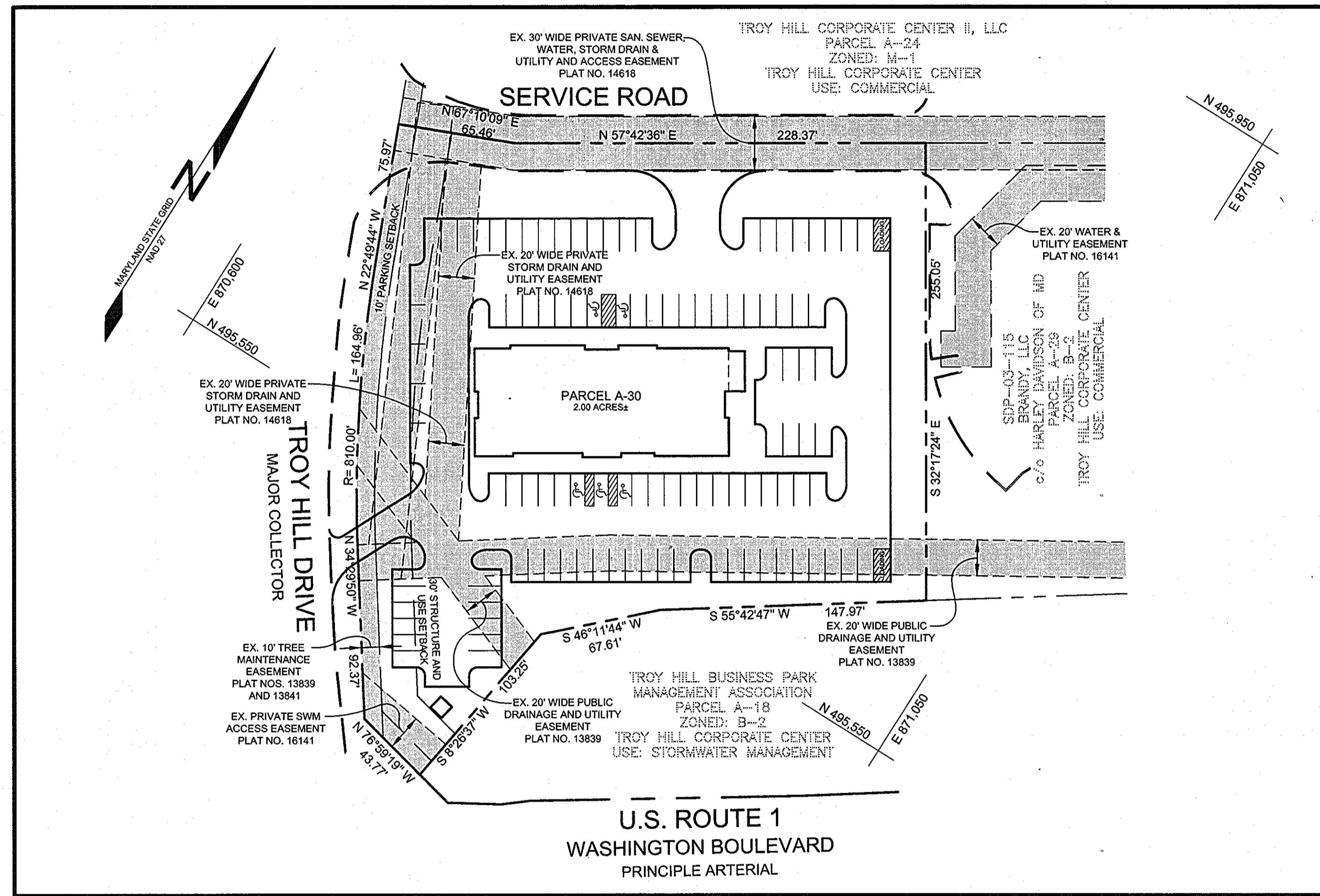
**SITE DEVELOPMENT PLAN**

**TROY HILL CORPORATE CENTER RESTAURANT AND RETAIL CENTER HOWARD COUNTY, MARYLAND**

BENCHMARKS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
371D	496,158.4	872,042.8	158.086'	49.3' NORTH OF CONCRETE INLET 2.5' WEST OF U.S. 1 PAVING
371E	555,817.8	1,382,686.2	143.616'	6.9' NORTH WEST OF U.S. 1 PAVING 63.2' EAST OF BILLBOARD



HOWARD COUNTY, MARYLAND ADC MAP 17, GRID D10  
**VICINITY MAP**  
SCALE: 1"=2000'



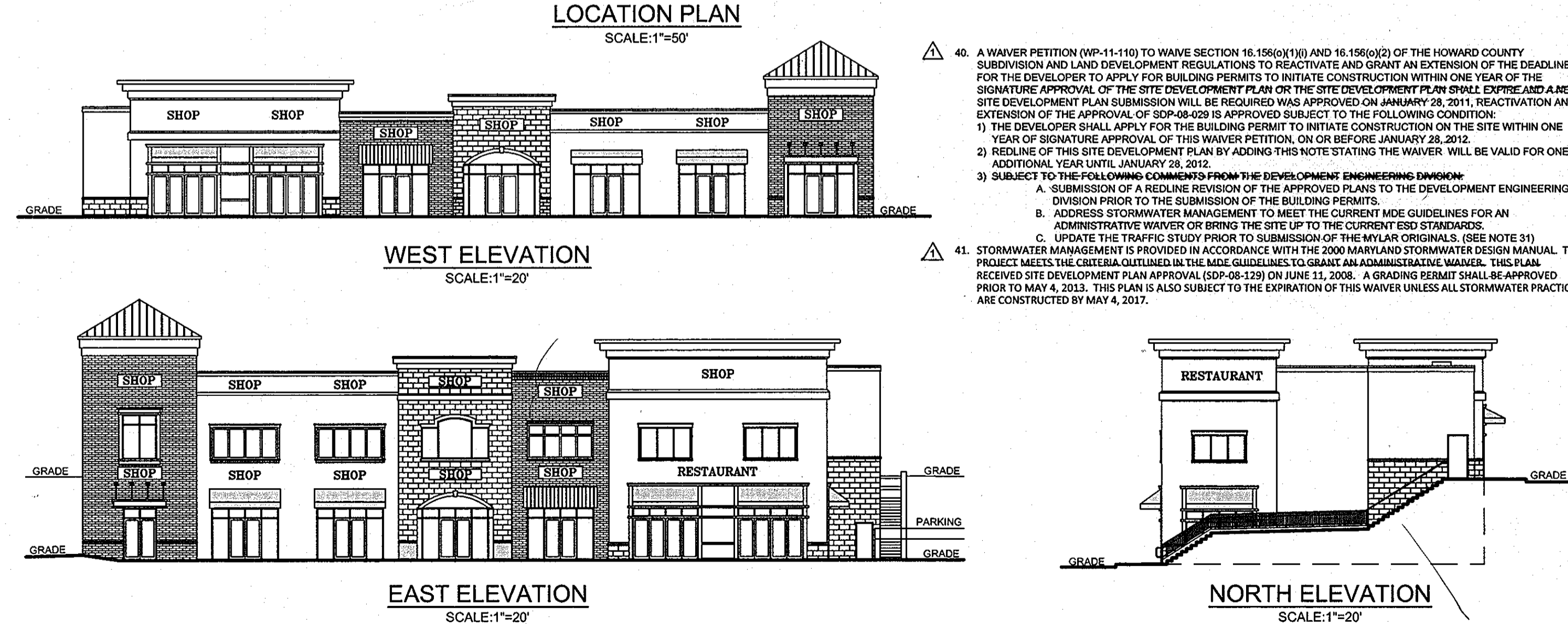
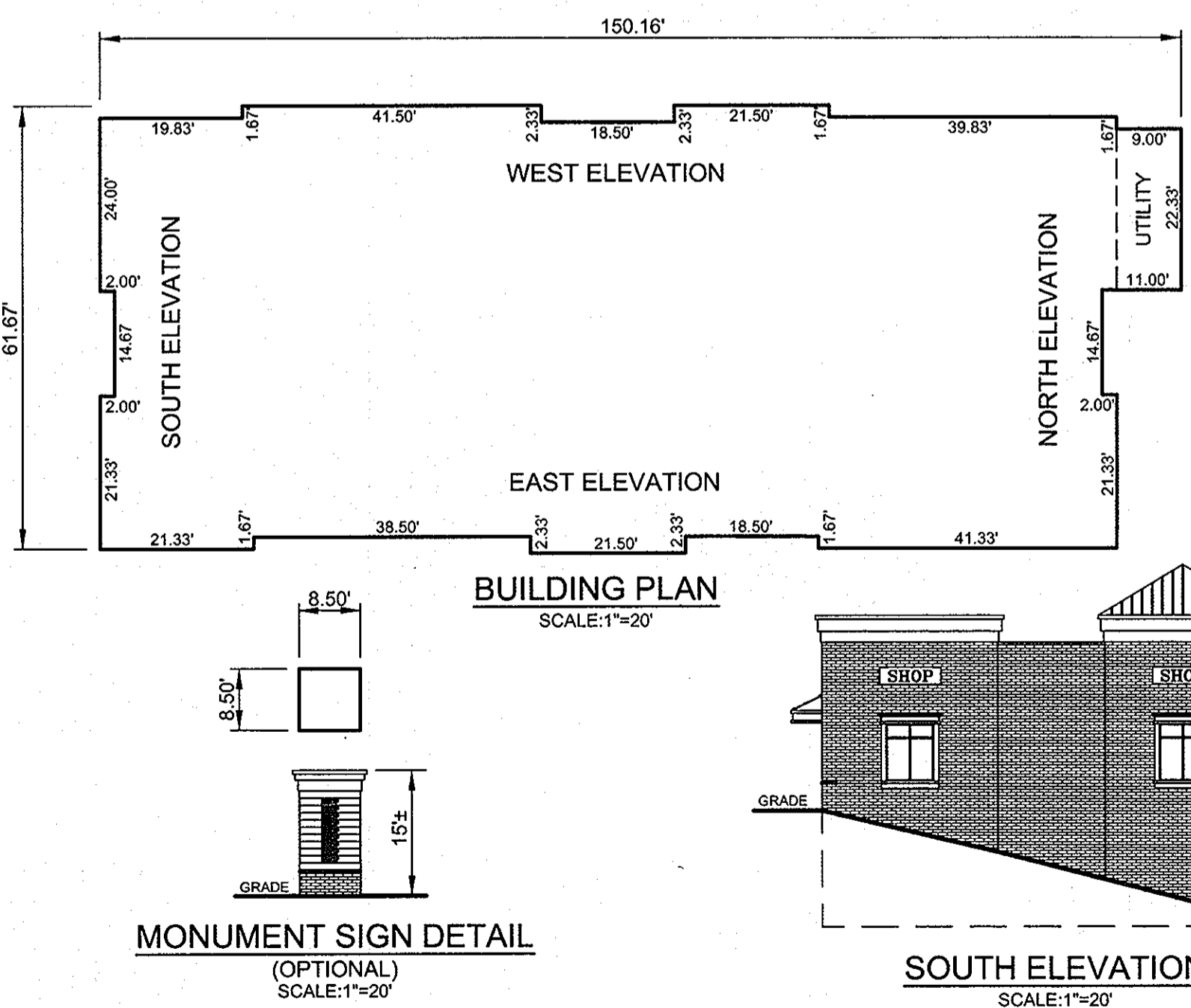
FLOOR SPACE USE CHART			
USE	LOWER FLOOR AREA	UPPER FLOOR AREA	TOTAL FLOOR AREA
RETAIL	6,000 SF±	8,400 SF±	14,400 SF±
RESTAURANT	2,400 SF±	NONE	2,400 SF±

SITE ANALYSIS DATA CHART			
TOTAL PROJECT AREA 2.00 AC±	AREA OF SUBMISSION 2.00 AC±	DISTURBED AREA 2.08 AC±	PRESENT ZONING B-2
PROPOSED USE RETAIL / RESTAURANT	FLOOR SPACE PER USE SEE CHART THIS SHEET	TOTAL UNITS ALLOWED NA	TOTAL UNITS PROPOSED NA
MAX. # EMPLOYEES/TENANTS NA	PARKING SPACES REQ. 106	PARKING SPACES PROV. 108	HC SPACES PROVIDED 5
OPEN SPACE REQUIRED NA	OPEN SPACE PROVIDED NA	REC. O.S. REQUIRED NA	REC. O.S. PROVIDED NA
BUILDING COVERAGE 8,400 SF±	FLOOR AREA RATIO 10%±	DPZ FILE REFERENCES SEE GENERAL NOTE 35	

ADDRESS CHART	
LOT	STREET ADDRESS
A-30	7190 TROY HILL DRIVE, ELK RIDGE, MD 21075

PERMIT INFORMATION CHART					
SUBDIVISION NAME TROY HILL CORPORATE CENTER		SECTION NA	PARCEL # / LOT # A-30		
PLAT NO. 16141	GRID # 18	ZONING B-2	TAX MAP # 37	ELECT. DIS. 1ST	CENSUS TRACT 6012.02
WATER CODE A03			SEWER CODE 2152200		

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING, SEDIMENT AND EROSION CONTROL PLAN
4	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
5	LANDSCAPING PLAN
6	STORMDRAIN PROFILES, WATER AND SEWER PROFILE, AND DETAILS
7	STORMDRAIN DRAINAGE AREA MAP
8	RETAINING WALL SITE PLAN AND SECTIONS
9	RETAINING WALL SECTIONS AND ELEVATION
10	RETAINING WALL GENERAL NOTES & DETAILS
11	RETAINING WALL ALLAN BLOCK SPECIFICATIONS & DETAILS
12	RETAINING WALL SECTIONS



- A WAIVER PETITION (WP-11-110) TO WAIVE SECTION 16.156(b)(1)(i) AND 16.156(b)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO REACTIVATE AND GRANT AN EXTENSION OF THE DEADLINE FOR THE DEVELOPER TO APPLY FOR BUILDING PERMITS TO INITIATE CONSTRUCTION WITHIN ONE YEAR OF THE SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN OR THE SITE DEVELOPMENT PLAN SHALL EXPIRE AND A NEW SITE DEVELOPMENT PLAN SUBMISSION WILL BE REQUIRED WAS APPROVED ON JANUARY 28, 2011. REACTIVATION AND EXTENSION OF THE APPROVAL OF SDP-08-129 IS APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:
  - THE DEVELOPER SHALL APPLY FOR THE BUILDING PERMIT TO INITIATE CONSTRUCTION ON THE SITE WITHIN ONE YEAR OF SIGNATURE APPROVAL OF THIS WAIVER PETITION, ON OR BEFORE JANUARY 28, 2012.
  - THE DEADLINE OF THIS SITE DEVELOPMENT PLAN BY ADDING THIS NOTE STATING THE WAIVER WILL BE VALID FOR ONE ADDITIONAL YEAR UNTIL JANUARY 28, 2012.
  - SUBJECT TO THE FOLLOWING COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION:
    - SUBMISSION OF A REVISED REVISION OF THE APPROVED PLANS TO THE DEVELOPMENT ENGINEERING DIVISION PRIOR TO THE SUBMISSION OF THE BUILDING PERMITS.
    - ADDRESS STORMWATER MANAGEMENT TO MEET THE CURRENT MDC GUIDELINES FOR AN ADMINISTRATIVE WAIVER OR BRING THE SITE UP TO THE CURRENT ESD STANDARDS.
    - UPDATE THE TRAFFIC STUDY PRIOR TO SUBMISSION OF THE MYLAR ORIGINALS. (SEE NOTE 31)
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL. THIS PROJECT MEETS THE CRITERIA OUTLINED IN THE MDC GUIDELINES TO GRANT AN ADMINISTRATIVE WAIVER. THIS PLAN RECEIVED SITE DEVELOPMENT PLAN APPROVAL (SDP-08-129) ON JUNE 11, 2008. A GRADING PERMIT SHALL BE APPROVED PRIOR TO MAY 4, 2013. THIS PLAN IS ALSO SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL STORMWATER PRACTICES ARE CONSTRUCTED BY MAY 4, 2017.

- A WAIVER PETITION (WP-12-115) TO WAIVE SECTION 16.156(b)(1)(i) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES THAT A DEVELOPER MUST APPLY FOR A BUILDING PERMIT TO INITIATE CONSTRUCTION WITHIN ONE YEAR OF SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN OR THE SITE DEVELOPMENT PLAN SHALL EXPIRE AND A NEW SITE DEVELOPMENT PLAN WILL BE REQUIRED, WAS APPROVED ON FEBRUARY 15, 2012. SUBJECT TO THE FOLLOWING CONDITIONS:
  - THE DEADLINE OF THIS SITE DEVELOPMENT PLAN SHALL BE SUBMITTED TO ADD A NOTE STATING THAT THIS WAIVER PETITION WILL BE VALID FOR ONE ADDITIONAL YEAR UNTIL JANUARY 28, 2013.
  - SUBJECT TO THE FOLLOWING COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION:
    - PLEASE NOTE THAT THIS SITE PLAN AND ITS APPROPRIATE STORMWATER MANAGEMENT REQUIREMENTS OF 2007. ALL STORMWATER MANAGEMENT PERMITS MUST BE OBTAINED AND FACILITIES BONDED BY MAY 4, 2013. GRANTING THIS EXTENSION FOR THE FULL YEAR ONLY GIVE APPROXIMATELY EIGHT (8) WEEKS TO APPLY FOR PERMITS AND EXECUTE APPROPRIATE DEVELOPER AGREEMENTS.
    - ALSO NOTE THAT PRACTICES MUST BE CONSTRUCTED BY MAY 4, 2017, OR THE CURRENT DESIGN WILL REQUIRE A REVISION TO MEET THE STORMWATER GUIDELINES IN EFFECT AT THE TIME.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/10/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/11/08  
 DIRECTOR

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY  
 [Signature] 6/9/08  
 COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT

NO.	DESCRIPTION	DATE
1	ADDITION OF GENERAL NOTES TO SHOW APPROVED WAIVER	03/16/12
2	ADDITION OF GENERAL NOTES TO SHOW APPROVED WAIVERS AND UPDATED TRAFFIC STUDY	07-26-11

PARKING TABULATION CHART				
USE	AREA	PARKING RATIO	REQUIRED	PROVIDED
RETAIL	14,400 SF	5 SPACES / 1000 SF	72 SPACES	72 SPACES
RESTAURANT	2,400 SF	14 SPACES / 1000 SF	34 SPACES	34 SPACES
BUSINESS/DELIVERY	NA	NA	NONE	2 SPACES
TOTAL	16,800 SF	VARIES	106 SPACES	108 SPACES

**OWNER/DEVELOPER**  
 TROY HILL SQUARE, LLC  
 c/o SERGIO ACLE  
 10132 BALTIMORE NATIONAL PIKE, SUITE A  
 ELLICOTT CITY, MD 21042  
 410.481.4400

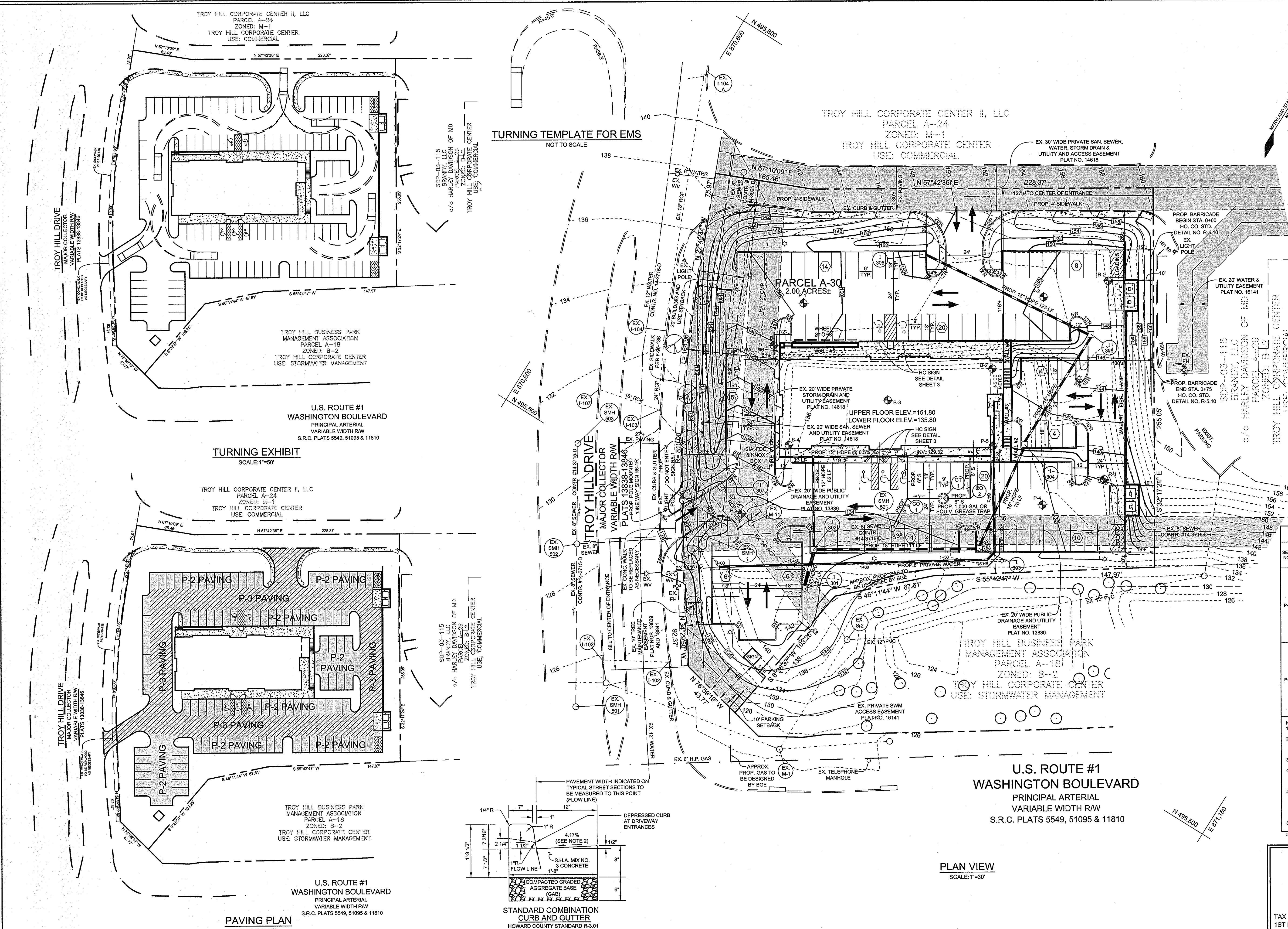
**COVER SHEET**  
**TROY HILL CORPORATE CENTER**  
 PARCEL A-30  
 RESTAURANT AND RETAIL CENTER  
 TAX MAP 37 GRID 18  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@sasland.com

DESIGN BY: JT  
 DRAWN BY: JT  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: MARCH 18, 2008  
 PROJECT #: 06-076  
 SHEET #: 1 of 12

**LEGEND**

EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	123.5
PROPOSED SPOT ELEVATION	+82.53
DIRECTION OF FLOW	→
EXISTING LIGHT POLES	*
PROPOSED LIGHT POLES	☆
PROPOSED DUMPSTER	D
EXISTING BORING LOCATION	P-4

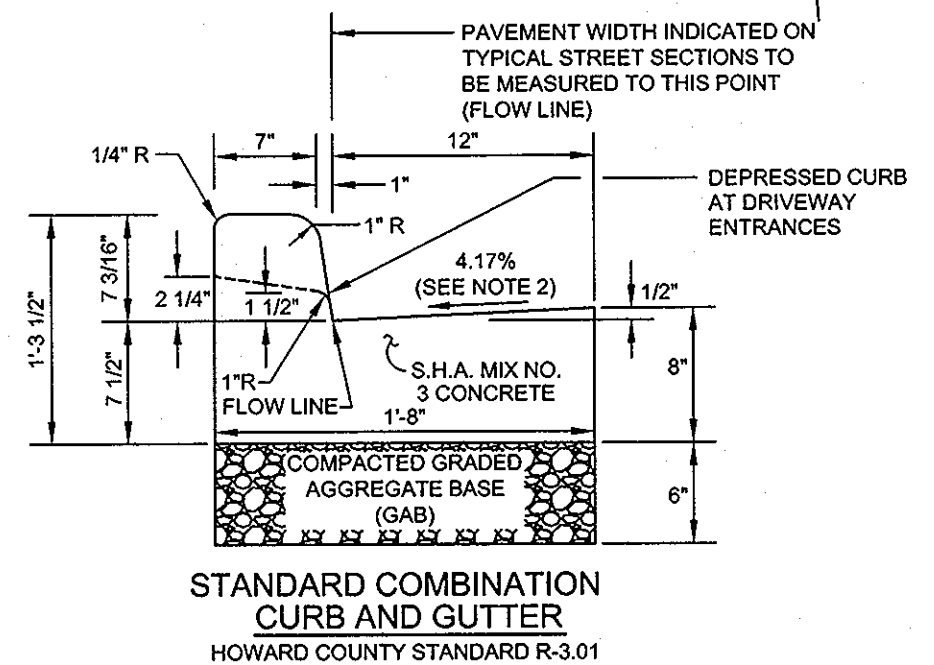


**PAVING SECTIONS**

SEC. NO.	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)		3 TO <5> TO <7>		3 TO <5> TO <7>		27		
		PAVEMENT MATERIAL (INCHES)	MIN	HMA WITH GAB	MIN	HMA WITH CONSTANT GAB	MIN	HMA WITH CONSTANT GAB	MIN	HMA WITH CONSTANT GAB
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	LOCAL ROADS: ACCESS PLACE, ACCESS STREET	HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0	2.0	2.0
P-3	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	LOCAL ROADS: ACCESS PLACE, ACCESS STREET	HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	CUL-DE-SACS: NON-RESIDENTIAL MINOR COLLECTORS:	HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL)	3.0	3.0	3.0	4.5	3.0	2.0	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	10.0	6.0	3.0	6.0	6.0	6.0	6.0	6.0

**NOTES:**

- HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARBAGE TRUCKS.
- HMA SUPERPAVE LAYERS SHALL BE PLACED IN APPROPRIATE COMPACTED LIFT THICKNESS: 10.0 MM BASE (2.0" MIN TO 4.0" MAX), 12.5 MM SURFACE (1.5" MIN TO 3.0" MAX), AND 9.5 MM SURFACE (1.0" MIN TO 2.0" MAX).
- GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED IN 6" MAX COMPACTED THICKNESS LAYERS.
- THE INTERMEDIATE SURFACE COURSE LAYER MUST BE PLACED WITHIN 2 WEEKS OF PLACEMENT OF BASE COURSE AND IS REQUIRED PRIOR TO SUBSTANTIAL COMPLETION INSPECTION AND BOND REDUCTION.
- IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER FOR COMMERCIAL / INDUSTRIAL ENTRANCE APRONS WITHIN THE COUNTY RIGHT-OF-WAY WHERE AUXILIARY LANES ARE NOT REQUIRED, THE THICKNESS OF THE INTERMEDIATE PAVEMENT LAYER CAN BE ADDED TO THE REQUIRED THICKNESS OF THE BASE ASPHALT LAYER.
- THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION, ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY.



**U.S. ROUTE #1 WASHINGTON BOULEVARD**  
PRINCIPAL ARTERIAL  
VARIABLE WIDTH R/W  
S.R.C. PLATS 5549, 51095 & 11810

**PLAN VIEW**  
SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 4/21/08	DATE: 6/1/08	DATE: 6/11/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION	CHIEF, DIVISION OF LAND DEVELOPMENT	DIRECTOR

**PAVING PLAN**  
SCALE: 1"=50'

- NOTE:**
- A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.
  - GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OF 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 & GUTTER.
  - A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
  - POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

*Kristen A. Peter* 6/19/2008  
COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT 50

**OWNER/DEVELOPER**  
TROY HILL SQUARE, LLC  
c/o SERGIO ACLE  
10132 BALTIMORE NATIONAL PIKE, SUITE A  
ELLCOTT CITY, MD 21042  
410.461.4400

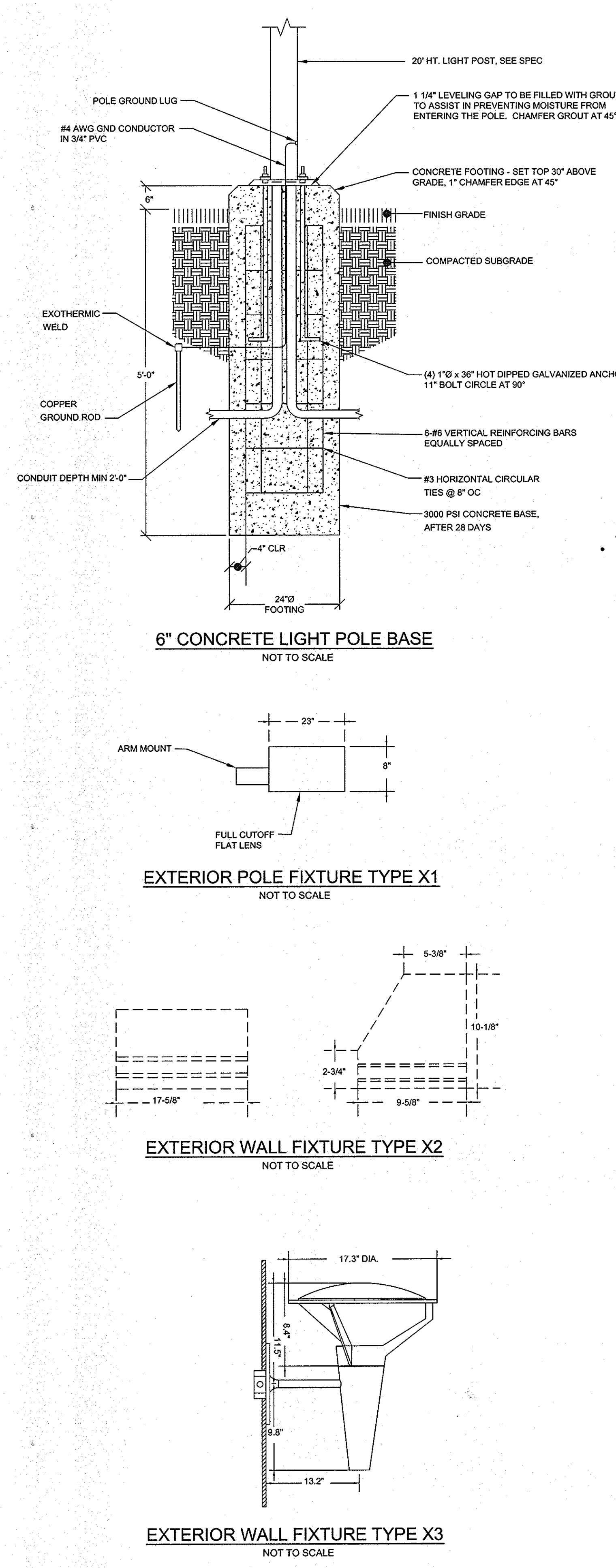
**SITE DEVELOPMENT PLAN**  
**TROY HILL CORPORATE CENTER**  
PARCEL A-30  
RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18  
1ST ELECTION DISTRICT

PARCEL 135  
HOWARD COUNTY, MARYLAND

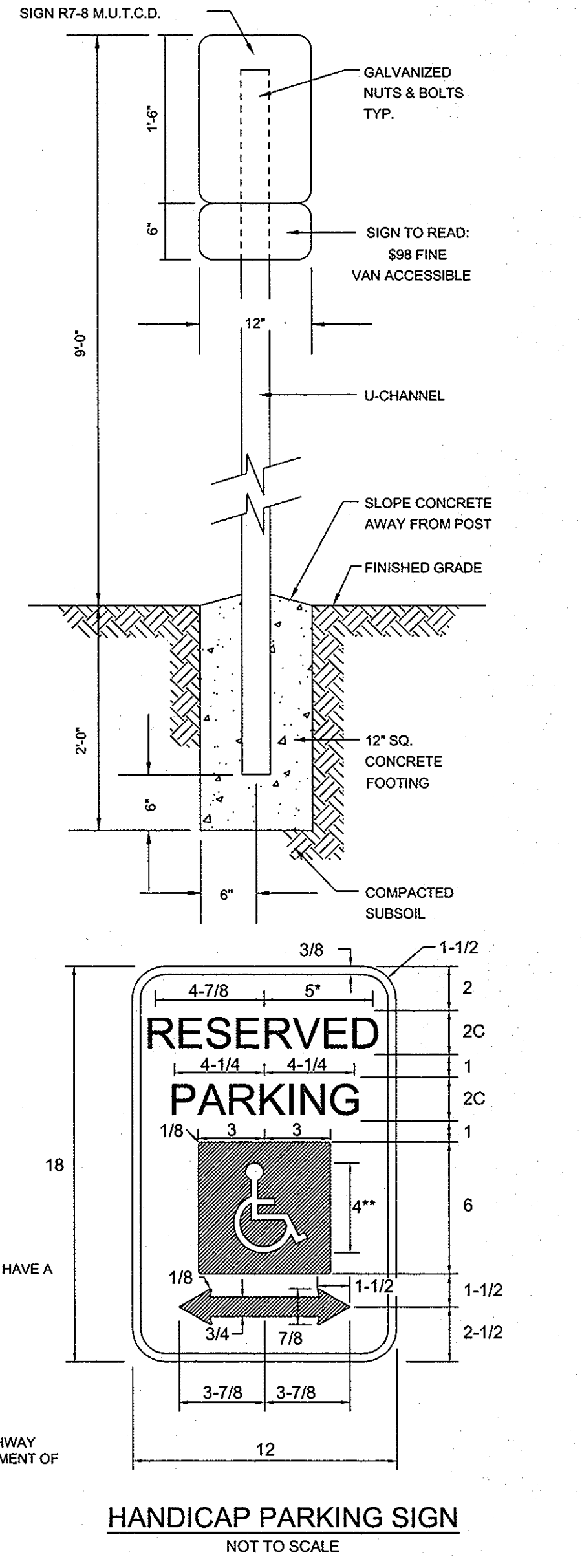
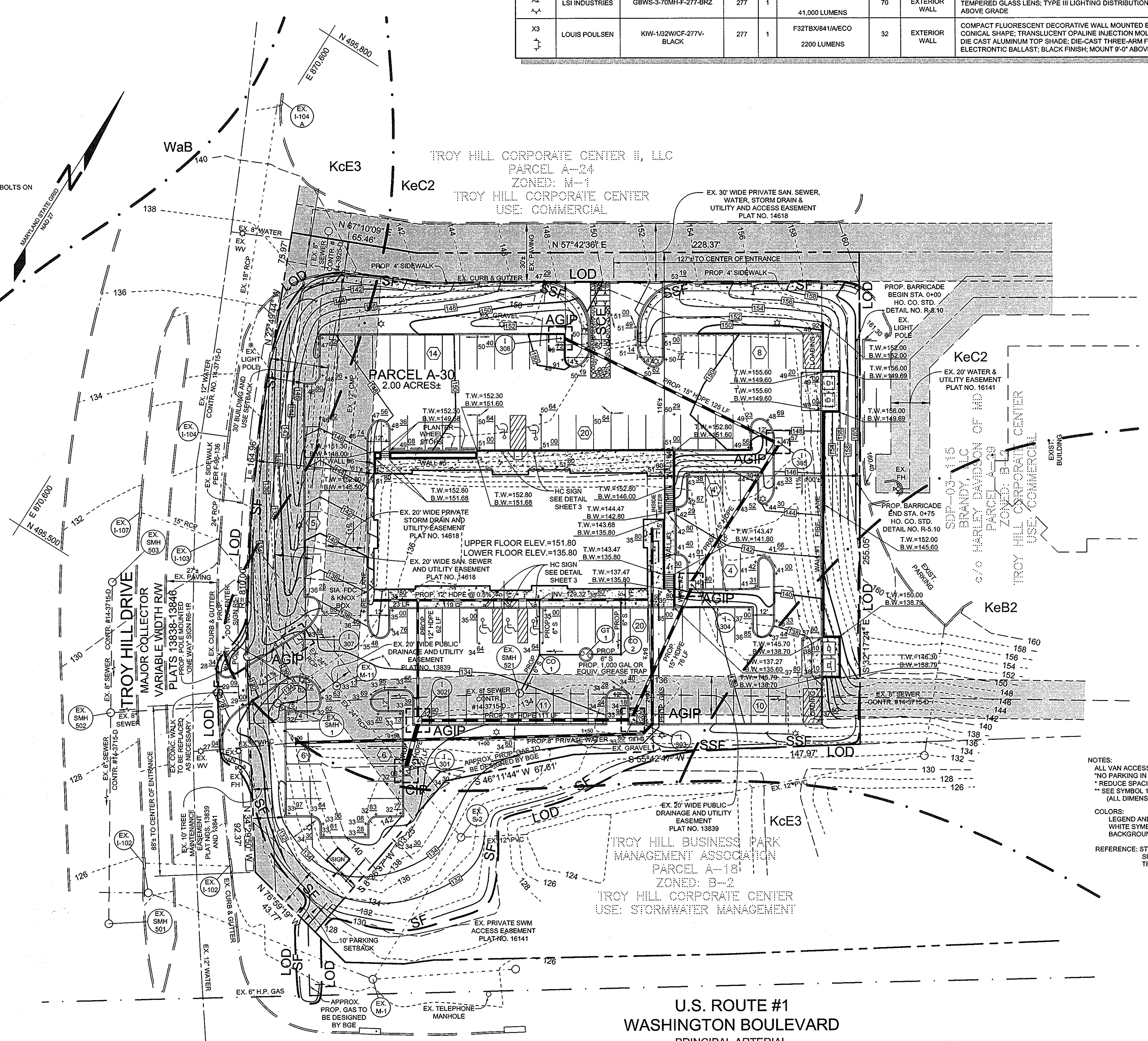
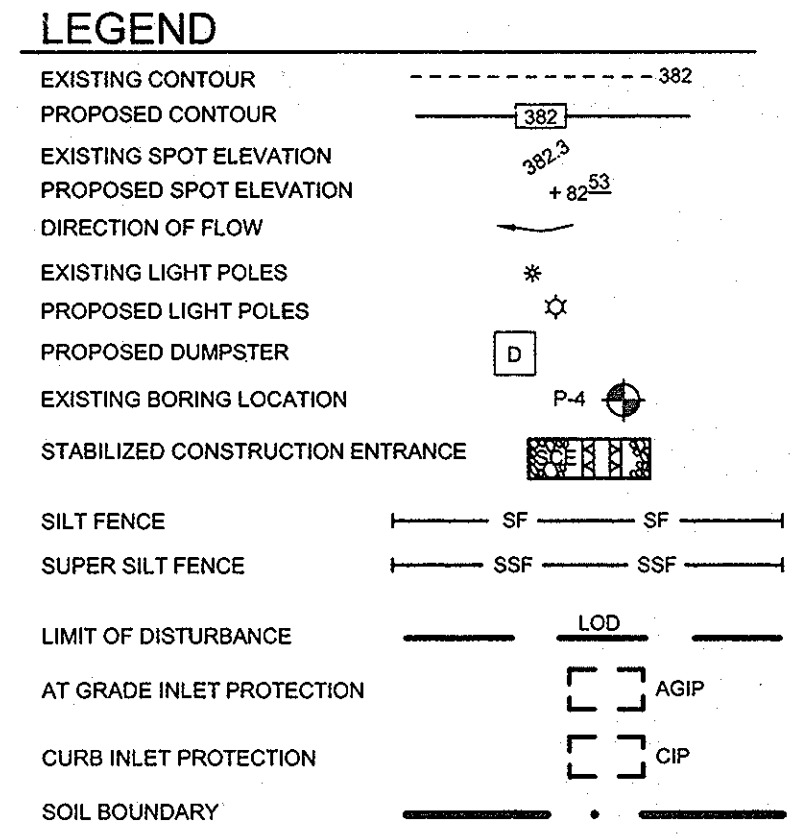
**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silland.com

DESIGN BY: JT  
DRAWN BY: JT  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MARCH 18, 2008  
PROJECT #: 08-076  
SHEET #: 2 of 12



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
KcE3	KELLY CLAY LOAM, 15 TO 30 PERCENT SLOPES, SEVERELY ERODED	D
KcB2	KELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	D
KcC2	KELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	D

LIGHTING FIXTURE SCHEDULE						
SYMBOL	MFR.	CATALOG NO.	CKT. VOLTS	LAMPS (GE CATALOG #)		MOUNTING
				NO.	WATTS	
X1	LSI INDUSTRIES	HE-3-400MH-F-MT-BRZ POLE: SSQBO-507G-20-S-BRZ-5BC	277	1	MVR400VBU/40 41,000 LUMENS	EXTERIOR POLE
X2	LSI INDUSTRIES	GBWS-3-70MH-F-277-BRZ	277	1	MV70UUMED 41,000 LUMENS	EXTERIOR WALL
X3	LOUIS POULSEN	KIW-1/32WCF-277V-BLACK	277	1	F327BX841/AECO 2200 LUMENS	EXTERIOR WALL



NOTES:  
 ALL VAN ACCESSIBLE PARKING SPACE AISLE SHALL HAVE A "NO PARKING IN ACCESS AISLE" SIGN.  
 \* REDUCE SPACING 50%  
 \*\* SEE SYMBOL 1860 FOR SYMBOL DESIGN (ALL DIMENSIONS FOR SIGNS IN INCHES)  
 COLORS:  
 LEGEND AND BORDER - GREEN  
 WHITE SYMBOL ON BLUE BACKGROUND  
 BACKGROUND - WHITE  
 REFERENCE: STATE OF MARYLAND STANDARD HIGHWAY SIGNS BOOKLET MARYLAND DEPARTMENT OF TRANSPORTATION.

U.S. ROUTE #1  
 WASHINGTON BOULEVARD  
 PRINCIPAL ARTERIAL  
 VARIABLE WIDTH R/W  
 S.R.C. PLATS 5549, 51095 & 11810

PLAN VIEW  
 SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 4/24/08

REVIEWER FOR HOWARD COUNTY AND TECHNICAL REQUIREMENTS  
 U.S.A. NATIONAL RESOURCES CONSERVATION SERVICE  
 DATE: 4/24/08  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT  
 DATE: 4/24/08

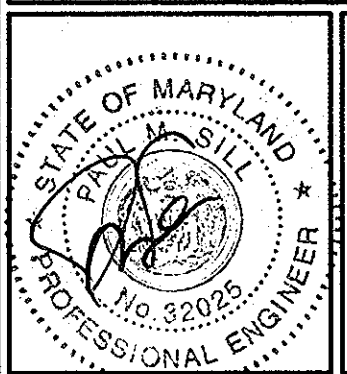
ENGINEERS CERTIFICATE  
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."  
 PAUL M. SILL, P.E.  
 DATE: 3-19-08

DEVELOPER'S CERTIFICATE  
 "I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."  
 DATE: 3-18-08

NO.	DESCRIPTION	DATE

OWNER/DEVELOPER  
 TROY HILL SQUARE, LLC  
 c/o SERGIO ACLE  
 10132 BALTIMORE NATIONAL PIKE, SUITE A  
 ELLICOTT CITY, MD 21042  
 410.461.4400

GRADING, SEDIMENT AND EROSION CONTROL PLAN  
 TROY HILL CORPORATE CENTER  
 PARCEL A-30  
 RESTAURANT AND RETAIL CENTER  
 TAX MAP 37 GRID 18  
 1ST ELECTION DISTRICT  
 PARCEL 135  
 HOWARD COUNTY, MARYLAND



Sill Adcock & Associates · LLC  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7652 Fax: 443.325.7655  
 Email: info@saaaland.com

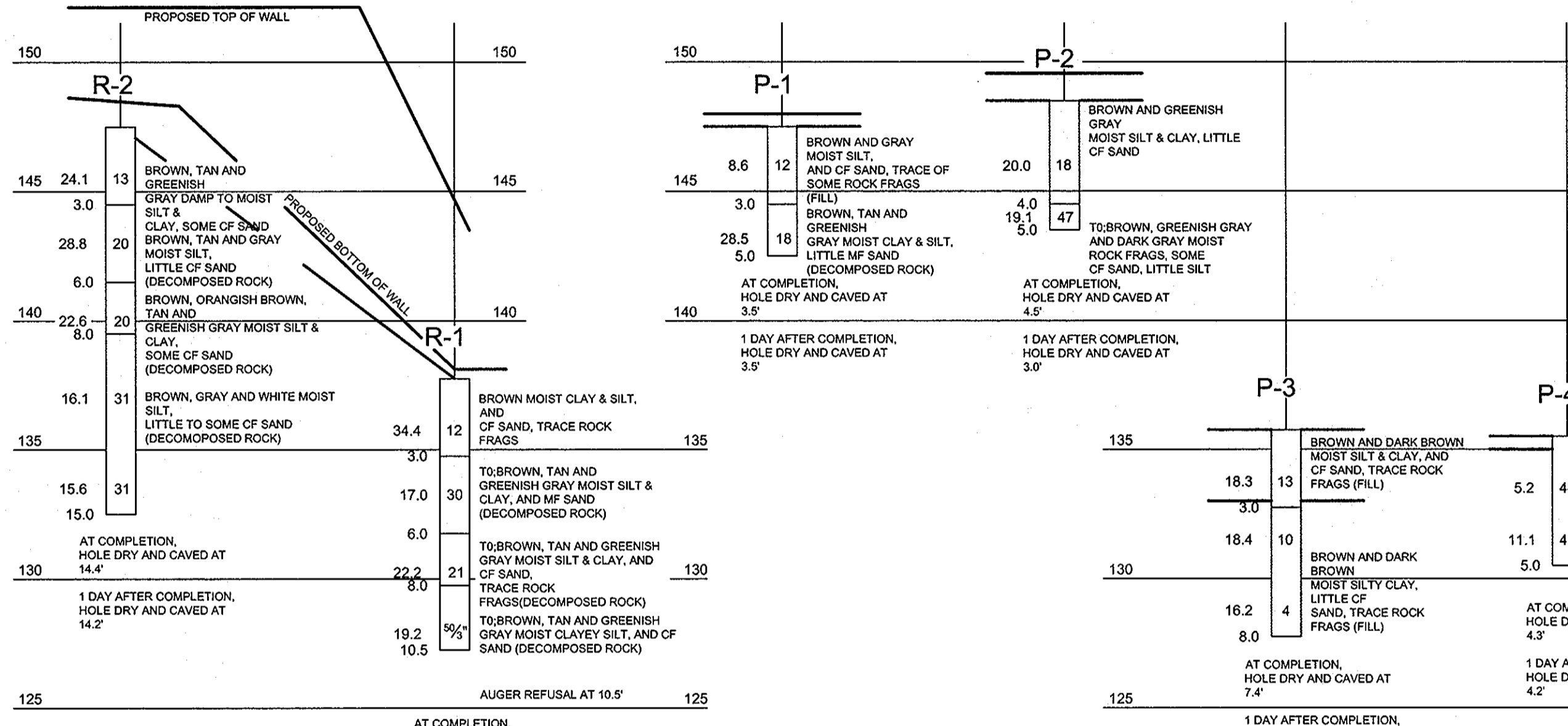
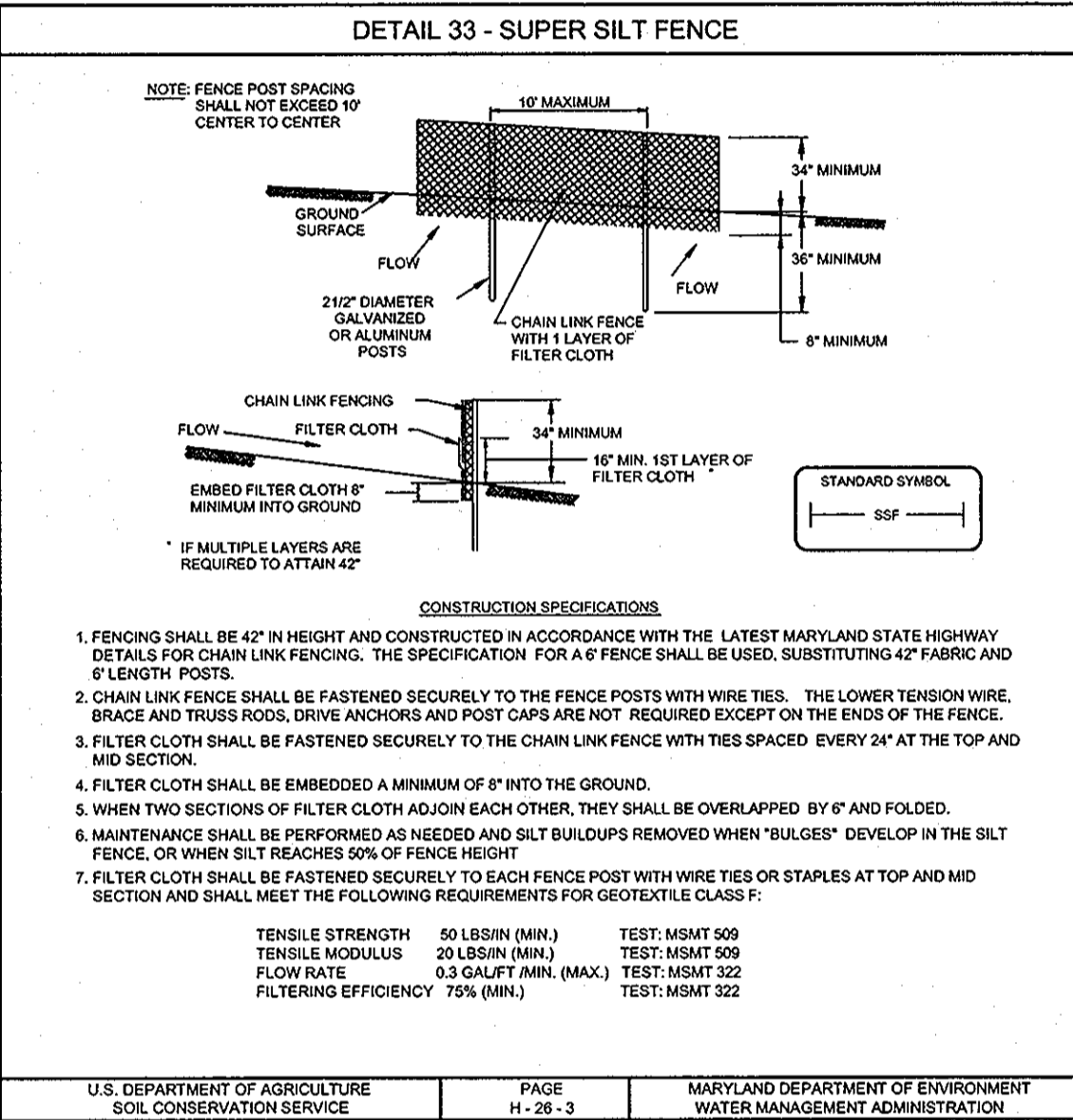
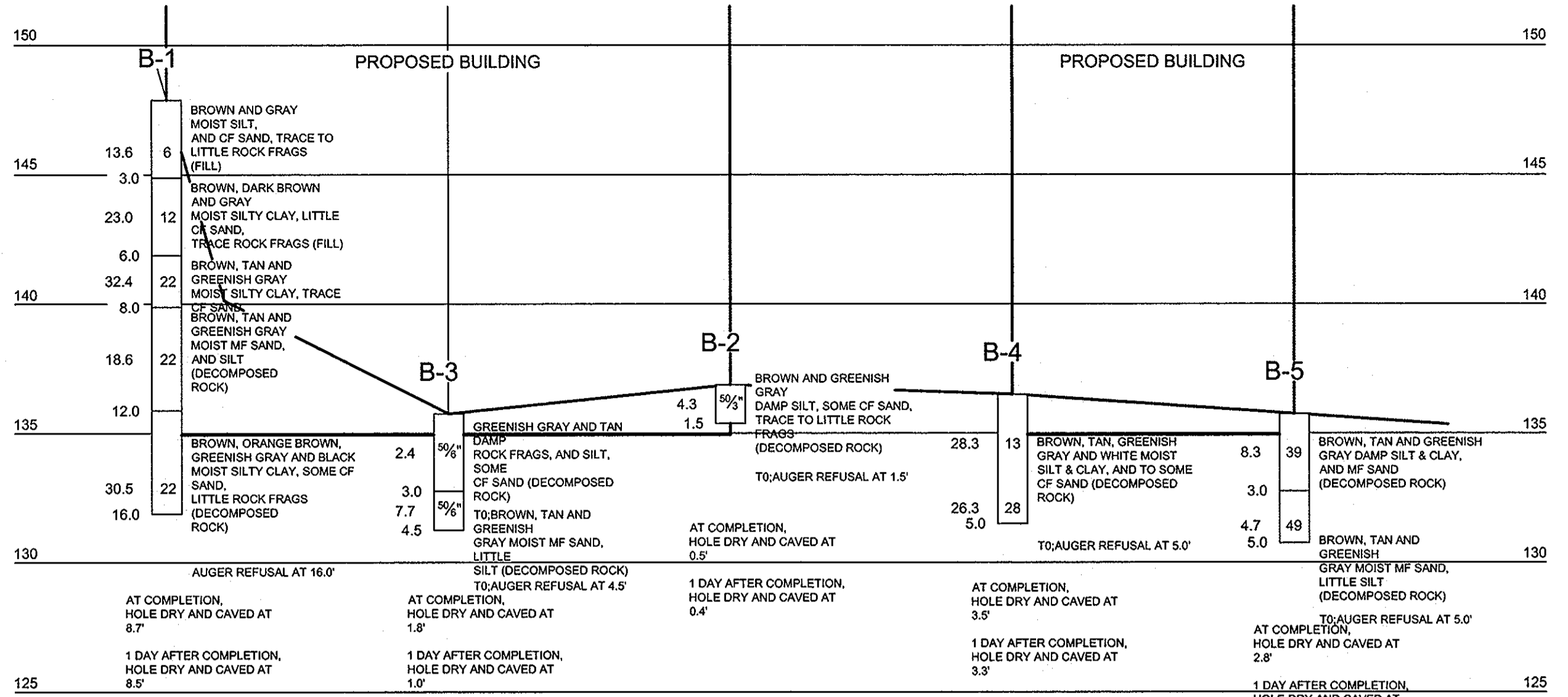
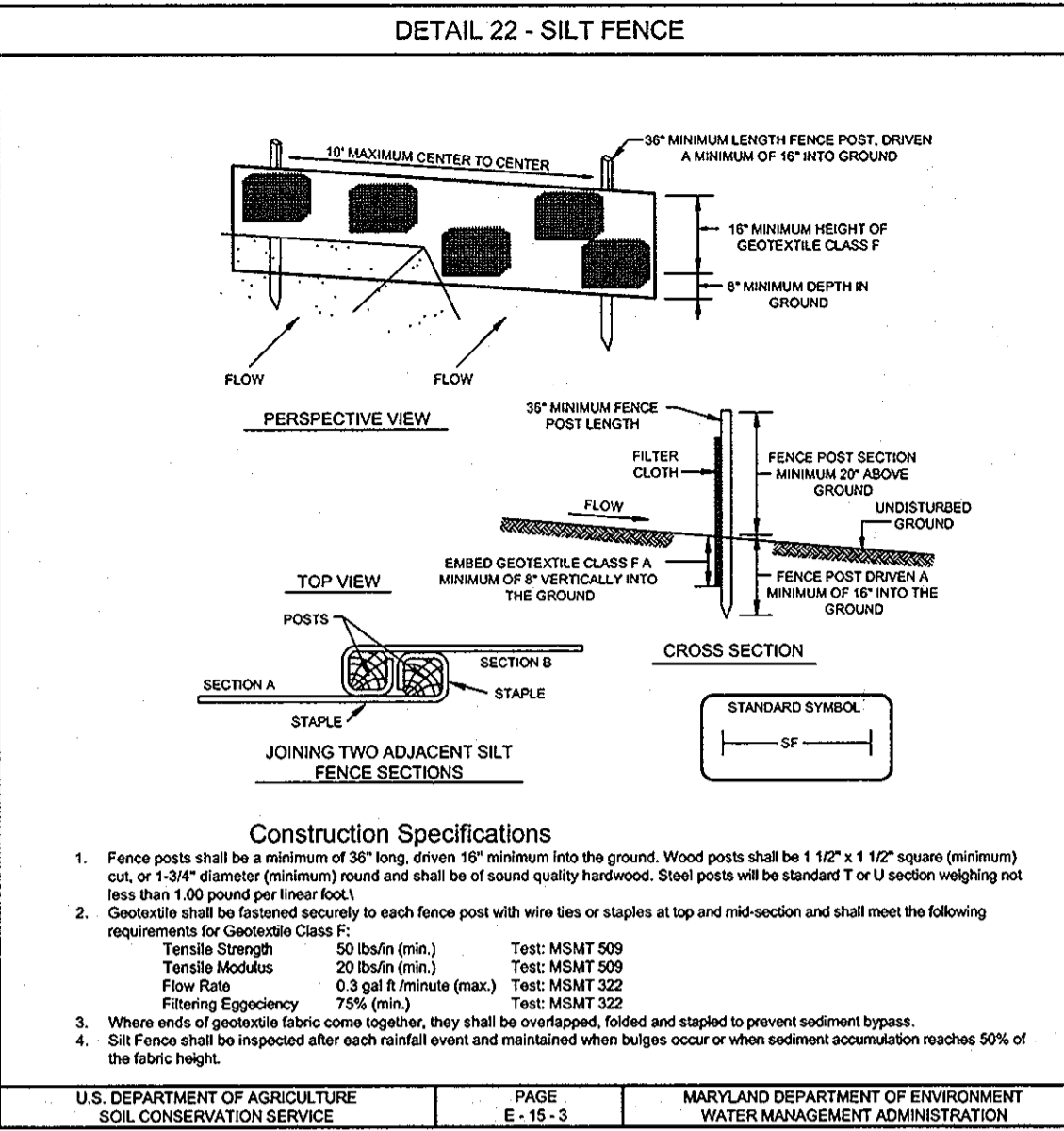
DESIGN BY: JT  
 DRAWN BY: JT  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: MARCH 18, 2008  
 PROJECT #: 06-078  
 SHEET #: 3 of 12

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOILS

- DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL...
PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH...
CONDITIONS WHERE PRACTICE APPLIES
I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES...

SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF CONSTRUCTION...
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN...
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...

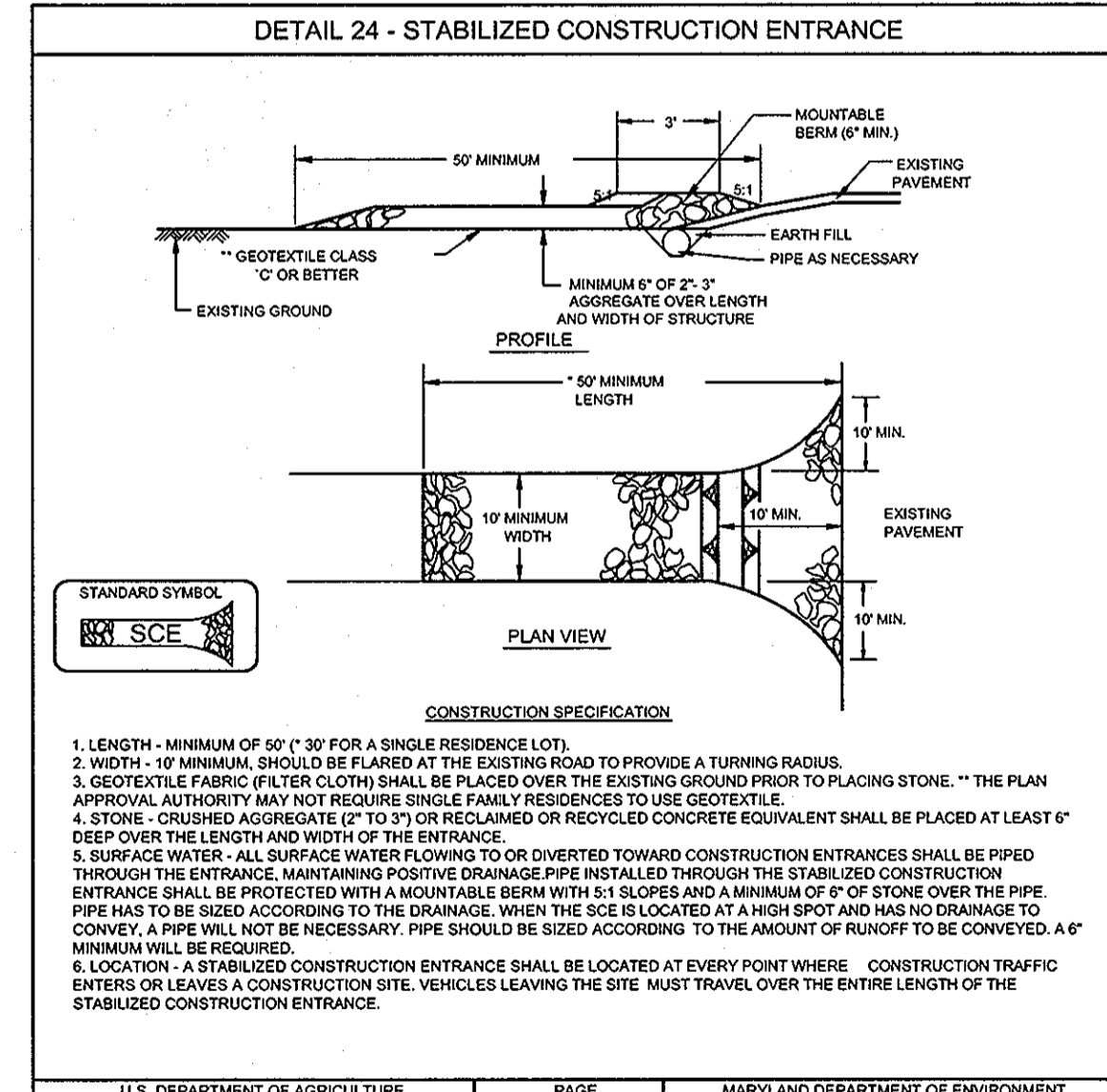
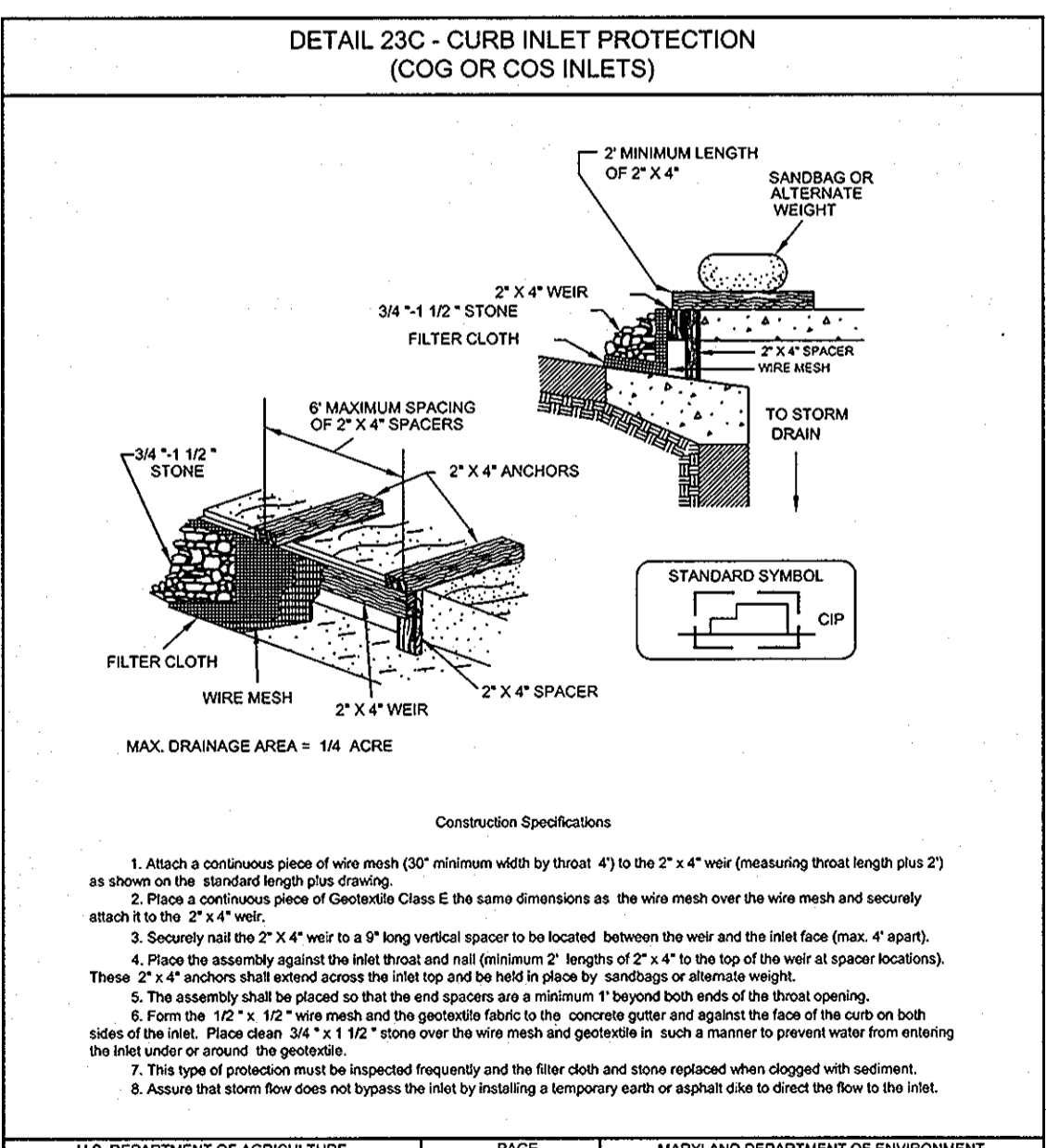
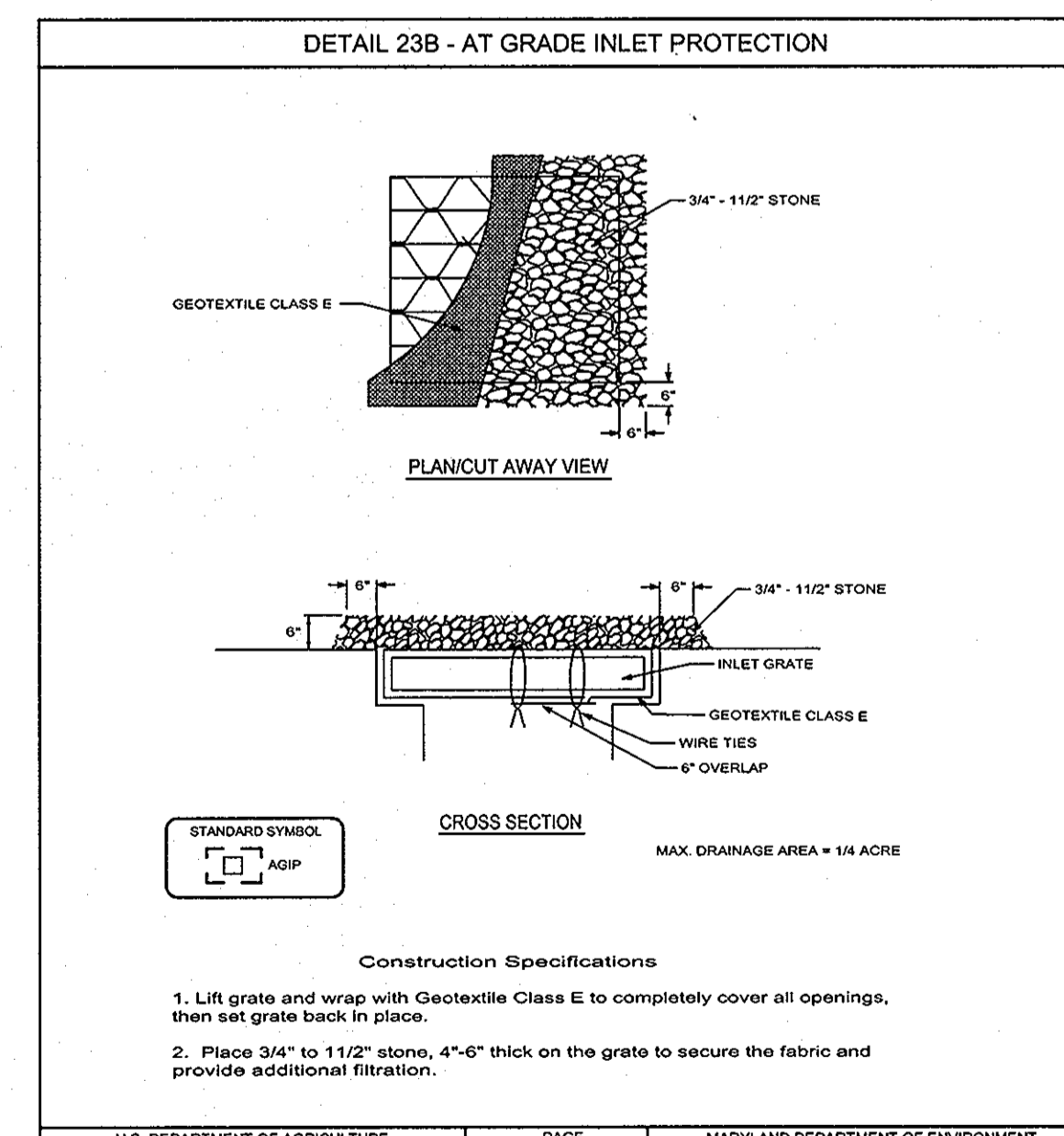


- CONSTRUCTION AND MATERIAL SPECIFICATIONS
I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...
II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 21.0 VEGETATIVE STABILIZATION - SECTION I...
III. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED...

- SEQUENCE OF CONSTRUCTION
1. OBTAIN GRADING PERMIT.
2. NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSE AND PERMITS AT (410) 313-1880 AT LEAST 24 HOURS BEFORE STARTING ANY WORK...
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND SUPER SILT FENCE (3 DAYS)...

PERMANENT SEEDING NOTES

- APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING...
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES...



BORING PROFILES NOT TO SCALE

TEMPORARY SEEDING NOTES

- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.).
SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 1 THRU NOVEMBER 15, SEED WITH 2 LBS BUSHLE PER ACRE OF ANNUAL RYE...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for planning and zoning approval.

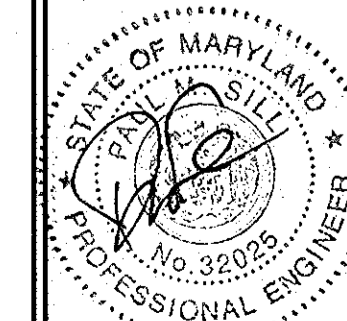
REVIEWED FOR HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES CONSERVATION SERVICE. Includes review comments and dates.

ENGINEERS CERTIFICATE: I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS...

DEVELOPER'S CERTIFICATE: I ME CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL... Includes signature and date.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

OWNER/DEVELOPER: TROY HILL SQUARE, LLC c/o SERGIO ACLE. 10132 BALTIMORE NATIONAL PIKE, SUITE A ELLICOTT CITY, MD 21042 410.461.4400.

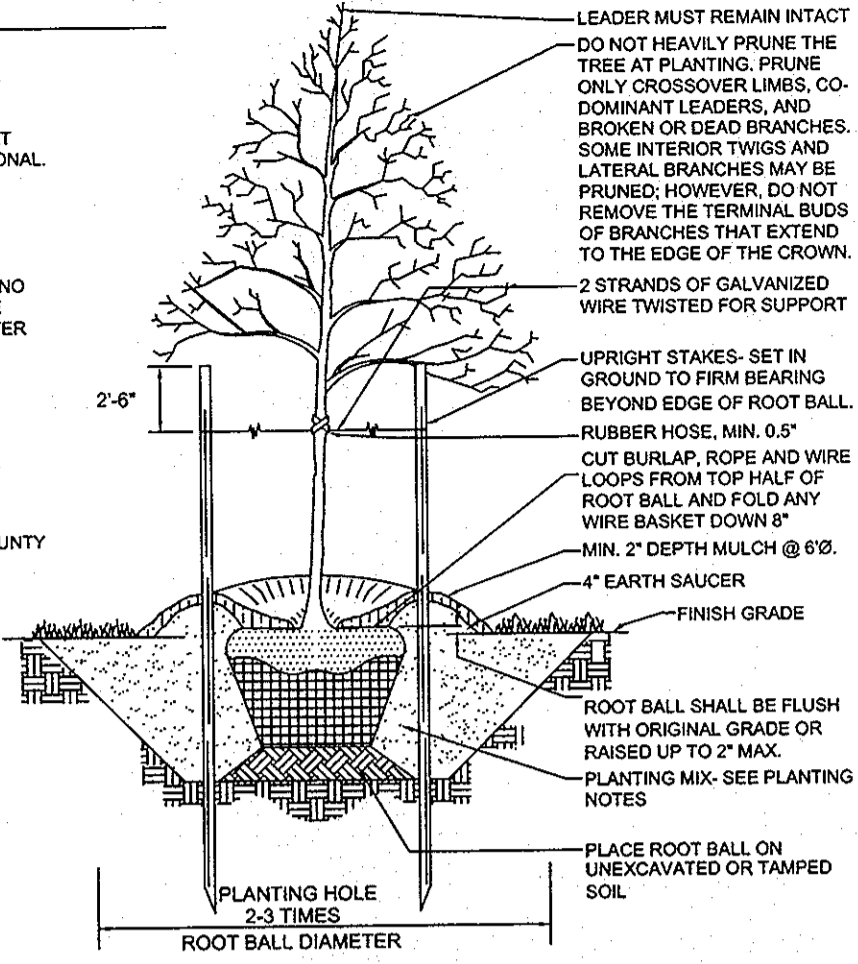


SEDIMENT AND EROSION CONTROL NOTES AND DETAILS. TROY HILL CORPORATE CENTER PARCEL A-30. RESTAURANT AND RETAIL CENTER. PARCEL 135 HOWARD COUNTY, MARYLAND.

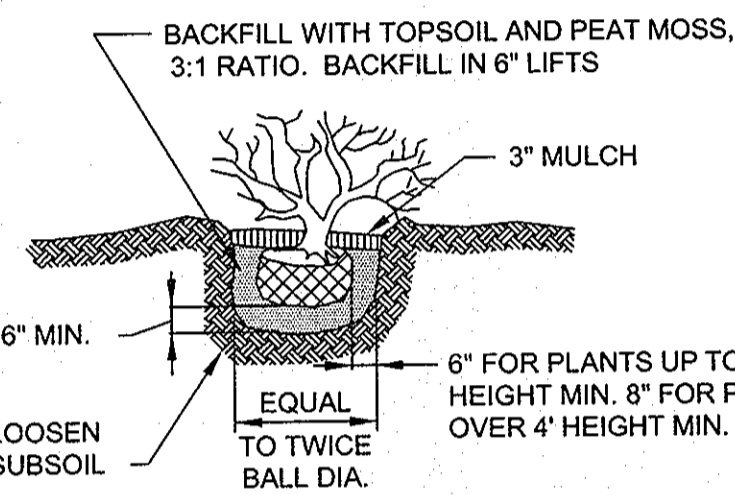
DESIGN BY: JT. DRAWN BY: JT. CHECKED BY: PS. SCALE: AS SHOWN. DATE: MARCH 18, 2008. PROJECT #: 06-076. SHEET #: 4 OF 12.

**NOTES**

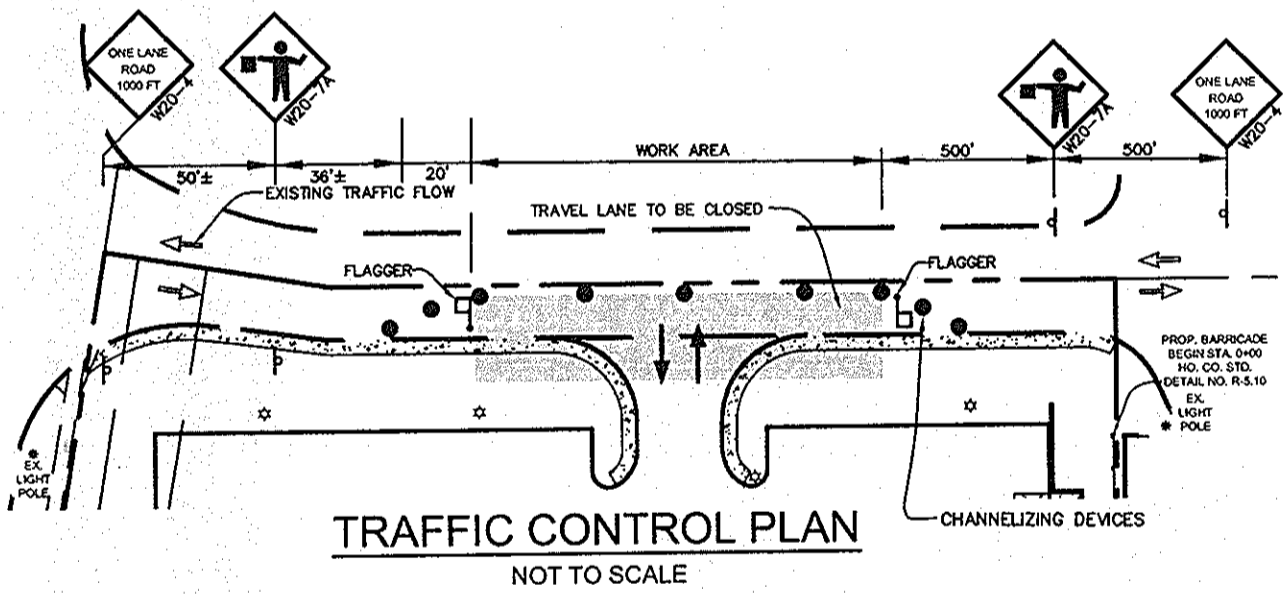
- CONSULT INTERNATIONAL SOCIETY OF AGRICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS, OR CONSULT WITH A QUALIFIED PROFESSIONAL.
- EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
- STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWERAGE EASEMENT.



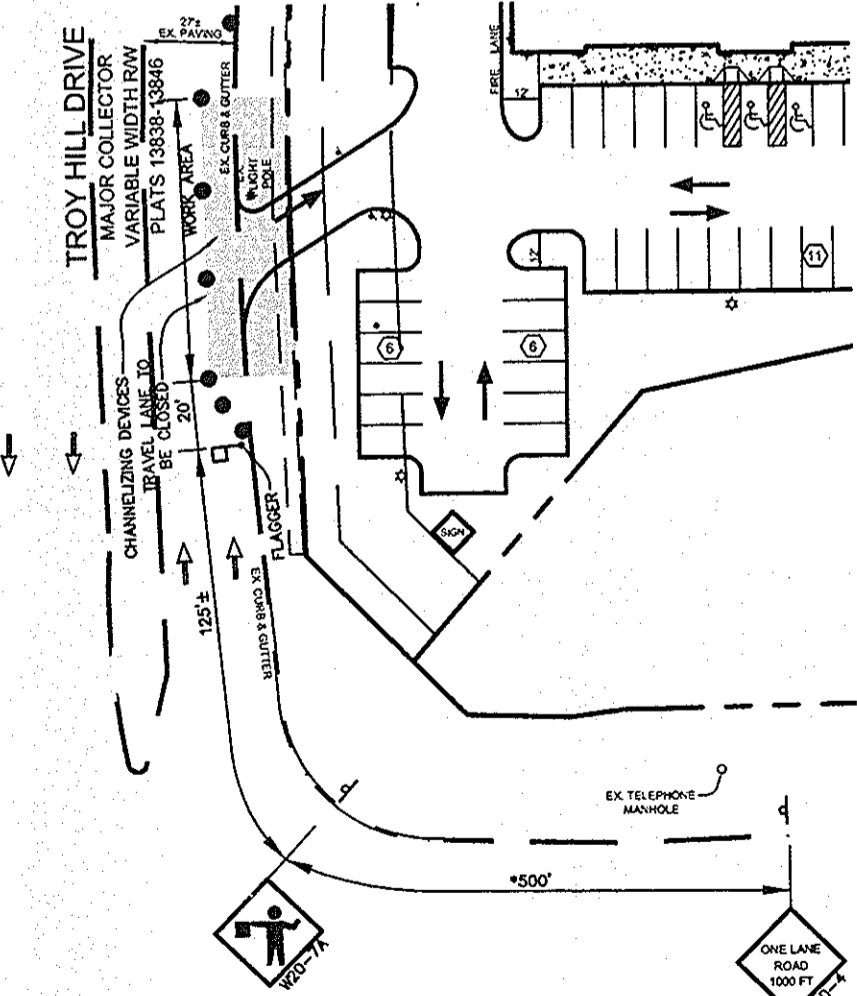
**TYPICAL TREE PLANTING AND STAKING**  
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE



**TYPICAL SHRUB PLANTING DETAIL**  
NOT TO SCALE

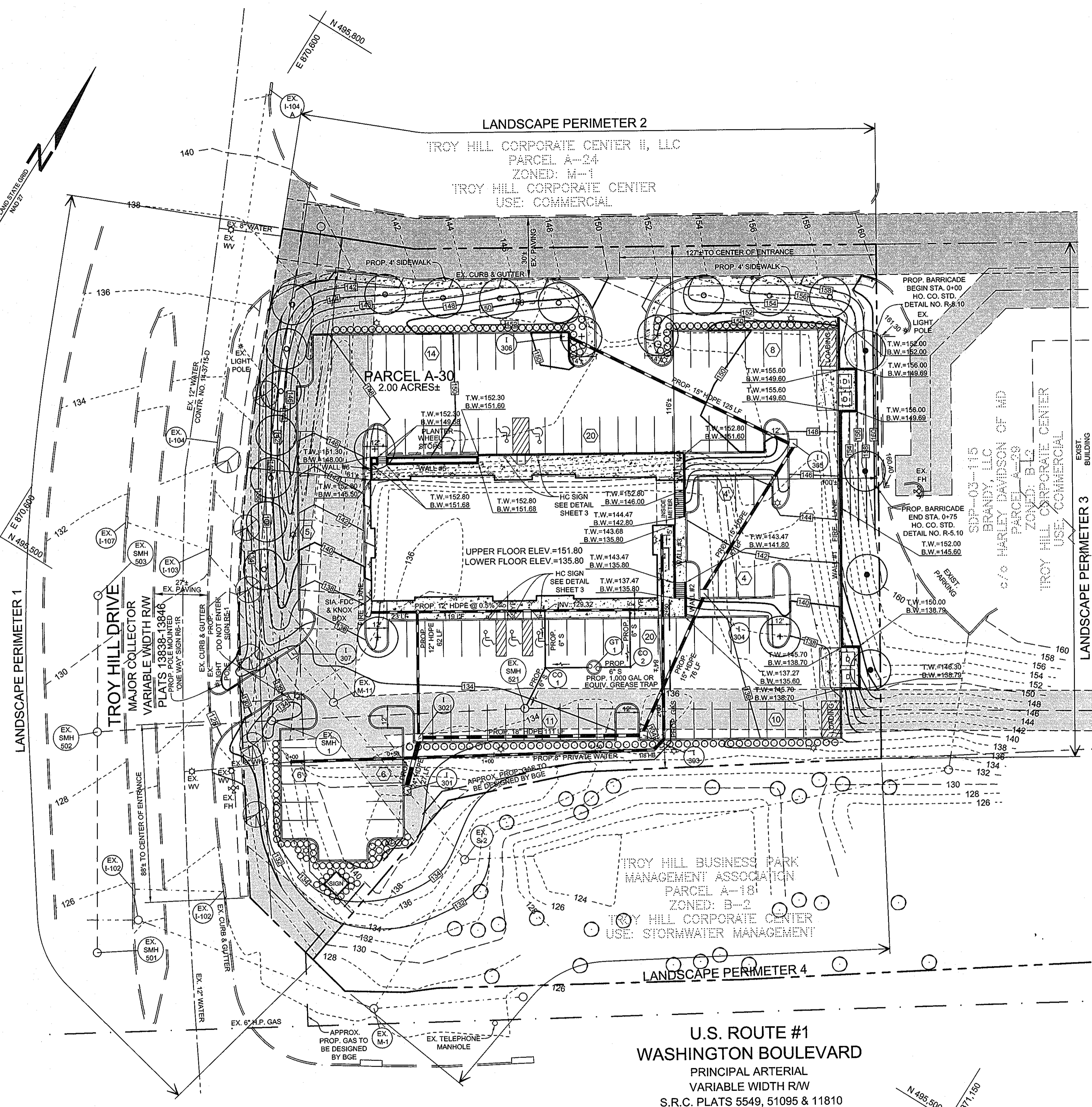


**TRAFFIC CONTROL PLAN**  
NOT TO SCALE



**TRAFFIC CONTROL PLAN**  
NOT TO SCALE

NOTE:  
1. CONSTRUCTION ON TROY HILL DRIVE AND THE SERVICE ROAD TO BE RESTRICTED TO ONE LANE AT A TIME. AT NO TIME SHALL THEY BE CLOSED.



**PLAN VIEW**  
SCALE: 1"=30'

**U.S. ROUTE #1**  
**WASHINGTON BOULEVARD**  
PRINCIPAL ARTERIAL  
VARIABLE WIDTH RAW  
S.R.C. PLATS 5549, 51095 & 11810

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING LIGHT POLES
- PROPOSED LIGHT POLES
- PROPOSED DUMPSTER
- PROPOSED LANDSCAPE TREES
- PROPOSED LANDSCAPE SHRUBS
- EXISTING STREET TREES
- EXISTING LANDSCAPE TREES

**SCHEDULE A**  
**PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES		TOTALS
	1	2	3	4	
PERIMETER/FRONTAGE DESIGNATION	1	2	3	4	2-A, 2-E
LANDSCAPE TYPE					
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	378	294	255	319	1,246
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO
REMAINING PERIMETER LENGTH	YES	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	201' (3)	NO	NO	NO	NO
REMAINING PERIMETER LENGTH					
NUMBER OF PLANTS REQUIRED	1:40 = 9	1:40 = 7	1:60 = 4	1:60 = 5	25
SHADE TREES					118
EVERGREEN TREES	1:4 = 44	1:4 = 74			
SHRUBS					
NUMBER OF PLANTS PROVIDED	7	7	4		18 (1)(2)
SHADE TREES					
EVERGREEN TREES					
OTHER TREES (2:1 SUBSTITUTION)	64 (1)	74		50 (2)	188 (1)(2)
SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					

- NOTES:  
1. SUBSTITUTE 20 SHRUBS FOR 2 SHADE TREES.  
2. SUBSTITUTE 50 SHRUBS FOR 5 SHADE TREES.  
3. CREDIT FOR 2' HIGH GRADED BERM. TOTAL GRADE DIFFERENCE BETWEEN TROY HILL DRIVE AND PROPOSED PARKING IS APPROX. 12" TO 14".

**SCHEDULE B**  
**PARKING LOT LANDSCAPING CHART**

NUMBER OF PARKING SPACES	109
NUMBER OF ISLANDS REQUIRED	5
NUMBER OF ISLANDS PROVIDED	5
NUMBER OF TREES REQUIRED	5
NUMBER OF TREES PROVIDED	5
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	

**PLANT LIST**

KEY	QUANTITY	BOTANICAL NAME	SIZE	NOTE
+	5	ACER RUBRUM 'OCTOBER GLORY'	2 1/2"-3" CAL.	B & B
+		OCTOBER GLORY RED MAPLE		B & B
○	14	ZELKOVA SERRATA 'VILLAGE GREEN'	2 1/2"-3" CAL.	B & B
○		VILLAGE GREEN JAPANESE ZELKOVA		B & B
○	4	PRUNUS GERASIFERA 'THUNDERCLOUD'	1 1/2"-2" CAL.	B & B
○		THUNDERCLOUD PLUM		B & B
○	124	EUONYMUS KIATSCHOVICUS 'MANHATTAN'	2-1/2' - 3' HT	B & B
○		MANHATTAN EUONYMUS		B & B
○	64	ILEX CORNUTA 'CARISSA'	2-1/2' - 3' HT	B & B
○		CARISSA HOLLY		B & B

**LANDSCAPE NOTES**

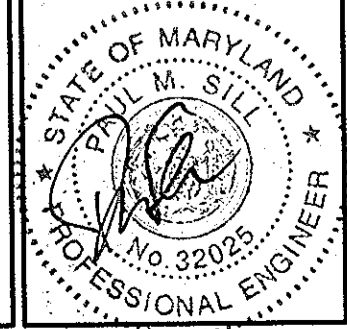
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (30 SHADE TREES AND 118 SHRUBS) WILL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$12,540.00.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature]

NO.	DESCRIPTION	DATE

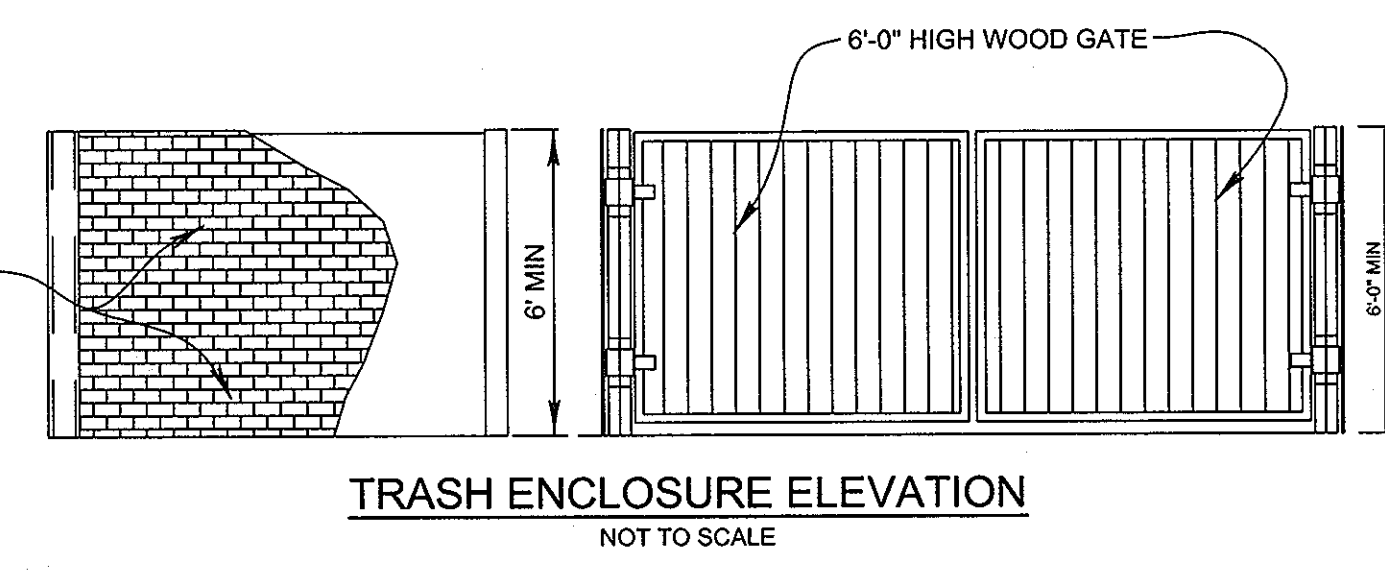
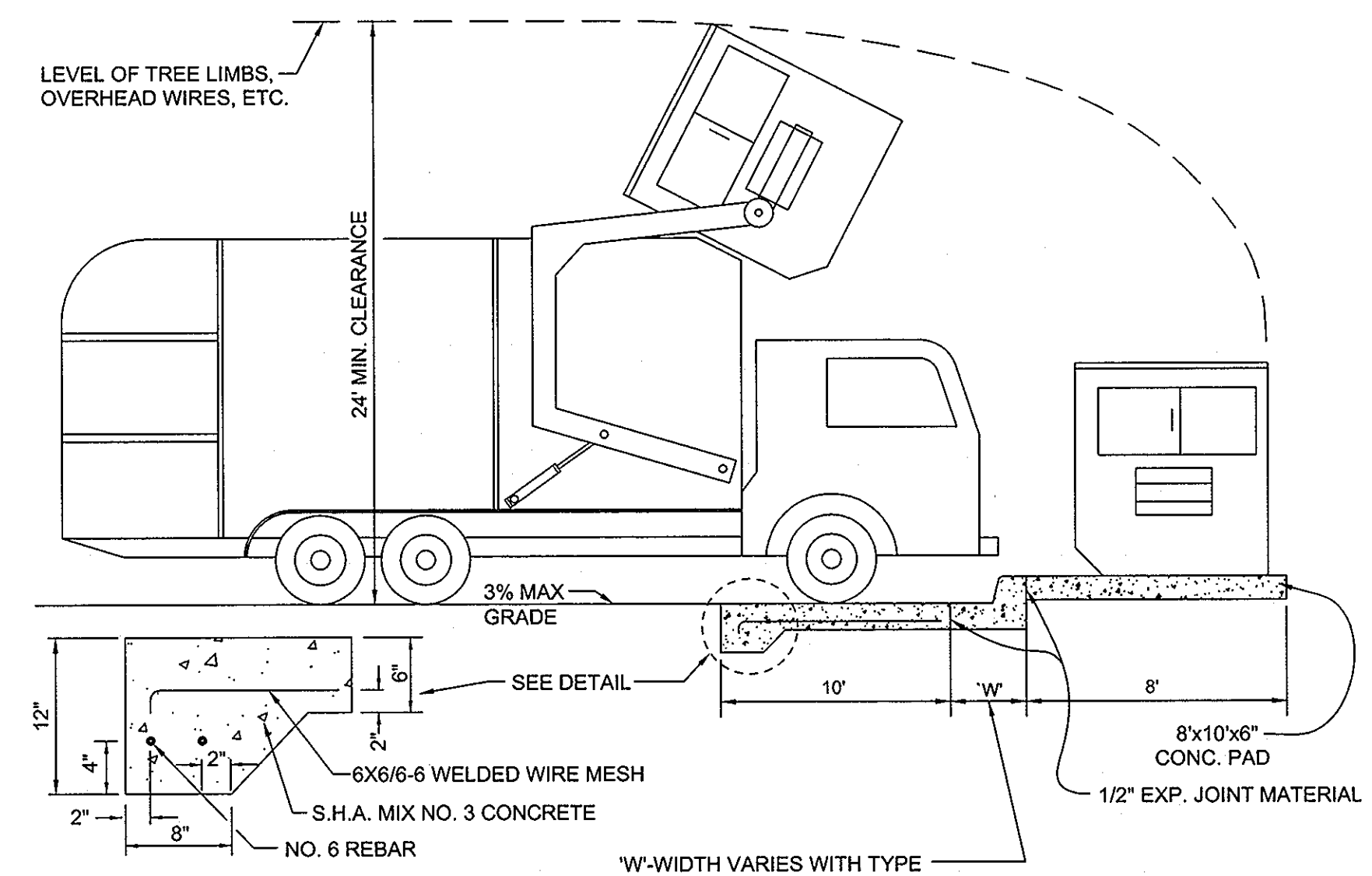
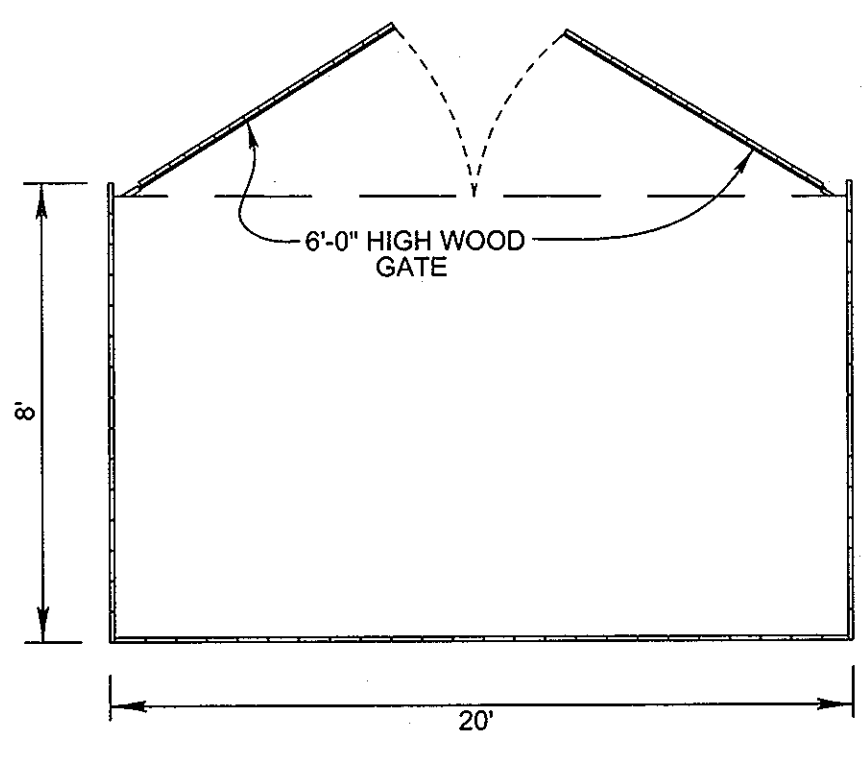
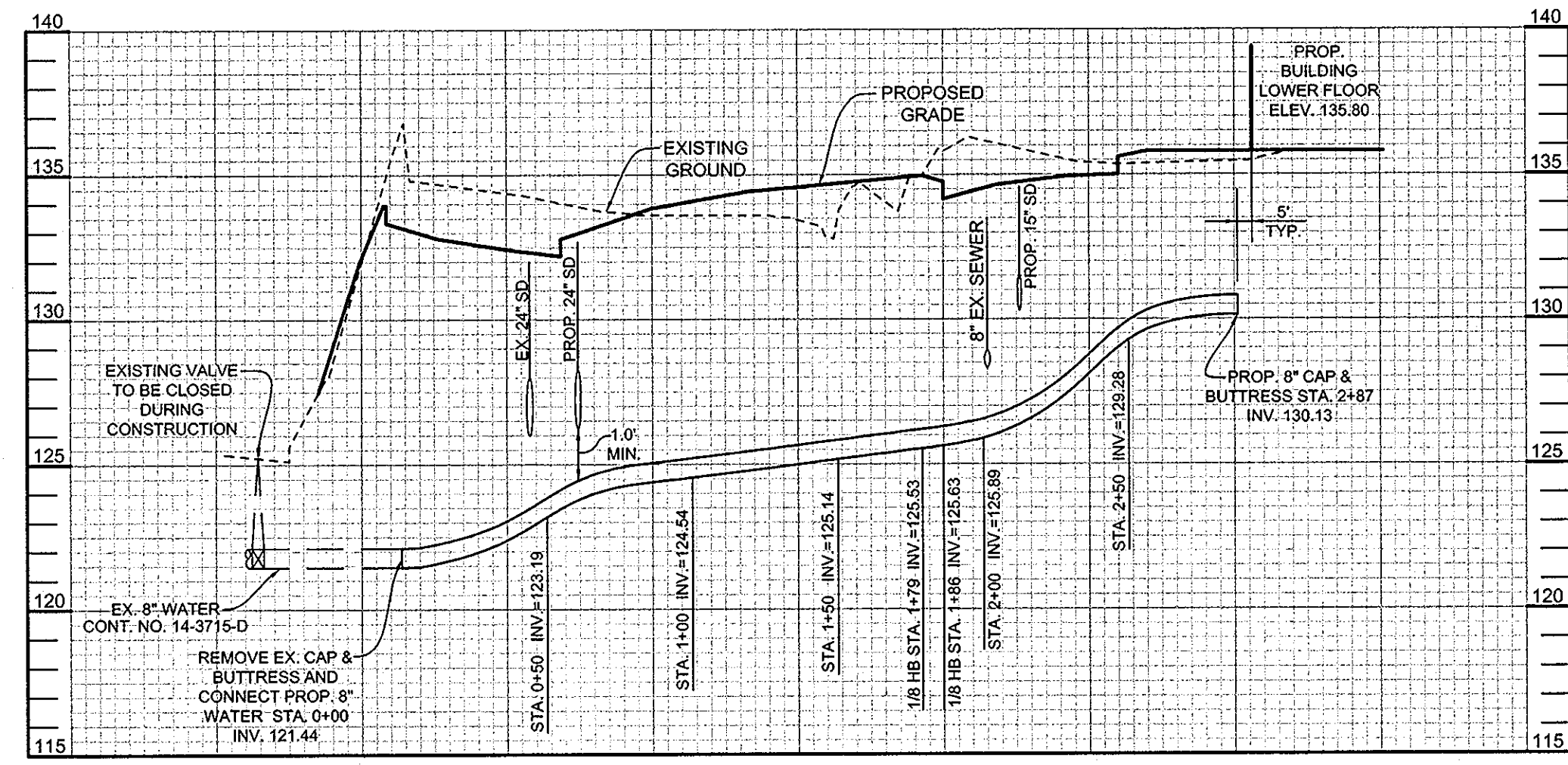
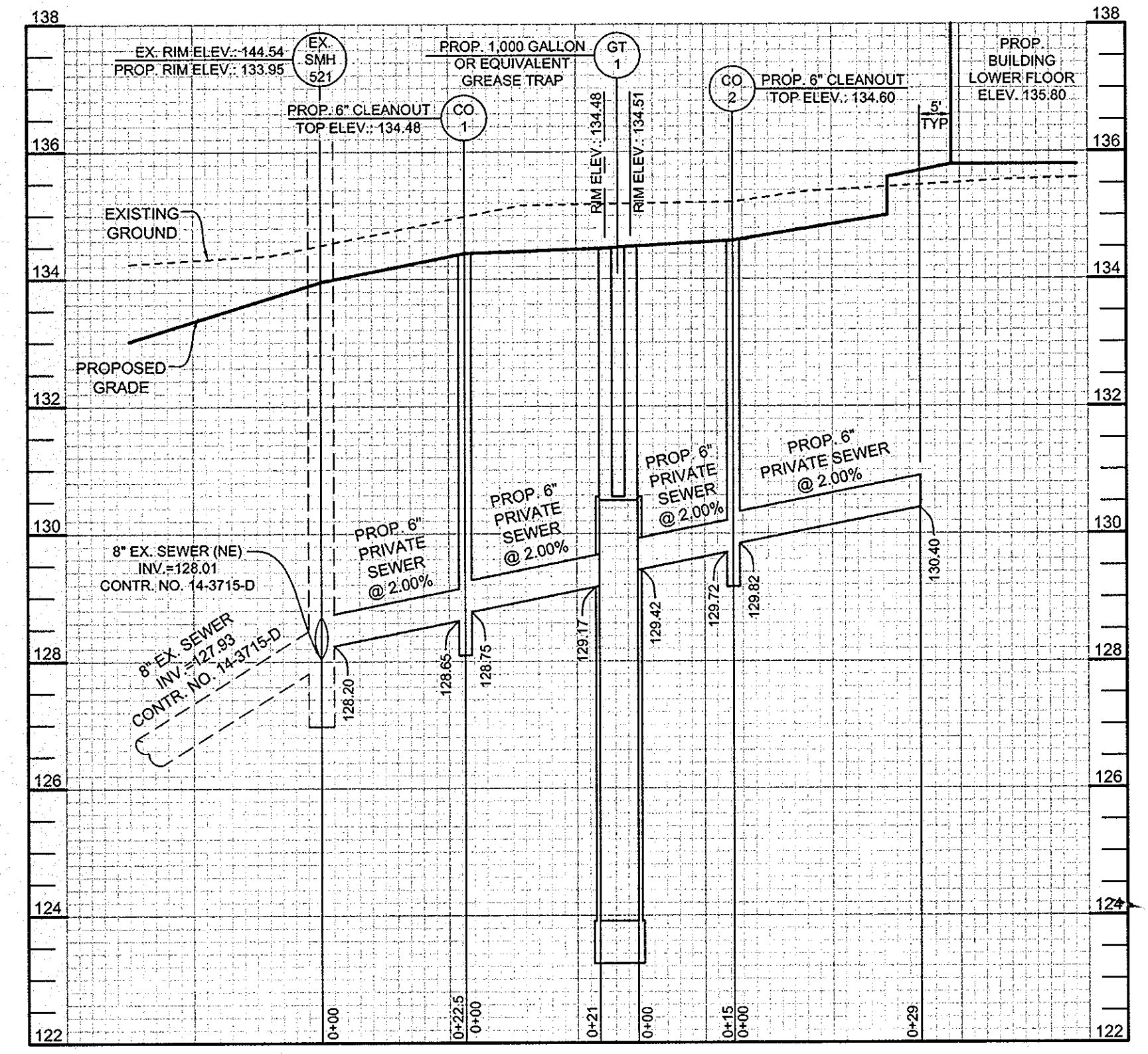
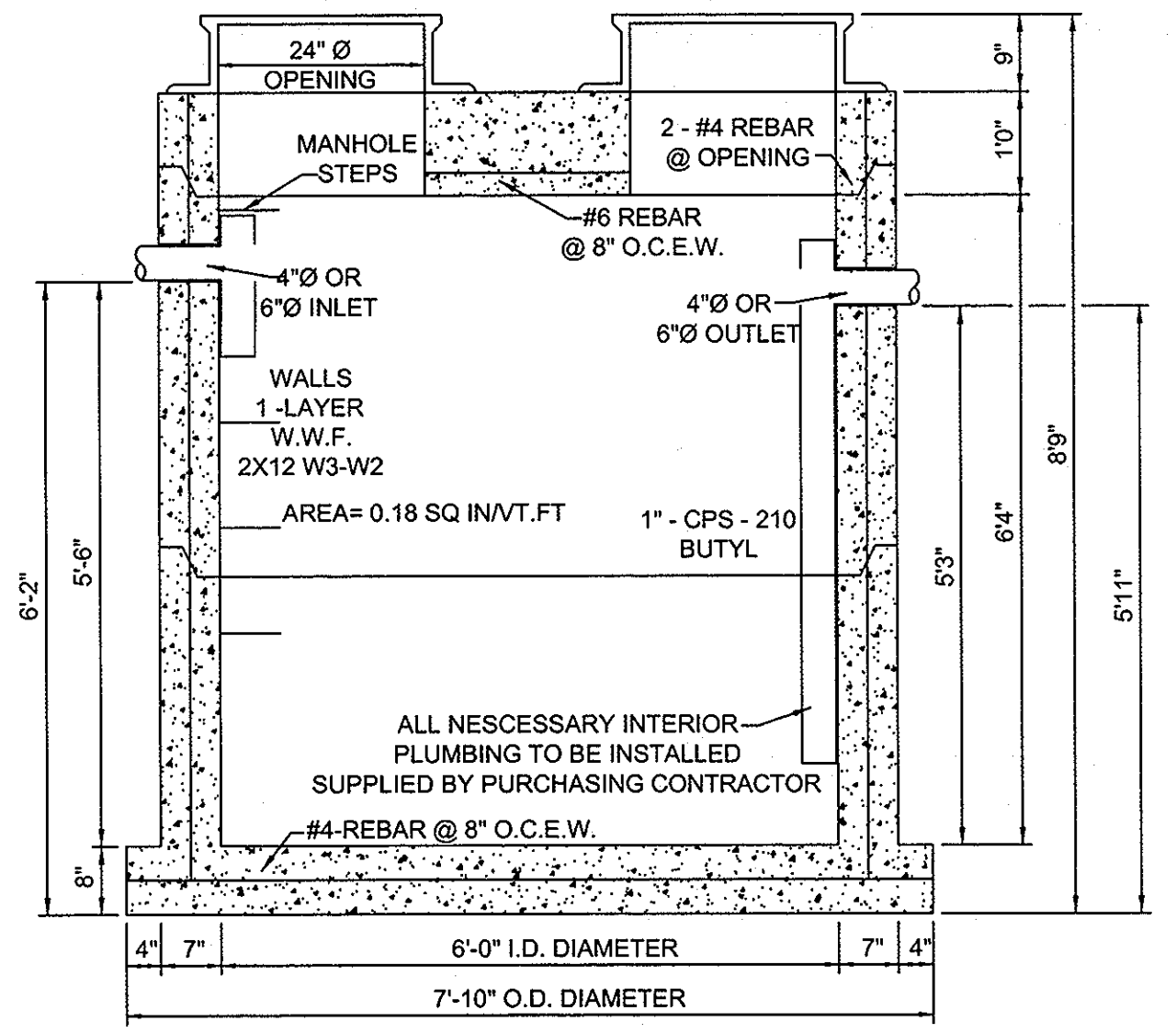
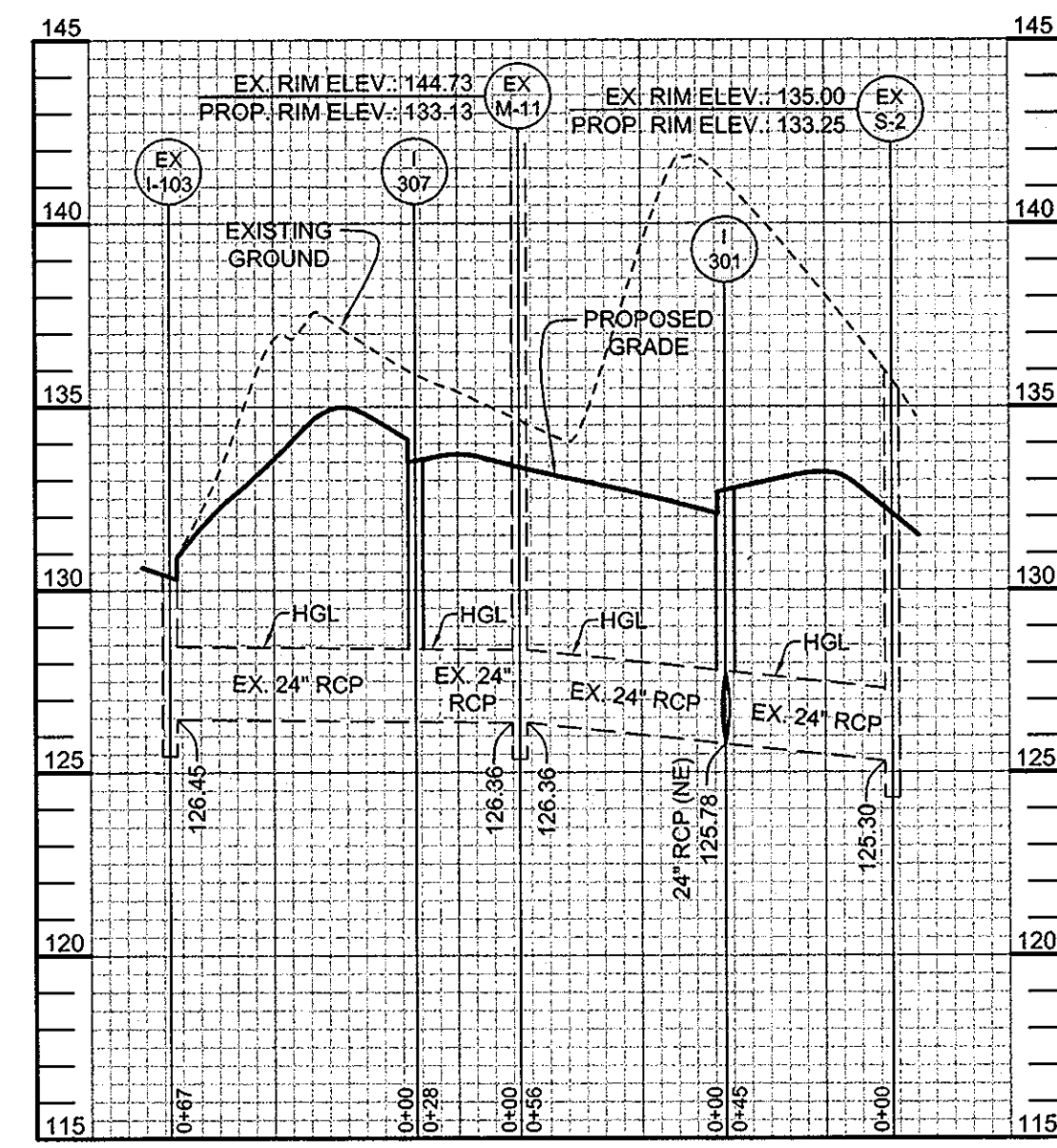
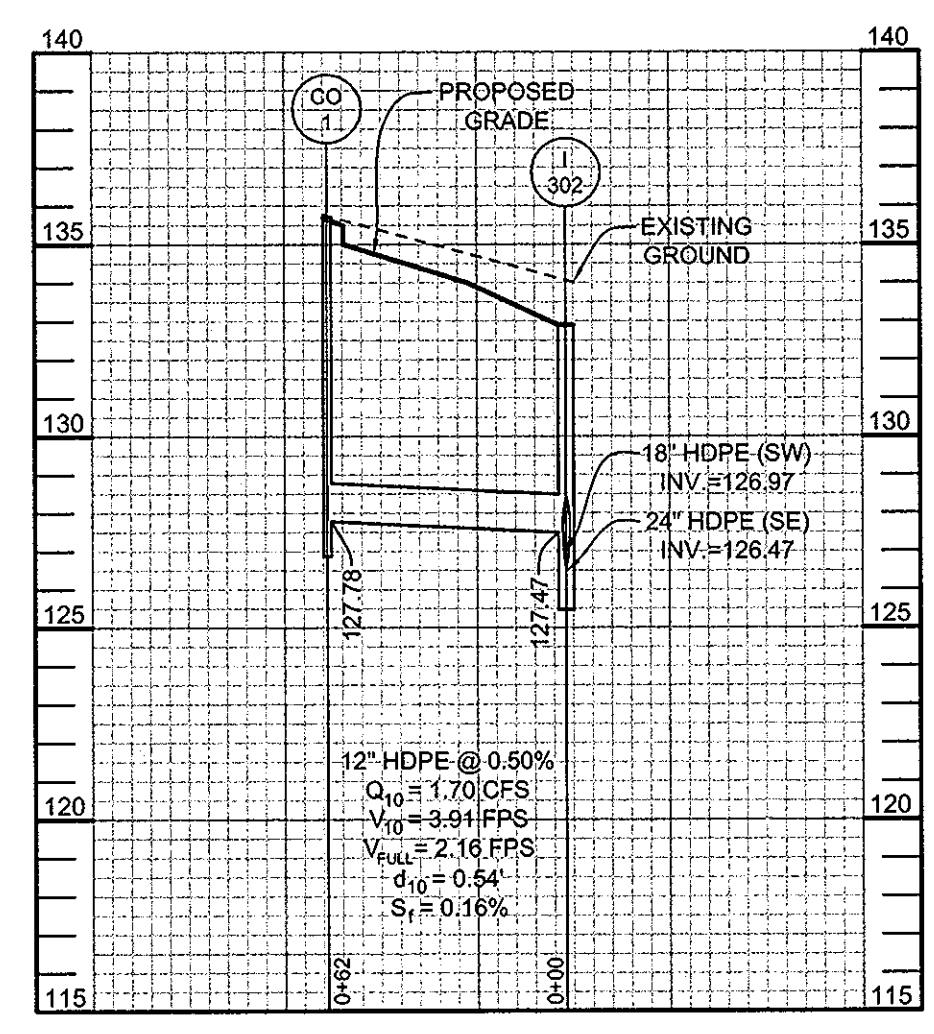
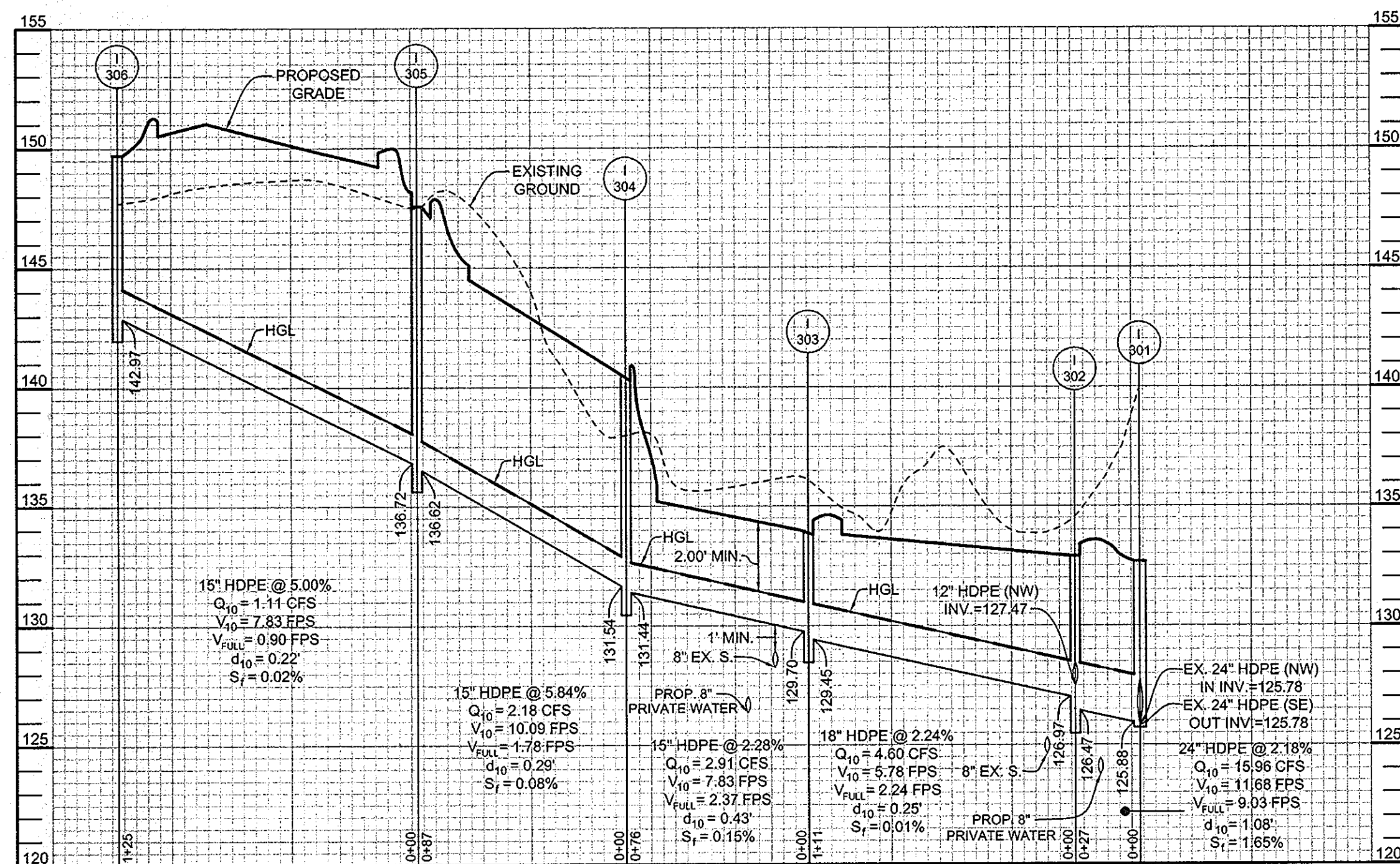
DEVELOPER'S BUILDER'S CERTIFICATE  
 I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXPEDITED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature]  
 3-18-08

**OWNER/DEVELOPER**  
 TROY HILL SQUARE, LLC  
 c/o SERGIO ACLE  
 10132 BALTIMORE NATIONAL PIKE, SUITE A  
 ELLICOTT CITY, MD 21042  
 410.461.4400



**Sill Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@sailand.com

DESIGN BY: JT  
 DRAWN BY: JT  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: MARCH 18, 2008  
 PROJECT #: 06-076  
 SHEET #: 5 of 12



**STORM DRAIN STRUCTURE SCHEDULE**

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-301	STD. PRECAST TYPE "A-S" INLET	N 495,498.6 E 870,837.0	132.08	125.88 24' 125.79 24'	125.78	(4)D-4.01
I-302	STD. PRECAST TYPE "S" INLET	N 495,523.9 E 870,828.1	132.90	127.47 12' 126.97 18'	126.47	D-4.22
I-303	STD. PRECAST TYPE "S" INLET	N 495,583.2 E 870,921.9	133.80	129.70	129.45	D-4.22
I-304	STD. PRECAST TYPE "S" INLET	N 495,658.7 E 870,910.4	140.40	131.54	131.44	D-4.22
I-305	STD. PRECAST TYPE "S" INLET	N 495,745.1 E 870,908.6	147.57	138.72	136.62	D-4.22
I-306	STD. PRECAST TYPE "S" INLET	N 495,730.8 E 870,784.8	149.72	-	142.97	D-4.22
I-307	STD. PRECAST TYPE "S" INLET	N 495,526.5 E 870,753.4	133.50	126.39	126.39	(4)D-4.22

**STORM DRAIN PIPE SCHEDULE**

SIZE	TYPE	LENGTH
12"	HDPE	204 LF
15"	HDPE	288 LF
18"	HDPE	111 LF
24"	HDPE	27 LF

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 6/10/08

*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 6/11/08

*[Signature]*  
DIRECTOR  
DATE: 6/11/08

NO.	DESCRIPTION	DATE

**STORM DRAIN PROFILES, WATER AND SEWER PROFILE, AND DETAILS**  
**TROY HILL CORPORATE CENTER**  
PARCEL A-30  
RESTAURANT AND RETAIL CENTER

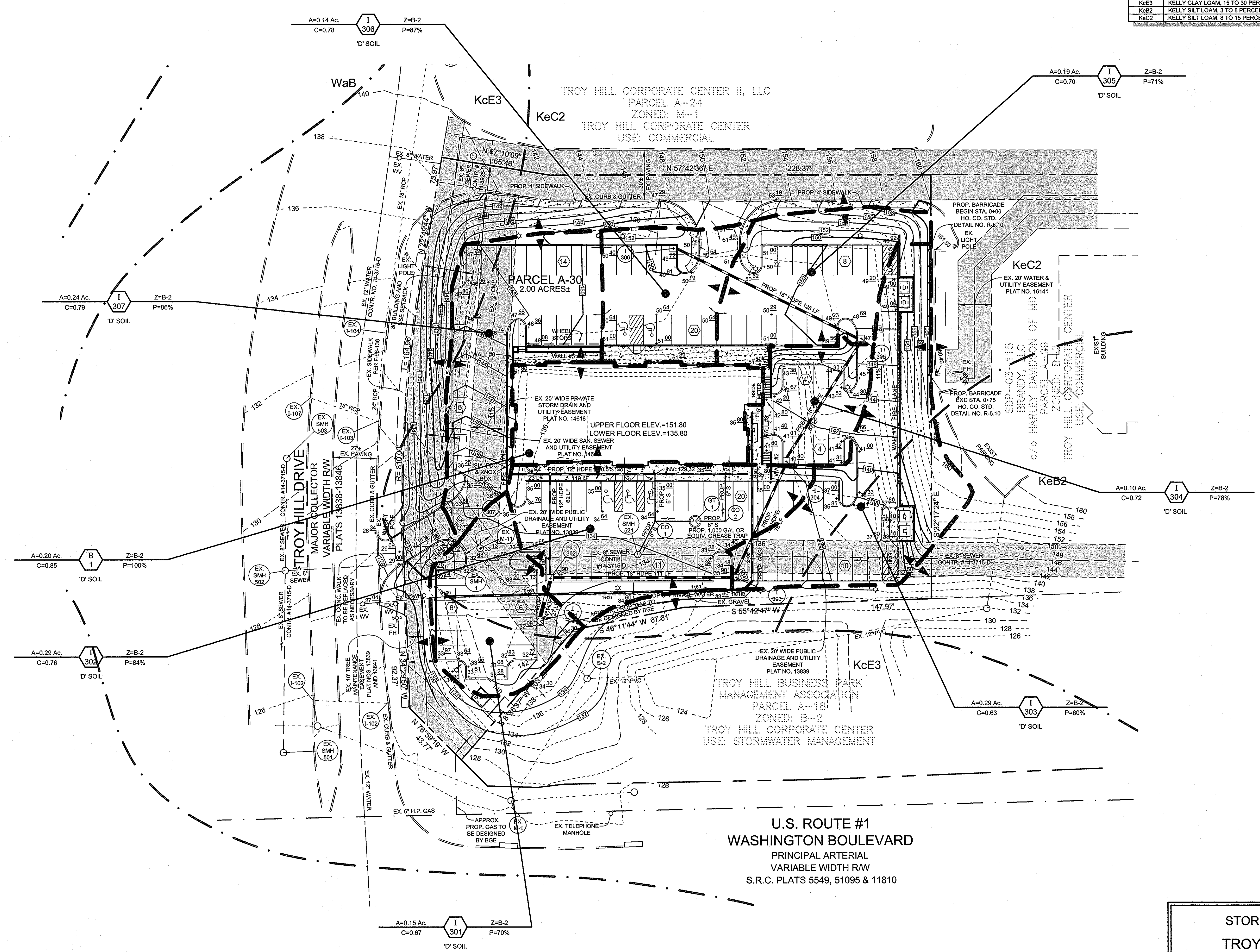
TAX MAP 37 GRID 18 PARCEL 135  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@saatlund.com

DESIGN BY: JT  
DRAWN BY: JT  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MARCH 18, 2008  
PROJECT #: 06-078  
SHEET #: 6 of 12

**OWNER/DEVELOPER**  
TROY HILL SQUARE, LLC  
c/o SERGIO ACLE  
10132 BALTIMORE NATIONAL PIKE, SUITE A  
ELLCOTT CITY, MD 21042  
410.461.4400

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
KcE3	KELLY CLAY LOAM, 15 TO 30 PERCENT SLOPES, SEVERELY ERODED	D
KeB2	KELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	D
KeC2	KELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	D



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4/29/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 6/10/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 6/17/08  
 DIRECTOR

NO.	DESCRIPTION	DATE

U.S. ROUTE #1  
 WASHINGTON BOULEVARD  
 PRINCIPAL ARTERIAL  
 VARIABLE WIDTH RW  
 S.R.C. PLATS 5549, 51095 & 11810

STORM DRAIN DRAINAGE AREA MAP  
 TROY HILL CORPORATE CENTER  
 PARCEL A-30  
 RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18 PARCEL 135  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER  
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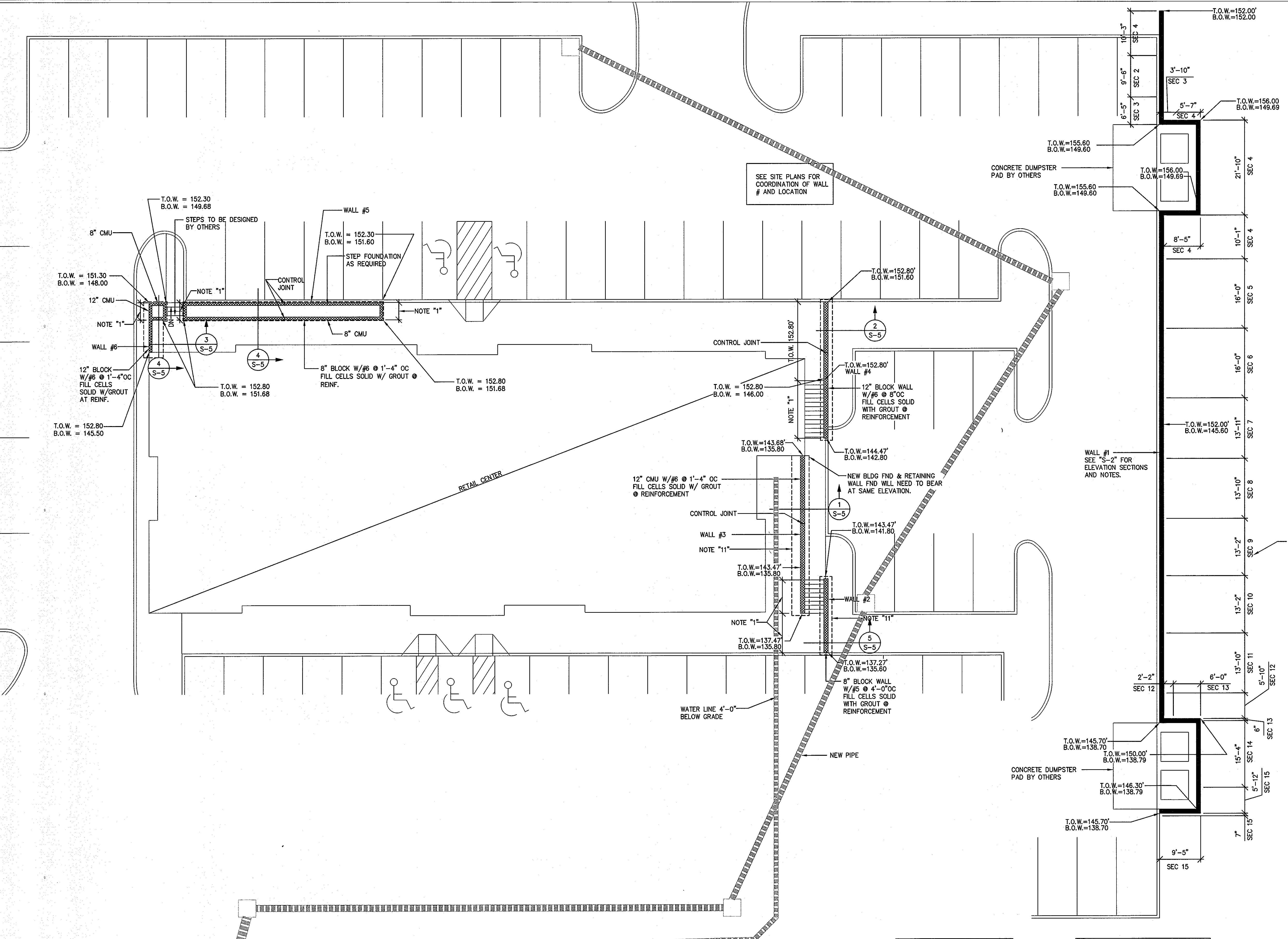
DESIGN BY: JT  
 DRAWN BY: JT  
 CHECKED BY: PS  
 SCALE: 1"=30'  
 DATE: MARCH 18, 2008  
 PROJECT #: 06-076  
 SHEET #: 7 of 12

SDP-08-029

# Foundation Plan

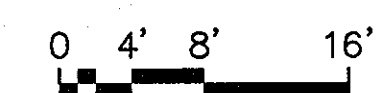
3/32" = 1'-0"

1. STEP TOP OF WALL (T.O.W.) SEE ARCHITECTURAL DRAWINGS.
2. SEE SITE PLAN FOR GRADES.
3. SEE DETAIL 'A/S-3' FOR WALL #1 DRAINAGE OPTIONS.
4. SEE DETAIL 'B/S-3' FOR WALL #1 BASE INFORMATION.
5. SEE DETAIL 'C/S-3' FOR WALL #1 TYP. CONSTRUCTION DETAIL.
6. SEE SHEET S-2 FOR WALL #1 ELEVATION, SECTIONS AND GEO GRID LENGTHS.
7. SEE DETAIL D & E ON S-4 FOR TYP CORNER DETAILS FOR WALL 1.
8. SEE ARCHITECTURAL DRAWINGS FOR HANDRAIL LOCATIONS AND REQUIREMENTS (NOT SHOWN).
9. SEE DETAILS 'A/S-4' AND 'B/S-4' FOR GEOGRID CORNER DETAIL.
10. SEE DETAIL 'E/S-3' FOR STEPPED FOOTING DETAIL THIS DOES NOT APPLY TO WALL #1.
11. SEE DETAIL 'A/S-5'.
12. SEE SHEETS S-2 AND S-5 FOR 'SEC X' SECTIONS.



TOP OF FOOTING ELEVATION: CONTRACTOR TO COORDINATE WITH MASONRY COURSING. TO ACHIEVE T.O.W. AND MINIMUM BEARING ELEVATION (BOTTOM OF FOOTING.)

TREES ARE SHOWN ON SITE PLAN BEHIND WALL # 1. DUE TO ROOT GROWTH, THERE IS A FUTURE POTENTIAL FOR STRUCTURAL WALL ISSUES.



**\*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 laws of the State of Maryland, License No. 16519, Expiration Date 06/11/09.

**OWNER/DEVELOPER**  
 TROY HILL SQUARE, LLC  
 c/o SERGIO ACLE  
 10132 BALTIMORE NATIONAL PIKE, SUITE A  
 ELLICOTT CITY, MD 21042  
 410.461.4400

**SITE PLAN AND SECTIONS**  
**TROY HILL CORPORATE CENTER**  
 PARCEL A-30  
 RESTAURANT AND RETAIL CENTER  
 TAX MAP 37 GRID 18 PARCEL 135  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**S-1**

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@salland.com

DESIGN BY: JPH  
 DRAWN BY: CMS  
 CHECKED BY: CMS  
 SCALE: AS NOTED  
 DATE: MARCH 18, 2007  
 PROJECT #: 07456  
 SHEET #: 8 of 12

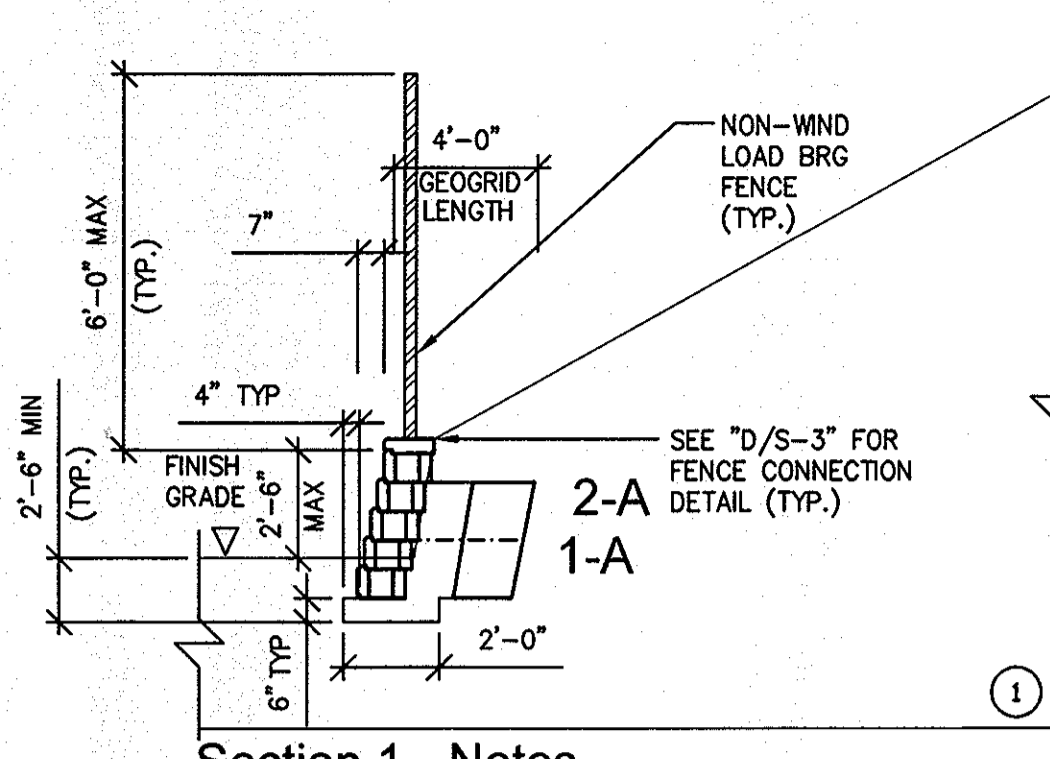
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4/2/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6/10/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

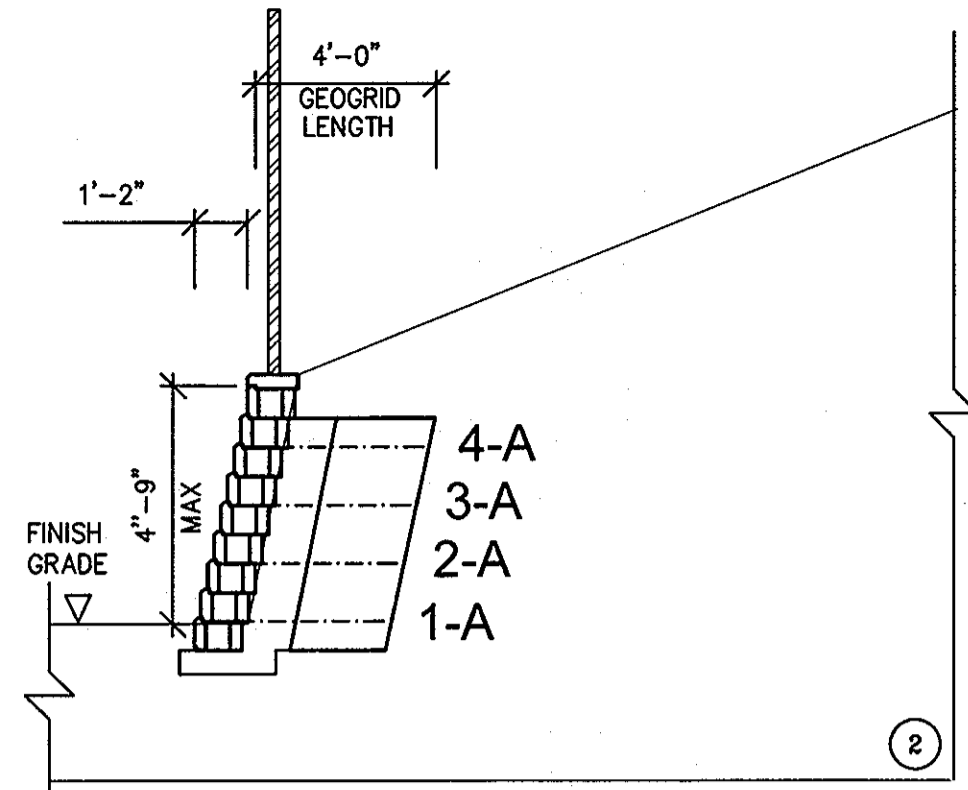
*[Signature]* 6/4/08  
 DIRECTOR DATE





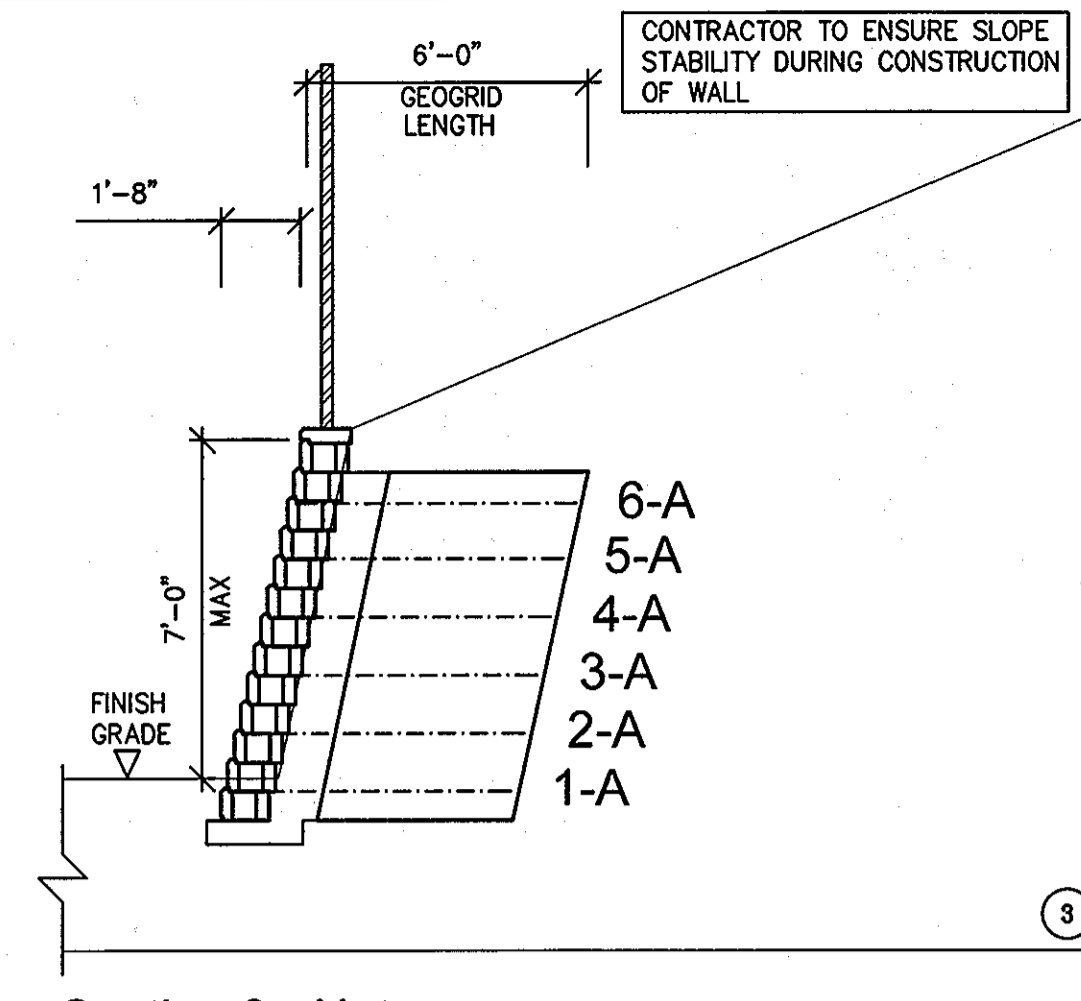
Section 1 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



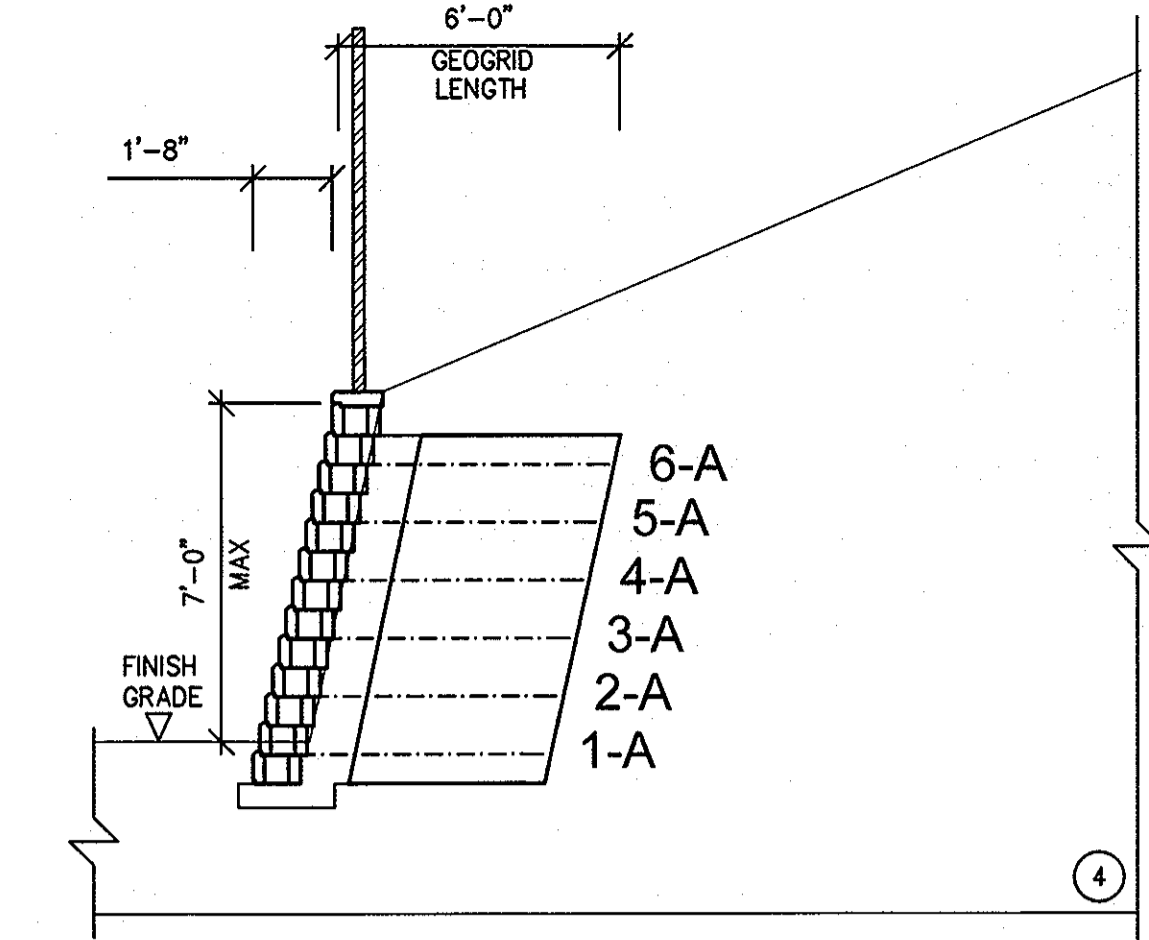
Section 2 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



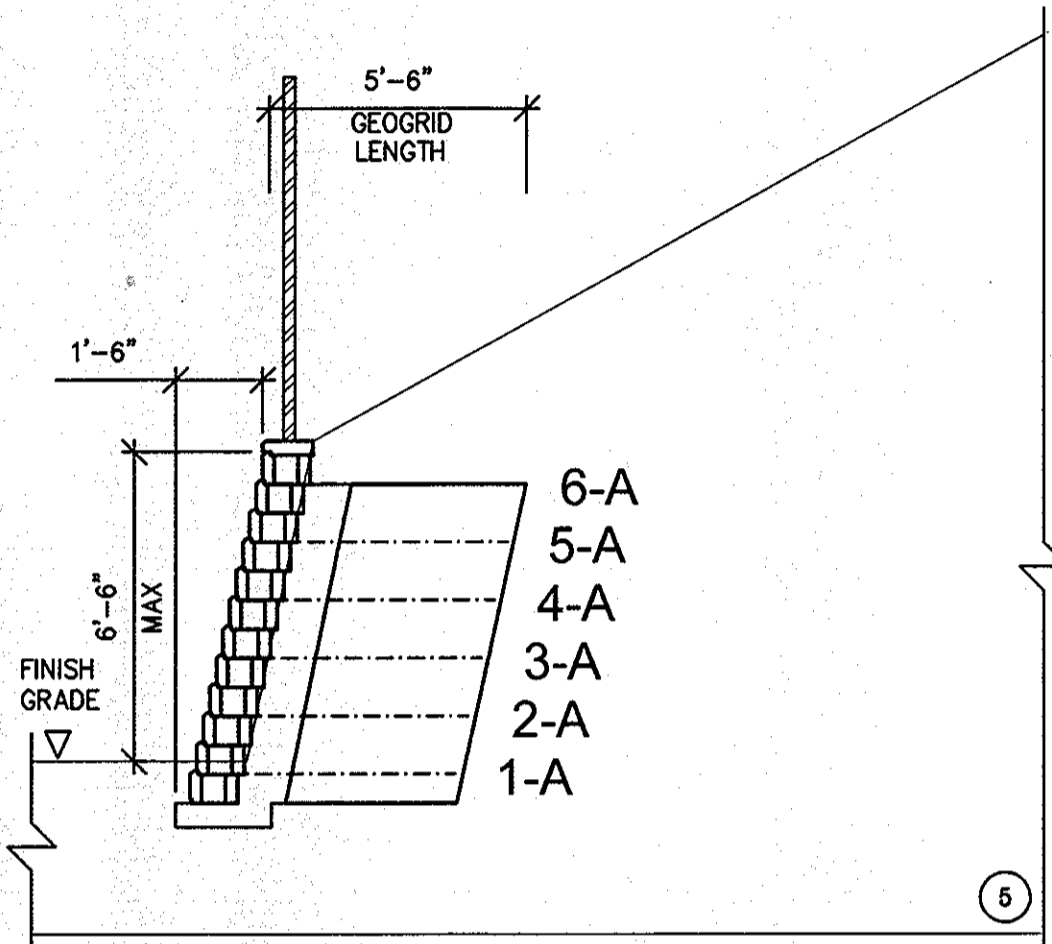
Section 3 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



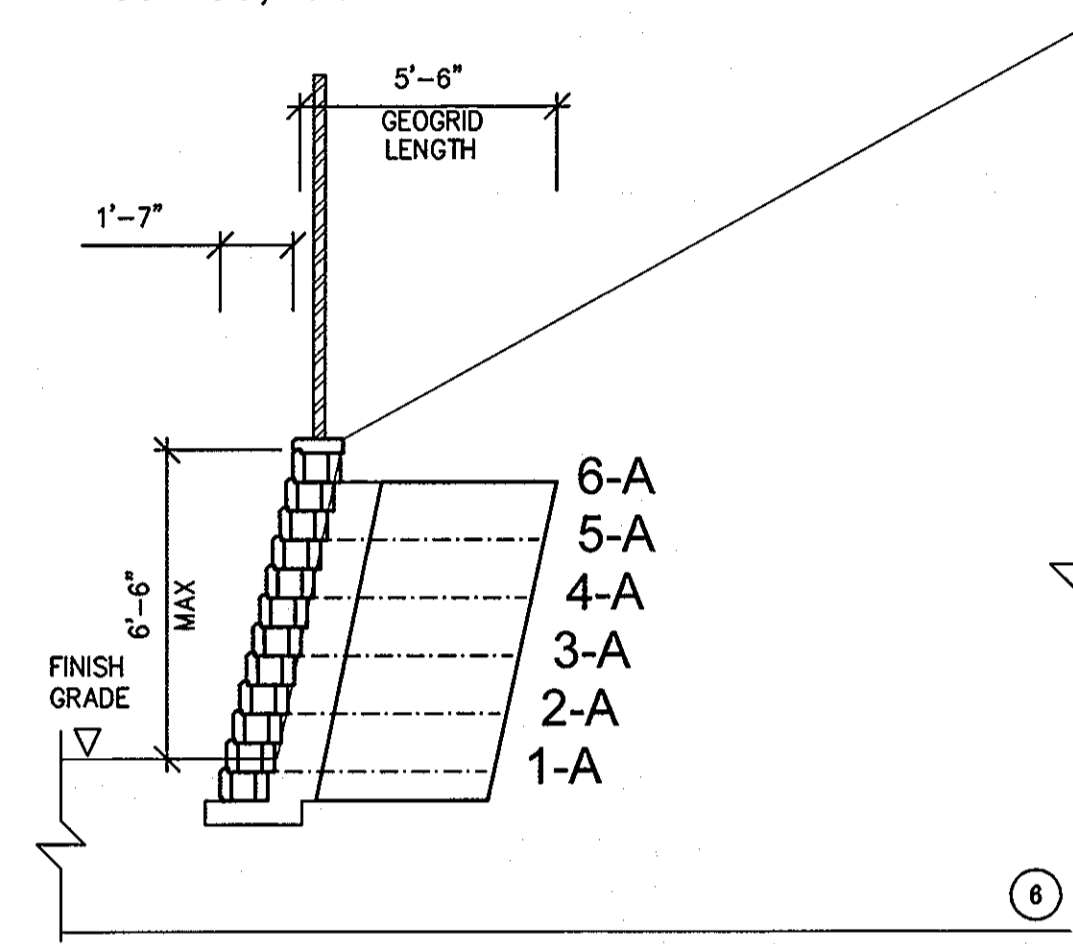
Section 4 - Notes

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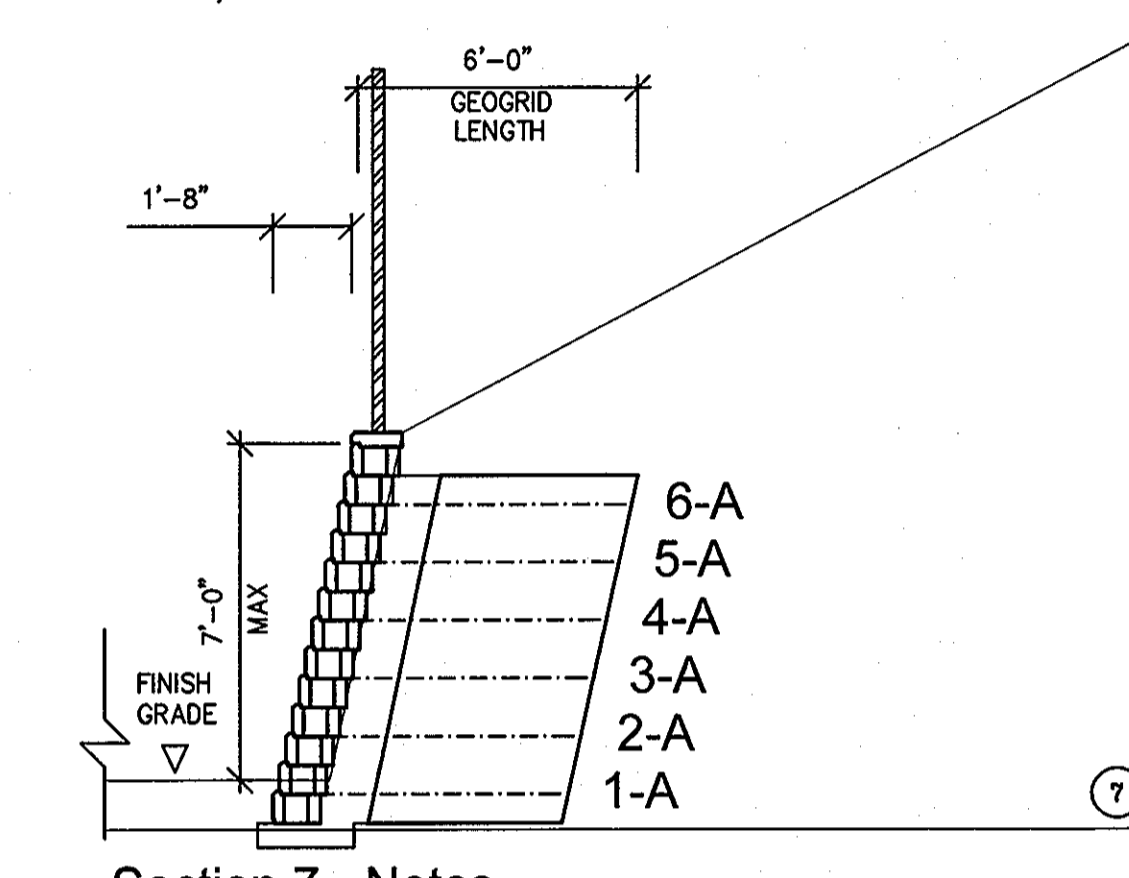
Section 5 - Notes

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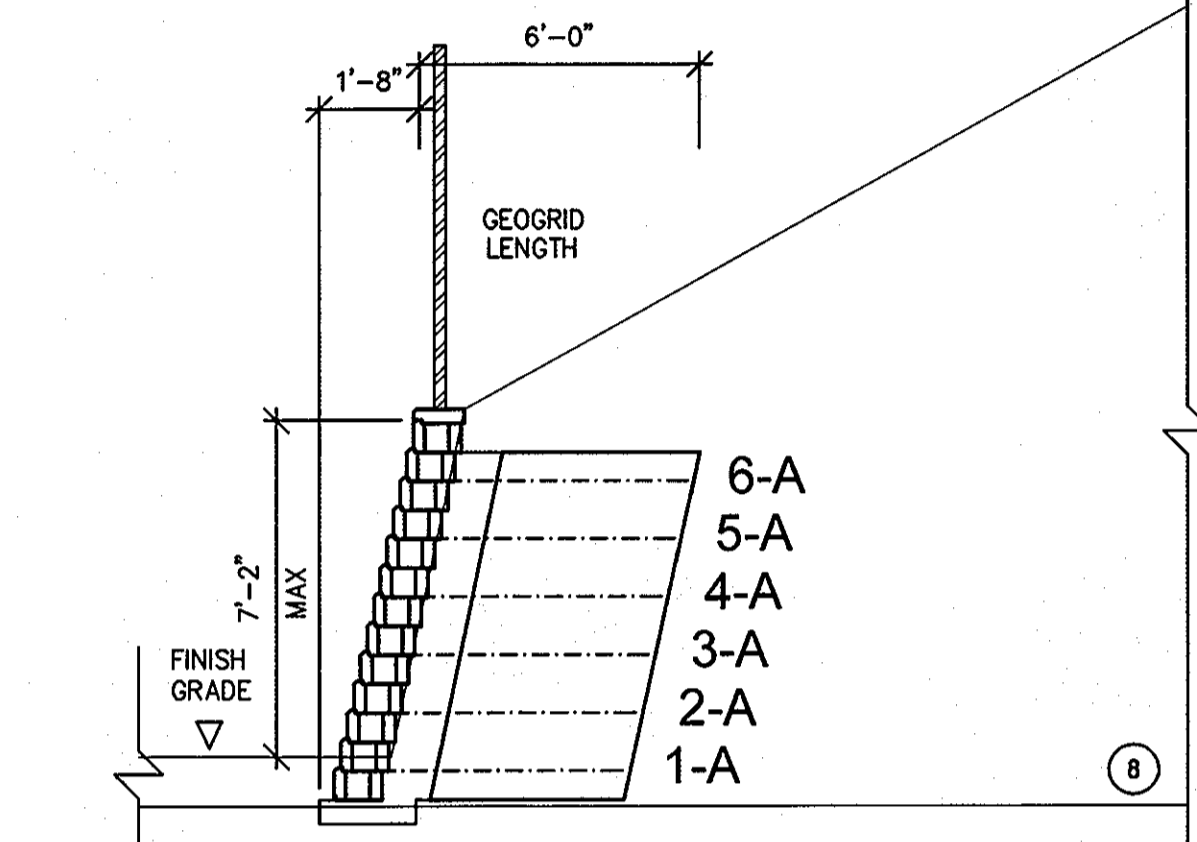
Section 6 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



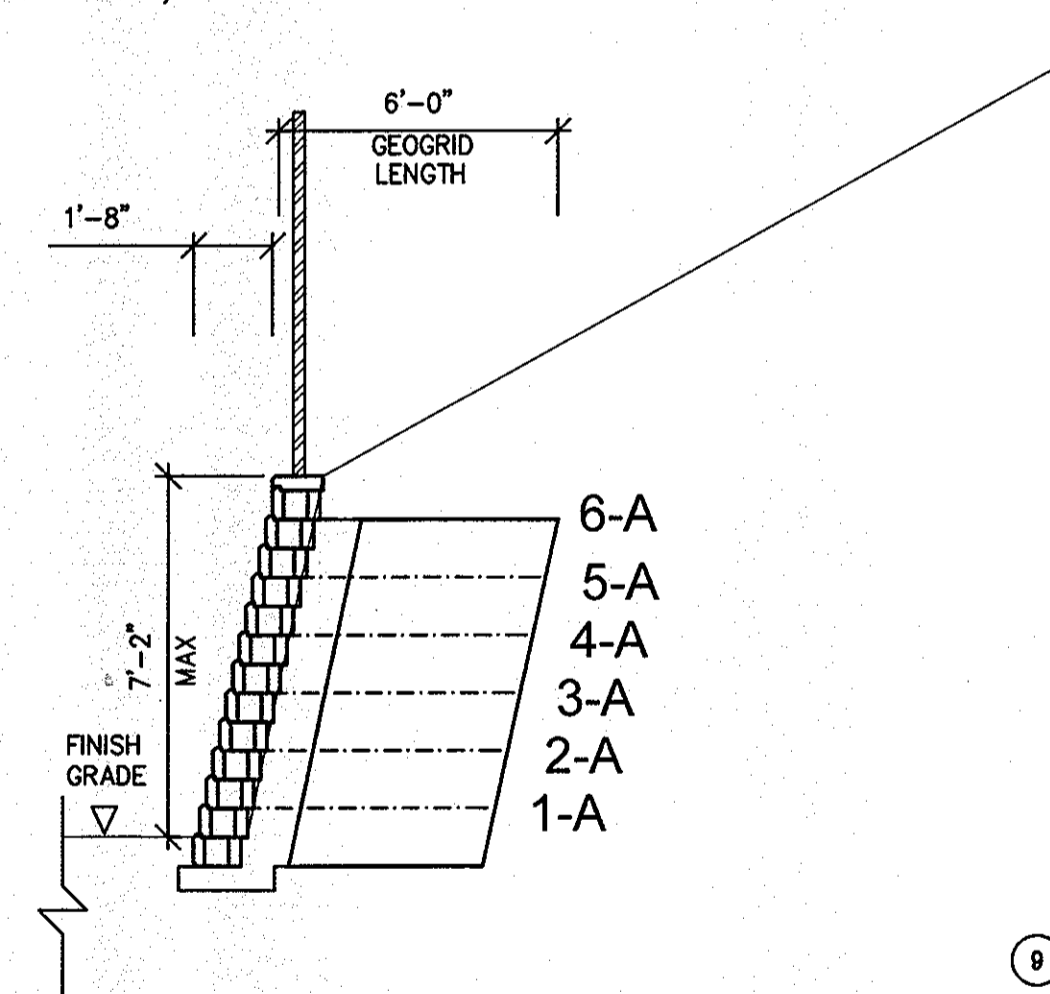
Section 7 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



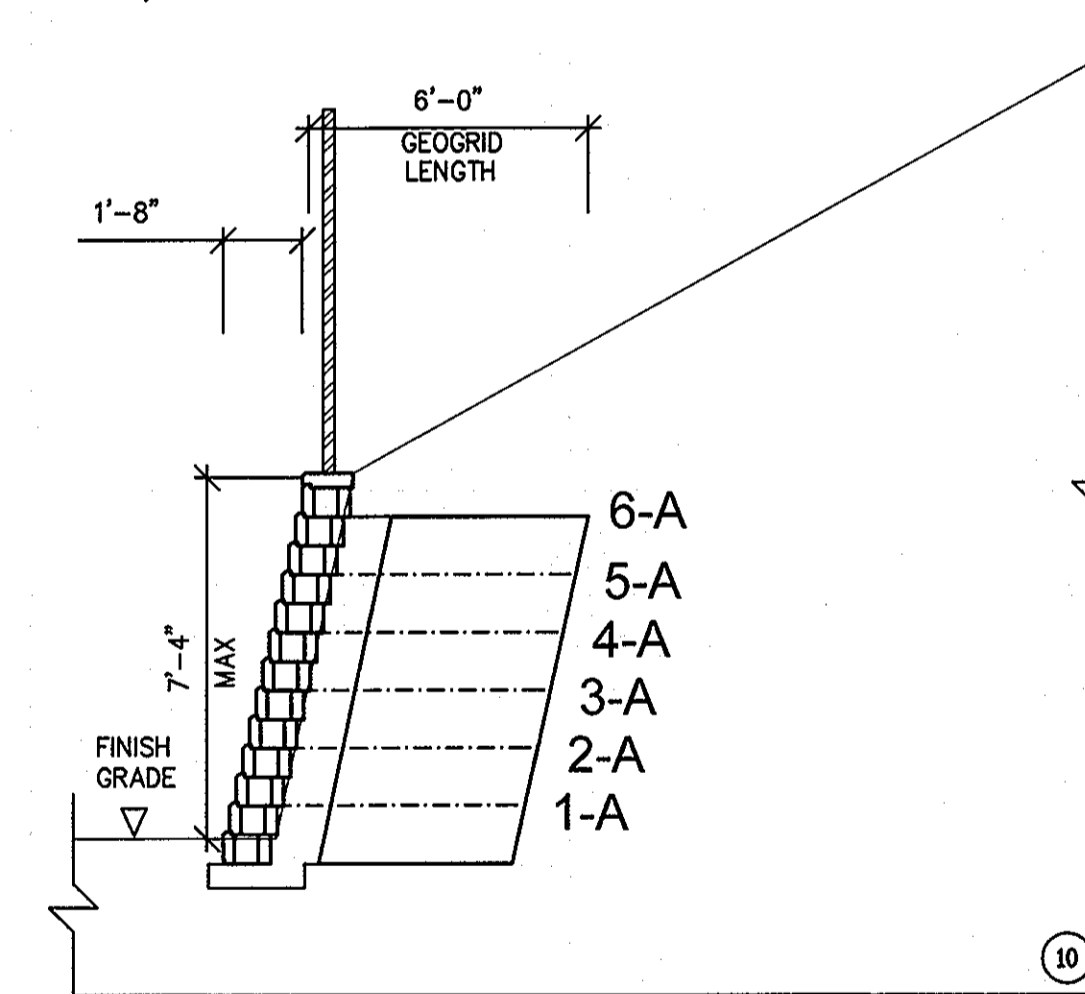
Section 8 - Notes

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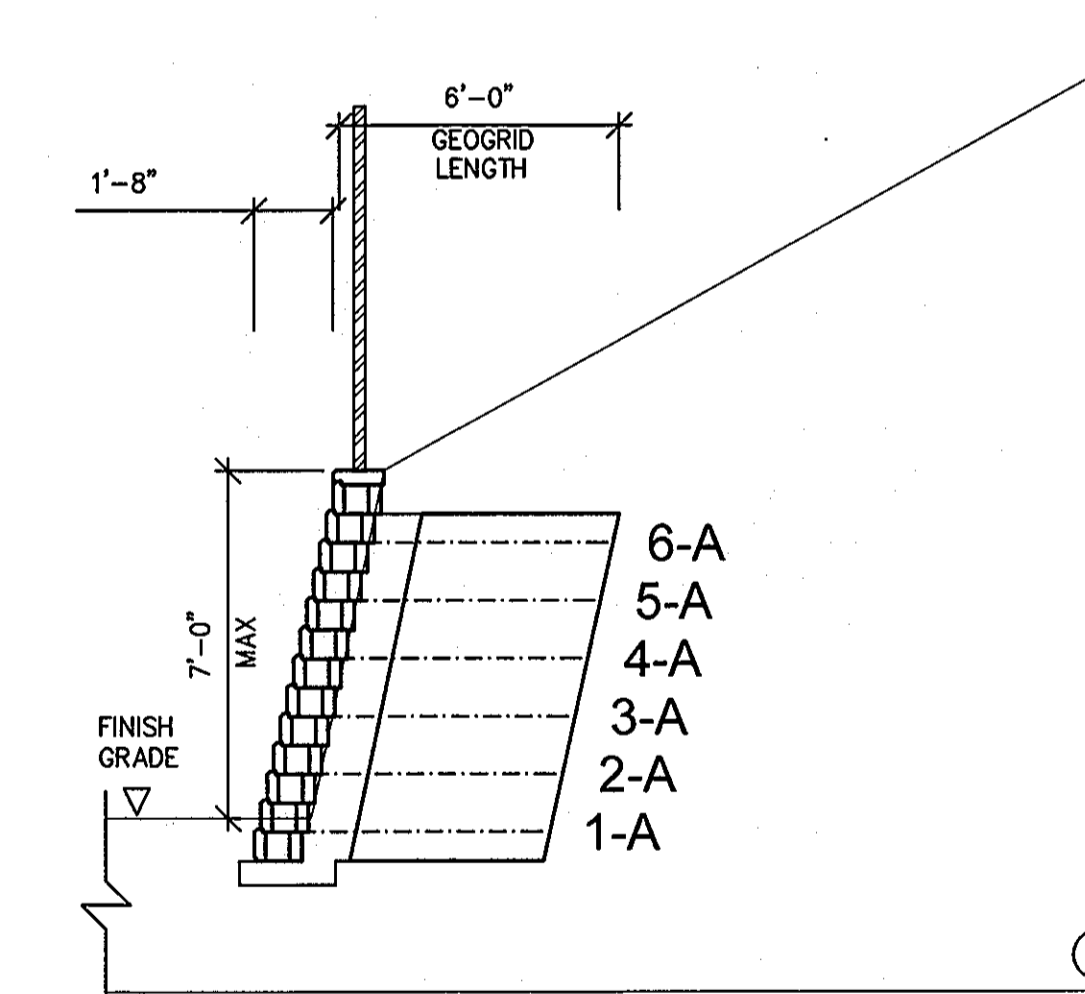
Section 9 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



Section 10 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.



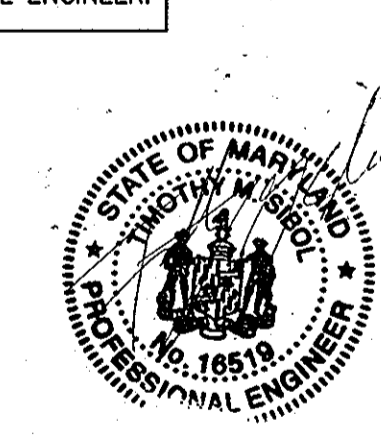
Section 11 - Notes

\*Setback distance is approximate and does not consider curves, radii or corners.

1-A DENOTES GEOGRID LEVEL TYPICAL. GEOGRID HAS BEEN DESIGNED USING THE SOIL DATA PROVIDED IN THE GEOTECHNICAL REPORT BY HERBST/BENSON ASSOCIATES DATED 8/31/2007. IF SITE CONDITIONS VARY, LENGTH OF GEOGRID MAY NEED TO BE INCREASED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.

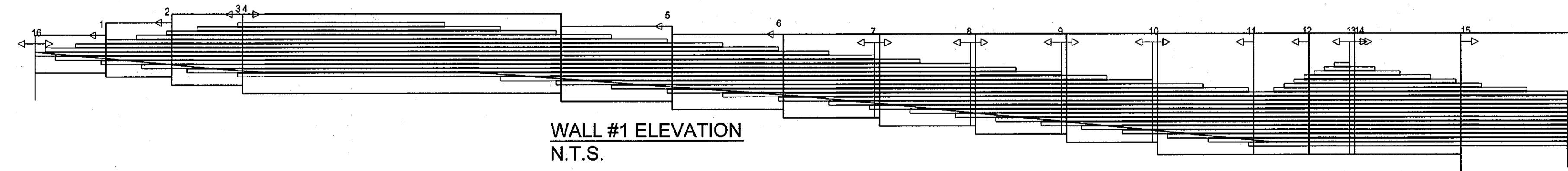
SEE DETAIL 'C/S-3' FOR MINIMUM BEARING ELEVATION COORDINATE WITH ALLAN BLOCK REQUIREMENTS

SEE DETAIL 'A/S-3' FOR DRAINAGE.



**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 laws of the State of Maryland, License No. 16519. Expiration Date 06/11/09.

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10132 BALTIMORE NATIONAL PIKE, SUITE A  
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410.461.4400



WALL #1 ELEVATION  
N.T.S.

1. SEE S-3 FOR TYPICAL DETAILS "A-E" AND GENERAL NOTES.

\*CONTINUE SECTIONS ON S-5

**NOTES:**  
1. DESIGN SHOWN IS FOR ALLAN BLOCK AB STONES WITH MIRAGRID 3xT FABRIC. IF A DIFFERENT SYSTEM IS USED DESIGN SHOWN MAY NOT APPLY.  
2. SEE 'D/S-3' FOR FENCE DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/21/08  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 6/14/08  
DIRECTOR  
DATE: 6/14/08

**SECTIONS AND ELEVATION**  
**TROY HILL CORPORATE CENTER**  
PARCEL A-30  
RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18  
1ST ELECTION DISTRICT

PARCEL 135  
HOWARD COUNTY, MARYLAND

**S-2**

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
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DESIGN BY: JPH  
DRAWN BY: CMS  
CHECKED BY: CMS  
SCALE: AS NOTED  
DATE: MARCH 18, 2007  
PROJECT #: 07456  
SHEET #: 9 of 12

# General Notes

## 1.1 DESIGN LOADS

- A. THE STRUCTURE WAS DESIGNED FOR THE LIVE LOADS SHOWN BELOW AND DEAD LOADS AS REQUIRED BY CONSTRUCTION IN ACCORDANCE WITH IBC 2003.
- B. LIVE LOADS SHOWN BELOW ARE IN POUNDS PER SQUARE FOOT.
- \* PARKING SURCHARGE: 250 PSF
- STAIRS SURCHARGE: 100 PSF

## 1.5 SUBMITTALS

- A. BEFORE SUBMISSION OF SHOP DRAWINGS, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR DATA WITH RESPECT THERETO AND REVIEWED OR COORDINATED EACH SHOP DRAWING WITH OTHER SHOP DRAWINGS AND SAMPLES AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
- B. AFTER CHECKING AND VERIFYING COMPLIANCE WITH CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, CONTRACTOR SHALL SUBMIT, FOR REVIEW, SHOP DRAWINGS REFERENCED IN THE INDIVIDUAL MATERIALS SECTIONS. CONTRACTOR SHALL STAMP OR PROVIDE A SIMILAR WRITTEN INDICATION THAT CONTRACTOR HAS REVIEWED THE SUBMISSION AND IS SATISFIED THAT MATERIALS SHOWN ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- C. A REVIEW PERIOD OF 5 WORKING DAYS WILL BE REQUIRED FOR SHOP DRAWING REVIEW, OF EACH UNIT TYPE. SHOP DRAWING SUBMISSION OF MULTIPLE COMPONENT TYPES WILL REQUIRE ADDITIONAL REVIEW TIME. SHOP DRAWINGS WILL BE FORWARDED TO ARCHITECT OR CLIENT FOR THEIR REVIEW BEFORE RETURNING TO THE CONTRACTOR.

## 2.3 FOUNDATIONS

- A. A SOIL BEARING CAPACITY OF 4000 P.S.F. WAS USED FOR FOOTING DESIGN. IF SOIL OF THIS CAPACITY IS NOT ENCOUNTERED AT ELEVATIONS INDICATED, INCREASE FOOTING SIZE OR LOWER AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- B. INSTALL EXTERIOR FOOTING BOTTOMS 2'-6" MINIMUM BELOW FINISH GRADE.
- C. COMPACT FILL AND BACKFILL TO 95% OF A.S.T.M. D-698 (1567). PERFORM FILL AND BACKFILL OPERATIONS UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- D. PRIOR TO POURING CONCRETE, ENGAGE THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER (REGISTERED IN MARYLAND), TO PERFORM TESTS, BORINGS, ETC. REQUIRED TO CERTIFY THAT THE SOIL BEARING CAPACITY MEETS OR EXCEEDS THAT SHOWN IN THE GENERAL NOTES ABOVE. GEOTECHNICAL ENGINEER SHALL VERIFY SUBGRADE CAPACITIES PRIOR TO INSTALLATION OF DRAINAGE FILL AND MOISTURE BARRIER.

## 3.1 CONCRETE

- A. CONCRETE WORK INCLUDING FORMING, MIXING, PLACING AND CURING SHALL BE IN ACCORDANCE WITH A.C.I. 301.
- B. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. REPRINTS OF CONTRACT DRAWINGS ARE NOT ACCEPTABLE. SUBMIT DESIGN MIXES FOR EACH CLASS OF CONCRETE PRIOR TO USE.
- C. CONCRETE REINFORCING: A.S.T.M. A-615, GRADE 60.
- D. PORTLAND CEMENT: A.S.T.M. C-150, TYPE I.
- E. BLENDED HYDRALIC CEMENT: A.S.T.M. C-596.
- F. FLY ASH: A.S.T.M. C-618, TYPE F MAX 25%.
- G. AGGREGATE: A.S.T.M. C-33. 1" MAXIMUM FOR FOOTINGS, WALLS AND SLABS ON GRADE, 3/4" MAXIMUM FOR THIN SLABS AND 3/8" FOR WALL FILL.
- H. WATER CEMENT RATIO NOT TO EXCEED .45 FOR AIR ENTRAINED CONCRETE.
- I. REINFORCING FOR FOOTINGS AND OTHER CONCRETE USING EARTH FORMS SHALL HAVE 3" CONCRETE COVER. REINFORCING FOR CONCRETE EXPOSED TO GROUND OR WEATHER AFTER REMOVAL OF FORMS SHALL HAVE 2" CONCRETE COVER. REINFORCING SHALL HAVE 3/4" CONCRETE COVER FOR SLABS AND WALLS AND 1 1/2" COVER FOR BEAMS, GIRDERS & COLUMNS.

- J. LAP CONTINUOUS FOOTING REINFORCING 36 BAR DIAMETERS AT SPLICES.
- K. USE A WATER REDUCING ADMIXTURE IN ALL CONCRETE.
- L. USE A MINIMUM OF 5 1/2 BAGS OF CEMENT AND A MAXIMUM OF 6 1/2 GALLONS OF WATER PER BAG FOR EACH CUBIC YARD OF CONCRETE.
- M. SLUMP - AS REQUIRED BY ACT (211.1). SHOULD EXTRA WATER BE REQUIRED BEFORE DEPOSITING CONCRETE AND WATER/CEMENT RATIO OF ACCEPTED MIX DESIGN HAS NOT BEEN EXCEEDED, GENERAL CONTRACTOR'S SUPERINTENDENT SHALL HAVE SOLE AUTHORITY TO AUTHORIZE ADDITION OF WATER. ANY ADDITIONAL WATER ADDED TO MIX AFTER LEAVING BATCH PLANT SHALL BE INDICATED ON THE TRUCK TICKET AND SIGNED BY PERSON RESPONSIBLE. SUBMIT COPY OF TRUCK TICKET FOR REVIEW.
- N. NO CALCIUM CHLORIDE WILL BE PERMITTED IN CONCRETE.
- O. ENGAGE THE SERVICES OF A TESTING AGENCY APPROVED BY THE ARCHITECT TO PERFORM TESTS OF CONCRETE. TAKE A MINIMUM OF 5 CYLINDERS FOR EACH CLASS OF CONCRETE POURED IN ANY ONE DAY. PERFORM 1 SLUMP TEST PER TRUCK LOAD OF CONCRETE.
- P. PROVIDE TWO COMPRESSION TESTS AT 7 DAYS, TWO AT 28 DAYS, AND RETAIN ONE TEST FOR ADDITIONAL TESTING AS REQUIRED.

## 4.1 MASONRY

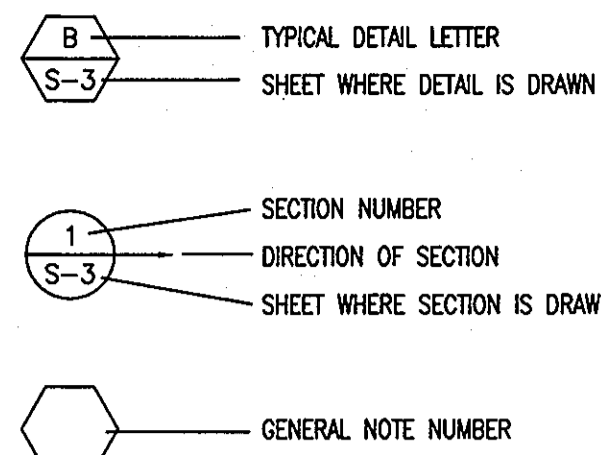
- A. MANUFACTURE AND INSTALL MASONRY IN ACCORDANCE WITH (ACI 530/ASCE 5/TMS 402), (ACI 530.1/ASCE 6/TMS 602). BLOCK: CONCRETE MASONRY UNITS: 1,900 PSI COMPRESSIVE STRENGTH (AVERAGE OF THREE UNITS). DESIGNED F'M: 1500 PSI. A.S.T.M. C-90 WITH MINIMUM DENSITY OF 125 LBS. PER CU. FT. FOR NORMAL WEIGHT UNITS.
- B. MORTAR: A.S.T.M. C-270 TYPE S.
- C. GROUT: A.S.T.M. C-476 (NON SHRINK, NON METALLIC).
- D. REINFORCING: A.S.T.M. A-615, GRADE 60.
- E. BLOCK SHALL HAVE GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCING AT 16" O/C MAXIMUM WITH PREFABRICATED CORNER AND "T" PIECES UNLESS NOTED. PARAPET WALLS SHALL HAVE HORIZONTAL JOINT REINFORCING AT 8" O/C. LAP SPLICES 6" MIN. STOP HORIZONTAL JOINT REINFORCING EACH SIDE OF CONTROL AND EXPANSION JOINTS.
- F. HORIZONTAL JOINT REINFORCING SHALL BE IN ACCORDANCE WITH ASTM - A951 AND SHALL BE MANUFACTURED FROM 9 GAGE (0.148) MIN. COLD DRAWN STEEL WIRE CONFORMING TO ASTM A-82 AND SHALL CONSIST OF TWO DEFORMED LONGITUDINAL SIDE RODS WELDED AT 16" PLUS OR MINUS INTERVALS TO A PERPENDICULAR CROSS ROD FORMING A LADDER DESIGN. CROSS ROD AND SIDE RODS SHALL BE LOCATED IN THE SAME PLANE AS THE LONGITUDINAL RODS. OUT TO OUT SPACING OF SIDE RODS SHALL BE APPROXIMATELY 2" LESS THAN THE NOMINAL WALL THICKNESS.
- G. JOINT REINFORCEMENT IN EXTERIOR WALLS TO BE HOT DIPPED GALVANIZED. AFTER FABRICATION, IN ACCORDANCE WITH ASTM A-153 CLASS B2 (1.80 OZ./SQ. FT.).
- H. BLOCK SHALL BE LAID IN FULL BED OF MORTAR INCLUDING CROSSWEBS.
- I. WALLS NOTED AS FILLED SOLID SHALL HAVE CORES OF BLOCK FILLED WITH PEA GRAVEL CONCRETE IN SIX COURSE MAXIMUM LIFTS.
- J. PROVIDE CONTROL JOINTS AT 30' MAXIMUM ON CENTER IN MASONRY WALLS.
- K. LAP SPLICES IN REINFORCING 48 BAR DIAMETER MINIMUM, UNLESS NOTED OTHERWISE VERTICAL REINFORCING TO BE FULL HEIGHT OF WALL AND DOWELED INTO FOOTINGS.
- L. FILL CELLS OF BLOCK CONTAINING VERTICAL REINFORCING WITH PEA GRAVEL CONCRETE IN SIX COURSE MAX. LIFTS. CONCRETE TO CONTAIN AN APPROVED WATER REDUCER.

## 5.9 STEEL GUARDRAILS/HANDRAILS

- A. MANUFACTURER SHALL DESIGN GUARDRAILS / HANDRAILS AND CONNECTIONS TO STRUCTURE AT BALCONIES, STAIRWELLS, RAMPS AND FLOOR OPENINGS TO SUPPORT THE FOLLOWING DESIGN LOADS: 50 POUNDS PER LINEAL FOOT OR 200 POUND CONCENTRATED LOAD, WHICHEVER IS GREATER, APPLIED AT ANY POINT AND IN ANY DIRECTION TO TOP OF RAIL, AND 50 POUND CONCENTRATED LOAD APPLIED ON A 1-SQUARE-FOOT AREA AT ANY POINT FOR REMAINING GUARDRAIL INFILL COMPONENTS. SUBMIT SHOP AND ERECTION DRAWINGS INDICATING SIZES AND CONNECTIONS OF GUARDRAIL AND HANDRAIL COMPONENTS.
- B. SUBMIT MANUFACTURER'S SHOP DRAWINGS CONTAINING A CERTIFICATION SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN MARYLAND) STATING THAT THE GUARDRAIL AND HANDRAIL COMPONENTS HAVE BEEN DESIGNED TO SUPPORT THE SPECIFIED LOADS.

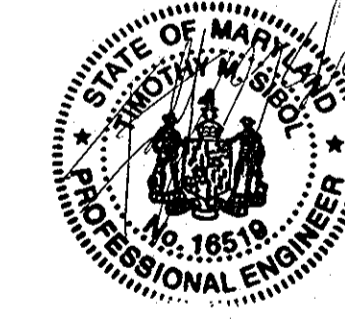
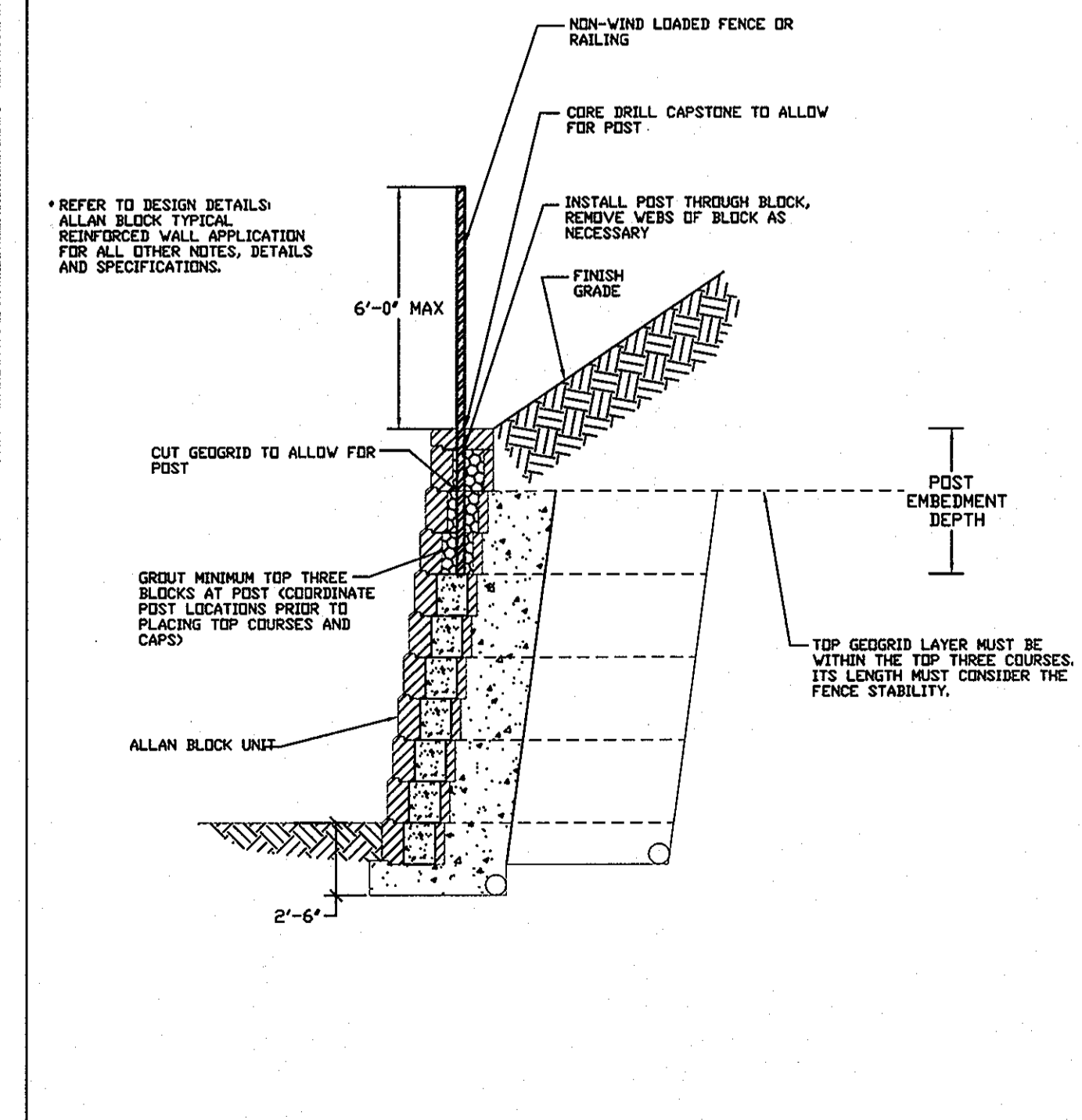
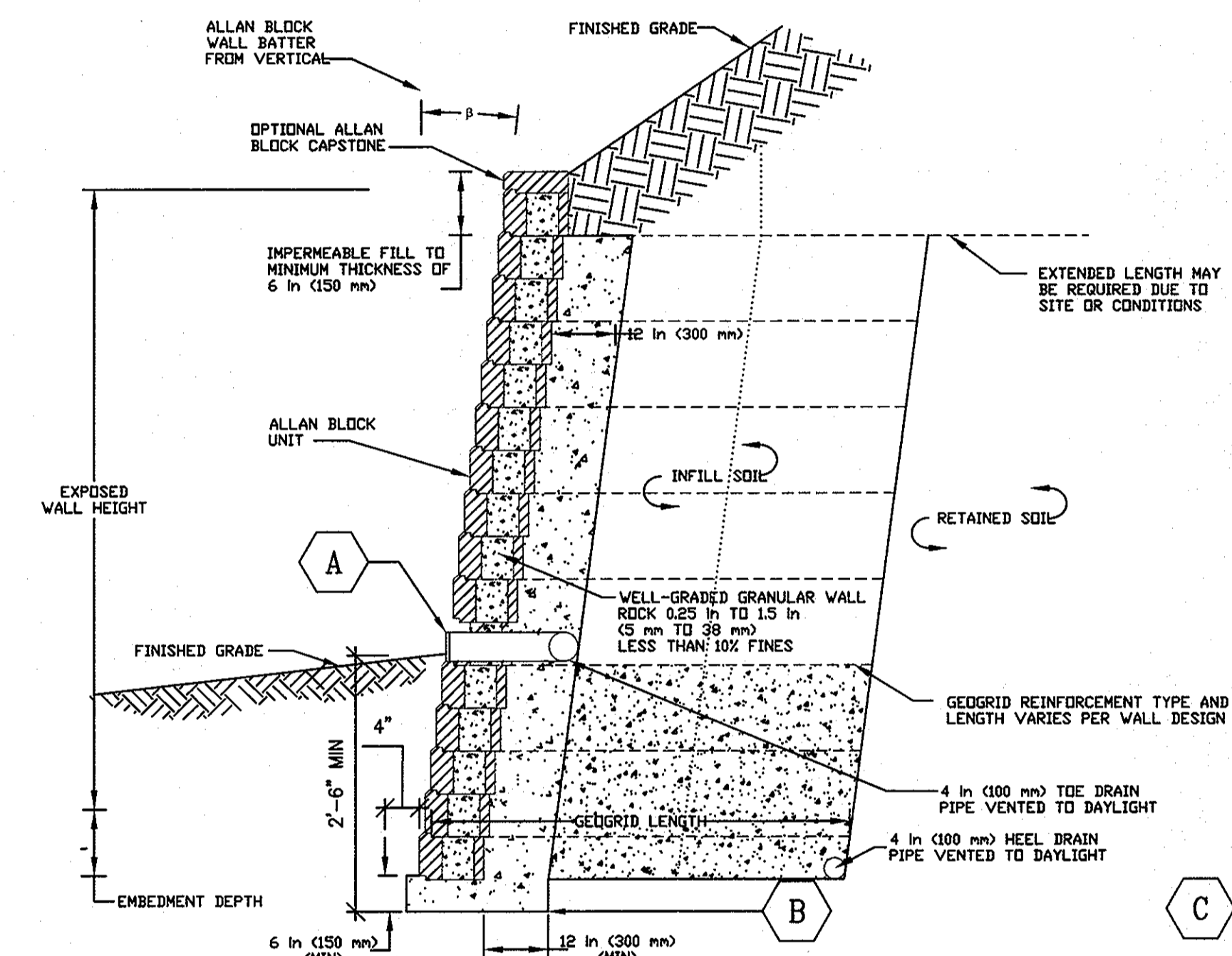
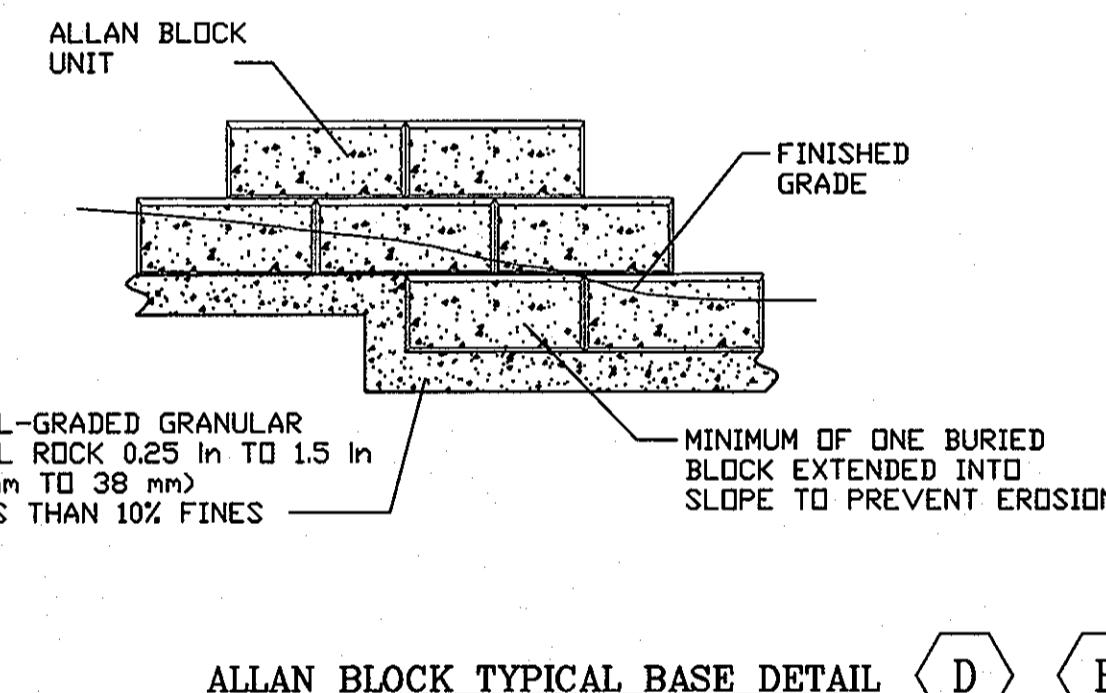
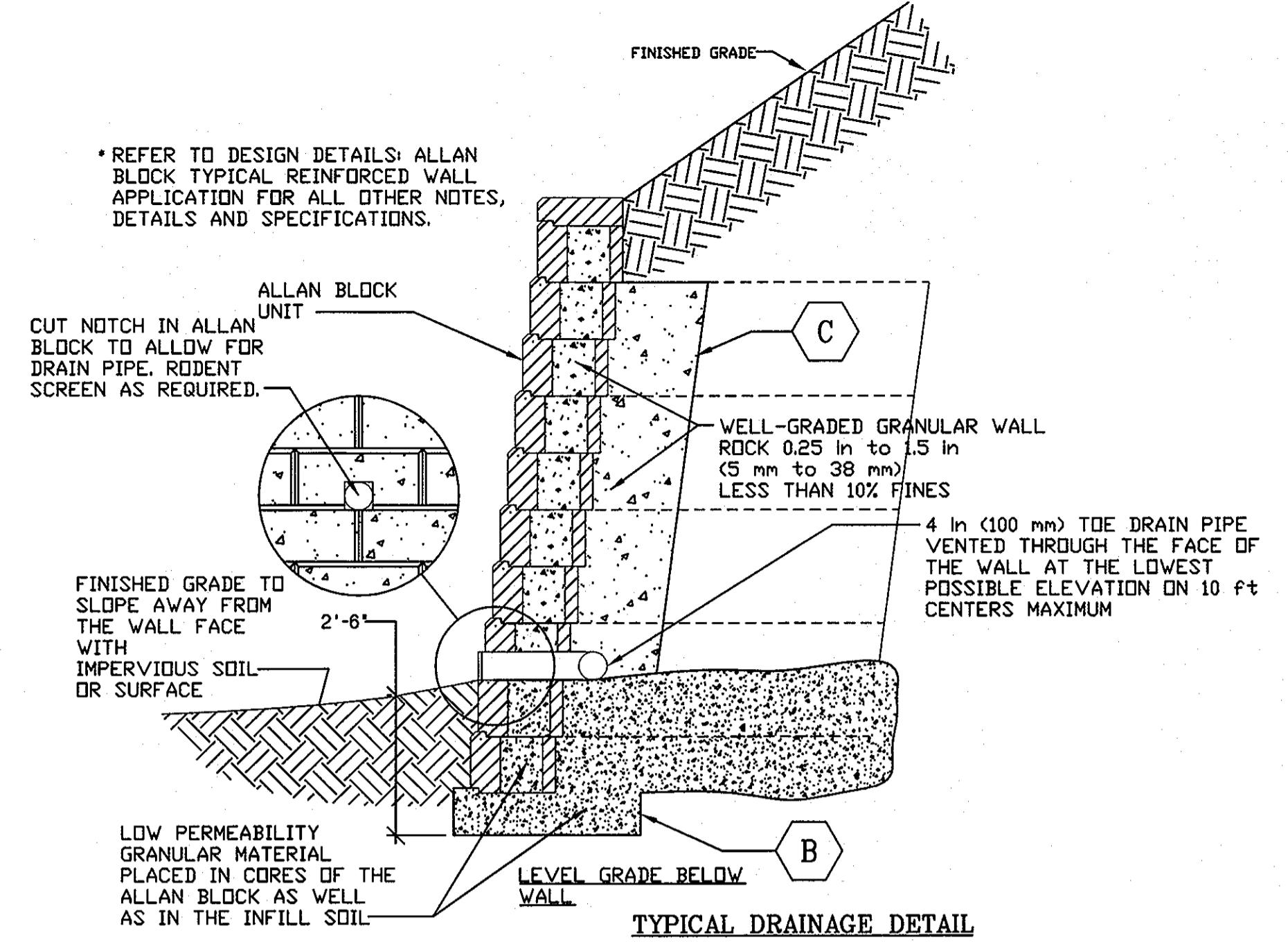
## SYMBOLS

A. ALL TYPICAL DETAILS, SECTIONS, AND NOTES ARE GENERAL IN NATURE AND USAGE IS NOT LIMITED TO WHERE SPECIFICALLY NOTED.



## STRUCTURAL ABBREVIATIONS

MARK	MEANING	MARK	MEANING	MARK	MEANING
#	DIAMETER	ES	EACH SIDE	OPP	OPPOSITE
#	POUND/NUMBER	EW	EACH WAY	OSS	ORIENTED STRAND BOARD
&	AND	EMB	EACH WAY BOTTOM	PAF	POWER ACTIVATED FASTENER
@	AT	EX	EXISTING	P	PLATE
±	PLUS OR MINUS	EXP	EXPANSION	PSF	POUNDS PER SQUARE FOOT
AB	ANCHOR BOLTS	EXT	EXTERIOR	PSI	POUNDS PER SQUARE INCH
ADD	ADDITIONAL	FIN	FINISHED	PSL	PARALLEL STRAND LUMBER
ALT	ALTERNATE	FF	FINISHED FLOOR	PLYM	PLYWOOD
ARCH	ARCHITECT	FND	FOUNDATION	PT	PRESSURE TREATED
BLKG	BLOCKING	FT	FOOT	RCP	REINFORCED CONCRETE PIPE
BM	BEAM	FTG	FOOTING	REINF	REINFORCING
BOT	BOTTOM	GA	GAUGE	REQD	REQUIRED
BRG	BEARING	GC	GENERAL CONTRACTOR	SM	SHIMLAR
BC	BOTTOM CHORD	GLV	GALVANIZED	SRTG	SHEATHING
BRD	BRIDGING	GEN	GENERAL	SOQ	SLAB ON GRADE
BLDG	BUILDING	GLB	GLUE LAMINATED BEAM	SFF	SPRUCE PINE FIR
CBR	CAMBER	GT	GRODOR TRUSS	SQ	SQUARE
CANT	CANTILEVER	HDR	HEADER	STD	STANDARD
#	CONTROL LINE	HGR	HANGER	STRF	STRENGTHEN
CLR	CLEAR	HK	HOOK	STL	STEEL
COL	COLUMN	HT	HEIGHT	TC	TOP CHORD
CONC	CONCRETE	HORIZ	HORIZONTAL	T&B	TOP AND BOTTOM
CJ	CONTROL JOINT	HSS	TUBE STEEL PIPE COLUMN	T&G	TONGUE AND GROOVE
CONN	CONNECTION	IN	INCH	T/FTG	TOP OF FOOTING
CONT	CONTINUOUS	INSUL	INSULATION	T/SLAB	TOP OF SLAB
COORD	COORDINATE	INT	INTERIOR	TOS	TOP OF STEEL
CONST	CONSTRUCTION	JST	JOIST	THRU	THROUGH
CONTR	CONTRACTOR	K	KIP	TYP	TYPICAL
#	PENNY NAIL	L	ANGLE	UNO	UNLESS NOTED OTHERWISE
DP	DEEP	LBS	POUND	VERT	VERTICAL
DET	DETAIL	LLH	LONG LEG HORIZONTAL	VAR	VARIES
DIAG	DIAGONAL	LLV	LONG LEG VERTICAL	VF	VERIFY IN FIELD
DD	DITTO	LVL	LAMINATED VENEER LUMBER	W	WIDE FLANGE BEAM
DBL	DOUBLE	LG	LONG	W/	WITH
DF	DOUGLAS FIR	LT GA	LIGHT GAUGE	W/O	WITH OUT
DWG	DRAWING	MATL	MATERIAL	WO	WOOD
DWL	DOWELL	MAX	MAXIMUM	W/F	WELDED WIRE FABRIC
EA	EACH	METL	METAL		
EE	EACH END	MIDHT	MID HEIGHT		
EF	EACH FACE	MIN	MINIMUM		
EJ	EXPANSION JOINT	MFR	MANUFACTURER		
EL	ELEVATION	N/C	NOT IN CONTRACT		
ELEV	ELEVATOR	N/S	NOT TO SCALE		
EMBD	EMBEDMENT	OC	ON CENTER		
EQ	EQUAL	OPNG	OPENING		



\*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 laws of the State of Maryland, License No. 16519, Expiration Date 06/11/09.

### OWNER/DEVELOPER

TROY HILL SQUARE, LLC  
c/o SERGIO ACLE  
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ELLICOTT CITY, MD 21042  
410.481.4400

### GENERAL NOTES & DETAILS TROY HILL CORPORATE CENTER PARCEL A-30 RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18 PARCEL 135  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
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Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@saaland.com

DESIGN BY: JPH  
DRAWN BY: CMS  
CHECKED BY: CMS  
SCALE: N.T.S.  
DATE: MARCH 18, 2007  
PROJECT #: 07456  
SHEET #: 10 OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Michael Dawson* 4/29/08  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*David Hoot* 6/10/08  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Paula K. Benge* 6/11/08  
DIRECTOR DATE

# ALLAN BLOCK SPECIFICATIONS

## SECTION 1

### PART 1: GENERAL

#### 1.1 Scope

Work includes furnishing and installing modular concrete block retaining wall units to the lines and grades designated on the construction drawings and as specified herein.

#### 1.2 Applicable Sections of Related Work

Geogrid Wall Reinforcement (see section 2)

#### 1.3 Reference Standards

Unless otherwise noted, most recent standard shall be used.

ASTM C1372 Standard Specification for Segmental Retaining Wall Units.

ASTM 1282 Evaluating the Freeze-thaw Durability of Manufactured CMU's and Related Concrete Units

ASTM D698 Moisture Density Relationship for Soils, Standard Method

ASTM D422 Gradation of Soils

ASTM C140 Sample and Testing concrete Masonry Units

#### 1.4 Delivery, Storage, and Handling

A. Contractor shall check the materials upon delivery to assure proper material has been received.

B. Contractor shall prevent excessive mud, wet cement, and like construction debris from coming in contact with the materials.

C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project (ASTM C1372).

### PART 2: MATERIALS

#### 2.1 Modular Wall Units

A. Wall units shall be produced by a licensed manufacturer.

B. Wall units shall have minimum 28 day compressive strength of 3000 psi (20.7 MPa) in accordance with ASTM C1372. The concrete units shall have adequate freeze-thaw protection in accordance with ASTM C1372 or an average absorption rate of 7.5 lb/lb (120 kg/m<sup>3</sup>) for northern climates and 10 lb/lb (160 kg/m<sup>3</sup>) for southern climates.

C. Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations on the height of any two units shall be 0.125 in. (3 mm).

D. Wall units shall provide a minimum of 110 lbs total weight per square foot of wall face area (55 kg/m<sup>2</sup>). Fill contained within the units may be considered 80% effective weight.

E. Exterior face shall be textured. Color as specified by owner.

#### 2.2 Wall Rock

A. Material must be well-graded compactible aggregate, 0.25 in. to 1.5 in., (6 mm - 38 mm) with no more than 10% passing the #200 sieve. (ASTM D422)

B. Material behind and within the blocks may be the same material.

#### 2.3 Infill Soil

A. Infill material shall be site excavated soils when approved by the on-site soils engineer unless otherwise specified in the drawings. Unsuitable soils for backfill (heavy clays or organic soils) shall not be used in the reinforced soil mass. Fine grained cohesive soils (f-c/s) may be used in wall construction, but additional backfilling, compaction and water management efforts are required. Poorly graded sands, expansive clays and/or soils with a plasticity index (PI) >20 or a liquid limit (LL) >40 should not be used in wall construction.

B. The infill soil used must meet or exceed the designed friction angle and description noted on the design cross sections, and must be free of debris and consist of one of the following inorganic USCS soil types: GP, GW, SW, SP, SM, SM-SC meeting the following gradation as determined in accordance with ASTM D422.

Sieve Size	Percent Passing
4 inch	100 75
No. 4	100 20
No. 40	0 - 60
No. 200	0 - 35

C. Where additional fill is required, contractor shall submit sample and specifications to the wall design engineer or the on-site soils engineer for approval and the approving engineer must certify that the soils proposed for use has properties meeting or exceeding original design standards.

### PART 3: WALL CONSTRUCTION

#### 3.1 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall use caution not to over-excavate beyond the lines shown, or to disturb the base elevations beyond those shown.

B. Contractor shall verify locations of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation.

#### 3.2 Foundation Soil Preparation

A. Foundation soil shall be defined as any soils located beneath a wall.

B. Foundation soil shall be excavated as dimensioned on the plans and compacted to a minimum of 95% of Standard Proctor (ASTM D698) prior to placement of the base material.

C. Foundation soil shall be examined by the on-site soils engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable material.

#### 3.3 Base

A. Base material shall be placed as shown on the construction drawing. Top of base shall be located to allow bottom wall units to be buried to proper depths as per wall heights and specifications.

B. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted to a minimum of 95% Standard Proctor (ASTM D698).

C. Base shall be compacted at 95% Standard Proctor (ASTM D698) to provide a level hard surface on which to place the first course of blocks. The base shall be constructed to ensure proper wall embedment and the final elevation shown on the plans. Well-graded sand can be used to smooth the top 1/2 in. (13 mm) on the base material.

D. Base material shall be a 4 in. (100 mm) minimum depth for walls under 4 ft (1.2 m) and a 6 in. (150 mm) minimum depth for walls over 4 ft (1.2 m).

#### 3.4 Unit Installation

A. The first course of wall units shall be placed on the prepared base with the raised lip facing up and out and the front edges tight together. The units shall be checked for level and alignment as they are placed.

B. Ensure that units are in full contact with base. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.

C. Fill all cores and cavities and a minimum of 12 in. (300 mm) behind the base course with wall rock. Use approved soils to backfill behind the wall rock and in front of the base course to firmly lock in place. Check again for level and alignment. Use a plate compactor to consolidate the area behind the base course. All excess material shall be swept from top of units.

D. Install next course of wall units on top of base row. Position blocks to be offset from seams of blocks below. Perfect "running bond" is not essential, but a 3 in. (75 mm) minimum offset is recommended. Check each block for proper alignment and level. Fill all cavities in and around wall units and to a minimum of 12 in. (300 mm) depth behind block with wall rock. For taller wall application the depth of wall rock behind the block should be increased; walls from 15ft (4.57m) to 25ft (7.62m) should have a minimum of 2ft (0.61m) and walls above 25ft (7.62m) should have a minimum of 3ft (0.91m). Spread backfill in uniform lifts not exceeding 8 in. (200 mm) in uncompacted thickness and compact to 95% of Standard Proctor (ASTM D698) behind the consolidation zone.

E. The consolidation zone shall be defined as 3 ft (1 m) behind the wall. Compaction within the consolidation zone shall be accomplished by using a hand operated plate compactor and shall begin by running the plate compactor directly on the block and then compacting in parallel paths from the wall face until the entire consolidation zone has been compacted. A minimum of two passes of the plate compactor are required with maximum lifts of 8 in. (200 mm). Expansive or fine-grained soils may require additional compaction passes and/or specific compaction equipment such as a sheepfoot roller. Maximum lifts of 4 inches (100 mm) may be required to achieve adequate compaction within the consolidation zone. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Final compaction requirements in the consolidation zone shall be established by the engineer of record.

F. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.

G. As with any construction work, some deviation from construction drawing alignments will occur. Variability in construction of SRWs is approximately equal to that of cast-in-place concrete retaining walls. As opposed to cast-in-place concrete walls, alignment of SRWs can be simply corrected or modified during construction. Based upon examination of numerous completed SRWs, the following recommended minimum tolerances can be achieved with good construction techniques.

- Vertical Control -  $\pm 1.25$  in. (32 mm) max. over 10 ft (3 m) distance.
- Horizontal Location Control - straight lines  $\pm 1.25$  in. (32 mm) over a 10 ft (3 m) distance.
- Rotation - from established plan wall batter : 2.0
- Bulging - 1.0 in. (25 mm) over a 10 ft (3.0 m) distance

#### 3.5 Additional Construction Notes

A. Filter fabric use is not suggested for use with cohesive soils. Clogging of such fabric creates unacceptable hydrostatic pressures in soil reinforced structures. When filtration is deemed necessary in cohesive soils, use a three dimensional filtration system of clean sand or filtration aggregate.

C. Water management is of extreme concern during and after construction. Steps must be taken to ensure that drain pipes are properly installed and vented to daylight and a grading plan has been developed that routes water away from the retaining wall location. Site water management is required both during construction of the wall and after completion of construction.

F.Allan Block Geogrid Specs Page of

Specification Guidelines: Geogrid Reinforcement Systems

### SECTION 2

#### PART 1: GENERAL

#### 1.1 Scope

Work includes furnishing and installing geogrid reinforcement, wall fill, and backfill to the lines and grades designated on the construction drawings and as specified herein.

#### 1.2 Applicable Section of Related Work

Section 1: Modular Retaining Wall Systems.

#### 1.3 Reference Standards

See specific geogrid manufacturers reference standards.

#### Additional Standards:

- A. ASTM D4595 - Tensile Properties of Geotextiles by the Wide-Width Strip Method
- B. ASTM D5262 - Test Method for Evaluating the Unconfined Creep Behavior of Geogrids
- C. ASTM D6638 - Grid Connection Strength (SRW-U1)
- D. ASTM D6916 - Grid Shear Strength (SRW-U2)
- E. GR-064 - Grid Long Term Allowable Design Strength (LTDS)
- F. ASTM D6706 - Test Method for Grid Pullout

#### 1.4 Delivery, Storage, and Handling

A. Contractor shall check the geogrid upon delivery to assure that the proper material has been received.

B. Geogrid shall be stored above -10 F. (-23 C).

C. Contractor shall prevent excessive mud, wet cement, or other foreign materials from coming in contact with the geogrid material.

### PART 2: MATERIALS

#### 2.1 Definitions

- A. Geogrid products shall be of high density polyethylene or polyester yarns encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material.
- B. Concrete retaining wall units are as detailed on the drawings and shall be Allan Block Retaining Wall Units.
- C. Drainage material is free draining granular material as defined in Section 1, 2.2 Wall Rock.
- D. Backfill is the soil used as fill for the reinforced soil mass.
- E. Foundation soil is the in-situ soil.

#### 2.2 Products

Geogrid shall be the type as shown on the drawings having the property requirements as described within the manufacturers specifications.

#### 2.3 Acceptable Manufacturers

A manufacturer's product shall be approved by the wall design engineer.

### PART 3: WALL CONSTRUCTION

#### 3.1 Foundation Soil Preparation

A. Foundation soil shall be excavated to the lines and grades as shown on the construction drawings, or as directed by the on-site soils engineer.

B. Foundation soil shall be examined by the on-site soils engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength.

C. Over-excavated areas shall be filled with compacted backfill material approved by on-site soils engineer.

D. Contractor shall verify locations of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation.

#### 3.2 Wall Construction

Wall construction shall be as specified under Section 1, Part 3, Wall Construction.

#### 3.3 Geogrid Installation

A. Install wall to designated height of first geogrid layer. Backfill and compact in layers not to exceed 8 in. (200 mm) lifts behind wall to depth equal to designed grid length before grid is installed.

B. Cut geogrid to designed embedment length and place on top of block to back edge of lip. Extend away from wall approximately 3% above horizontal on compacted backfill.

C. Lay geogrid at the proper elevation and orientations shown on the construction drawings or as directed by the wall design engineer.

D. Correct orientation of the geogrid shall be verified by the contractor and on-site soils engineer. Strength direction is typically perpendicular to wall face.

E. Follow manufacturers guidelines for overlap requirements. In curves and corners, layout shall be as specified in Design Details 9-12, see Page 15 of the AB Spec Book.

F. Place next course of block on top of grid and fill block cores with wall rock to lock in place. Remove stock and folds in grid and stake to hold in place.

G. Adjacent sheets of geogrid shall be buttled against each other at the wall face to achieve 100 percent coverage.

H. Geogrid lengths shall be continuous. Splicing parallel to the wall face is not allowed.

#### 3.4 Fill Placement and Backfill Placement

A. Infill material shall be placed in lifts and compacted as specified under Section 1, Part 3.4, Unit Installation.

B. Backfill shall be placed, spread and compacted in such a manner that minimizes the development of slack or movement of the geogrid.

C. Only hand-operated compaction equipment shall be allowed within 3 ft (1 m) behind the wall. This area shall be defined as the consolidation zone. Compaction in this zone shall begin by running the plate compactor directly on the block and then compacting in parallel paths to the wall face until the entire consolidation zone has been compacted. A minimum of two passes of the plate compactor are required with maximum lifts of 8 in. (200 mm).

D. When fill is placed and compaction cannot be defined in terms of Standard Proctor Density, then compaction shall be performed using ordinary compaction process and compacted so that no deformation is observed from the compaction equipment or to the satisfaction of the engineer of record or the site soils engineer.

E. Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 in. (150 mm) is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 mph (16 Km/h). Sudden braking and sharp turning shall be avoided.

G. The infill shall be compacted to achieve 95% Standard Proctor (ASTM D698). Compaction tests shall be taken at 3 ft (1 m) behind the block and at the back of the reinforced zone and frequency shall be as determined by the on-site soils engineer or as specified on the plan. Soil tests of the backfill material shall be submitted to the on-site soils engineer for review and approval prior to the placement of any backfill. The contractor is responsible for achieving the specified compaction requirements. The on-site soils engineer may direct the contractor to remove, correct or amend any soil found not in compliance with these written specifications.

### ALLAN BLOCK WATER MANAGEMENT SPECS PAGE OF SPECIFICATION GUIDELINES: WATER MANAGEMENT

#### SECTION 3

#### PART 1: GENERAL DRAINAGE

#### 1.1 Surface Drainage

A. At the end of each day's construction and at final completion, grade the backfill to avoid water accumulation behind the wall or in the reinforced zone.

B. Surface water must not be allowed to pond or be trapped in the area above the wall or at the toe of the wall.

C. Existing slopes adjacent to retaining wall or slopes created during the grading process shall include drainage details so that surface water will not be allowed to drain over the top of the slope face and/or wall. This may require a combination of berms and surface drainage ditches.

D. Irrigation activities at the site shall be done in a controlled and reasonable manner. If an irrigation system is employed, the design engineer or irrigation manufacturer shall provide details and specification for required equipment to ensure against over irrigation which could damage the structural integrity of the retaining wall system.

C. Existing slopes adjacent to retaining wall or slopes created during the grading process shall include drainage details so that surface water will not be allowed to drain over the top of the slope face and/or wall. This may require a combination of berms and surface drainage ditches.

D. Irrigation activities at the site shall be done in a controlled and reasonable manner. If an irrigation system is employed, the design engineer or irrigation manufacturer shall provide details and specification for required equipment to ensure against over irrigation which could damage the structural integrity of the retaining wall system.

E. Surface water that cannot be diverted from the wall must be collected with surface drainage swales and drained laterally in order to disperse the water around the wall structure. Construction of a typical swale system shall be in accordance with Design Detail 5: Swales, on page 14 of the Allan Block Spec Book.

#### 1.2 Grading

A. Establish final grade with a positive gradient away from the wall structure. Concentrations of surface water runoff shall be managed by providing necessary structures, such as paved ditches, drainage swales, catch basins, etc.

B. Grading designs must divert sources of concentrated surface flow, such as parking lots, away from the wall.

#### 1.3 Drainage System

A. All walls will be constructed with a minimum of 12 in. (300 mm) of wall rock directly behind the wall facing. The material shall meet or exceed the specification for wall rock outlined in Section 1, 2.2 Wall Rock.

B. The drainage collection pipe, drain pipe, shall be a 4 in. (100 mm) perforated or slotted PVC, or corrugated HDPE pipe as approved by engineer of record.

C. All walls will be constructed with a 4 in. (100 mm) diameter drain pipe placed at the lowest possible elevation within the 12 in. (300 mm) of wall rock. This drain pipe is referred to as a toe drain, Section 3, 1.4 Toe Drain.

D. Geogrid Reinforced Walls shall be constructed with an additional 4 in. (100 mm) drain pipe at the back bottom of the reinforced soil mass. This drain pipe is referred to as a head drain, Section 3, 1.5 Head Drain.

#### 1.4 Toe Drain

A. For site configurations with bottoms of the base on a level plane it is recommended that a minimum one percent gradient be maintained on the placement of the pipe with outlets on 50 ft (15 m) centers, or 100 ft (30 m) centers if pipe is crossed between the outlets. This would provide for a maximum height above the bottom of the base in a flat configuration of no more than 6 in. (150 mm).

B. For rigid drain pipes with drain holes the pipes should be positioned with the holes located down. Allan Block does not require that toe drain pipes be wrapped when installed into base rock complying with the specified wall rock material.

C. Pipes shall be routed to storm drains where appropriate or through or under the wall at low points when the job site grading and site layout allows for routing. Appropriate details shall be included to prevent pipes from being crushed, plugged, or infested with rodents.

D. On sites where the natural drop in grade exceeds the one percent minimum, drain pipe outlets shall be on 100 foot (30 m) centers, maximum. This will provide outlets in the event that excessive water flow exceeds the capacity of pipe over long stretches.

E. When the drain pipe must be raised to accommodate outlets through the wall face, refer to the Design Detail 4: Alternate Drain, on page 14 of the Allan Block Spec Book.

#### 1.5 Head Drain

A. The piping used at the back of the reinforced mass shall have a one percent minimum gradient over the length, but it is not critical for it to be positioned at the very bottom of the cut.

Additionally the entire length of the pipe may be vented at one point and should not be tied into the toe drain.

B. The pipe may be a rigid pipe with holes at the bottom with an integral sock encasing the pipe or a corrugated perforated flexible pipe with a sock to filter out fines when required based on soil conditions. For infill soils with a high percentage of sand and/or gravel the head drain pipe does not need to be surrounded by drainage rock. When working with soils containing more than fifty percent clay, one cubic foot of drainage rock is required for each foot of pipe.

#### 1.6 Ground Water

A. If water is encountered in the area of the wall during excavation or construction, a drainage system (chimney, composite or blanket) must be installed as directed by the wall design engineer.

B. Standard retaining wall designs do not include hydrostatic forces associated with the presence of ground water. If adequate drainage is not provided the retaining wall design must consider the presence of the water may not be adequate for the additional hydrostatic pressure.

C. When non-free draining soils are used in the retained zone, the incorporation of a chimney and blanket drain should be added to minimize the water penetration into the reinforced mass. Refer to

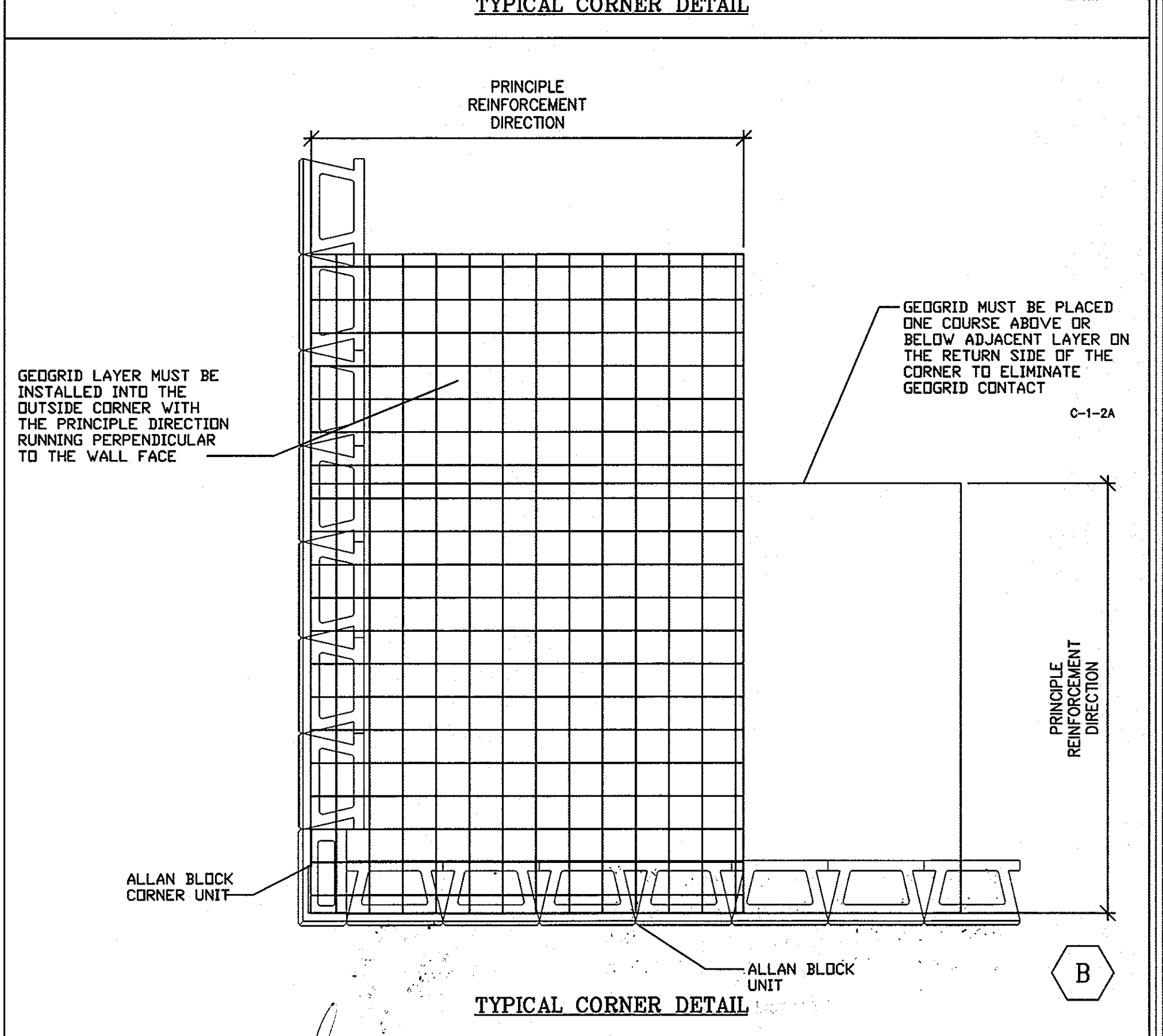
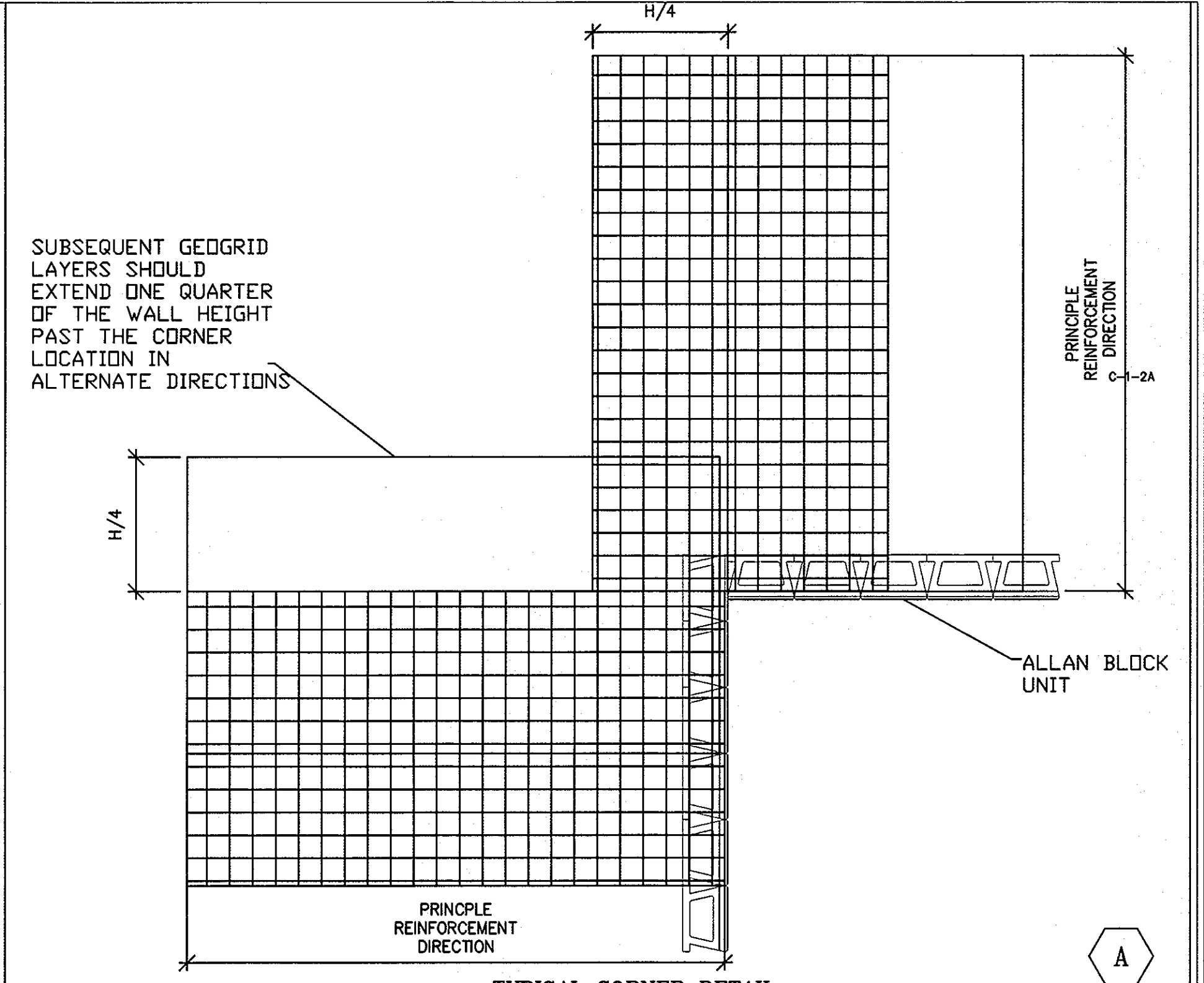
#### 1.7 Concentrated Water Sources

A. All roof downspouts of nearby structures shall be sized with adequate capacity to carry storm water from the roof away from the wall area. They shall be connected to a drainage system in closed pipe and routed around the retaining wall area.

B. Site layout must take into account locations of retaining wall structures and all site drainage paths. Drainage paths should always be away from retaining wall structures.

C. Storm sewers and catch basins shall be located away from retaining wall structures and designed so as not to introduce any incidental water into the reinforced soil mass.

D. A path to route storm sewer overflow must be incorporated into the site layout to direct water away from the retaining wall structure.



#### OWNER/DEVELOPER

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### Allan Block Specifications & Details TROY HILL CORPORATE CENTER PARCEL A-30

RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18 PARCEL 135

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

"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 laws of the State of Maryland, License No. 16519. Expiration Date 06/11/09."

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief Development Engineering Division  
Date: 4/24/09  
Chief, Division of Land Development  
Date: 6/10/08  
Director  
Date: 6/11/08

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DESIGN BY: JPH

DRAWN BY: CMS

CHECKED BY: CMS

SCALE: N.T.S.

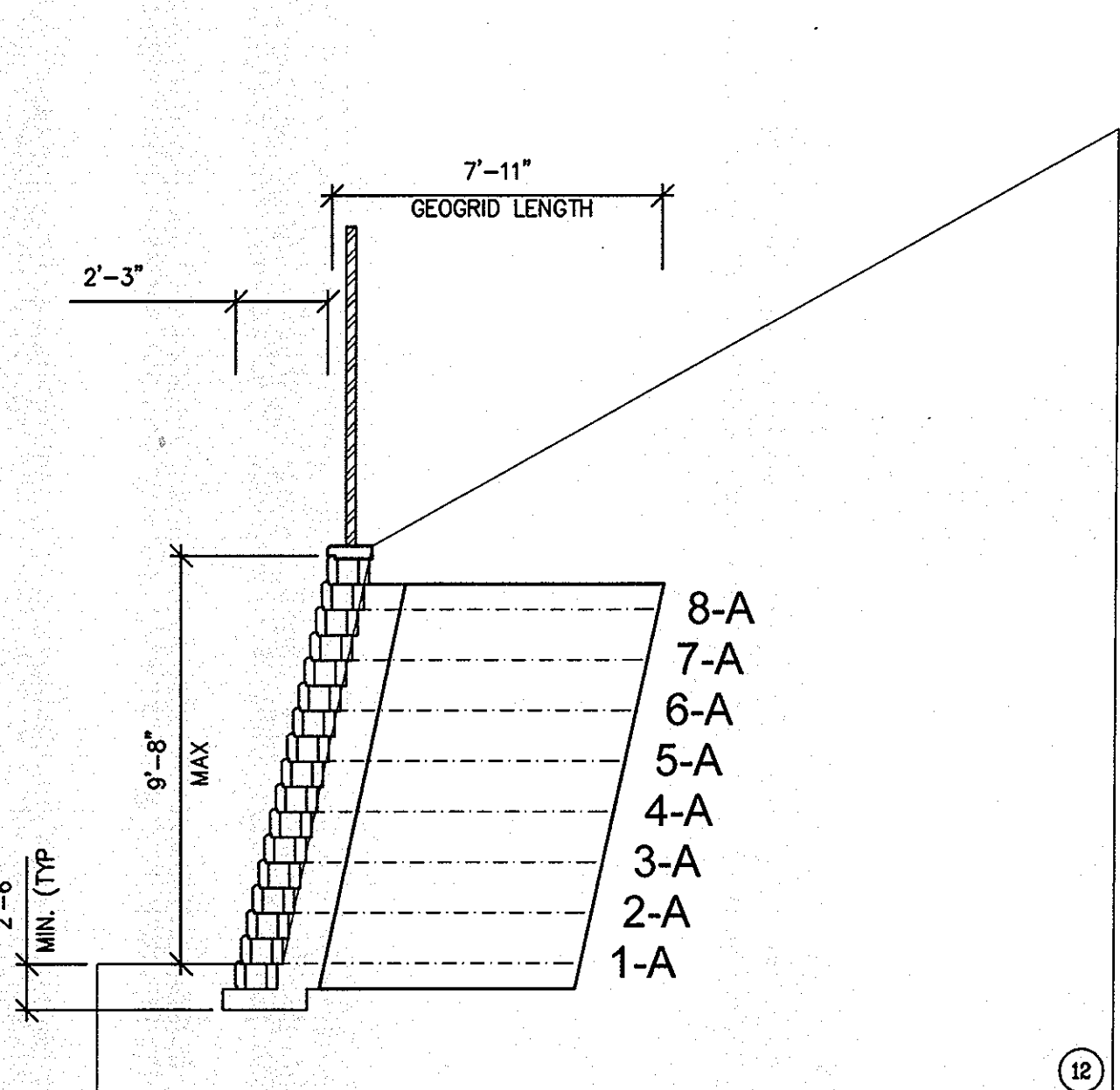
DATE: MARCH 18, 2009

PROJECT #: 07456

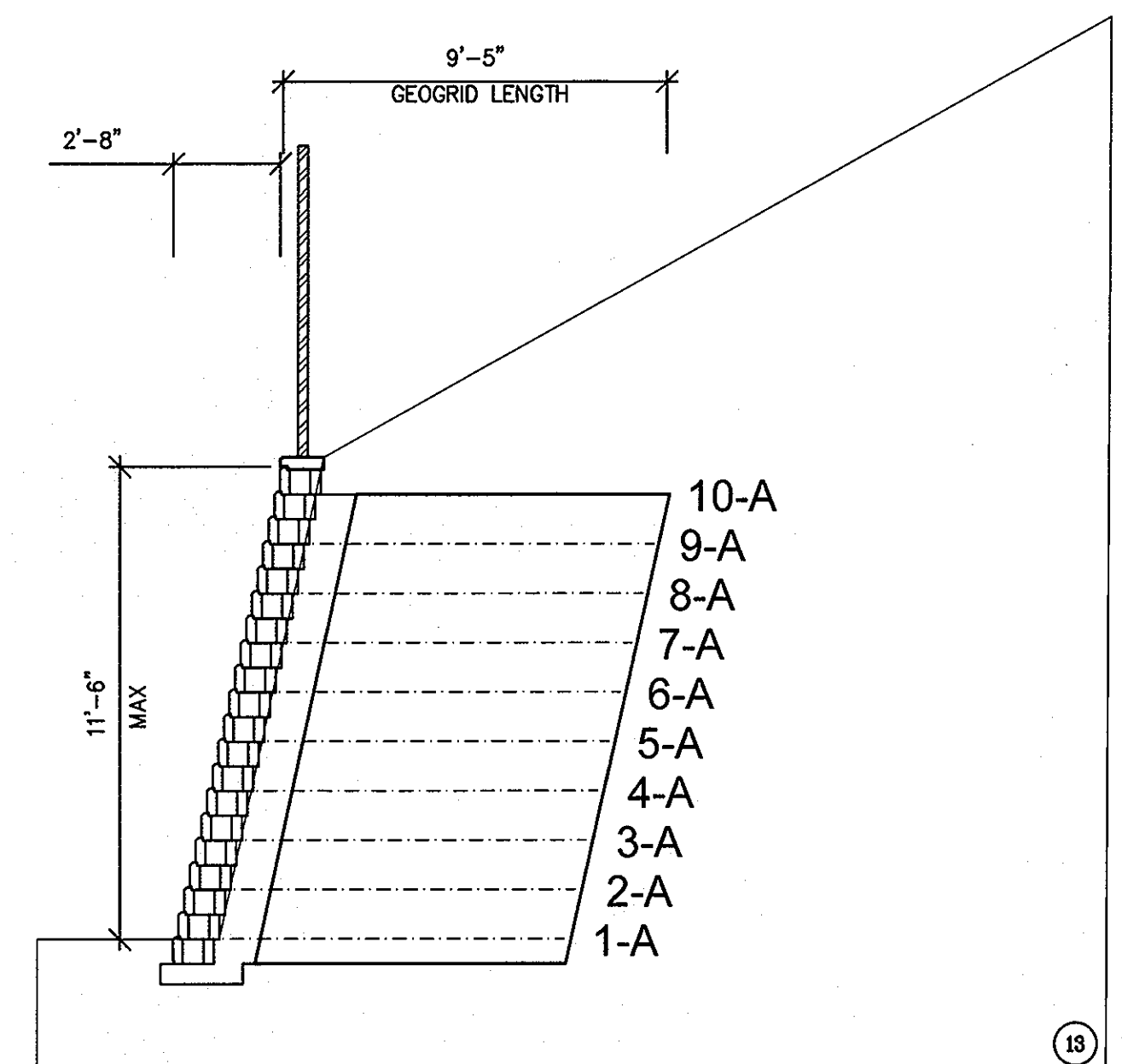
SHEET #: 11 of 12

S-4

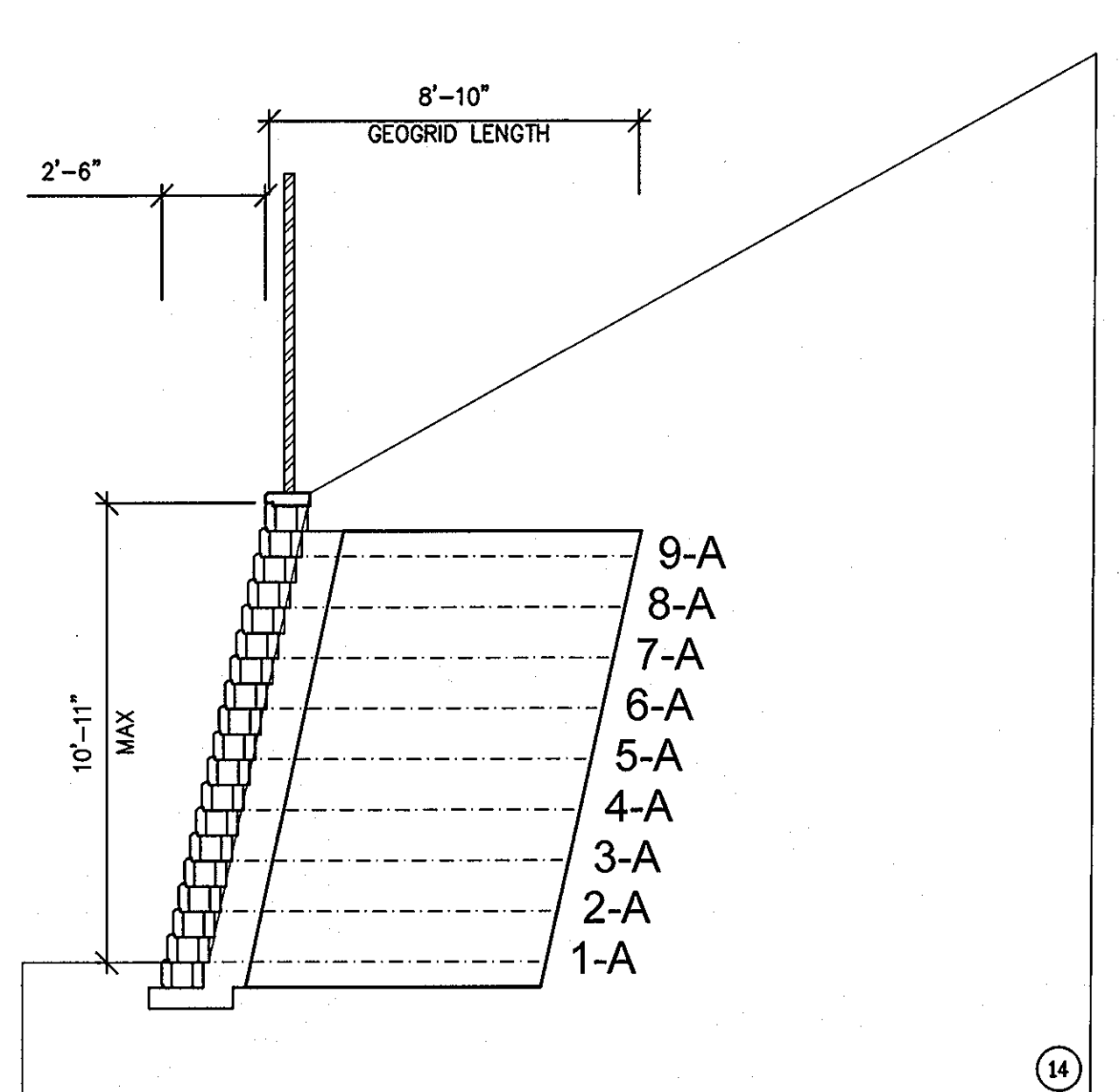
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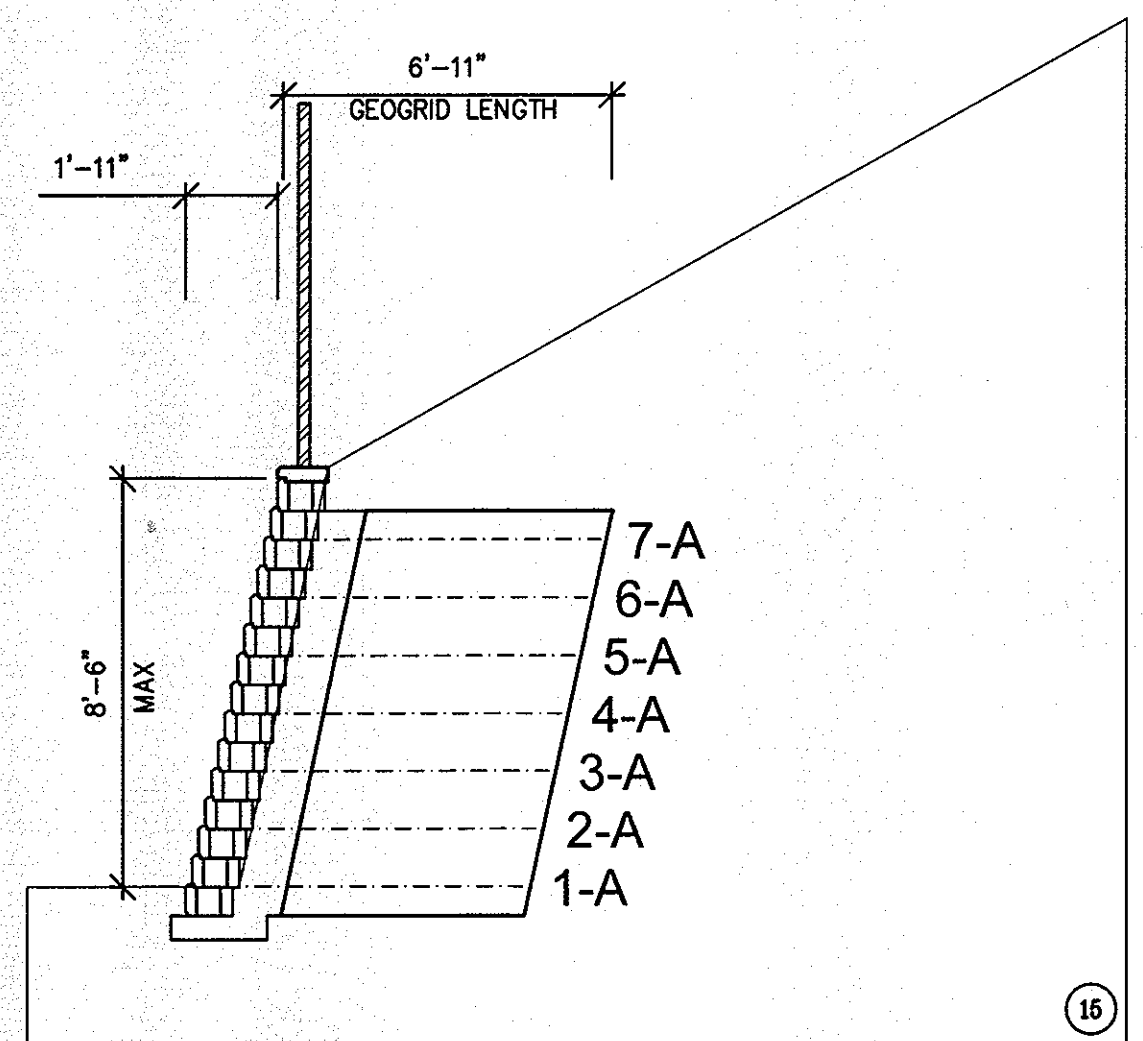
**Section 12 - Notes**  
 \*Setback distance is approximate and does not consider curves, radii or corners.



**Section 13 - Notes**  
 \*Setback distance is approximate and does not consider curves, radii or corners.



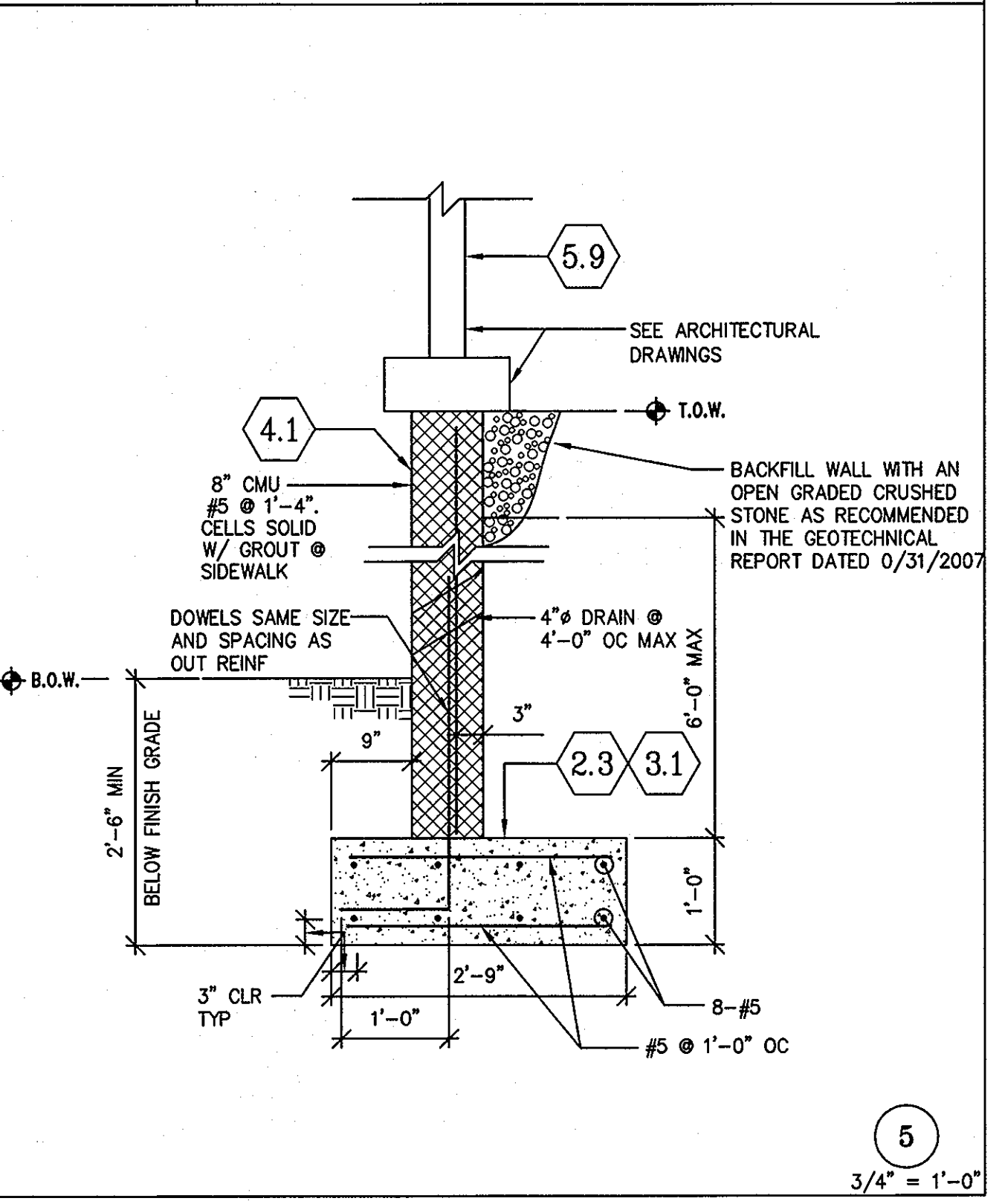
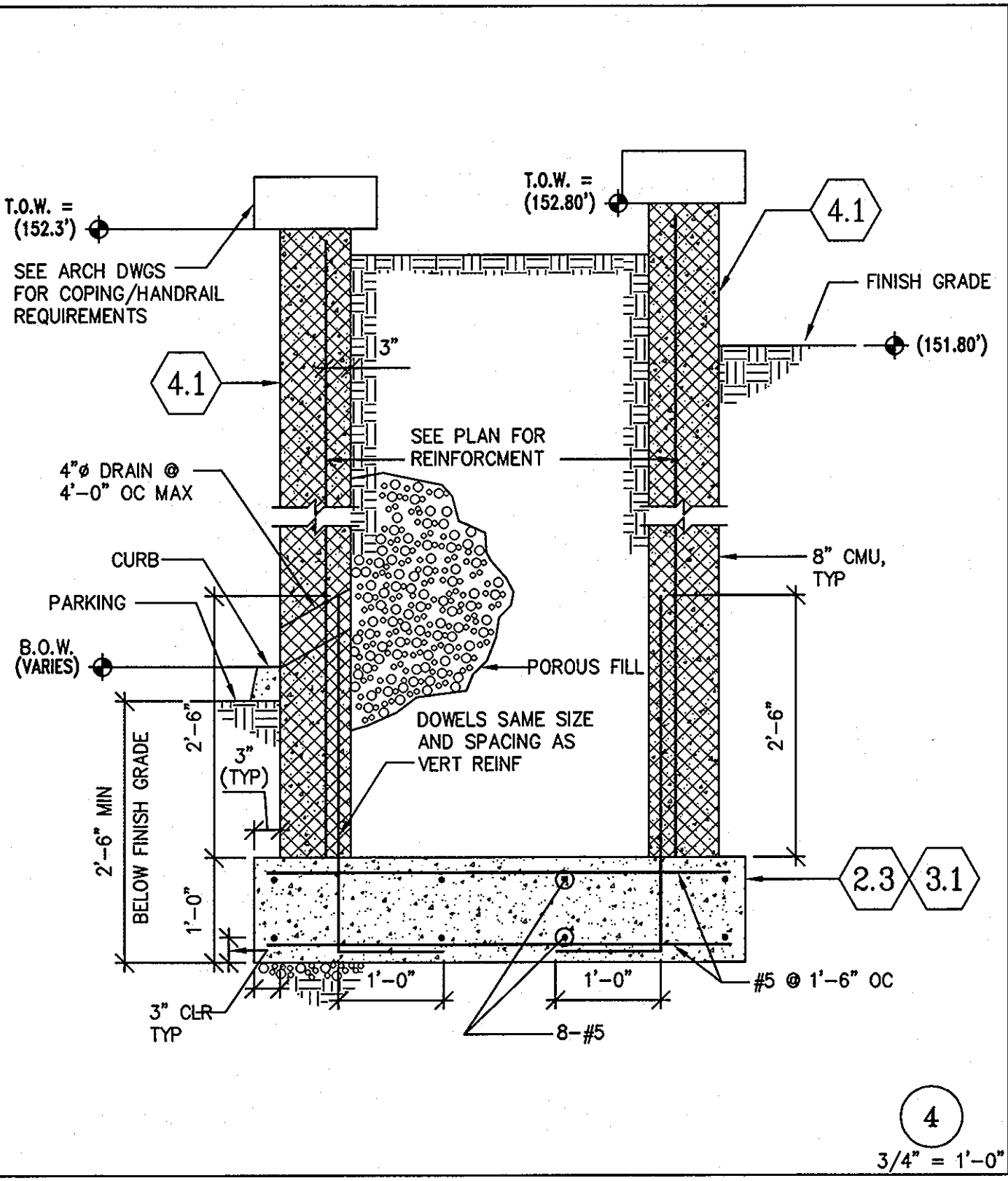
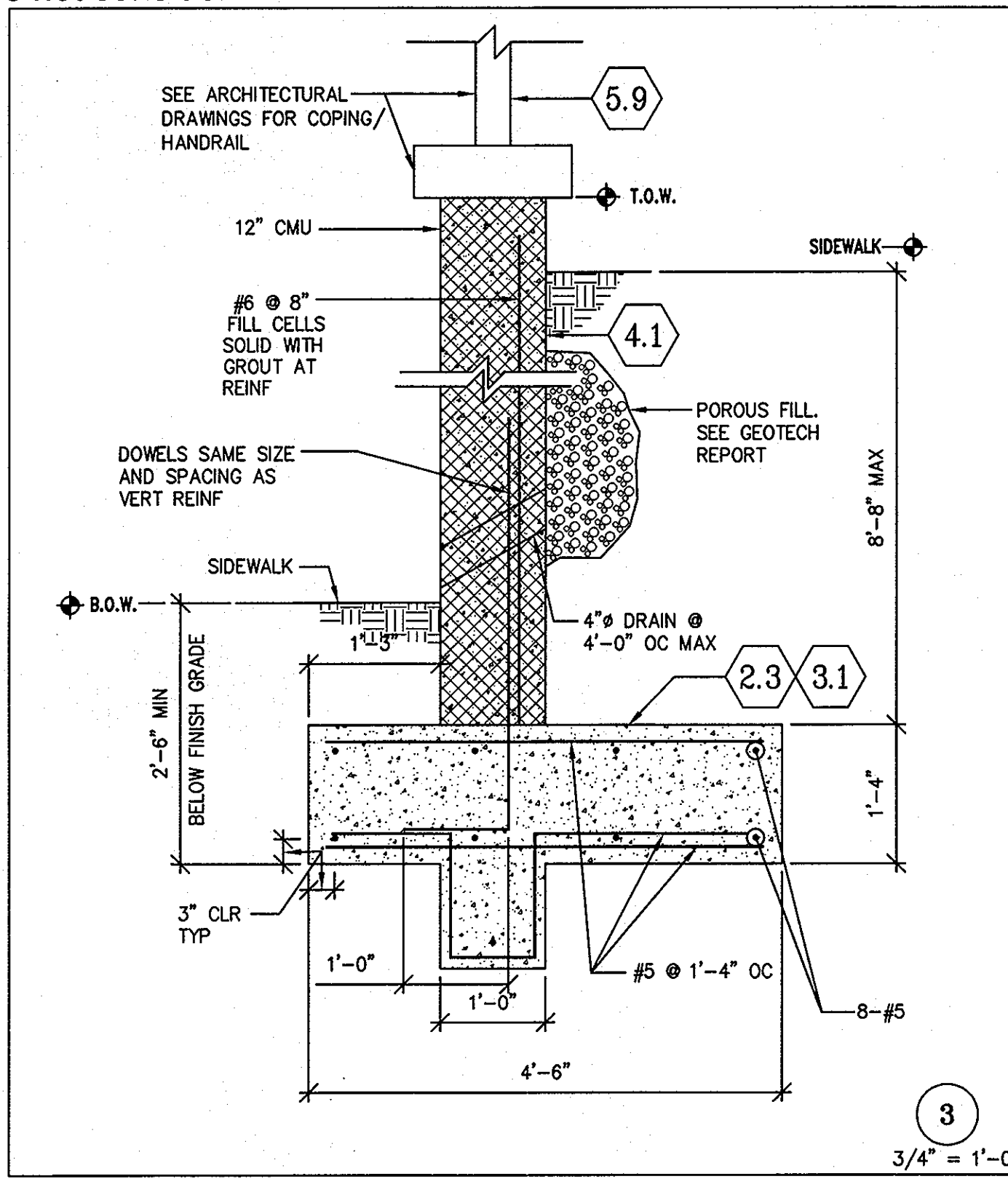
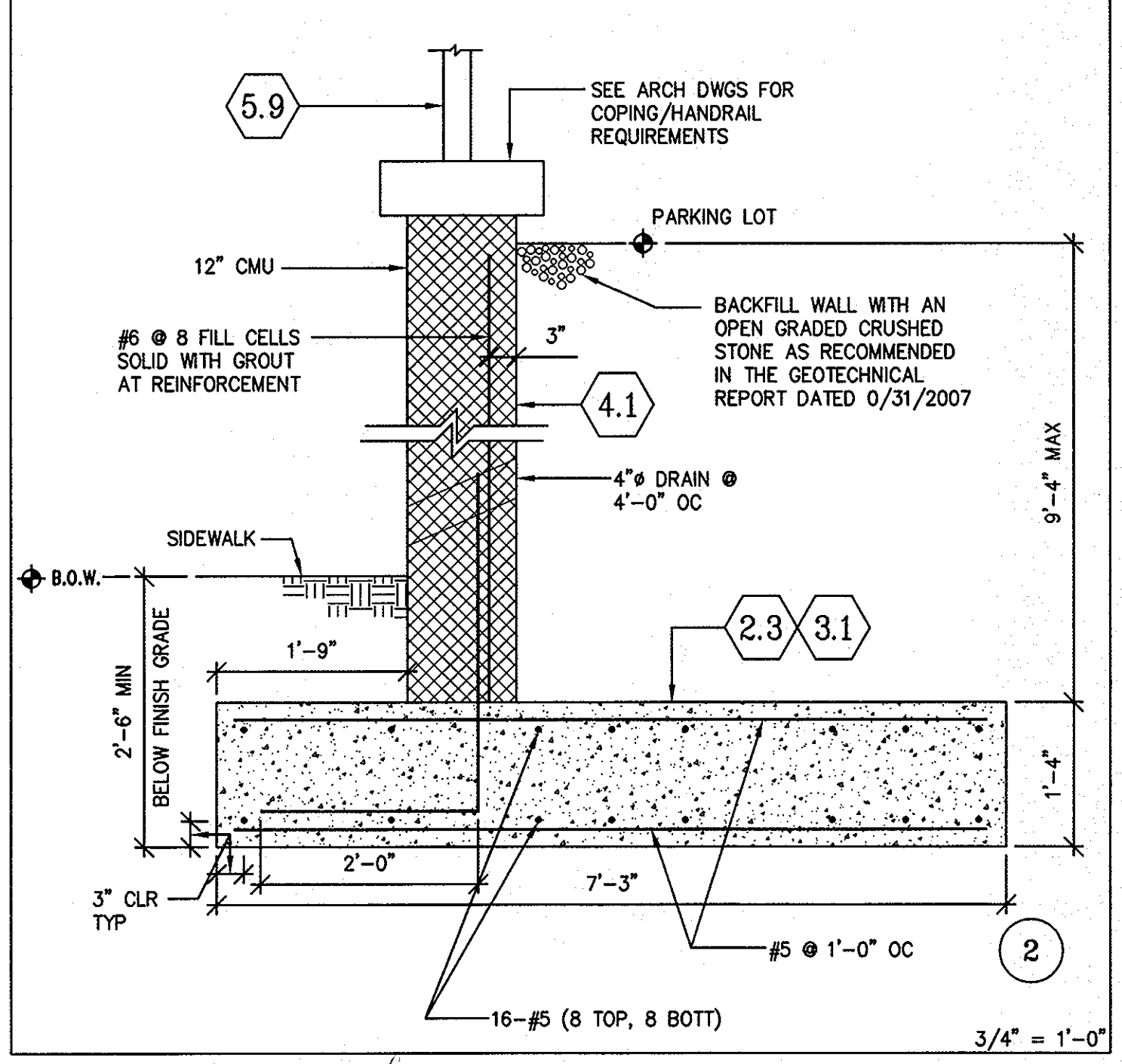
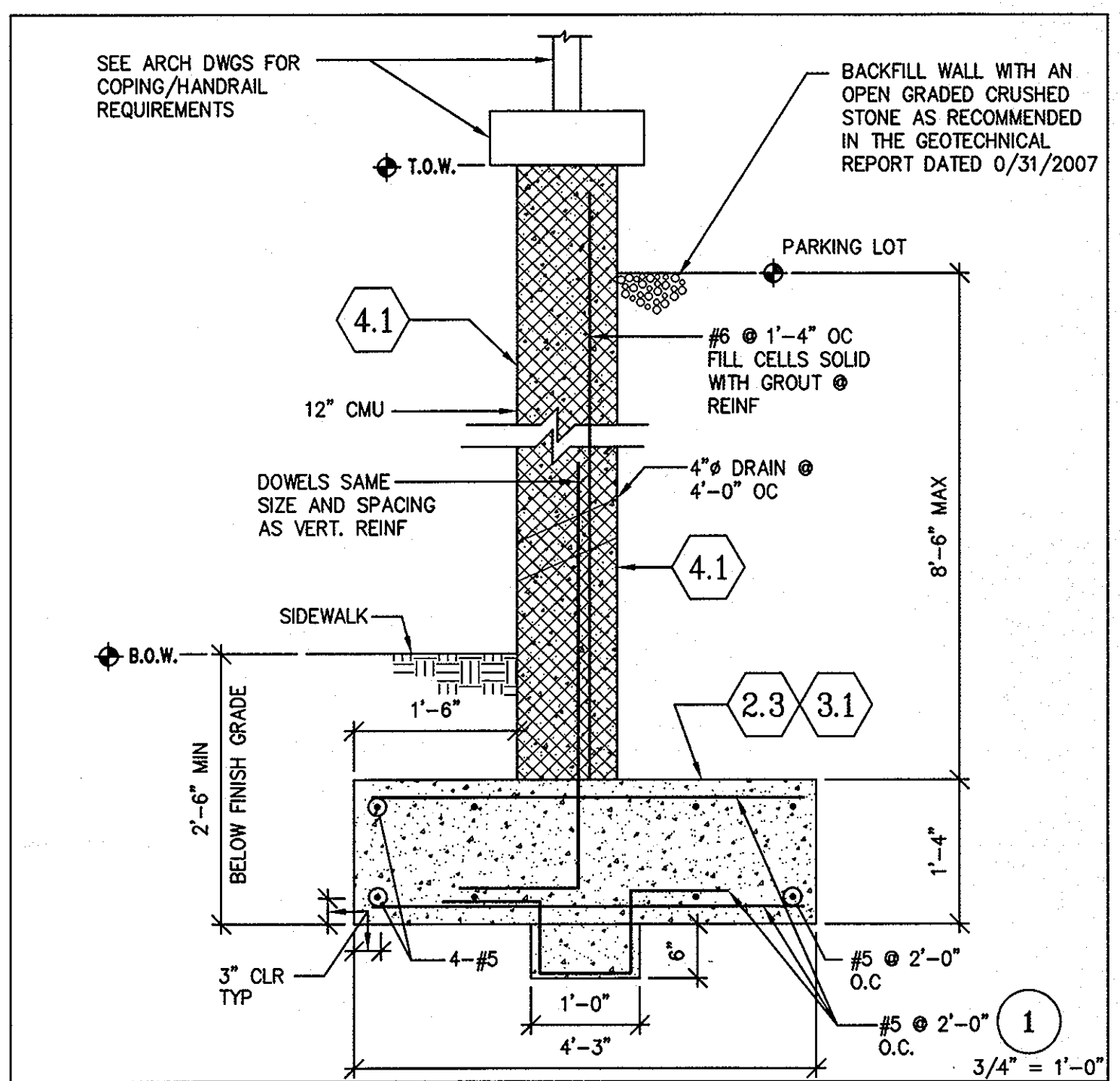
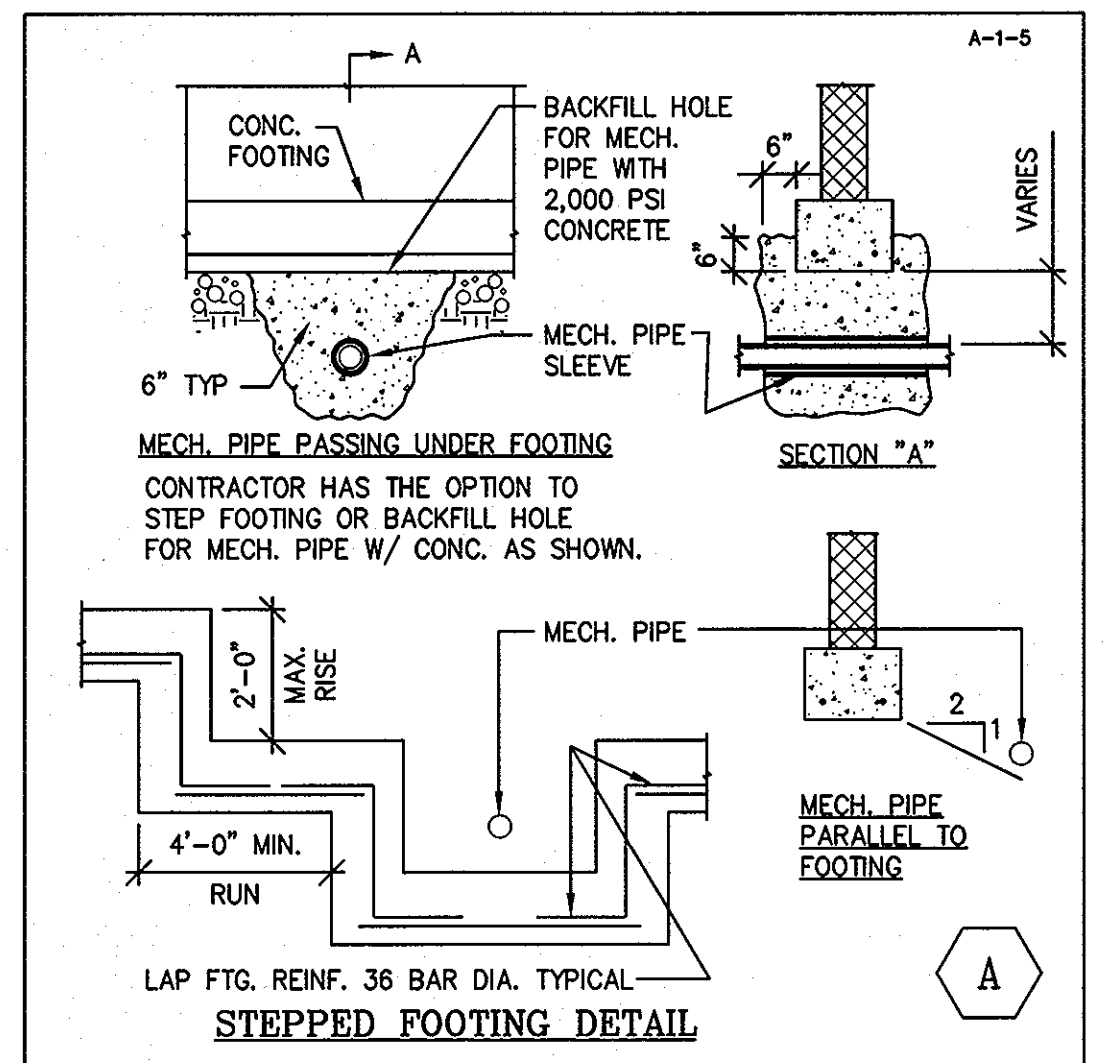
**Section 14 - Notes**  
 \*Setback distance is approximate and does not consider curves, radii or corners.



**Section 15 - Notes**  
 \*Setback distance is approximate and does not consider curves, radii or corners.

X - A REPRESENTS THE GEO GRID LEVEL

SEE DETAILS 'A/S-3' AND 'C/S-3' FOR DRAINAGE AND FOUNDATION INFORMATION.



**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 laws of the State of Maryland, License No. 16519, Expiration Date 06/11/09.

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**SECTIONS**  
**TROY HILL CORPORATE CENTER**  
 PARCEL A-30  
 RESTAURANT AND RETAIL CENTER

TAX MAP 37 GRID 18 PARCEL 135  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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**S-5**

DESIGN BY: JPH  
 DRAWN BY: CMS  
 CHECKED BY: CMS  
 SCALE: AS NOTED  
 DATE: MARCH 18, 2007  
 PROJECT #: 07456  
 SHEET #: 12 OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 4/24/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/10/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
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 DIRECTOR