

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" FOR WORK IN THE COUNTY RIGHT-OF-WAY PLUS TISHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 381-8500 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK, THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF HIGHWAYS AT (410) 381-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER AND SEWER MAINS. THE CONTRACTOR SHALL ALSO NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON HARTLAND UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE STATE HIGHWAY ADMINISTRATION (SHA). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- SEWER SHOWN ON SITE IS BASED ON FIELD RUN TOPOGRAPHY COMPLETED BY CCL. ALL OTHER UTILITY LOCATIONS ARE APPROXIMATE BASED ON HOWARD COUNTY RECORDS.
- PUBLIC SEWER TO THE PROPOSED BUILDING WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.1225 OF THE HOWARD COUNTY CODE. PUBLIC SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- THIS SITE IS LOCATED IN THE LITTLE PATUXENT WATERSHED (DNR# 023105).
- ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH AASHTO T-99--STANDARD.
- CONTRACTOR SHALL MAINTAIN ALL SEDIMENT CONTROL DEVICES WITHIN THE LIMITS OF THE SITE DURING CONSTRUCTION OF THE SITE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS MAY BE NECESSARY DURING CONSTRUCTION AND/OR BY GOVERNING AGENCIES.
- PER FEHA MAP# 24044028C DATED APRIL 02, 1997, THIS SITE IS NOT LOCATED WITHIN THE 100 YR FLOODPLAIN.
- THERE ARE NO STEEP SLOPES LOCATED ON THIS SITE.
- THERE ARE NO KNOWN CEMETERIES OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES, THE DEVELOPER WILL BE SUBJECT TO SECTION 16.1305 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE SUBJECT PROPERTY IS ZONED R-20 (RESIDENTIAL: SINGLE) PER THE COMPREHENSIVE ZONING PLAN (02/02/2004) AND THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE JULY 25, 2007.
- THE TOPOGRAPHY AND SITE BOUNDARY WERE PREPARED BY CHRISTOPHER CONSULTANTS, BASED ON STATIC A GPS MISSION BY CHRISTOPHER CONSULTANTS, IN APRIL OF 2008.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. MONUMENT NUMBERS 300A AND 300B WERE USED FOR THIS PROJECT (NAD 83/1 VERTICLE DATUM NAVD83).
- ALL EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED. UTILITIES CONTRACTOR SHALL VERIFY THE SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND TEST FIT ALL UTILITIES, INCLUDING PROPOSED THE SIZE AND QUANTITY. PROPOSED INFILTRATION TRENCHES WILL PROVIDE ADDITIONAL STORAGE FOR THE INCREASE IN RUNOFF. THE FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE 200 HIDE REQUIREMENTS AND CHAPTER 5 OF THE HOWARD COUNTY MANUAL.
- WATER IS PUBLIC (CONTRACT NO. 24-3150)
- SEWER IS PUBLIC (CONTRACT NO. 24-3150)
- THE CONTRACTOR SHALL INSURE THAT CURRENT AS-BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION, CERTIFIED (I.E. P.E. STAMPED) AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER.
- THE SITE IS SUBJECT TO DEVELOPMENT CRITERIA FOR STORMWATER MANAGEMENT. IN ACCORDANCE WITH THE PREVIOUSLY APPROVED SITE DEVELOPMENT PLAN FOR THIS SITE INFILTRATION TRENCHES WILL BE UTILIZED FOR WATER QUALITY. THERE ARE EXISTING INFILTRATION TRENCHES CURRENTLY BEING USED FOR WATER QUALITY AND QUANTITY. PROPOSED INFILTRATION TRENCHES WILL PROVIDE ADDITIONAL STORAGE FOR THE INCREASE IN RUNOFF. THE FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE 200 HIDE REQUIREMENTS AND CHAPTER 5 OF THE HOWARD COUNTY MANUAL.
- THIS DEVELOPMENT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS IN ACCORDANCE WITH SECTION 16.1202 (b)(1)(ii) OF THE HOWARD COUNTY CODE. APPROVED PERMITS TO 101010496-BA-08-21c.
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, AND THE LANDSCAPE MANUAL.
- LANDSCAPE SURETY IN THE AMOUNT OF \$7,620.00 HAS BEEN POSTED AS A PART OF THE DEVELOPER'S AGREEMENT. LANDSCAPE SURETY IS BASED ON THE NUMBER OF REQUIRED PLANTS AND FENCING PER THE LANDSCAPE MANUAL (19 SHADE TREES x \$300.00 EA., 7 EVG. TREES x \$150.00 EA., AND 91 SHRUBS x \$20.00 EA.).
- ASSOCIATED PLANS LISTED UNDER COLUMBIA PRESBYTERIAN CHURCH
  - BA-06-05E WAS A PETITION FOR A SPECIAL EXCEPTION FOR A RELIGIOUS FACILITY AND WAS GRANTED ON MARCH 10, 1987, AND EXTENDED ON NOVEMBER 10, 1998.
  - BA-90-34E WAS A PETITION FOR A SPECIAL EXCEPTION FOR A RELIGIOUS FACILITY AND WAS GRANTED ON OCTOBER 26, 1990.
  - PHASE CONSTRUCTION, PER SDP-02-03 (APPROVED SEPTEMBER 1992), HAS BEEN COMPLETED.
  - BA-00-02E WAS A PETITION FOR CONSTRUCTION OF TWO TEMPORARY CLASSROOM TRAILERS, GRANTED IN 2000.
  - BA-03-73C WAS A PETITION TO MODIFY THE SPECIAL EXCEPTION TO COMPLETE THE PHASE 2 PARKING AREA, AND WAS GRANTED ON JUNE 7, 2004.
  - BA-08-03C IS A PETITION FOR EXPANSION OF THE EXISTING RELIGIOUS FACILITY AND PARKING LOT, SUBMITTED ON MAY 19, 2008, AND APPROVED BY THE BOARD OF APPEALS ON SEPT. 21, 2009.
  - A BUILDING PERMIT (44658) WAS ISSUED FOR THE 1ST PHASE OF CONSTRUCTION, A CERTIFICATE OF USE AND OCCUPANCY FOR THIS CONSTRUCTION WAS ISSUED ON JULY 29, 1994 BY D.L.P.
  - MP-10-04B TO HAVE SECTION 16.156(C) (TO REACTIVATE THE SDP) AND SECTION 16.1002 (FOREST CONSERVATION) OF THE ZONING CODE WAS APPROVED ON FEB. 2, 2010 TO REACTIVATE THE SITE DEVELOPMENT PLAN AND FIND THAT THE PLAN WAS APPROVED BY THE CONDITIONAL USE PLAN APPROVAL PRIOR TO THE FOREST CONSERVATION REVISION DEADLINE.
- UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED AT FACE OF CURB.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS AS NECESSARY TO GRADE THE SITE AND COMPLETE ANY REQUIRED EXCAVATIONS.
- CHRISTOPHER CONSULTANTS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES, UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES WHICH ARE TO REMAIN FREE FROM DAMAGE AND MAINTAIN UNINTERRUPTED SERVICE TO ALL USERS. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OR SUBCONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- T.B.R. = TO BE REMOVED
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (2 GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- PER HOWARD COUNTY BUILDING CODE SECTION 9401.1 ALL BUILDINGS IN EXCESS OF 5,000 SF IN SIZE WILL HAVE A COMPLETE AUTOMATIC FIRE SUPPRESSION SYSTEM DESIGNED IN ACCORDANCE WITH NFPA #13.
- TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR PERPETUAL EASEMENT RIGHT TO TRY OR REMOVE ANY PROTECTED TREE IF IN THE SOLE OPINION OF SGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
- NO GRADING, REMOVAL OF VEGETATION COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) AND THEIR BUFFERS, AND FOREST CONSERVATION EASEMENT AREAS.
- THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 46-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO. 25-2003. 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, AND BUILDING/GRADING PERMIT APPLICATIONS.
- A KNOX BOX FOR FIRE DEPARTMENT ACCESS TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE LEFT OF THE MAIN ENTRANCE APPROXIMATELY 4'-5" IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED.
- WATER METER WILL BE PLACED INSIDE OF THE BUILDING.

# SITE DEVELOPMENT PLAN

## COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION

### PARCEL 223

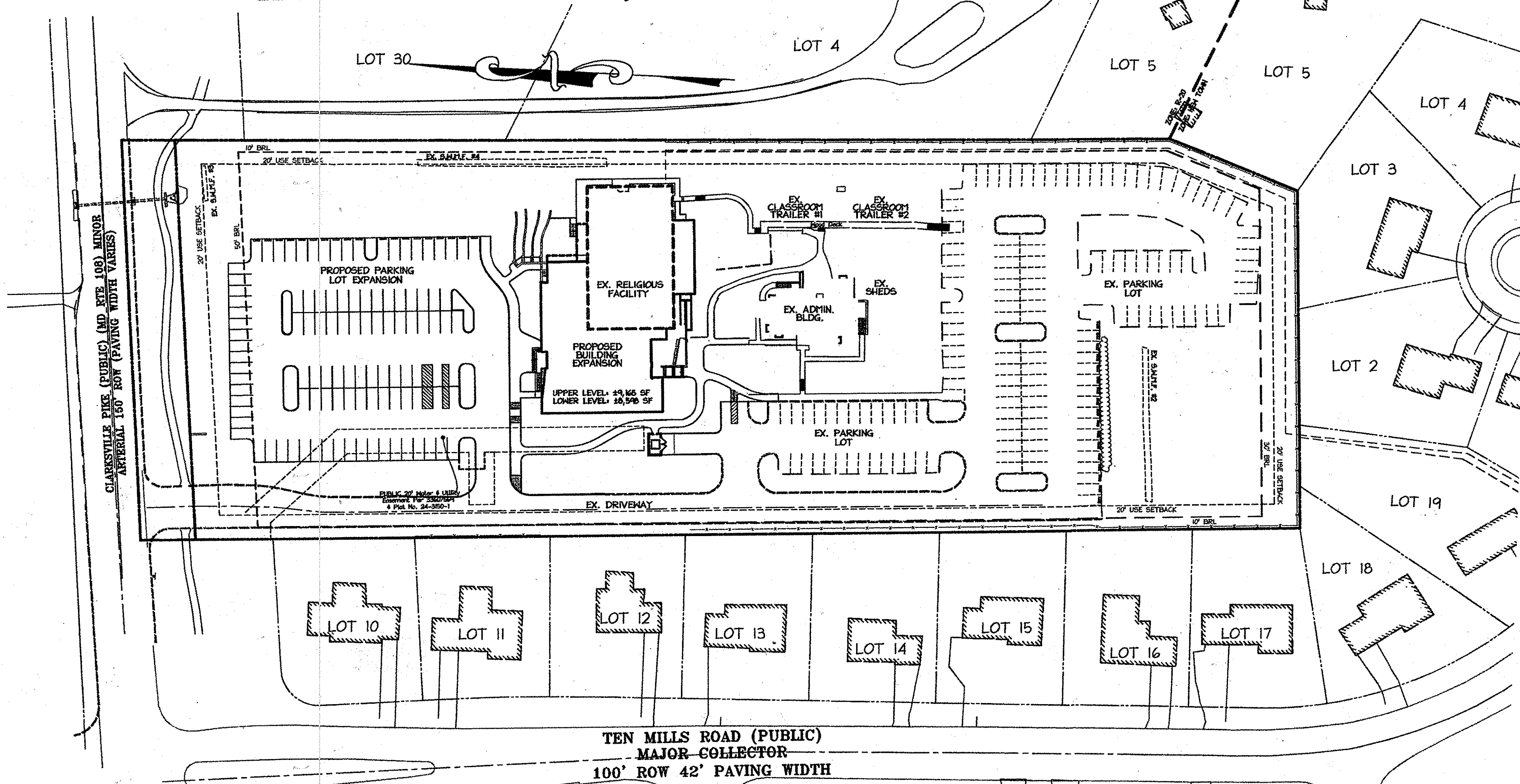
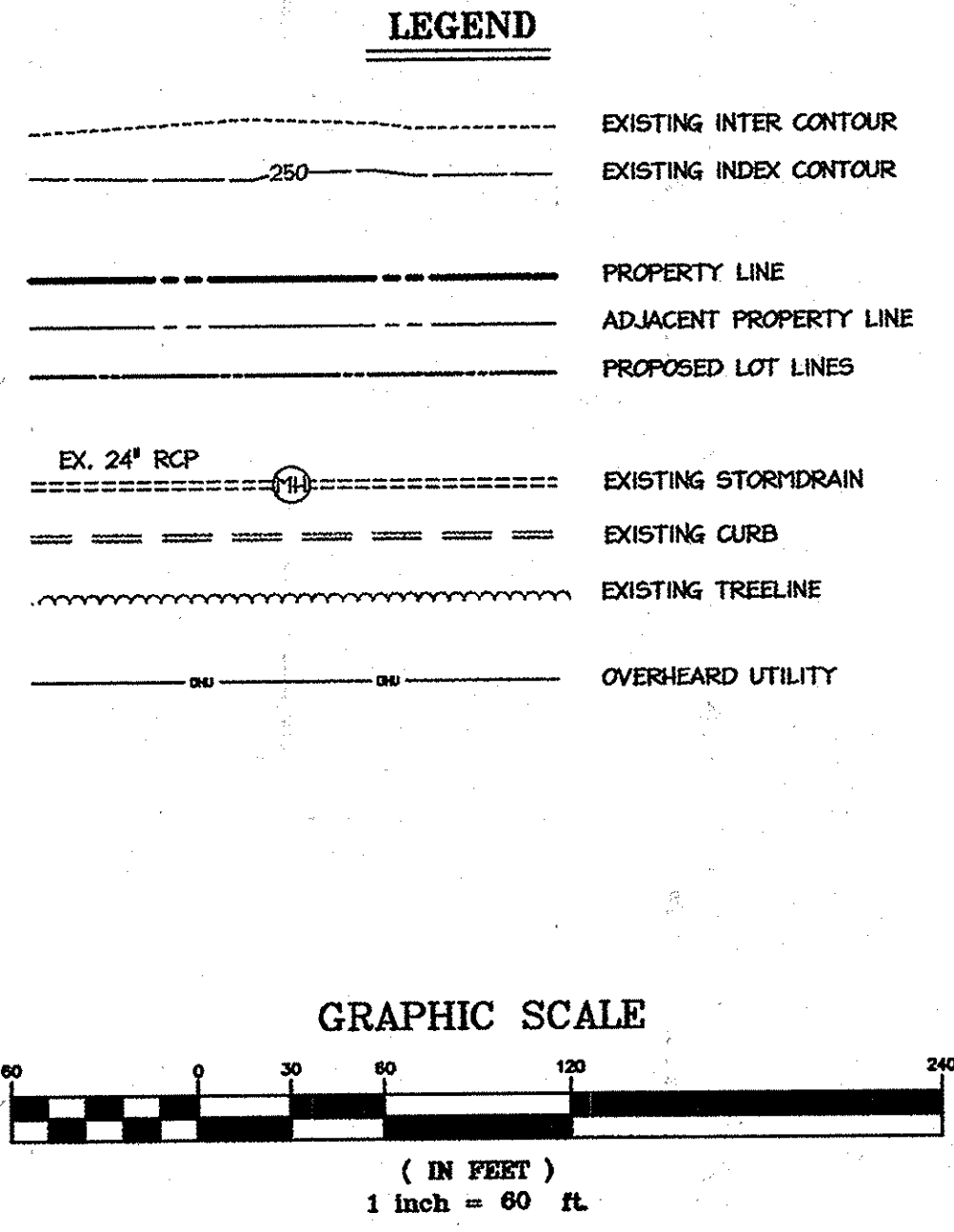
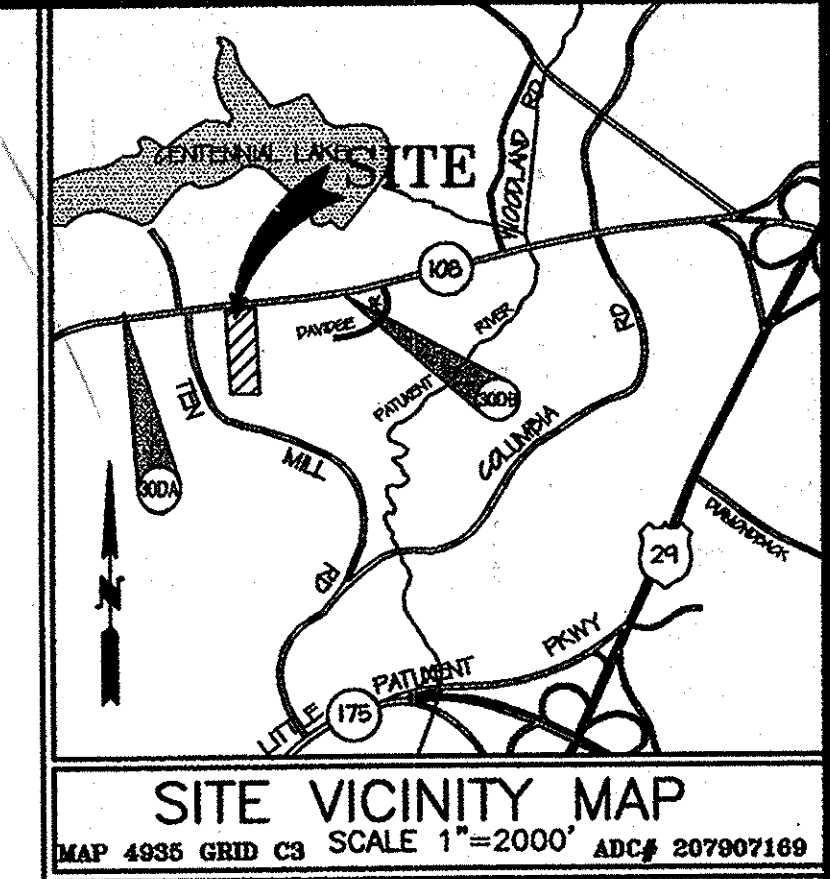
### 5TH ELECTION DISTRICT 10001 CLARKSVILLE PIKE HOWARD COUNTY, MARYLAND 21044

**BENCHMARK INFORMATION**  
 GEODETIC SURVEY CONTROL 300A:  
 NORTHING 572073.8503 U.S. SURVEY FEET / LATITUDE 39°14' 14.60" N  
 EASTING 150408.2945 U.S. SURVEY FEET / LONGITUDE 76°51' 48.322" W  
 ELEVATION 426.316 U.S. SURVEY FEET

GEODETIC SURVEY CONTROL 300B:  
 NORTHING 572298.1284 U.S. SURVEY FEET / LATITUDE 39°14' 16.79" N  
 EASTING 150500.7902 U.S. SURVEY FEET / LONGITUDE 76°51' 23.106" W  
 ELEVATION 429.163 U.S. SURVEY FEET

HORIZONTAL DATUM: MARYLAND NAD83 (ADJ 1991)  
 VERTICAL DATUM: NAVD83

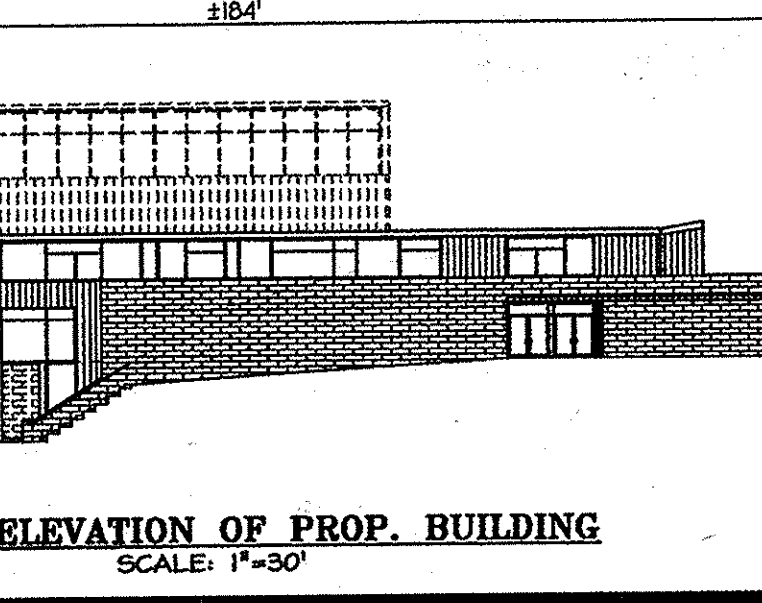
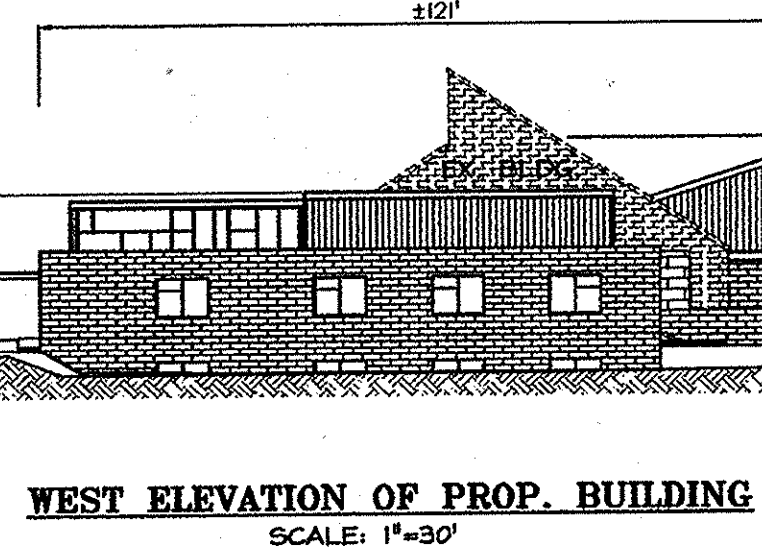
DESCRIPTIONS:  
 STAMPED DISC SET ON 3" DEEP COLUMN OF CONCRETE



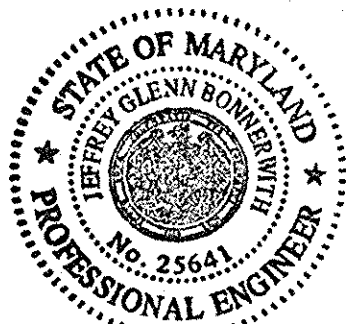
**SITE ANALYSIS DATA CHART**

- TOTAL PROJECT AREA: 36.0 AC (2246,200 SF)
  - AREA OF PLAN SUBMISSION: 36.0 AC (2246,200 SF)
  - LIMIT OF DISTURBED AREA: 22.05 AC (149,329 SF)
  - PRESENT ZONING DESIGNATION: R-20 (RESIDENTIAL: SINGLE)
  - PROPOSED USES FOR SITE AND STRUCTURE: EXPANSION OF EXISTING RELIGIOUS FACILITY
  - BUILDING SQUARE FOOTAGE: SQUARE FOOTAGE OF PROPOSED EXPANSION: 17,763 S.F.  
 UPPER LEVEL: 14,165 S.F.  
 LOWER LEVEL: 3,598 S.F.
  - NUMBER OF STORIES: 2
  - MAXIMUM LOT COVERAGE PERMITTED: 25% OF LOT AREA (374,052 S.F.)
  - LOT COVERAGE PROPOSED: 8.2% (224,248 S.F.)
  - NUMBER OF PARKING SPACES REQUIRED BY HOWARD COUNTY ZONING REGULATIONS:  
 NO. OF SEATS IN SANCTUARY: 950 SEATS  
 PARKING REQUIRED (1 SPACE/3 SEATS): 317 SPACES  
 NUMBER OF PARKING SPACES PROVIDED ON SITE: 262 PARKING SPACES  
 NUMBER OF HANDICAP ACCESSIBLE SPACES PROVIDED: 8 (INCL. 2 VAN SPACES)
  - APPLICABLE DPZ FILE REFERENCES: BA-08-03C (APPROVED SEPT. 9, 2009), BA-06-05E - (GRANTED ON MARCH 10, 1987, AND EXTENDED ON NOVEMBER 10, 1998), BA-90-34E - (GRANTED ON OCTOBER 26, 1990), SDP-02-03 (APPROVED SEPTEMBER 1992), BA-00-02E (GRANTED IN 2000), BA-03-73C (GRANTED JUNE 7, 2004) AND MP-10-04B (APPROVED FEB. 2, 2010)
- ZONING REGULATIONS:**
- MAXIMUM BUILDING HEIGHT (PRINCIPAL STRUCTURE): 34'  
 a. PER SECTION 13.1.3.1 OF THE HOWARD COUNTY ZONING REGULATIONS, STRUCTURES USED PRIMARILY FOR RELIGIOUS ACTIVITIES MAY BE ERRECTED TO A GREATER HEIGHT THAN PERMITTED IN THE DISTRICT IN WHICH IT IS LOCATED, PROVIDED THAT THE FRONT, SIDE AND REAR SETBACKS SHALL BE INCREASED ONE FOOT FOR EACH FOOT BY WHICH SUCH STRUCTURE EXCEEDS THE HEIGHT LIMITATION.
  - MAXIMUM BUILDING HEIGHT PER SECTION 13.1.3.1b: 62'
  - MINIMUM SETBACK REQUIREMENTS:  
 a. FROM ARTERIAL OR COLLECTOR PUBLIC STREET R.O.W.:  
 (1) STRUCTURES:  
 (a) FRONT OR SIDE: 50'  
 (b) REAR: 50'  
 (2) USES (OTHER THAN STRUCTURES) IN ALL DEVELOPMENT PROJECTS EXCEPT SINGLE-FAMILY DETACHED: 20'  
 b. FROM OTHER PUBLIC STREET R.O.W.:  
 (1) STRUCTURES:  
 (a) FRONT OR SIDE: 50'  
 (b) REAR: 30'  
 (2) USES (OTHER THAN STRUCTURES) IN ALL DEVELOPMENT PROJECTS EXCEPT SINGLE-FAMILY DETACHED: 20'  
 c. FROM LOT LINES:  
 (1) STRUCTURES:  
 (a) FRONT: 20'  
 (b) SIDE: 10'  
 (c) REAR: 30'  
 (2) USES (OTHER THAN STRUCTURES) IN ALL DEVELOPMENT PROJECTS EXCEPT SINGLE-FAMILY DETACHED: 20'

**PLAN**  
SCALE: 1"=60'



AS-BUILT CERTIFICATION  
 THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.  
 DATE: 2013-01-10



**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.

DATE: 4/10/10

**SHEET INDEX**

NO.	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	EXISTING CONDITIONS AND DEMOLITION PLAN
4	SITE, GRADING, AND UTILITY PLAN
5	SITE, GRADING, AND UTILITY PLAN
6	SITE NOTES AND DETAILS
7	ACCESSIBLE ROUTE GRADING DETAIL
8	SEDIMENT AND EROSION CONTROL PLAN
9	SEDIMENT AND EROSION CONTROL PLAN
10	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
11	SOIL BORING PLAN
12	STORMWATER MANAGEMENT NOTES AND DETAILS
13	STORMWATER MANAGEMENT NOTES & DETAILS AND UTILITY PROFILES
14	LANDSCAPE PLAN
15	LANDSCAPE PLAN
16	LANDSCAPE DETAILS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Robert C. Little</i>	4/7/10
Chief, Division of Land Development	Date
<i>John J. Williams</i>	4/23/10
Chief, Development Engineering Division	Date
<i>Thomas J. Stutler</i>	4/28/10
Director, Department of Planning and Zoning	Date

12.26.12 1 AS-BUILT REVISION

**COLUMBIA PRESBYTERIAN CHURCH  
BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
 COLUMBIA PRESBYTERIAN CHURCH  
 10001 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 730-6004  
 FAX: (410) 947-5499  
 CONTACT: AL EDWARDS



**ADDRESS CHART**

LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01
PLAT NO.	GRID NO.	ZONE
14	14	R-20
TAX MAP	ELECTION DISTRICT	
30	5	
WATER CODE	SEWER CODE	

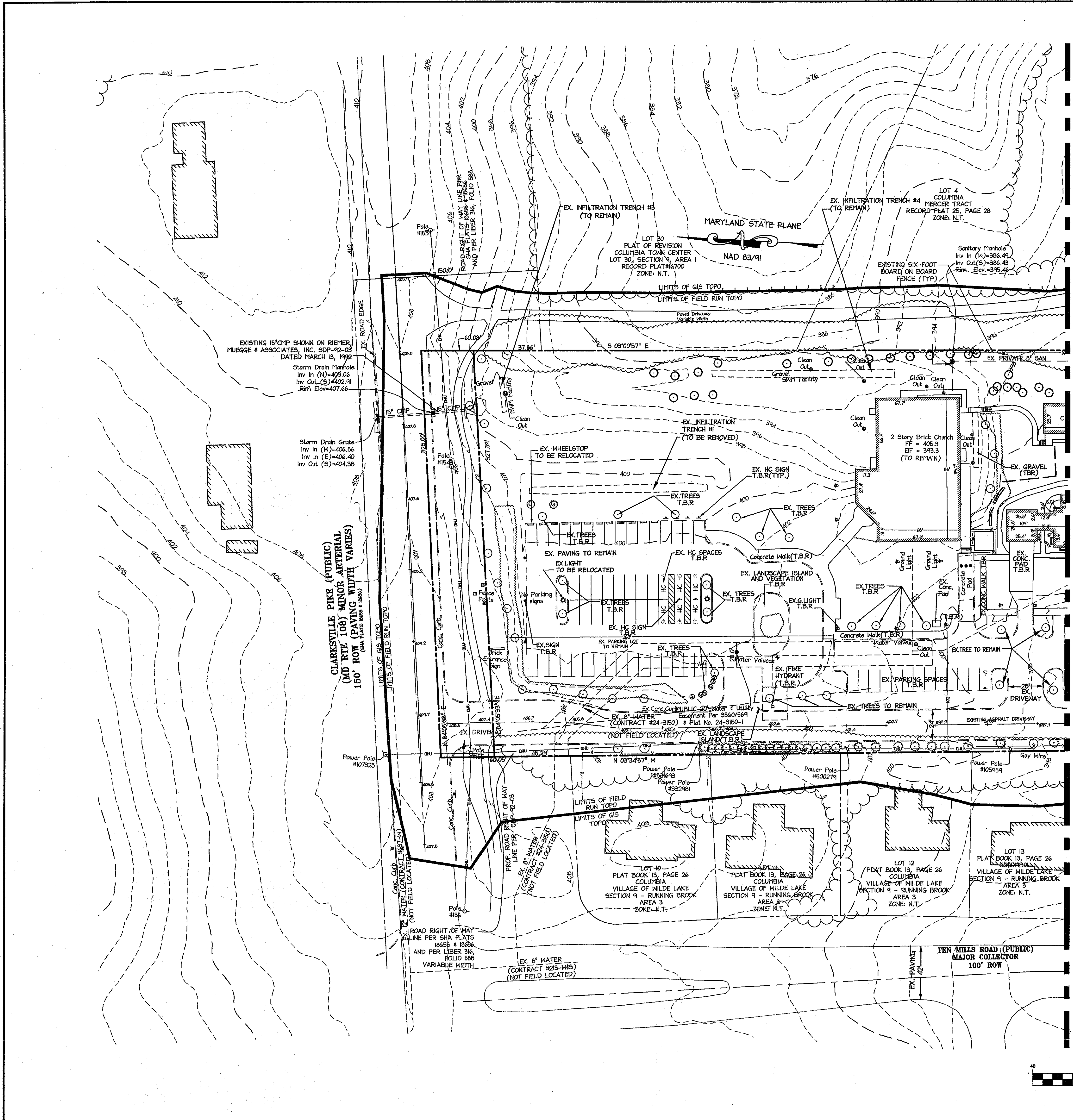
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 AS-BUILT  
 COVER SHEET

DESIGN: LNG SCALE: AS SHOWN PROJECT: 080601.00  
 DRAWN: SSA DATE: APRIL 2010  
 CHECKED: RCE APPROVED: RCE

**1 OF 16**

MDC-878(SDP)





**LEGEND**

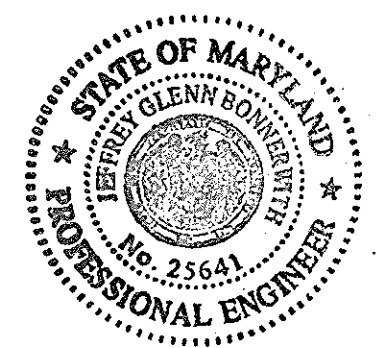
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- EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EX. 24" RCP
- EXISTING STORMDRAIN
- EXISTING CURBLINE
- EXISTING TREELINE
- OVER HEARD UTILITY
- SOILS LINE
- B.R.L. LINE
- USE SET BACK LINE
- EXISTING SIGN
- EXISTING LIGHT POST
- EXISTING ASPHALT PAVING TO BE REMOVED

**SOILS SUMMARY CHART**

SYMBOL	NAME	GROUP
G-B2	GLENVILLE	B
MIC3	MANOR	B
CHE2	CHESTER	B
GIB2	GLENEIG	B
GIC2	GLENEIG	B

MATCHLINE SEE SHEET 3 FOR CONTINUATION

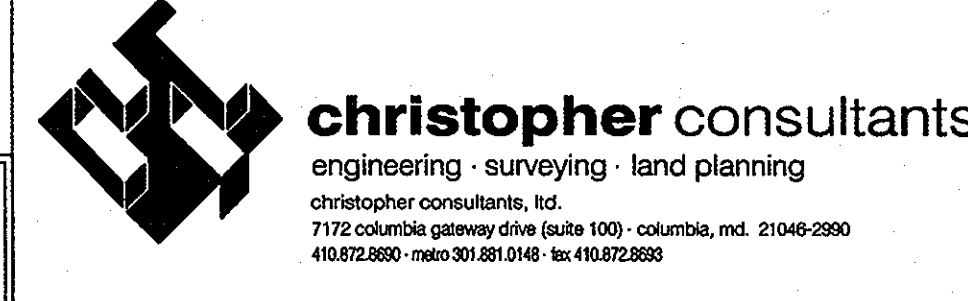
AS-BUILT CERTIFICATION  
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*[Signature]* 2013-01-10  
 DATE



Miss Utility  
 Service Protection Center  
 CALL TOLL FREE  
 1-800-251-7777

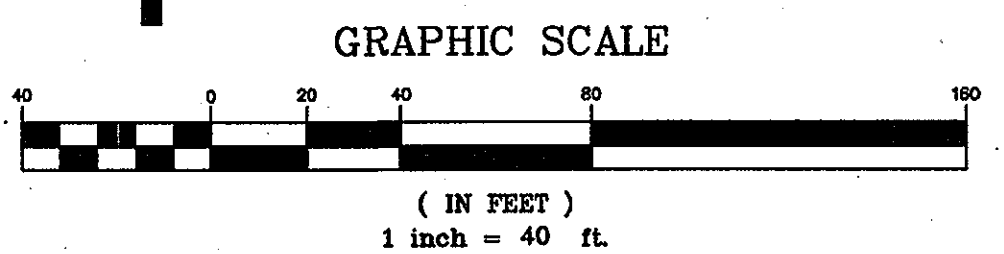
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 4/17/10  
 Chief, Division of Land Development  
*[Signature]* 4/22/10  
 Chief, Development Engineering Division  
*[Signature]* 4/23/10  
 Director, Department of Planning and Zoning

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**  
 OWNER/DEVELOPER  
 COLUMBIA PRESBYTERIAN CHURCH  
 1001 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 730 - 6004  
 FAX: (410) 997 - 5489  
 CONTACT: AL EDWARDS



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4/15/10  
 DATE  
  
*[Signature]*



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223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01
PLAT NO.	GRID NO.	TAX MAP
---	14	R-20
WATER CODE	SEWER CODE	ELECTION DISTRICT
---	---	5

**TITLE:** AS-BUILT EXISTING CONDITIONS AND DEMOLITION PLAN

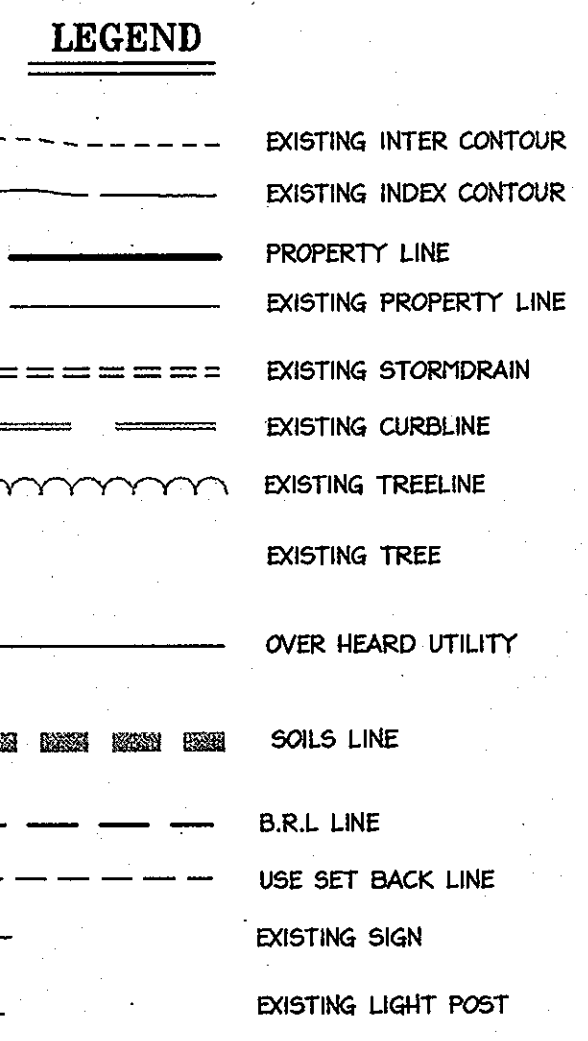
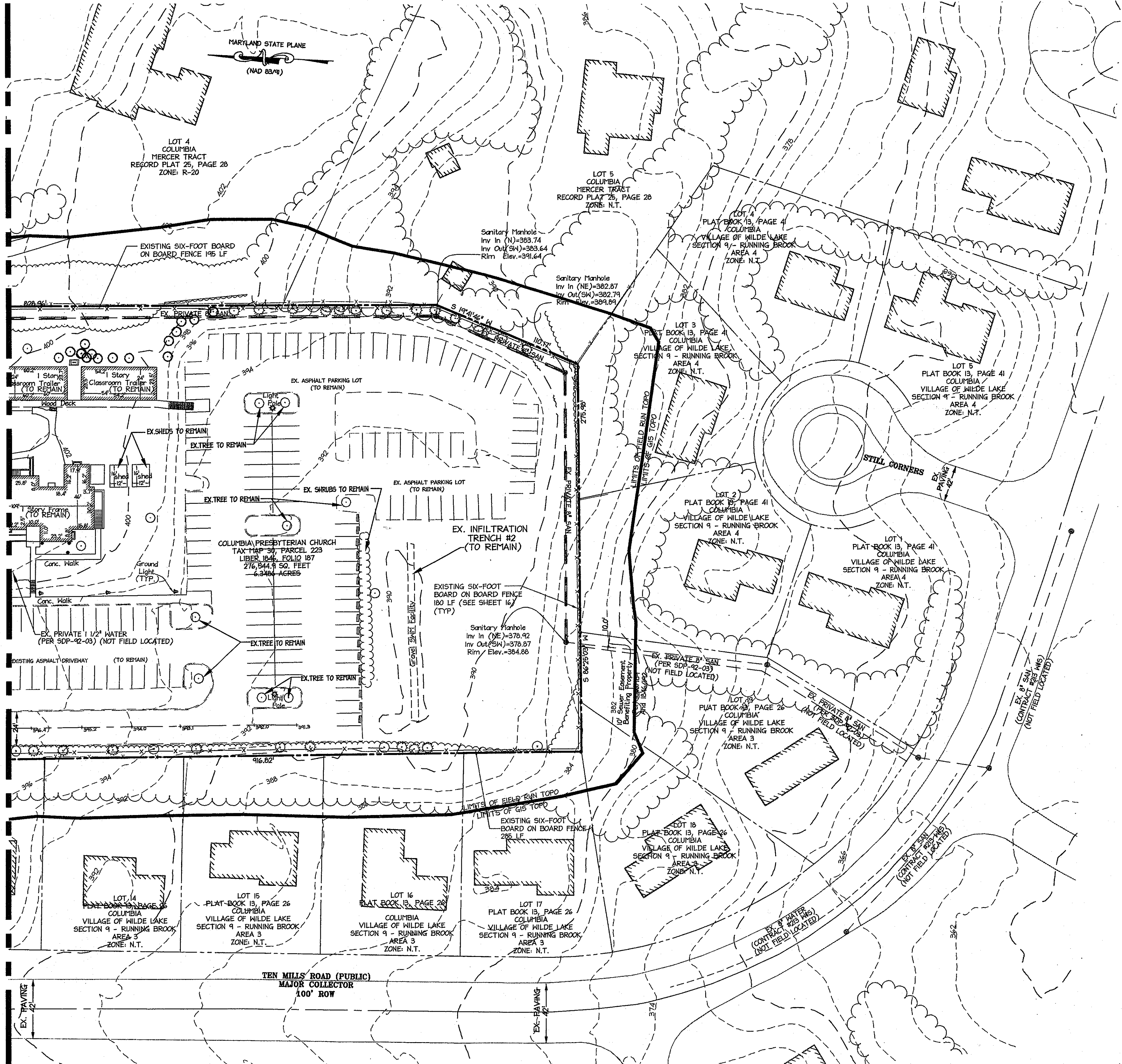
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DRAWN: SGA	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	

**2 OF 16**

MDC-878(SDP)



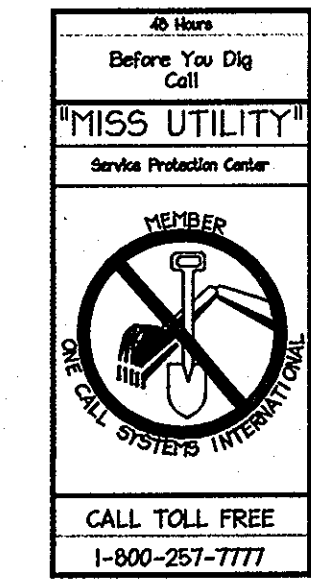
MATCHLINE SEE SHEET 2 FOR CONTINUATION



**SOILS SUMMARY CHART**

SYMBOL	NAME	GROUP
GIB2	GLENVILLE	B
MIC3	MANOR	B
CHB2	CHESTER	B
GIB2	GLENVIG	B
GIC2	GLENVIG	B

AS-BUILT CERTIFICATION  
 THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET  
*Robert J. ...* 2013-01-10  
 DATE



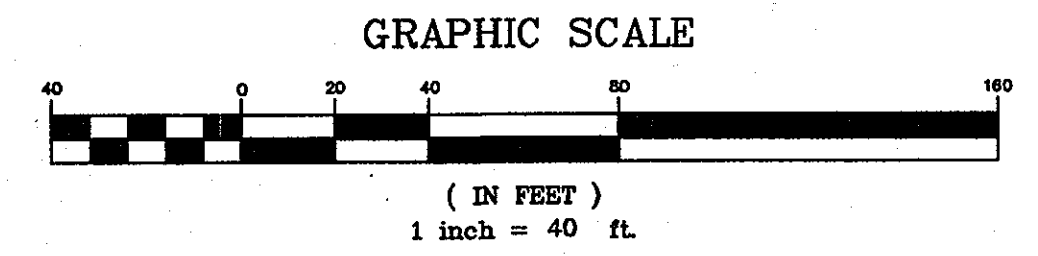
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Robert J. ...* 4/28/10  
 Chief, Division of Land Development  
*John ...* 4/28/10  
 Chief, Development Engineering Division  
*Thomas S. ...* 4/28/10  
 Director, Department of Planning and Zoning

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**  
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 COLUMBIA, MD 21044  
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 CONTACT: AL EDWARDS



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4/3/10  
 DATE  
  
*Robert J. ...*



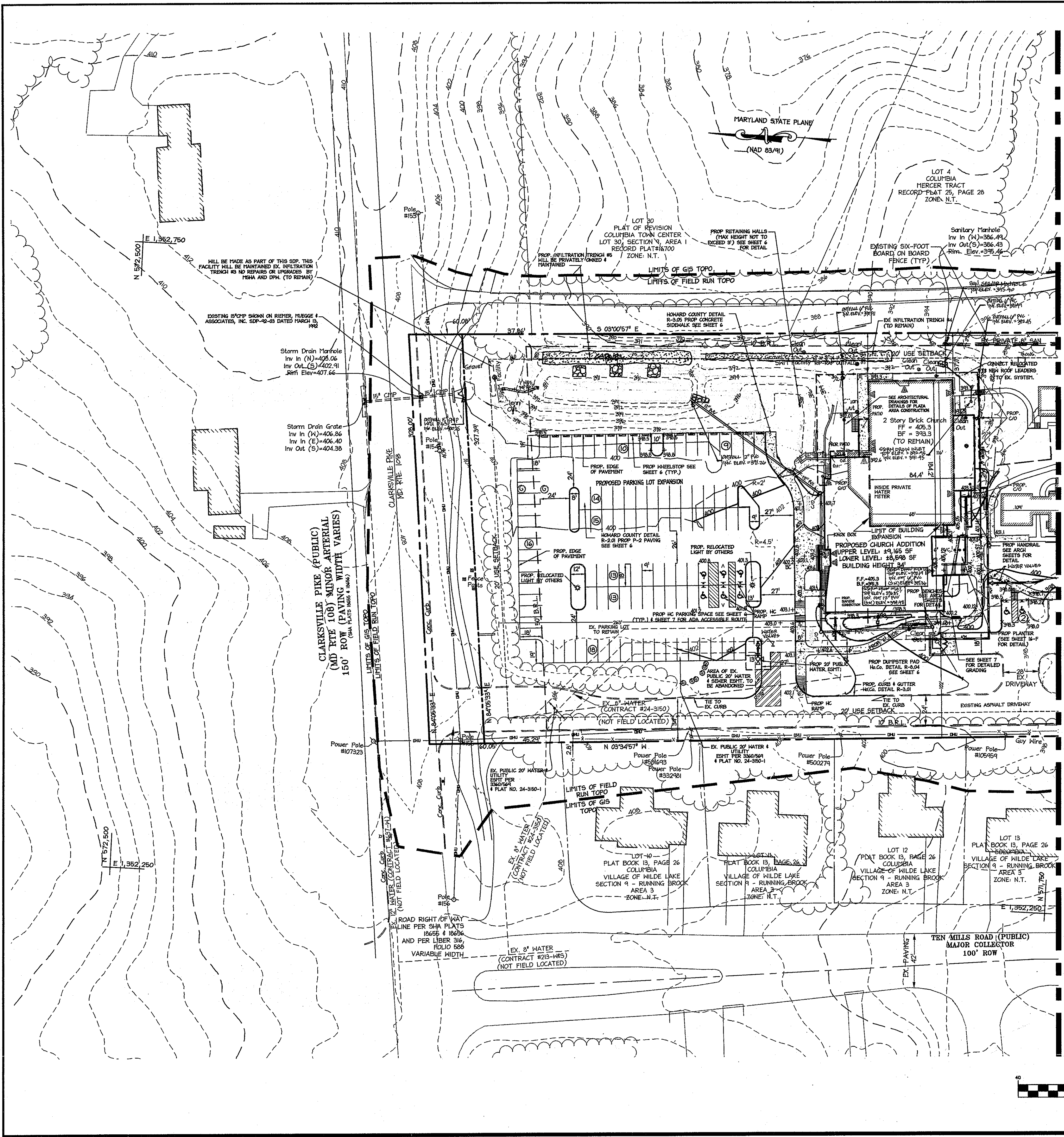
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223	1001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

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DESIGN: CRH	SCALE: 1"=40'	PROJECT: 080801.00
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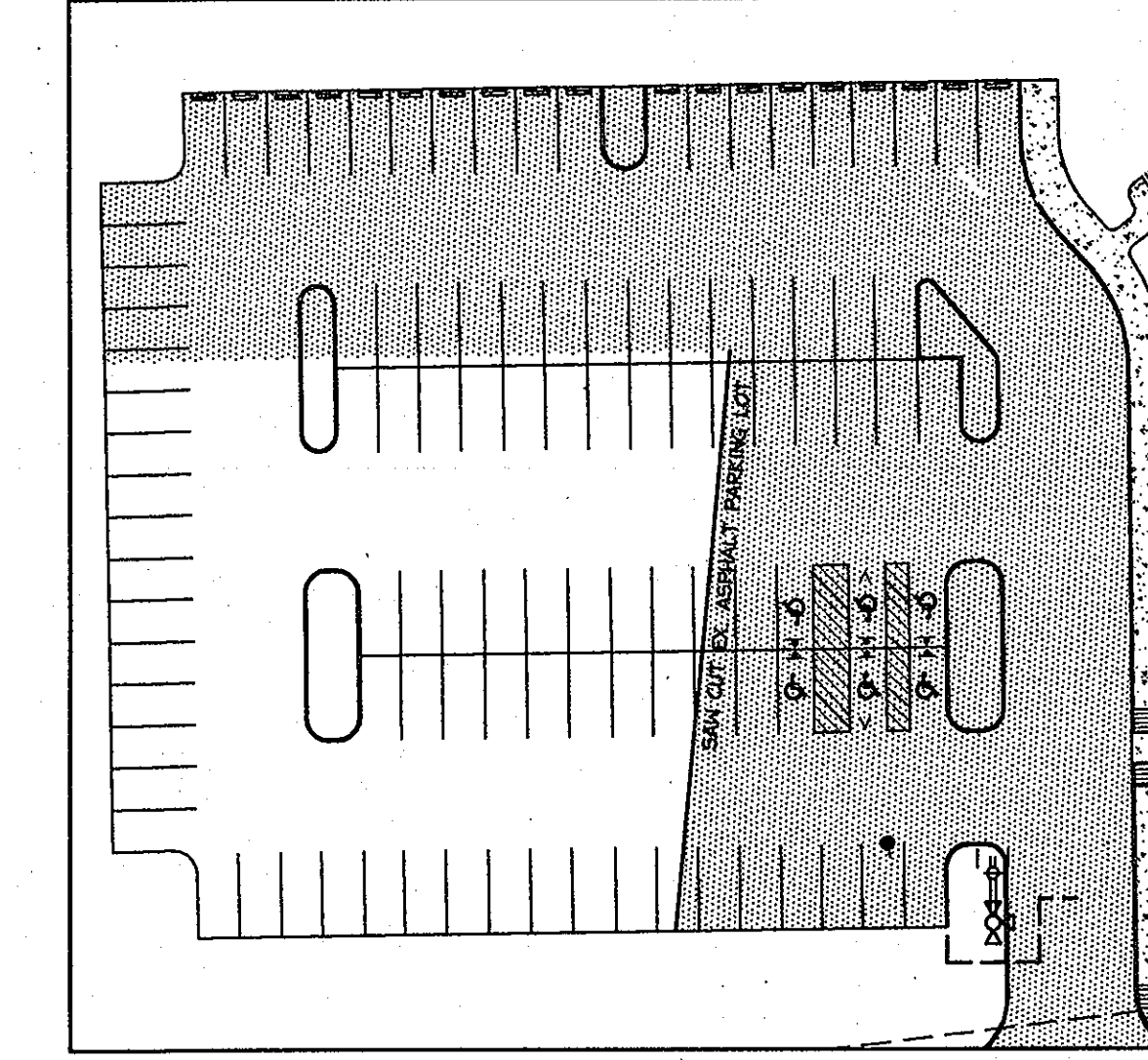




**NOTES:**

- INFILTRATION TRENCH #4 WILL NEED TO BE CLEANED OUT REPAIRED, AND RETROFITTED TO MEET THE CURRENT STORMWATER MANAGEMENT DESIGN STANDARDS.
- INFILTRATION TRENCH #1 WILL BE REMOVED. ANY STANDING WATER SHALL BE PUMPED OUT. ALL SEDIMENT LADEN DEBRIS SHALL BE REMOVED FROM THE SITE AND TAKEN TO AN HOWARD COUNTY APPROVED DUMP SITE. THE AREA SHALL BE BACKFILLED PER THE GEOTECH REPORT AND PAVED OVER.
- SOIL BORINGS WILL BE TAKEN TO DETERMINE THE ACTUAL INFILTRATION RATES ONSITE.
- REFER TO SHEET 13 FOR THE INFILTRATION DETAILS.
- ALL CURBS RADI ARE 5' UNLESS OTHERWISE NOTED.
- ON THE SOUTH & EAST SIDES OF THE BUILDING RELOCATE EX. ROOF DRAIN DOWNSPUTS TO 5' OUTSIDE OF THE PROPOSED EDGE OF BUILDING. THE ROOF DRAIN WILL NEED TO BE EXTENDED TO CONNECT TO THE CURRENT ROOF DRAIN SYSTEM. A NEW 6" HDPE (OR PVC) PIPE SHALL BE INSTALLED AT 2% TO CONNECT THE ROOF DRAIN FROM THE PROPOSED EXPANSION ON THE NORTH AND EAST SIDES TO INFILTRATION TRENCH #5.
- THE EXISTING CLEANOUTS FOR THE EXISTING OBSERVATION WELLS (WITHIN THE INFILTRATION TRENCHES) SHALL BE LOCATED AND REPAIRED AS PART OF THIS SITE DEVELOPMENT PLAN. THE CONTRACTOR NEEDS TO INSPECT TRENCHES 1, 2, AND 4 AND REPAIR AS NEEDED. EX. INFILTRATION TRENCHES WILL BE MAINTAINED BY MSHA AND HOWARD COUNTY DPM. NO REPAIRS OR UPGRADES WILL BE MADE AS PART OF THIS SUBMISSION.
- REFER TO SHEET 7 FOR GRADING DETAILS (SPOTS) AROUND BUILDING.

**PARKING:**  
 NUMBER OF PARKING SPACES REQUIRED BY HOWARD COUNTY ZONING REGULATIONS: 183 SPACES  
 NUMBER OF SEATS IN SANCTUARY: 550 SEATS  
 PARKING REQUIRED (1 SPACE/3 SEATS): 183 SPACES  
 NUMBER OF PARKING SPACES PROVIDED ON SITE: 262 PARKING SPACES  
 NUMBER OF HANDICAP ACCESSIBLE SPACES PROVIDED: 8 (INCL. 2 VAN SPACES)



**SAW CUT DETAIL**  
1" = 40'

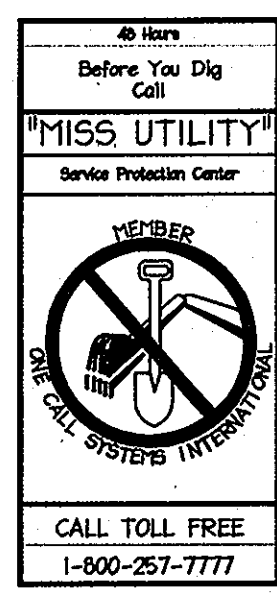
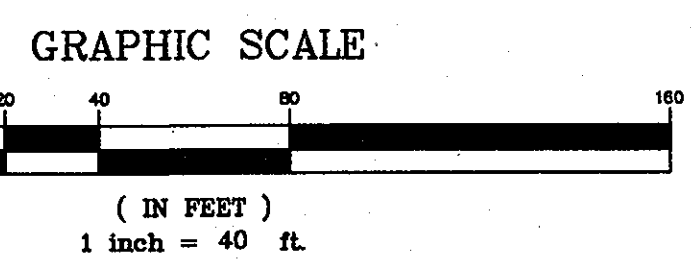
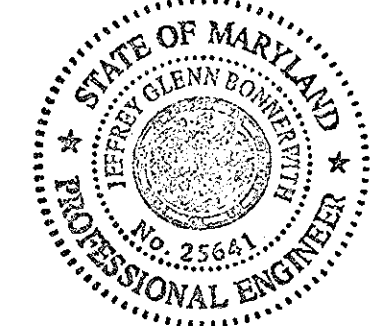
MATCHLINE SEE SHEET 5 FOR CONTINUATION

**LEGEND**

- - - - - 390 EXISTING INTER CONTOURS
- - - - - 400 EXISTING INDEX CONTOURS
- - - - - 240 PROPOSED INTER CONTOURS
- - - - - 250 PROPOSED INDEX CONTOURS
- — — — — PROPERTY LINE
- — — — — EXISTING PROPERTY LINE
- - - - - B.R.L. PROPOSED B.R.L.
- - - - - 20' USE SETBACK PROPOSED USE SETBACK
- — — — — PROP. PERMISSIBLE BUILDING AREA
- - - - - EX. 8" WATER EXISTING WATER
- — — — — EXISTING SANITARY SENEK EXISTING SANITARY SENEK
- — — — — EXISTING STORMDRAIN EXISTING STORMDRAIN
- — — — — EXISTING CURBLINE EXISTING CURBLINE
- — — — — OVERHEAD UTILITY OVERHEAD UTILITY
- — — — — PROP. 15" CHP PROPOSED STORMDRAIN
- — — — — EXISTING UTILITY POLE EXISTING UTILITY POLE
- — — — — EXISTING TREE EXISTING TREE
- — — — — PROPOSED HANDICAP SIGN PROPOSED HANDICAP SIGN
- — — — — PROPOSED LIGHT POST PROPOSED LIGHT POST
- — — — — PROPOSED WHEEL STOPS PROPOSED WHEEL STOPS
- — — — — BUILDING ENTRANCE BUILDING ENTRANCE
- — — — — PROPOSED CURBLINE PROPOSED CURBLINE
- — — — — PROPOSED PARKING LOT EXPANSION PROPOSED PARKING LOT EXPANSION

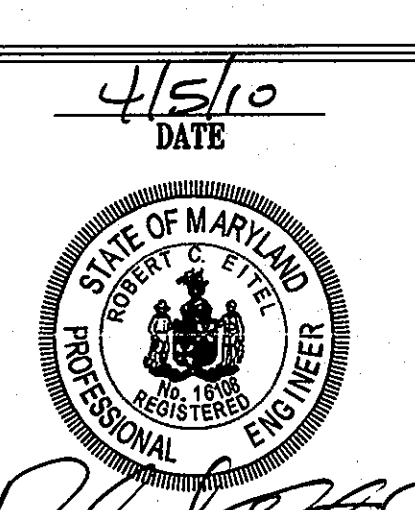
**AS-BUILT CERTIFICATION**  
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY OPERIALIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

*J. J. Davis* 2013-01-10  
DATE



**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.

*Robert C. Eitel*  
DATE: 4/15/10



APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Neil Shadlock</i>	Date: 4/27/10
Chief, Division of Land Development	
<i>John Decker</i>	Date: 4/28/10
Chief, Development Engineering Division	
<i>Deanna S. Butler</i>	Date: 4/29/10
Director, Department of Planning and Zoning	
12-26-12	1 AS-BUILT REVISION
Date	No.

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
 COLUMBIA PRESBYTERIAN CHURCH  
 1001 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 730-6004  
 FAX: (410) 977-5499  
 CONTACT: AL EDWARDS

**ADDRESS CHART**

LOT/PARCEL	STREET ADDRESS
223	1001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME COLUMBIA PRESBYTERIAN CHURCH	LOT/PARCEL NO. PARCEL 223	CENSUS TRACT 6054.01
PLAT NO. 14	GRID NO. R-20	TAX MAP 30
WATER CODE ---	SEWER CODE ---	ELECTION DISTRICT 5

**TITLE:** AS-BUILT SITE, GRADING, AND UTILITY PLAN

DESIGN: CRH	SCALE: 1" = 40'	PROJECT: 080801.00
DRAWN: SSA	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	

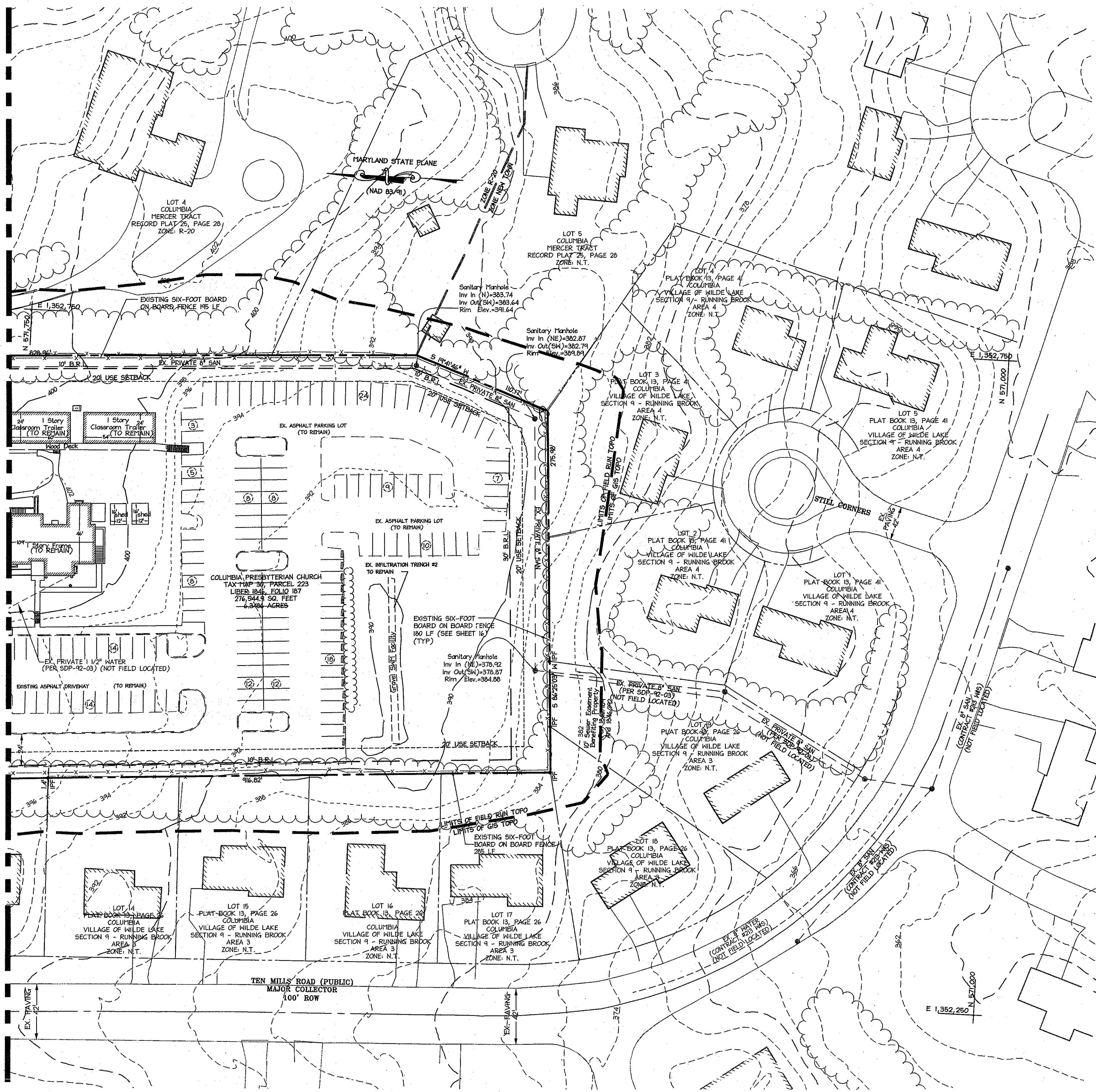
MDC-878(SDP)



**LEGEND**

	EXISTING INTER CONTOURS
	EXISTING INDEX CONTOURS
	PROPOSED INTER CONTOURS
	PROPOSED INDEX CONTOURS
	PROPERTY LINE
	EXISTING PROPERTY LINE
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING STORM DRAIN
	EXISTING CURBLINE
	EXISTING TREENLINE
	EXISTING TREE
	EXISTING PARKING STRIP TO REMAIN

MATCHLINE SEE SHEET 4 FOR CONTINUATION



AS-BUILT CERTIFICATION  
 THERE IS NO AS-BUILT INFORMATION  
 PROVIDED ON THIS SHEET.  
*[Signature]* 2013-01-10  
 P.018

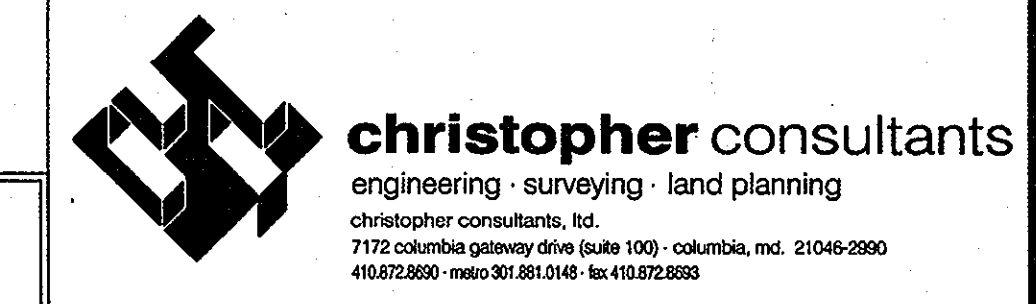


MISS UTILITY  
 Service Production Center  
 CALL TOLL FREE  
 1-800-257-7777

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i> Chief, Division of Land Development	4/27/10 Date
<i>[Signature]</i> Chief, Development Engineering Division	4/23/10 Date
<i>[Signature]</i> Director, Department of Planning and Zoning	4/23/10 Date
12-26-12	1 AS-BUILT REVISION
Date	No.

**COLUMBIA PRESBYTERIAN CHURCH  
 BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
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 COLUMBIA, MD 21044  
 PHONE: (410) 730-6004  
 FAX: (410) 997-5499  
 CONTACT: AL EDWARDS



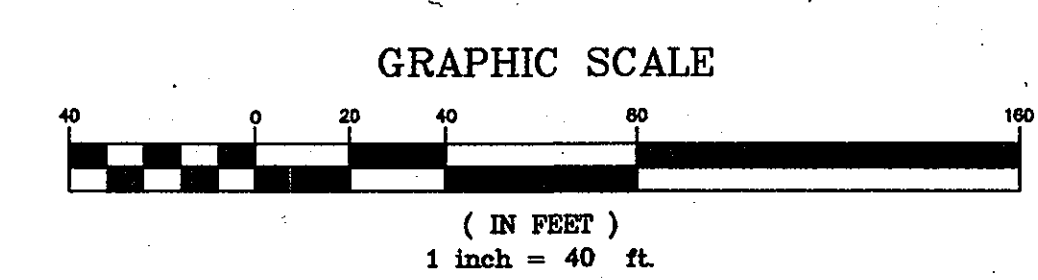
**PROFESSIONAL CERTIFICATION**

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4/15/10  
DATE

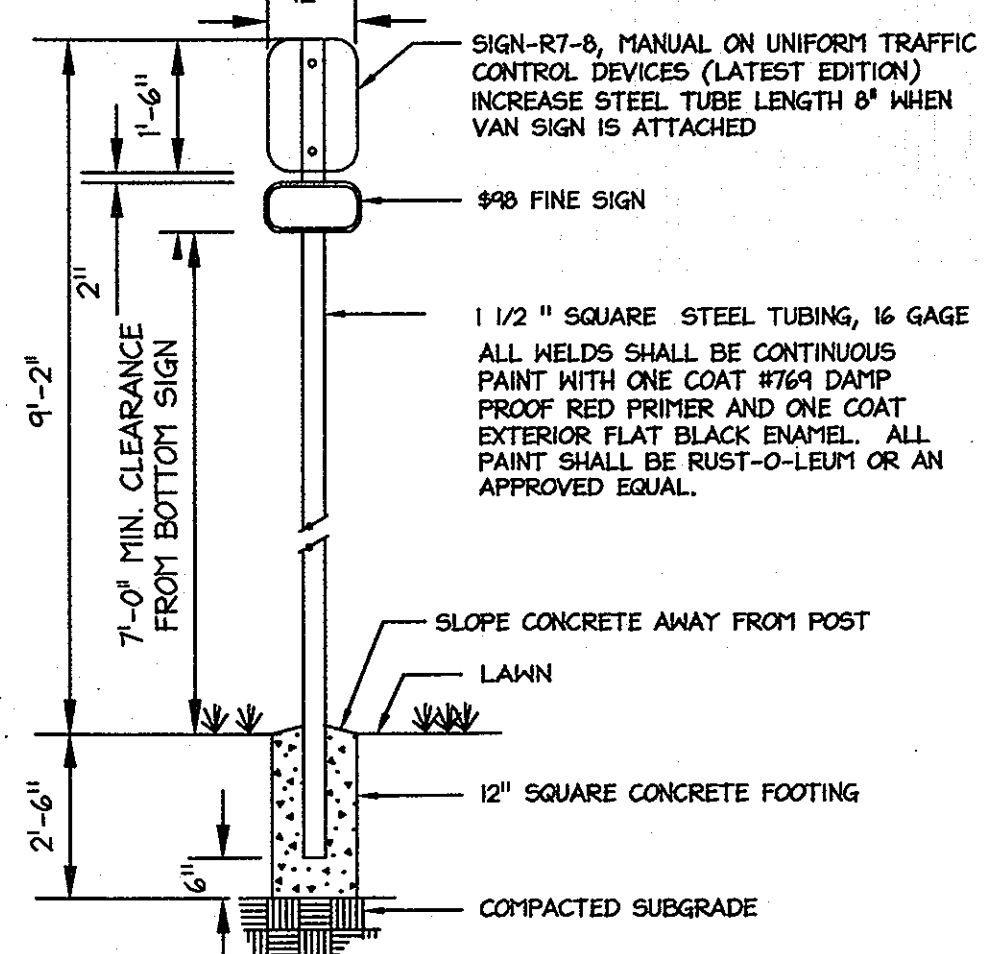
*[Signature]*

ADDRESS CHART				
LOT/PARCEL	STREET ADDRESS			
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044			
PERMIT INFORMATION CHART				
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01		
PLAT NO.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
---	14	R-20	30	5
WATER CODE	SEWER CODE			
---	---			
TITLE: AS-BUILT SITE, GRADING, AND UTILITY PLAN				
DESIGN: CRH	SCALE: 1" = 40'	PROJECT: 080801.00		
DRAWN: SSA	DATE: APRIL 2010			
CHECKED: RCE	APPROVED: RCE	<b>5 of 16</b>		



MDC-878(SDP)

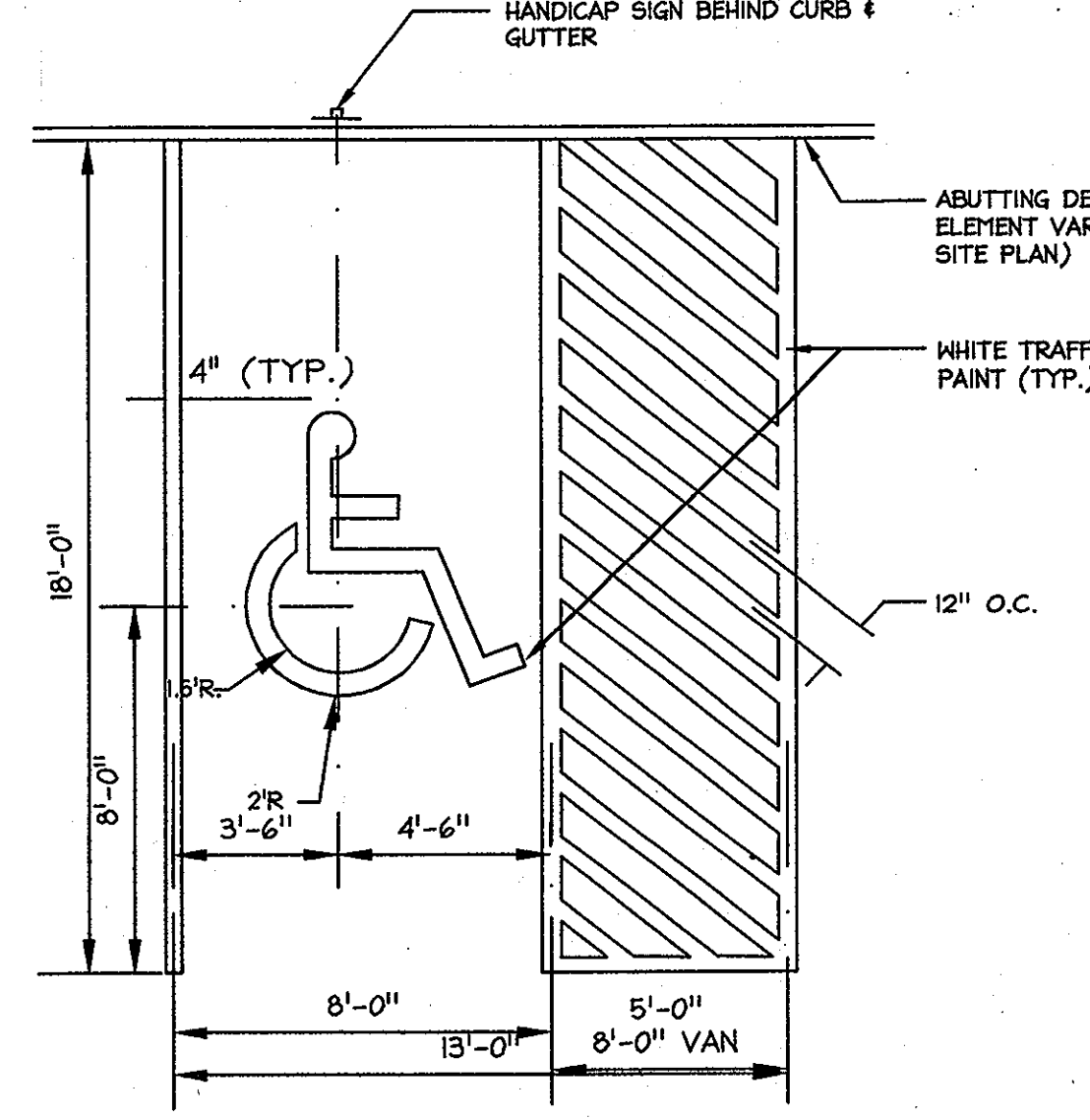




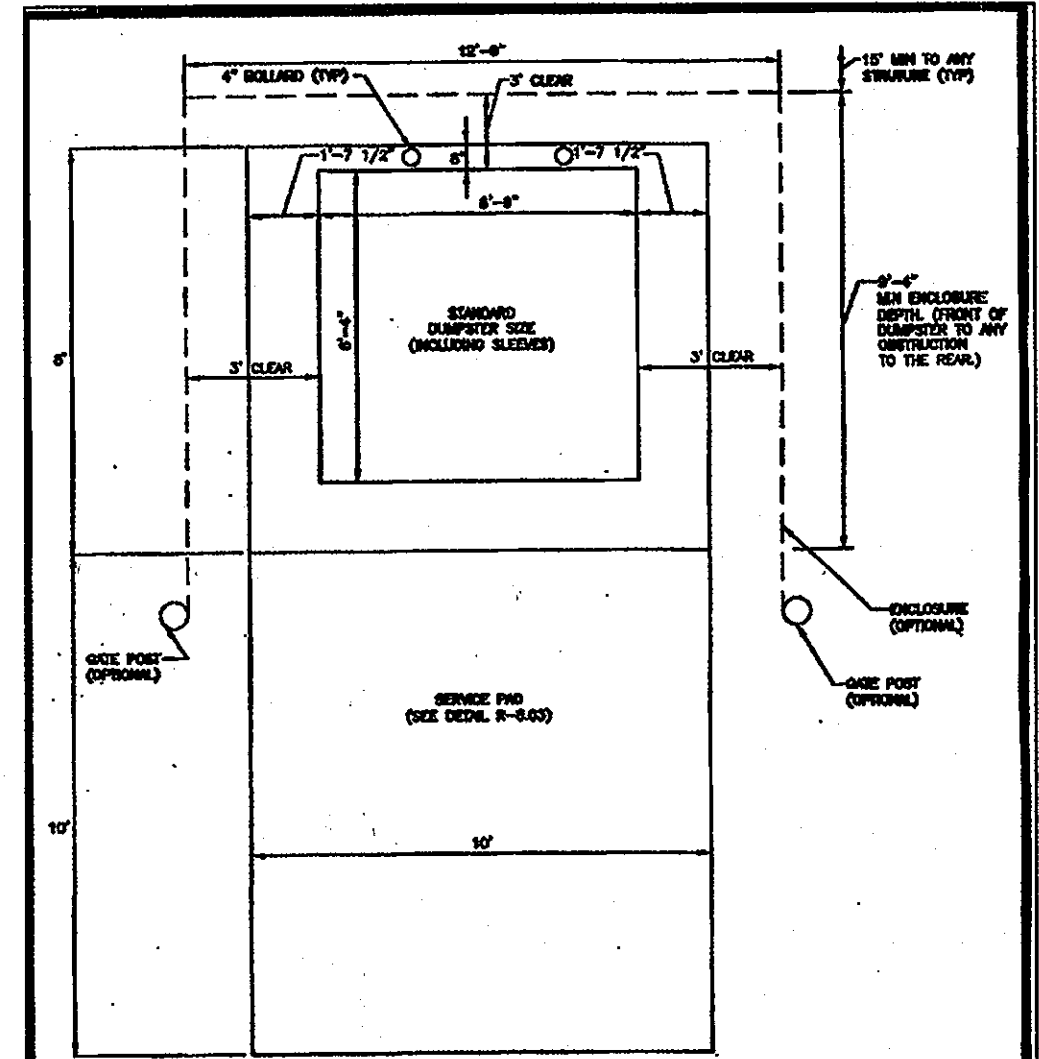
**SIGN COLORS:**  
LETTERS AND BORDER - GREEN WHITE  
H.C. SYMBOLS - WHITE  
H.C. SYMBOLS - WHITE  
BACKGROUND - BLUE  
BACKGROUND - WHITE



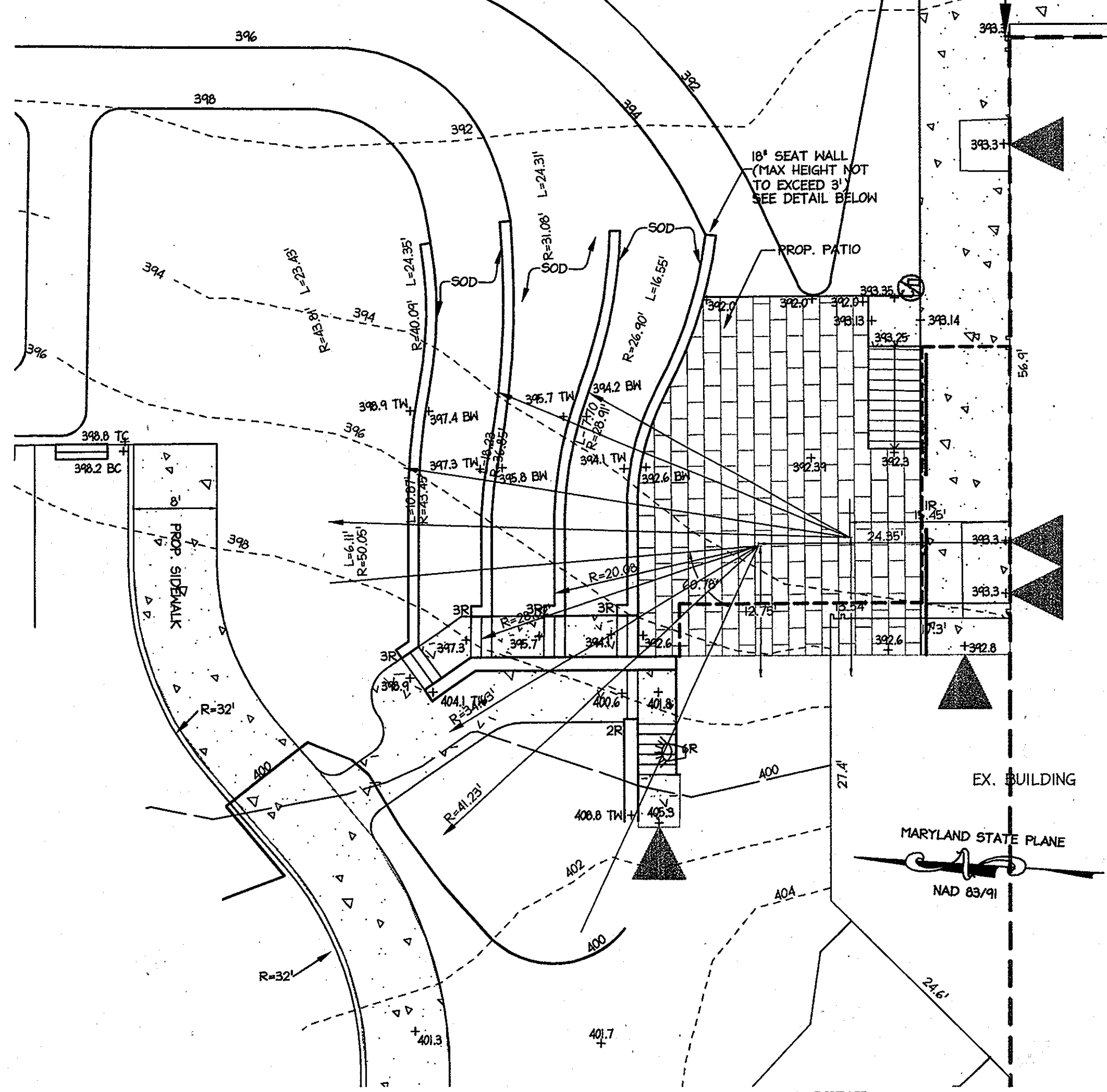
**SIGN COLORS:**  
LETTERS AND BORDER - GREEN WHITE  
H.C. SYMBOLS - WHITE  
H.C. SYMBOLS - WHITE  
BACKGROUND - BLUE  
BACKGROUND - WHITE



**HANDICAP PARKING SPACE**  
NOT TO SCALE

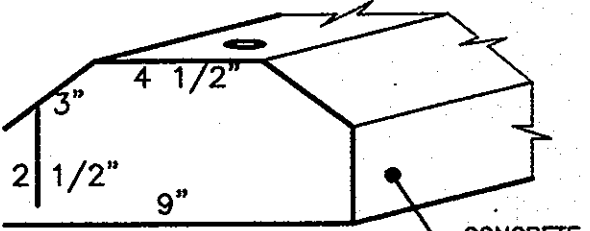


**SOLID WASTE**  
Single Container Enclosure  
Detail  
R-8.04



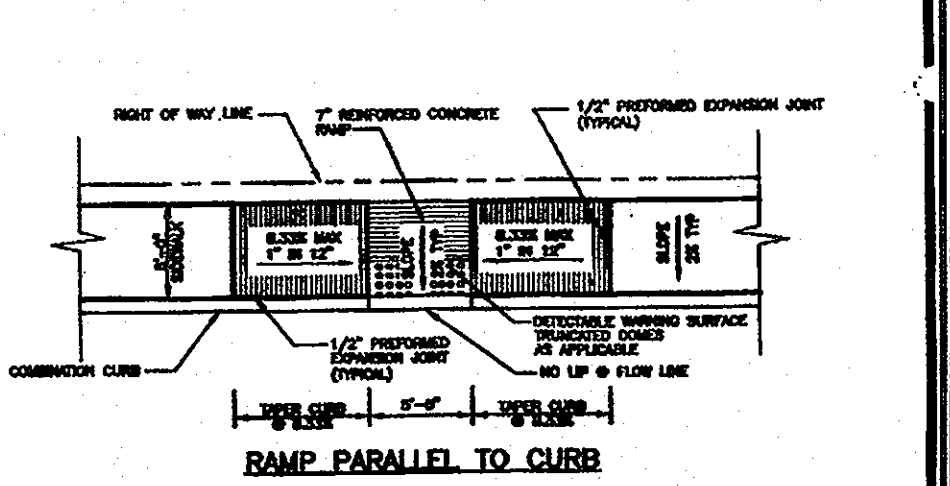
**RETAINING WALL AND OUTDOOR SEATING DETAIL**  
SCALE: 1" = 10'

- NOTES:**
- DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'.
  - SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAP SIGN.
  - SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

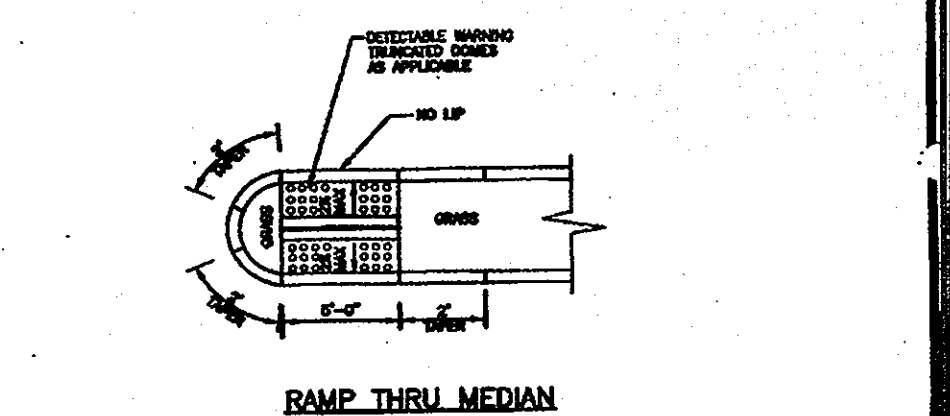


**WHEELSTOP DETAIL**  
N.T.S.

6 FT. - CONCRETE  
9" WIDE  
5" HIGH  
2 STEEL BARS - REINFORCED  
2 PRE-FORMED HOLES  
APPROXIMATE WEIGHT - 210 LBS.

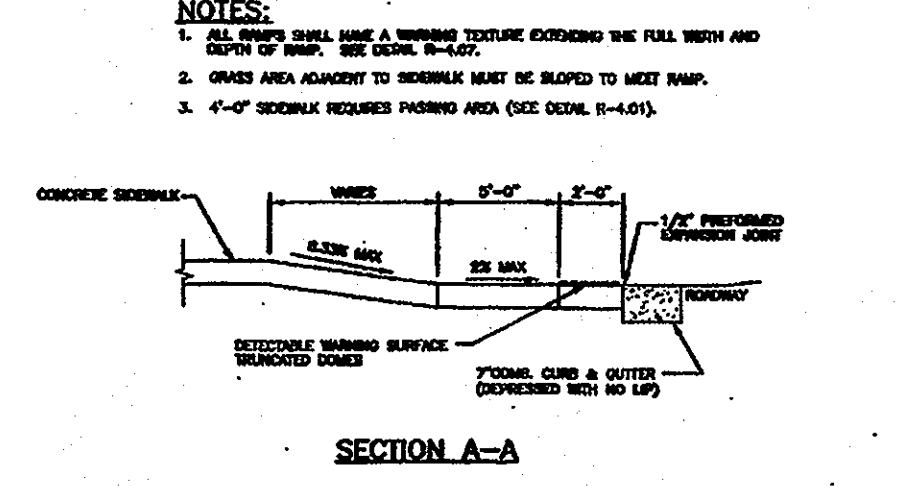


**RAMP PARALLEL TO CURB**

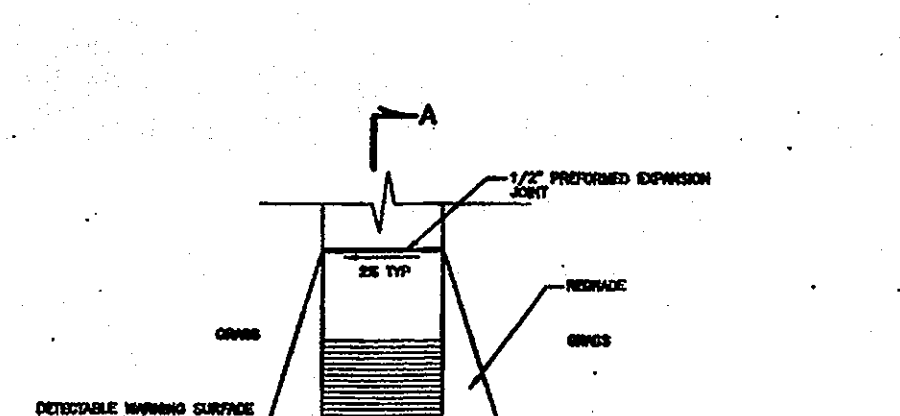


**RAMP THRU MEDIAN**

- NOTES:**
- ALL RAMP SURFACES SHALL HAVE DETECTABLE WARNING SURFACES. SEE DETAIL R-4.27.
  - GRADE ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.

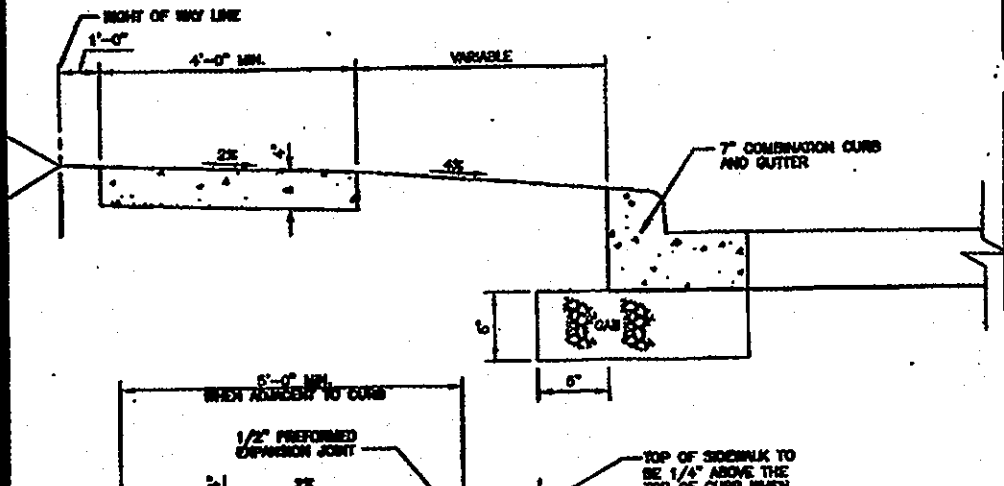


**SECTION A-A**

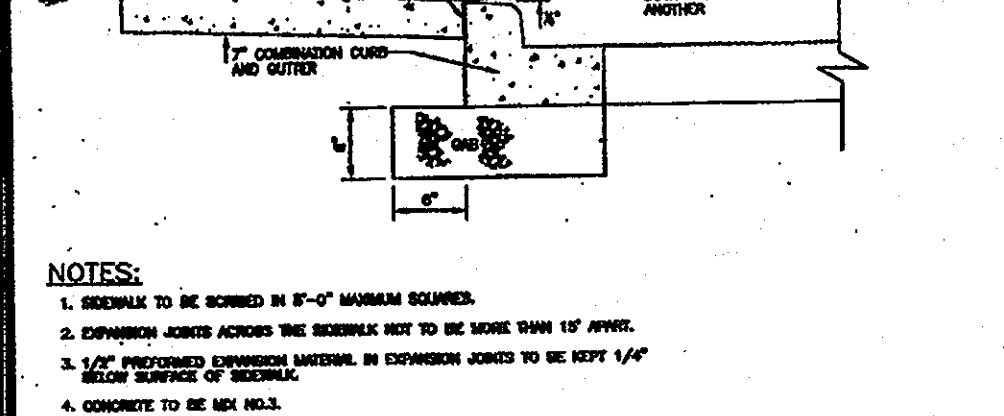


**RAMP PERPENDICULAR TO CURB**

- NOTES:**
- ALL RAMP SURFACES SHALL HAVE DETECTABLE WARNING SURFACES. SEE DETAIL R-4.27.
  - GRADE ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.

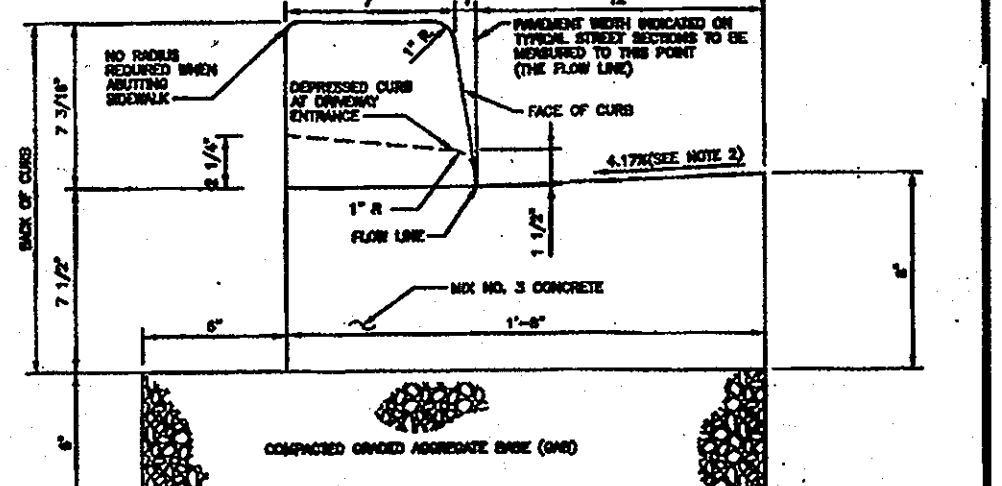


**Concrete Sidewalk**

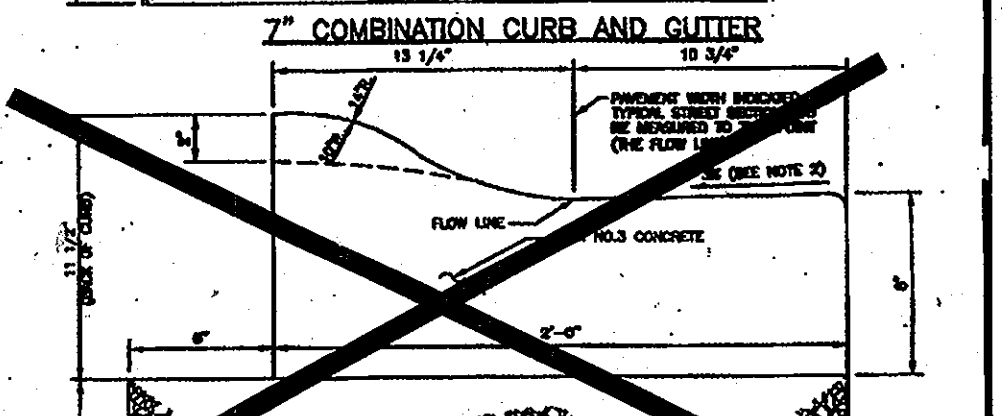


**7" COMBINATION CURB AND GUTTER**

- NOTES:**
- SIDEWALK TO BE SLOPED IN 1/4" PER 10' MINIMUM SLOPE.
  - CONCRETE JOINTS SHALL BE 1/2" WIDE AND 1/4" DEEP.
  - CONCRETE JOINTS SHALL BE 1/2" WIDE AND 1/4" DEEP.
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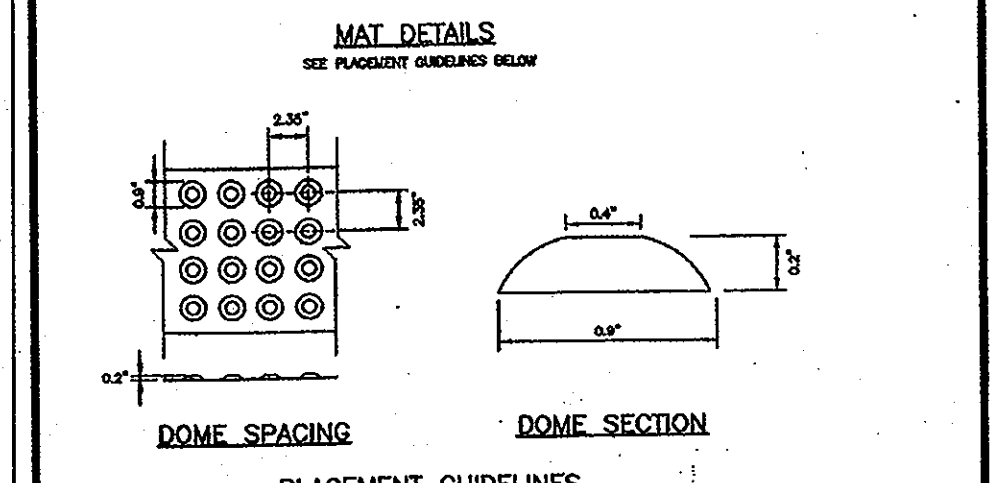


**MODIFIED COMBINATION CURB AND GUTTER**



**RAMP RADIAL AND ADJACENT TO CURB**

- NOTES:**
- A DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE HIGHEST TO THE CURB IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
  - FOR DETECTABLE WARNING SURFACES, THE DETECTABLE WARNING SURFACES SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF THE CURB ARE NO LESS THAN 6" AND NO MORE THAN 30" FROM THE BACK OF THE CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO MEET THESE REQUIREMENTS.
  - A MINIMUM OF TWO (2) FEET OF COMPACTED GRANULAR FILL OR EQUIVALENT SHALL SUPPORT THE ENTIRE BACK OF CURB.
  - POSITIVE DRAINAGE SHALL BE PROVIDED WITHIN THE CURB AND ALONG THE GUTTER AND FLOW LINE.



**MAT DETAILS**

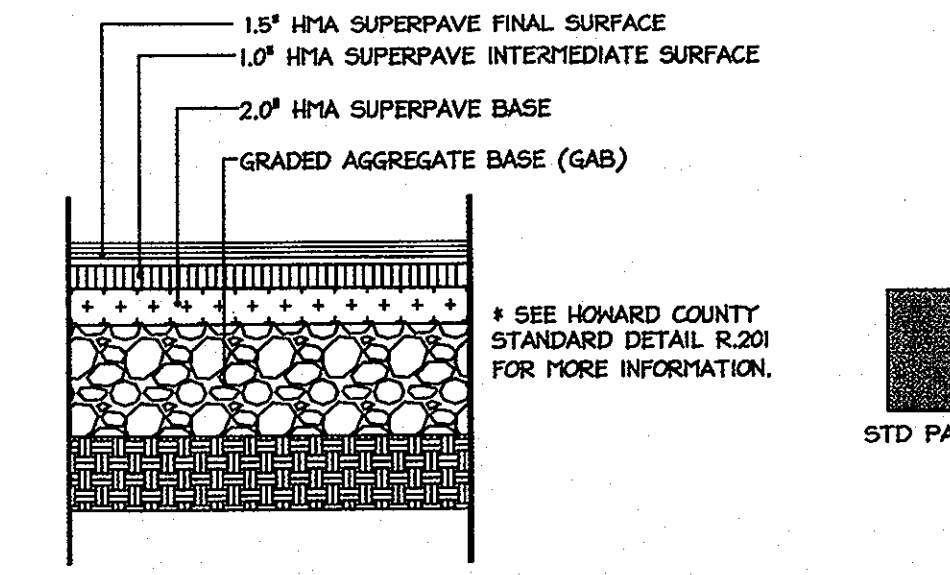
- NOTES:**
- A DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE HIGHEST TO THE CURB IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
  - FOR DETECTABLE WARNING SURFACES, THE DETECTABLE WARNING SURFACES SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF THE CURB ARE NO LESS THAN 6" AND NO MORE THAN 30" FROM THE BACK OF THE CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO MEET THESE REQUIREMENTS.
  - A MINIMUM OF TWO (2) FEET OF COMPACTED GRANULAR FILL OR EQUIVALENT SHALL SUPPORT THE ENTIRE BACK OF CURB.
  - POSITIVE DRAINAGE SHALL BE PROVIDED WITHIN THE CURB AND ALONG THE GUTTER AND FLOW LINE.

Howards County, Maryland Department of Public Works	DETAIL SIDEWALK RAMP Layout & Grading Parallel to Curb & Thru Median	Detail R-4.06
--	---	------------------

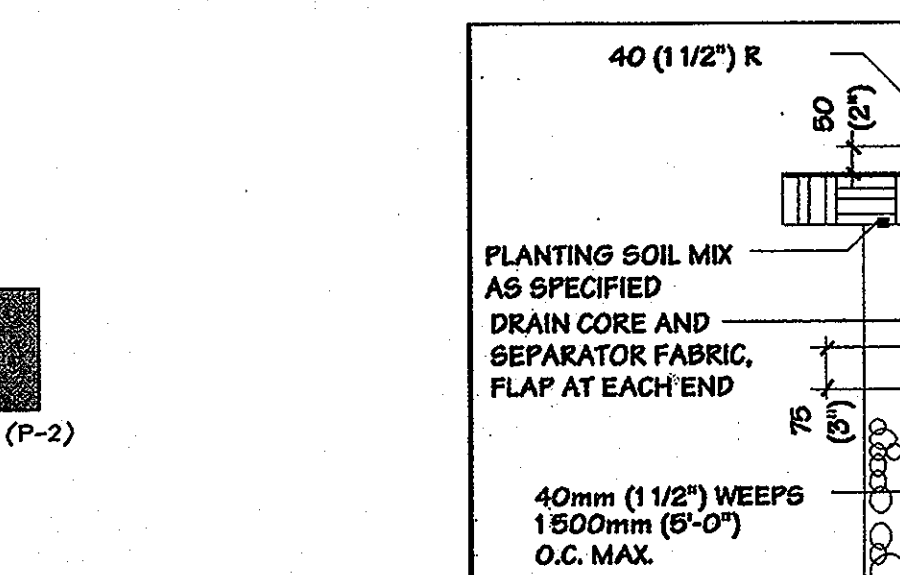
Howards County, Maryland Department of Public Works	DETAIL SIDEWALK RAMP Layout & Grading Perpendicular to Curb	Detail R-4.05
--	--	------------------

Howards County, Maryland Department of Public Works	DETAIL Concrete Sidewalk	Detail R-3.05
--	-----------------------------	------------------

Howards County, Maryland Department of Public Works	DETAIL CURB AND GUTTER 7" & Modified	Detail R-3.01
--	--	------------------



**PAVING**  
NOT TO SCALE



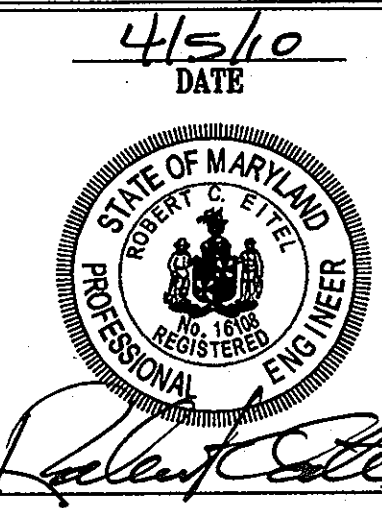
**SEAWALL DETAIL**  
NOT TO SCALE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BOARDING BASIS (CB)	3 TO 4	4 TO 5	5 TO 6	6 TO 7
P-2	FRONT YARD DRIVE RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 15' HEAVY TRUCK PER DAY LOCAL FRONT YARD DRIVE ACCESS STREET COLLECTOR RESIDENTIAL	PAVEMENT MATERIAL (INCHES)	MIN. HMA WITH GAB			
		1.5" SUPERPAVE FINAL SURFACE 1.5" HMA, PG 64-22, LEVEL 1 (CBM)	1.5	1.5	1.5	
		1.0" SUPERPAVE INTERMEDIATE SURFACE 1.0" HMA, PG 64-22, LEVEL 1 (CBM)	1.0	1.0	1.0	
		2.0" SUPERPAVE BASE 2.0" HMA, PG 64-22, LEVEL 1 (CBM)	2.0	2.0	2.0	
		GRADED AGGREGATE BASE (GAB) 18.0" MIN. PG 64-22, LEVEL 1 (CBM)	8.0	4.0	3.0	

AS-BUILT CERTIFICATION  
THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.  
DATE: 2013-01-10



**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.



APPROVED - DEPARTMENT OF PLANNING AND ZONING	
Chief, Division of Land Development	Date: 4/23/10
Chief, Development Engineering Division	Date: 4/23/10
Director, Department of Planning and Zoning	Date: 4/23/10
DATE: 12/26/12	
NO. 1 AS-BUILT REVISION	
COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION	
OWNER/DEVELOPER COLUMBIA PRESBYTERIAN CHURCH 1009 CLARKSVILLE PIKE COLUMBIA, MD 21044 PHONE: (410) 730-6004 FAX: (410) 987-5484 CONTACT: AL EDWARDS	



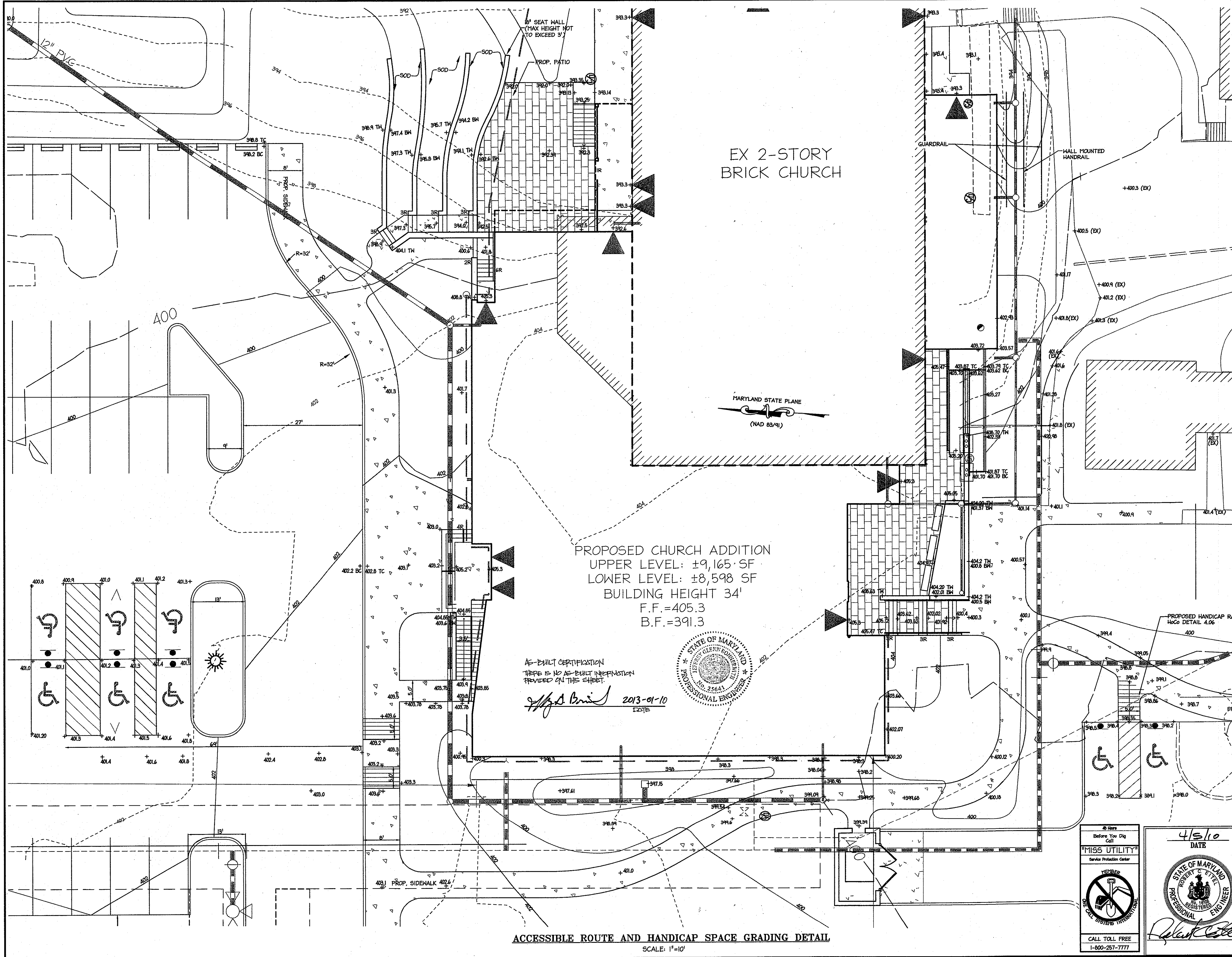
LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01
PLAT NO.	GRID NO.	ZONE
	14	R-20
TAX MAP	30	ELECTION DISTRICT
5		

TITLE: AS-BUILT SITE NOTES & DETAILS		
DESIGN: CRH	SCALE: AS SHOWN	PROJECT: 080801.00
DRAWN: SSA	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	

MDC-878(SDP)





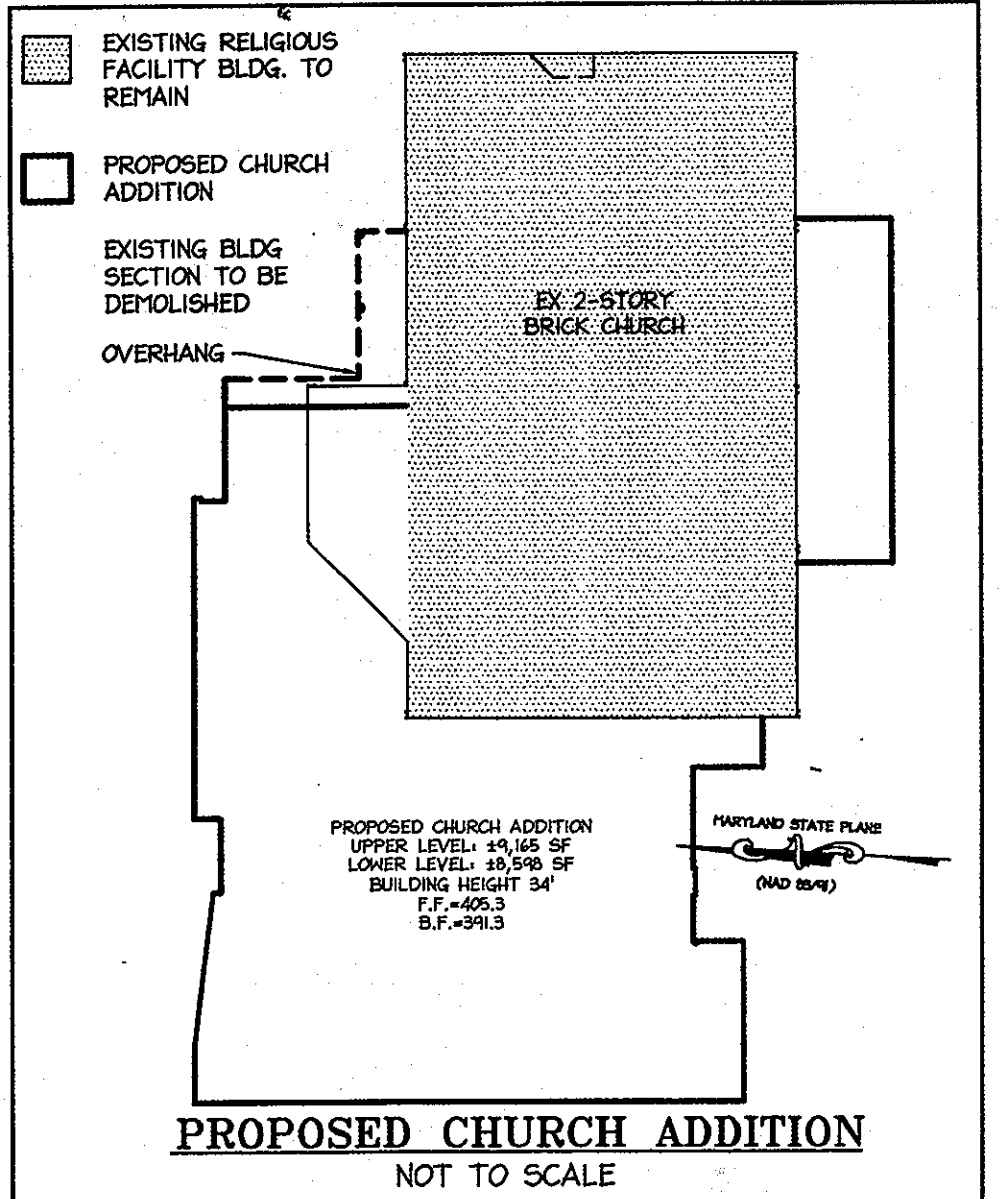
EX 2-STORY  
BRICK CHURCH

PROPOSED CHURCH ADDITION  
UPPER LEVEL: ±9,165 SF  
LOWER LEVEL: ±8,598 SF  
BUILDING HEIGHT 34'  
F.F. = 405.3  
B.F. = 391.3



AS-BUILT CERTIFICATION  
THERE IS NO AS-BUILT INFORMATION  
PROVIDED ON THIS SHEET.  
*Robert C. Steel* 2013-01-10  
DATE

ACCESSIBLE ROUTE AND HANDICAP SPACE GRADING DETAIL  
SCALE: 1"=10'



- LEGEND**
- - - - - 398 EXISTING INTER CONTOURS
  - - - - - 400 EXISTING INDEX CONTOURS
  - - - - - 218 PROPOSED INTER CONTOURS
  - - - - - 250 PROPOSED INDEX CONTOURS
  - PROPERTY LINE
  - - - - - EXISTING PROPERTY LINE
  - PROPOSED LOT LINES

**PROFESSIONAL CERTIFICATION**

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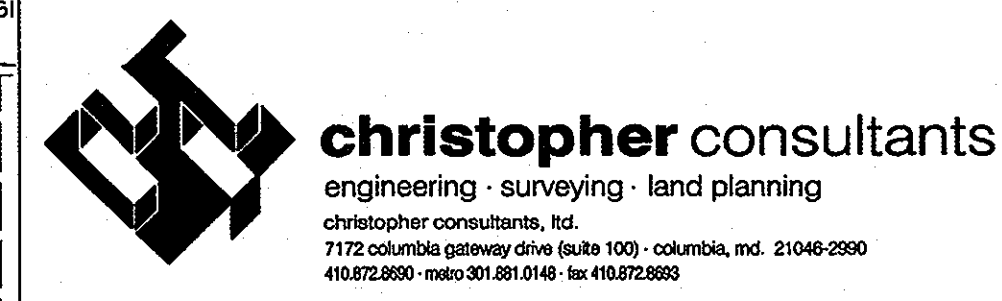
APPROVED - DEPARTMENT OF PLANNING AND ZONING

<i>Robert C. Steel</i>	4/23/10
Chief, Division of Land Development	Date
<i>William D. ...</i>	4/23/10
Chief, Development Engineering Division	Date
<i>Thomas J. ...</i>	4/23/10
Director, Department of Planning and Zoning	Date

DATE	NO.	AS-BUILT REVISION

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
COLUMBIA PRESBYTERIAN CHURCH  
1001 CLARKSVILLE PIKE  
COLUMBIA, MD 21044  
PHONE: (410) 730-6004  
FAX: (410) 997-5499  
CONTACT: AL EDWARDS



ADDRESS CHART

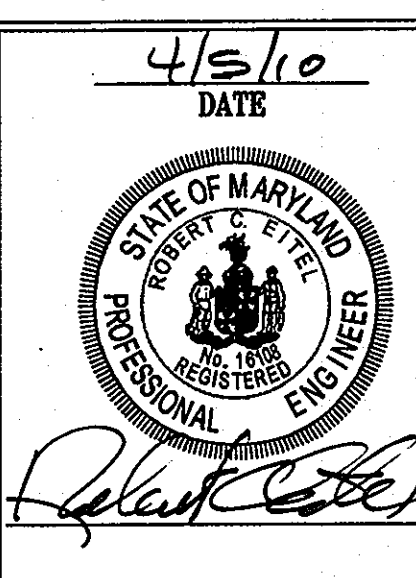
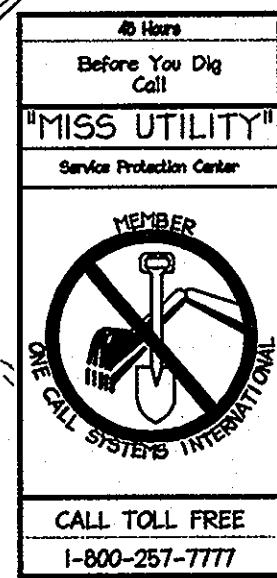
LOT/PARCEL	STREET ADDRESS
223	1001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01
PLAT NO.	GRID NO.	TAX MAP
14	R-20	30
WATER CODE	SEWER CODE	
---	---	

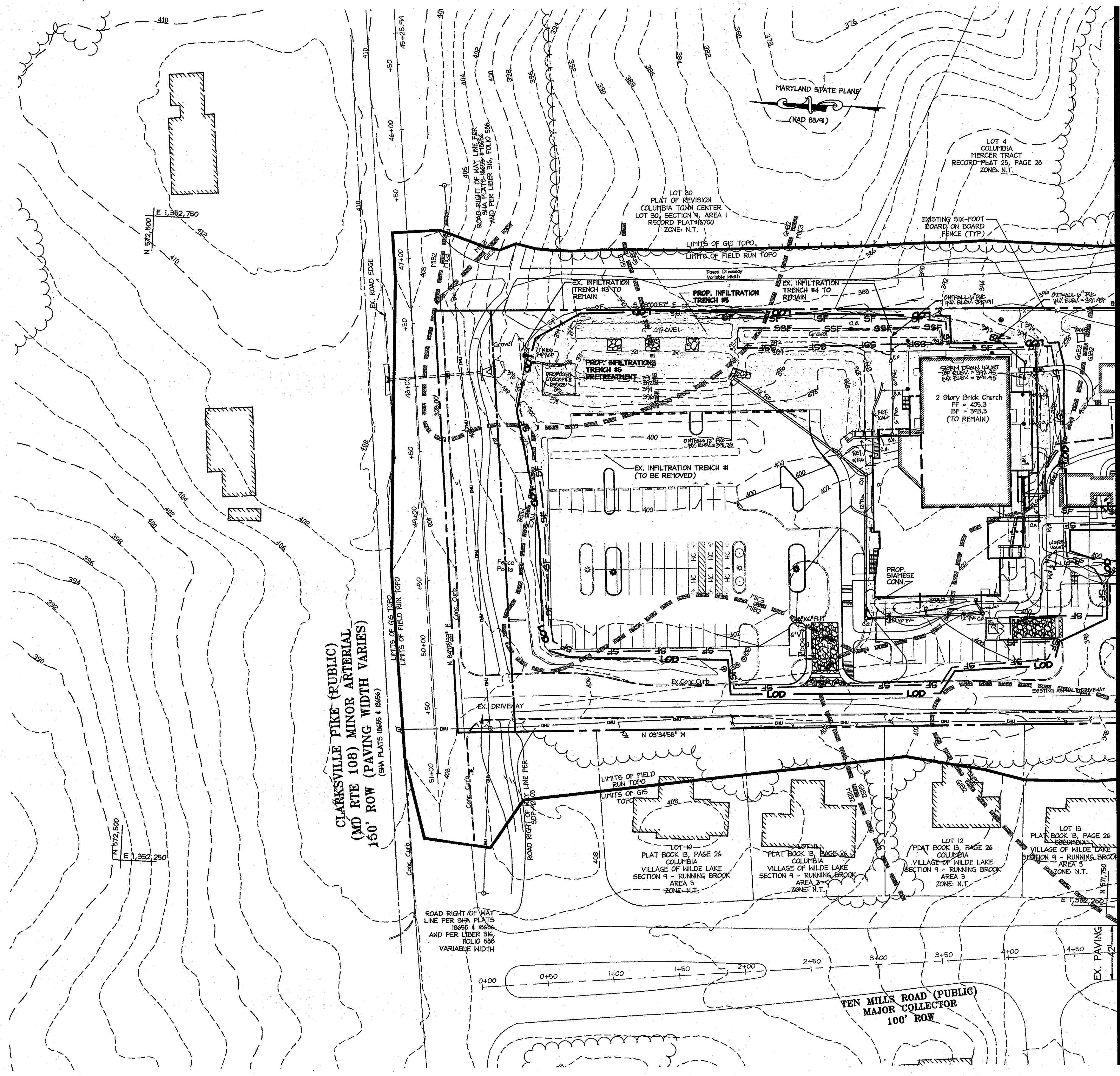
TITLE: **AS-BUILT ACCESSIBLE ROUTE GRADING DETAIL**

DESIGN: CRH	SCALE: AS SHOWN	PROJECT: 080801.00
DRAWN: SSA	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	



P:\Projects\080801.00\MC-XXXX\MDC-878 SDP\07- HANDICAP DETAIL.dwg, 4/22/2010 5:03:46 PM, APC Plotter.pc3





**LEGEND**

- 300- EXISTING INTER CONTOURS
- 400- EXISTING INDEX CONTOURS
- 250- PROPOSED INTER CONTOURS
- 250- PROPOSED INDEX CONTOURS
- PROPERTY LINE
- EXISTING PROPERTY LINE
- CHU EXISTING OVERHEAD UTILITY
- EX. 8" WATER EXISTING WATER
- EX. 8" SAN EXISTING SANITARY SEWER
- EX. 15" CIP EXISTING STORM DRAIN
- EXISTING CURBLINE
- EXISTING TREELINE
- EXISTING TREE
- SOILS LINE
- SF SF SF SILT FENCE
- LOD LIMITS OF DISTURBANCE
- SSF SSF SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- WASH RACK

**DEVELOPER'S CERTIFICATE**  
 I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer: *Stephen B. Greel* Date: *4/5/2010*  
 Print name below signature: **STEPHEN B. GREEL**

**ENGINEER'S CERTIFICATE**  
 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: *Robert C. Eitel* Date: *4/5/10*  
 Print name below signature: **ROBERT C. EITEL**

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *John K. Hunter* Date: *4/5/10*  
 Howard SCD

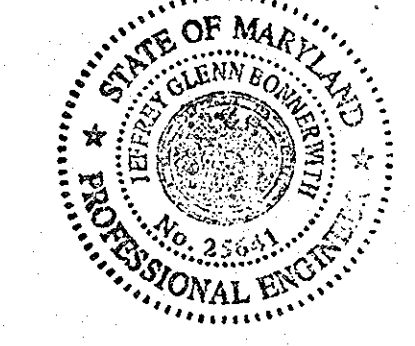
**SOILS SUMMARY CHART**

SYMBOL	NAME	GROUP
G#2	GLENVILLE	B
M#3	MANOR	B
CH#2	CHESTER	B
GB#2	GLENEIG	B
GC#2	GLENEIG	B

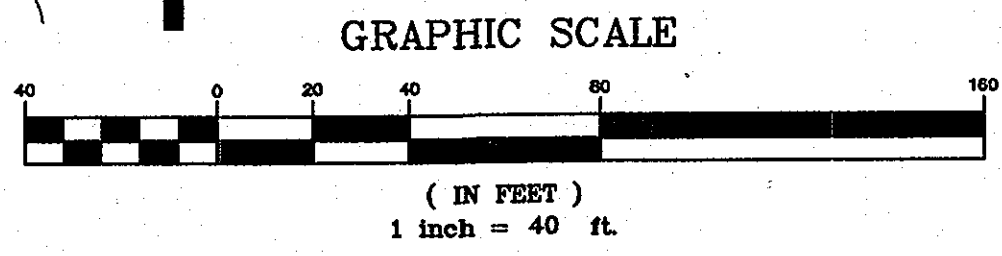
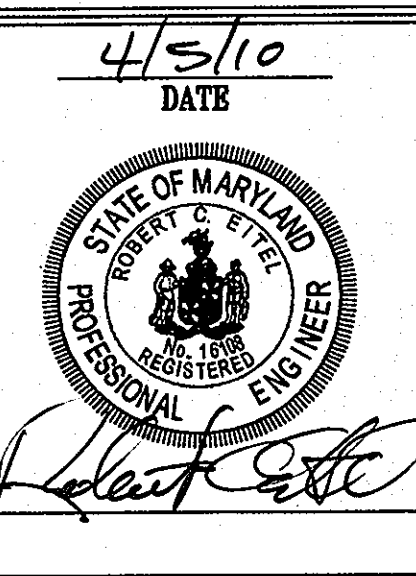
**GENERAL NOTES:**

- LIMIT OF DISTURBANCE HAS BEEN SHOWN FOR GRAPHICAL PURPOSES ONLY. THE LIMIT OF DISTURBANCE SHOULD NOT EXTEND BEYOND THE PROPERTY'S BOUNDARY.

**AS-BUILT CERTIFICATION**  
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.  
 Signature: *M. S. Lewis* Date: *2013-01-10*



**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.  
 Signature: *Robert C. Eitel* Date: *4/5/10*



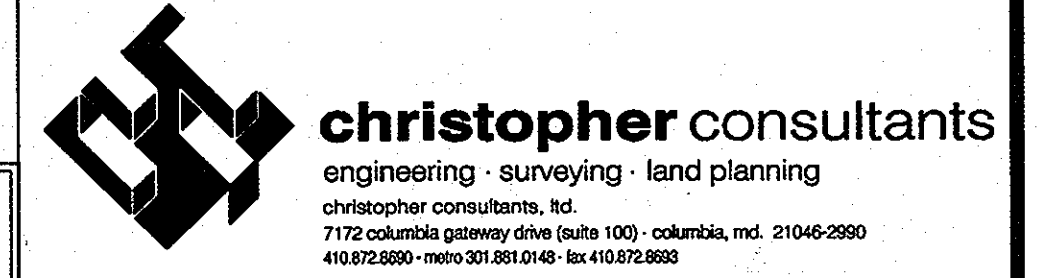
MATCHLINE SEE SHEET 9 FOR CONTINUATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development: *K. J. Sheehan* Date: *4/27/10*  
 Chief, Development Engineering Division: *John Deane* Date: *4/28/10*  
 Director, Department of Planning and Zoning: *Thomas S. Butler* Date: *4/28/10*

12-26-12 1. AS-BUILT REVISION

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
 COLUMBIA PRESBYTERIAN CHURCH  
 10001 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 730-6004  
 FAX: (410) 997-5484  
 CONTACT: AL EDWARDS



**ADDRESS CHART**

LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME: COLUMBIA PRESBYTERIAN CHURCH	LOT/PARCEL NO.: 223	CENSUS TRACT: 6054.01
PLAT NO.: 14	GRID NO.: R-20	TAX MAP: 30
WATER CODE: ---	SEWER CODE: ---	ELECTION DISTRICT: 5

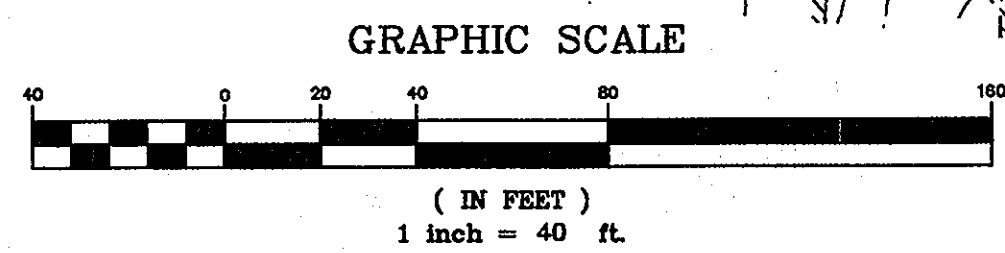
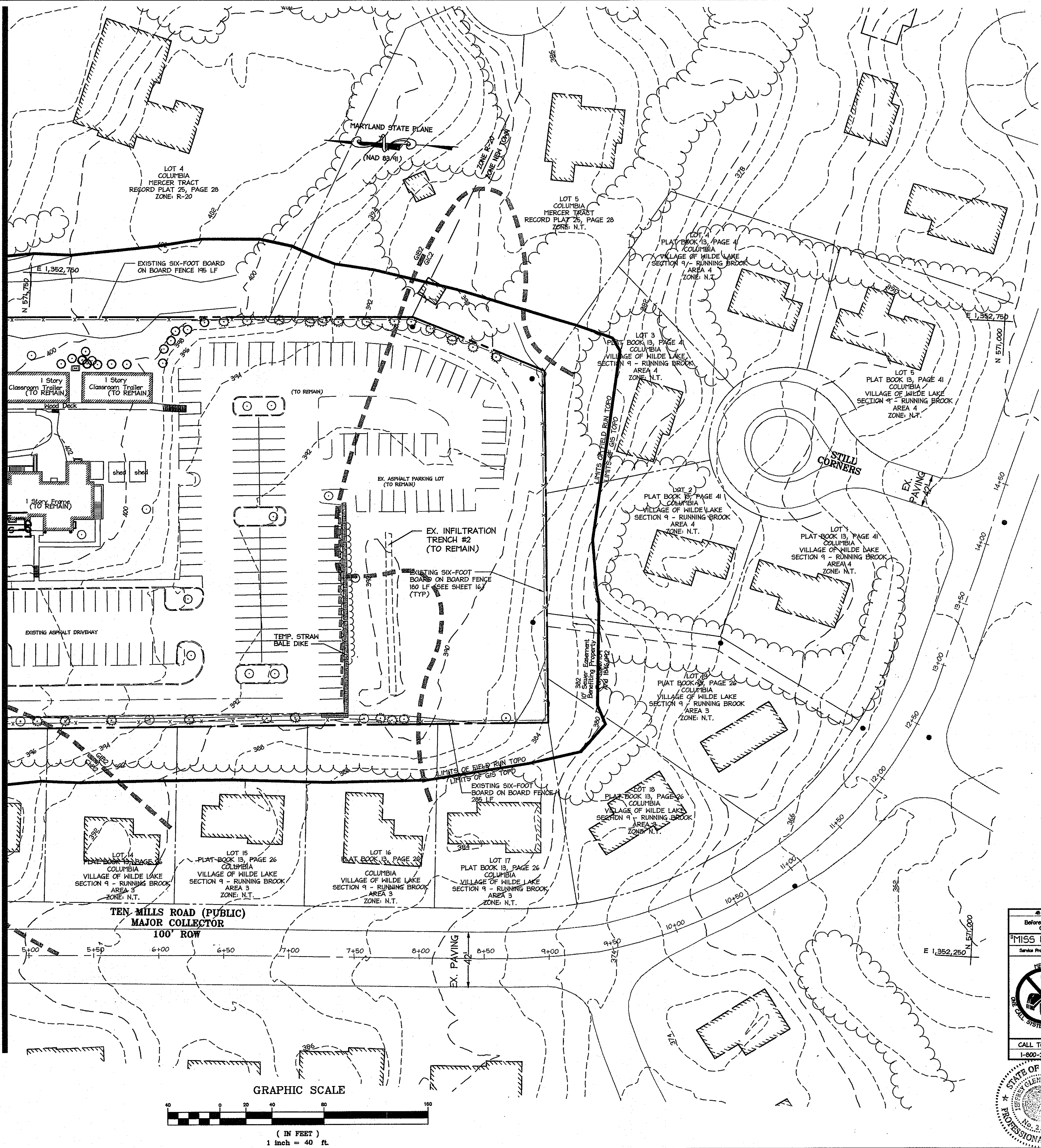
**TITLE: AS-BUILT SEDIMENT AND EROSION CONTROL PLAN**

DESIGN: DAM	SCALE: 1" = 40'	PROJECT: 080801.00
DRAWN: DAM	DATE: APRIL 2010	<b>8 OF 16</b>
CHECKED: ENJ	APPROVED: RCE	

MDC-878(SDP)



MATCHLINE SEE SHEET 8 FOR CONTINUATION



**DETAIL 32 - STRAW BALE DIKE**

**STRAW BALE DIKE**

Construction Specifications

- Bales shall be placed at the toe of a slope, on the contour, and in a row with the ends of each bale tightly abutting the adjacent bales.
- Each bale shall be entrenched in the soil a minimum of 4" and placed so the bindings are horizontal.
- Bales shall be securely anchored in place by either two stakes or re-bars driven through the bale 12" to 18" into the ground. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the top of the bale.
- Straw bale dikes shall be inspected frequently and after each rain event and maintenance performed as necessary.
- All bales shall be removed when the site has been stabilized. The trench where the bales were located shall be graded flush and stabilized.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE      PAGE H-25-2      MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**LEGEND**

	EXISTING INTER CONTOURS
	EXISTING INDEX CONTOURS
	PROPOSED INTER CONTOURS
	PROPOSED INDEX CONTOURS
	PROPERTY LINE
	EXISTING PROPERTY LINE
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING STORM DRAIN
	EXISTING CURBLINE
	EXISTING TREE
	SOILS LINE
	TEMPORARY STRAW BALE DIKE

**DEVELOPER'S CERTIFICATE**

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*Stephan B. Green*      4/5/10  
Signature of Developer      Date

*Stephan B. Green*  
Print name below signature

**ENGINEER'S CERTIFICATE**

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.

*Robert C. Satal*      4/5/10  
Signature of Engineer      Date

*Robert C. Satal*  
Print name below signature

**REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.**

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

*John J. Warner*      4/5/10  
Howard SCD      Date

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*Robert C. Satal*      4/23/10  
Chief, Division of Land Development      Date

*William J. ...*      4/28/10  
Chief, Development Engineering Division      Date

*Wm. J. ...*      4/28/10  
Director, Department of Planning and Zoning      Date

12.24.12      1      AS-BUILT REVISION

Date      No.      Description

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
COLUMBIA PRESBYTERIAN CHURCH  
10001 CLARKSVILLE PIKE  
COLUMBIA, MD 21044  
PHONE: (410) 730-6004  
FAX: (410) 977-5489  
CONTACT: AL EDWARDS

**christopher consultants**  
engineering · surveying · land planning  
7172 columbia gateway drive suite 100 · columbia, md 21046-2800  
410.872.8890 · mto301.881.0148 · fax 410.872.8893

**ADDRESS CHART**

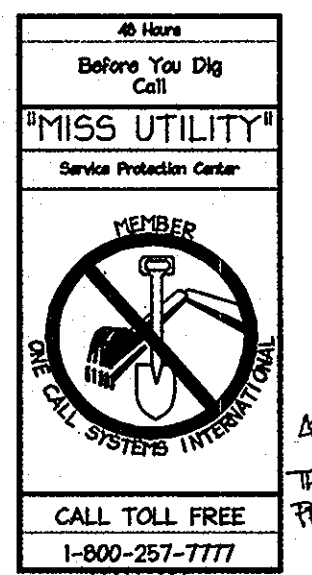
LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME COLUMBIA PRESBYTERIAN CHURCH	LOT/PARCEL NO. PARCEL 223	CENSUS TRACT 6054.01
PLAT NO. 14	ZONE R-20	TAX MAP 30
WATER CODE	SEWER CODE	ELECTION DISTRICT 5

**TITLE: AS-BUILT SEDIMENT AND EROSION CONTROL PLAN**

DESIGN: DAF1	SCALE: 1" = 40'	PROJECT: 080801.00
DRAWN: DAF1	DATE: APRIL 2010	
CHECKED: ENJ	APPROVED: RCE	<b>9 OF 16</b>

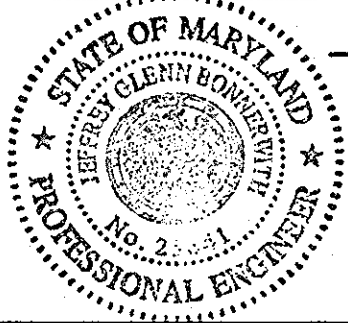


**SOILS SUMMARY CHART**

SYMBOL	NAME	GROUP
GnB2	GLENVILLE	B
MIC3	MANOR	B
CHB2	CHESTER	B
GIB2	GLENEIG	B
GIC2	GLENEIG	B

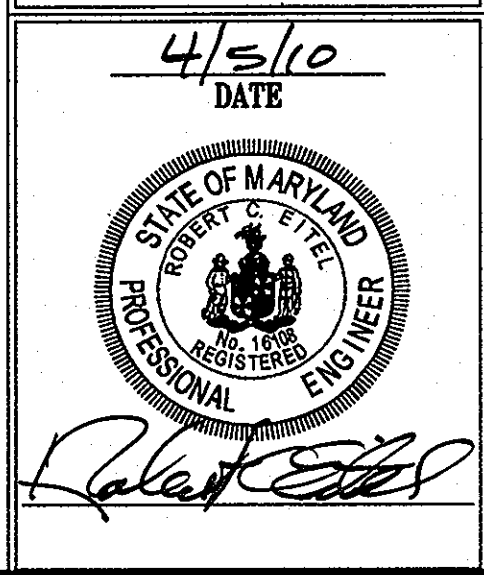
AS-BUILT CERTIFICATION  
THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

*M. D. ...*      2013-01-10  
DATE



**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.



MDC-878(SDP)



19.0 Standards and Specifications For Land Grading

Definitions Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications.

Many countries have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they should be followed.

1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mounded the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mounding steep slopes.

3. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slopes exceeds 20 feet, for 3:1 slopes it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slopes face as equally as possible and shall convey the water to a stable outlet.

- a. Benches shall be a minimum of six-feet wide to provide ease of maintenance.
b. Benches shall be designed with a reverse slope of 6:1 of flatter to the toe of the upper slope and with a minimum of one foot in depth.
c. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations.

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downcut by the use of a designated structure, except where:

- a. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected for surface runoff until they are stabilized.
b. The face of the slope shall not be subjected to any concentrated flows of surface water such as from natural drainways, graded swales, downspouts, etc.
c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

5. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made.

6. Surface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created to close to property lines as the enduser adjoining properties without adequately protecting such properties against sediment, erosion, siltation, settlement, subsidence or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers over eight (8) inches in diameter where compacted by rollers or other equipment.

9. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subjected to the provisions of the Standard and Specifications.

All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

21.0 Standard and Specifications For Topsoil

Definitions Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose To provide a suitable soil medium for vegetative growth. Soil of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies This practice is limited to areas having 2:1 or flatter slopes where:

- 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 materials toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

For the purpose of these Standards and Specification, 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 stabilization shown on the plans.

Construction and Material Specifications Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications.

- 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 soil scientist and approved by the appropriate approval authority.
ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or other as specified.
iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread to the rate of 4-8 tons/acre.

For sites having disturbed areas under 5 acres: Place topsoil (if required) and apply soil amendments as specified in 20.0 vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

For sites having disturbed areas over 5 acres: On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following.

- a. pH for topsoil shall be between 6.0 and 7.5. If tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise 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 soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 day min.) to permit dissipation of phytotoxic materials.
e. Topsoil substitutes or amendments as recommended by a qualified agronomist or soil scientist approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Place topsoil (if required) and apply soil amendments as specified on 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

Topsoil Application When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fences and Sediment Traps and Basins.

Grades in the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage.

Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below.

Composted Sludge Materials for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

- a. Composted sludge shall be supplied by, or originated from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0.
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

30.0 Dust Control

Definition Controlling dust blowing and movement on construction sites and roads.

Purpose To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies This practice is applicable to areas subject to dust blowing and movement where in and off-site damage is likely without treatment.

Specifications Temporary Methods 1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.

- 2. Vegetative Cover - See standards for temporary vegetative cover.
3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts.
4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist.
5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar materials can be used to control air currents and soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods 1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.

- 2. Topsoil - Covering with less erosive materials. See Standards for topsoiling.
3. Stone - Cover surface with crushed stone or coarse gravel.

References 1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.

2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA - ARS.

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, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1. Preferred--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding.
2. Acceptable--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding.
3. Seeding -- For the periods March 1 -- April 30 and August 15 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue.

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.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation -- Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Mulching -- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project.

Signature of Developer: Stephen B. Green, Date: 4/5/2010

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Conservation District.

Signature of Engineer: Robert C. Eitel, Date: 4/5/10

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Signature of Reviewer: Jim Clark, Date: 4/15/10

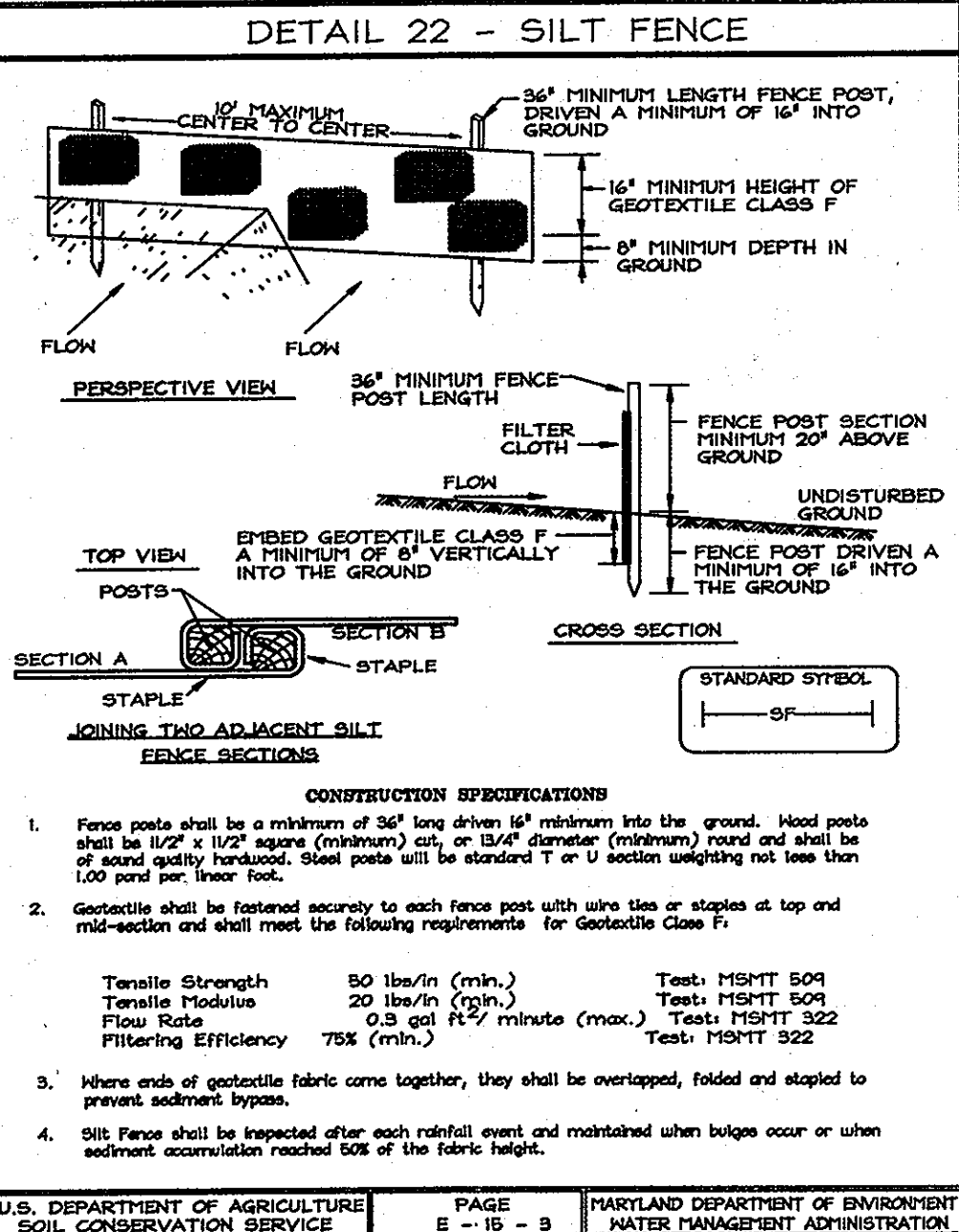
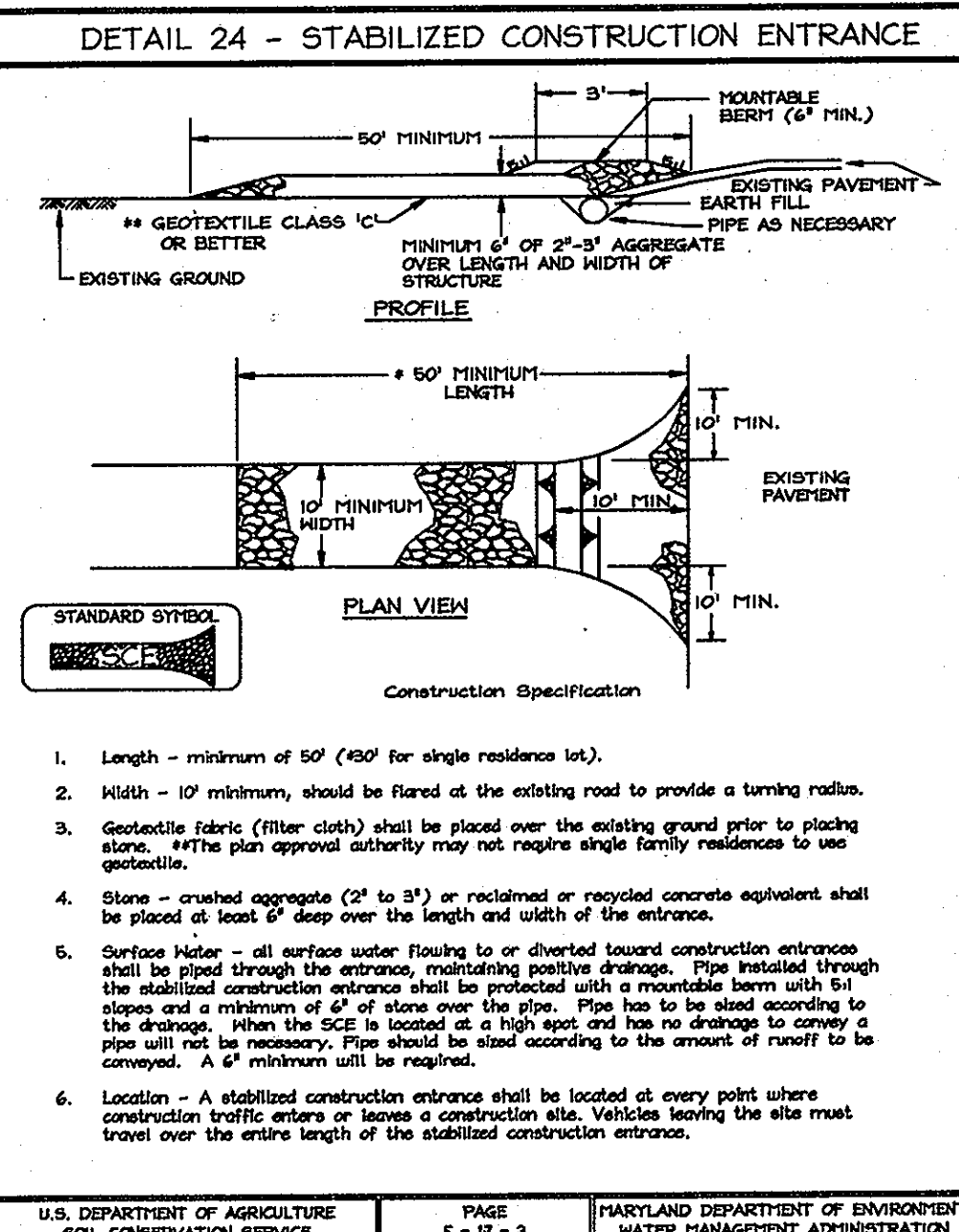
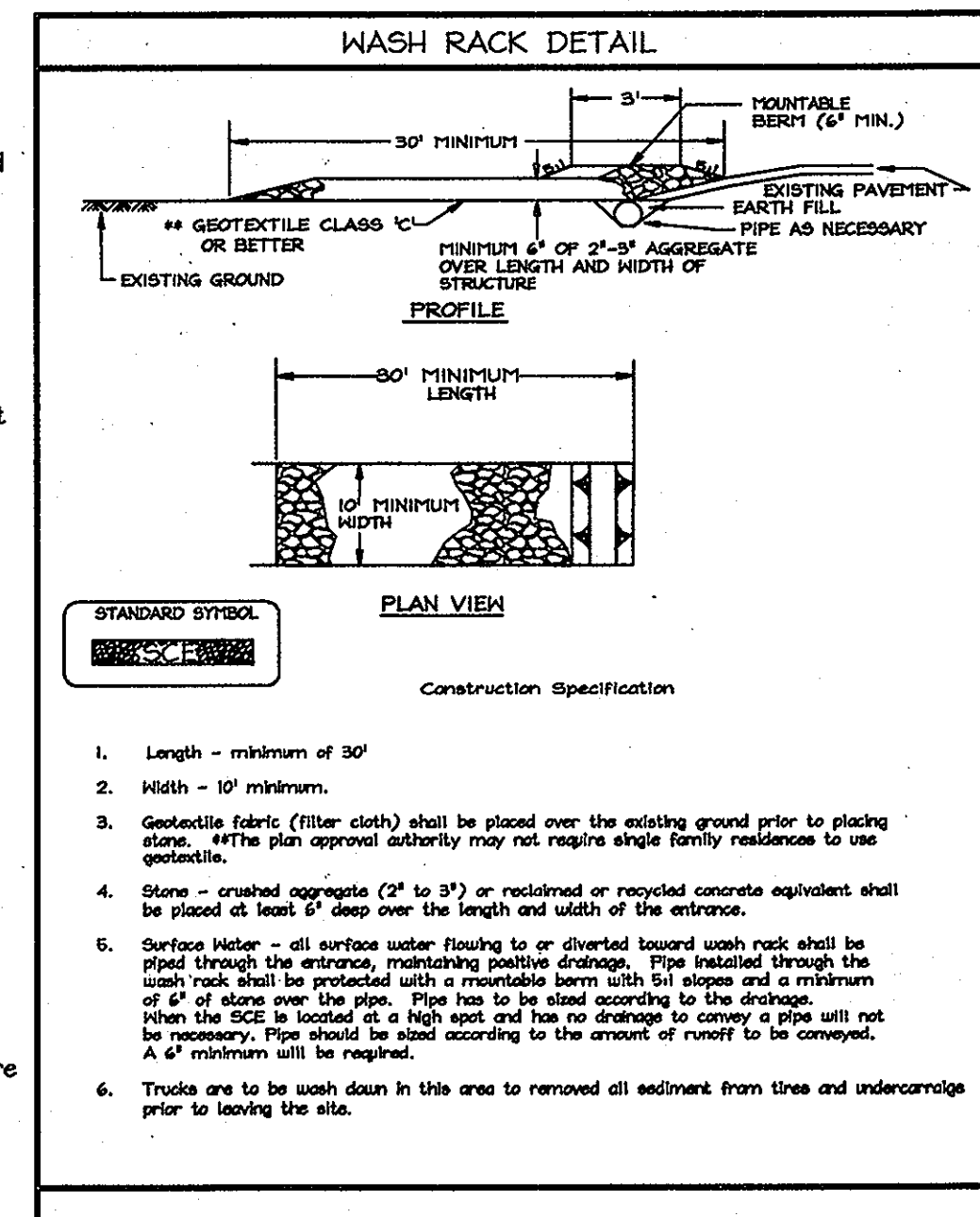


Table with 4 columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE 7-18-3, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION, U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PAGE E-18-3, MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION.

SEQUENCE OF CONSTRUCTION

- 1. The contractor is responsible for obtaining all required permits prior to commencing any land disturbance activities. (1 day)
2. An on-site preconstruction meeting shall be conducted with the contractor and the Howard County Inspector at least 48 hours prior to the start of construction.
3. Install the perimeter sediment control devices including silt fence, straw bale dikes and the stabilized construction entrance.
4. Remove the existing structures, and other site features which are located within the limit of disturbance begin building excavation. (120 days)
5. Begin utility work. Construct proposed infiltration trenches. The contractor shall inspect and repair the existing infiltration trenches and cleanouts.

Total Construction Time: 185 Days

HOWARD COUNTY SOIL CONSERVATION DISTRICT

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (410-313-1855).

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbances or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol I, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specific above in accordance with the 1995 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 52) and mulching (Section 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained by the Howard County Sediment Control Inspector.

7. Site Analysis: Total Area of Site 6.8 Acres, Area Disturbed 2.05 Acres, Area to be roofed or paved 0.5 Acres, Area to be vegetatively stabilized 2.45 Acres, Total Cut 1,078 Cu. Yds., Total Fill 0 Cu. Yds.

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 control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all site 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. TO BE DETERMINED

11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized any construction as shown on these plans by the end of each work day, whichever is shorter.

AS-BUILT CERTIFICATION

THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

Signature: J. J. Lewis, Date: 2013-9-10

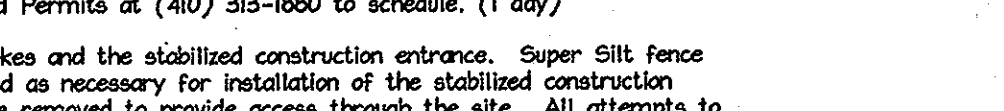


Table with 2 columns: APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

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APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

AS-BUILT CERTIFICATION

THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

Signature: J. J. Lewis, Date: 2013-9-10



Table with 2 columns: APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

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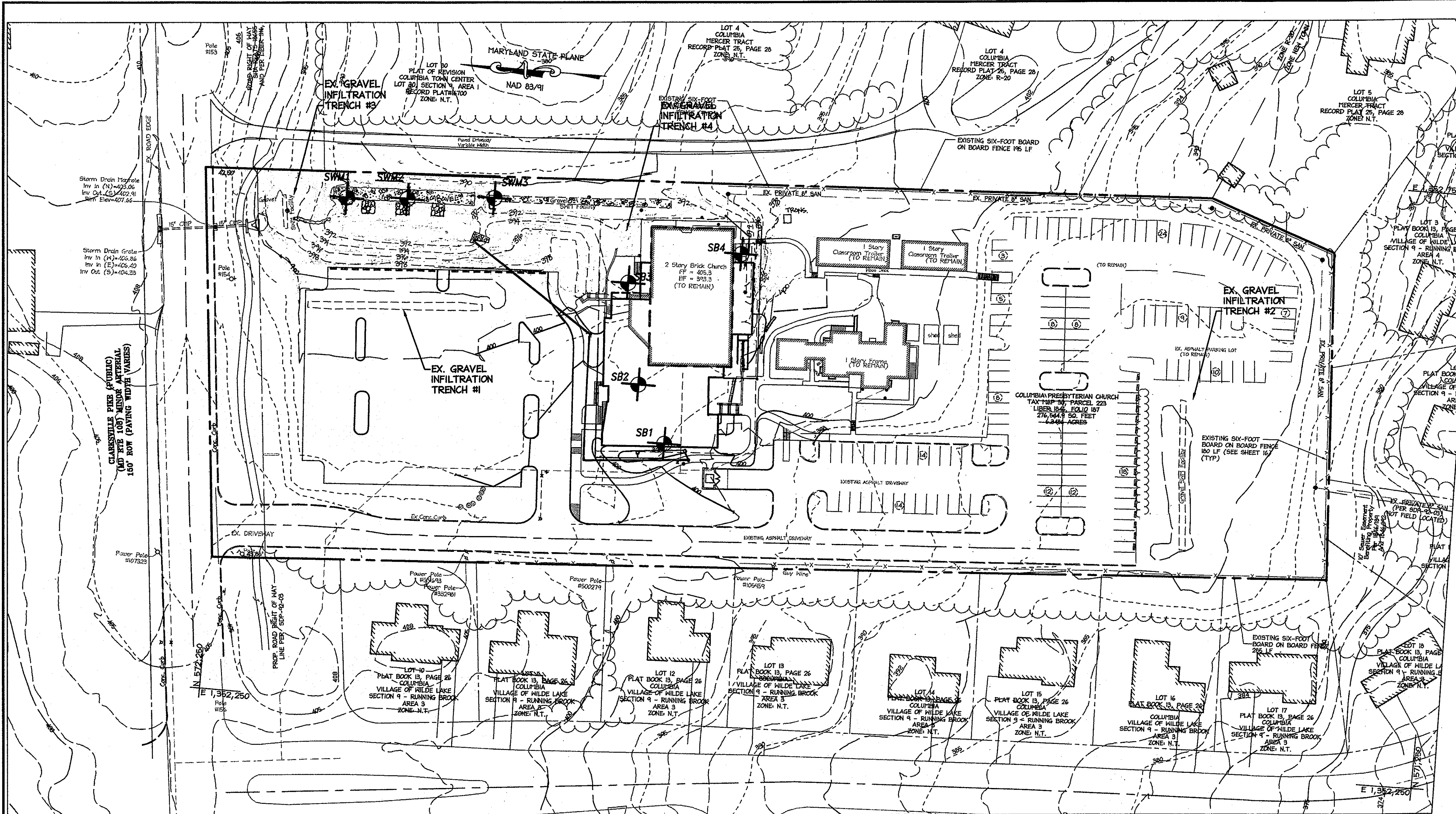
APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

APPROVED: DEPARTMENT OF PLANNING AND ZONING, Chief, Development Engineering Division, Director, Department of Planning and Zoning.

MDC-878(SDP)





**LOG OF BORING NO. SWM-1**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
3.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
4.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
5.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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7.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**LOG OF BORING NO. SWM-2**

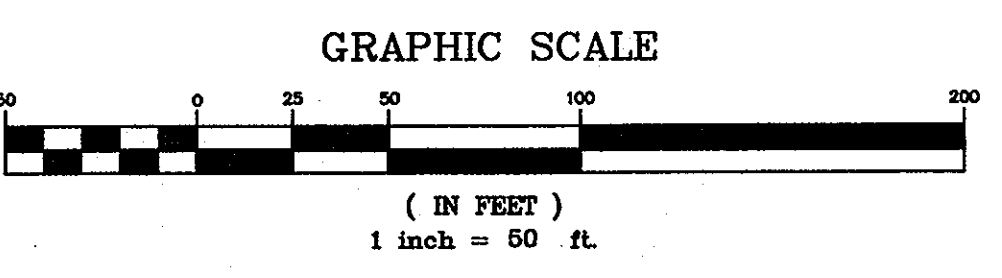
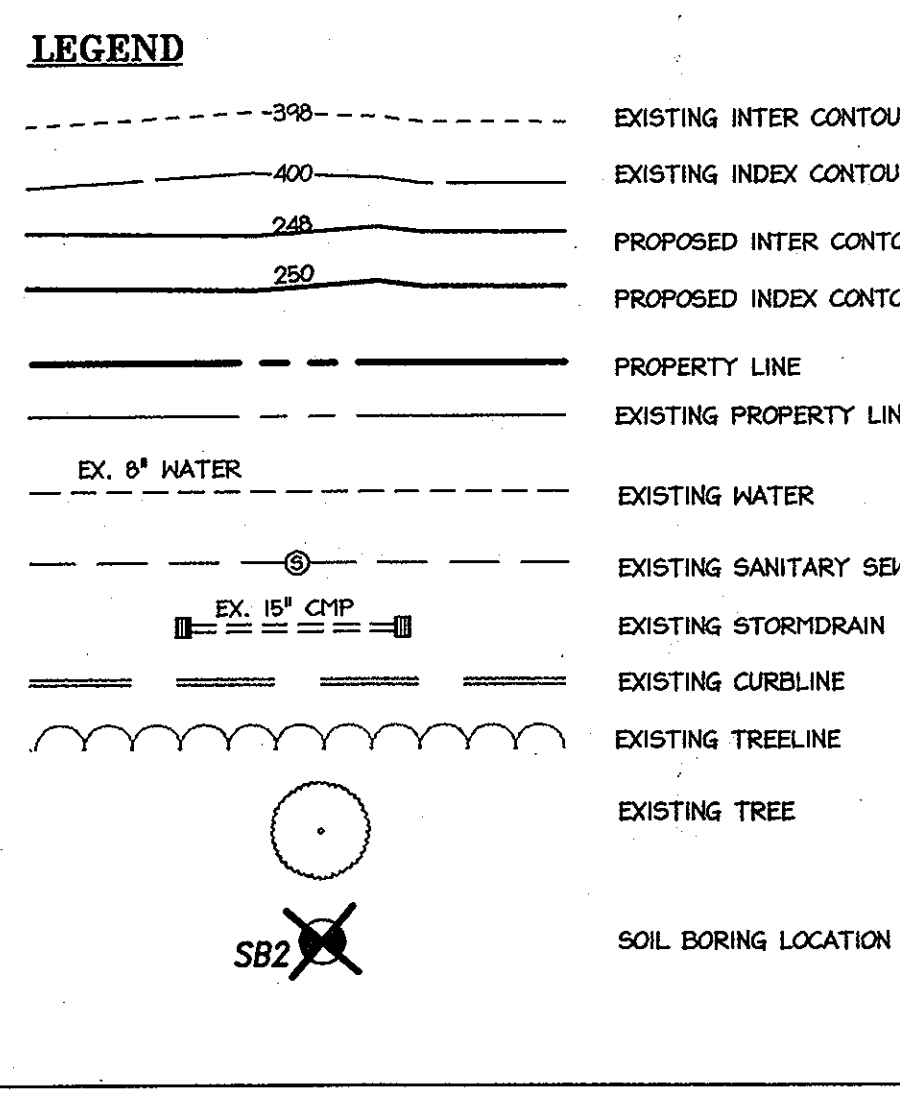
PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
3.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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7.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**LOG OF BORING NO. SWM-3**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
3.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
4.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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7.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	



**LOG OF BORING NO. SB-1**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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7.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**LOG OF BORING NO. SB-2**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**LOG OF BORING NO. SB-3**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**LOG OF BORING NO. SB-4**

PROJECT: Columbia Presbyterian Church  
 PROJECT NO: 060864  
 DATE: 7/2/2008  
 DATE COMPLETED: 7/2/2008  
 DRAFTER: P. Stephens, Jr.  
 CHECKED BY: B. Dimatore

DEPTH (FEET)	SOIL TYPE	REMARKS
1.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	Typical 1 ft.
2.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
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4.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
5.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
6.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
7.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
8.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
9.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	
10.00	Gravelly sand, medium sand, occasional silt, with sand and gravel fragments, thin organic.	

**AS-BUILT CERTIFICATION**  
 I HEREBY CERTIFY, BY MYSELF, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

*[Signature]* 2/13/10  
 DATE



**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.

4-5-10  
 DATE

*[Signature]*  
 REGISTERED PROFESSIONAL ENGINEER

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*[Signature]* 4/27/10  
 Chief, Division of Land Development

*[Signature]* 4/28/10  
 Chief, Development Engineering Division

*[Signature]* 4/28/10  
 Director, Department of Planning and Zoning

12.7612. 1 AS-BUILT REVISION  
 Date No.

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
 COLUMBIA PRESBYTERIAN CHURCH  
 1000 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 730-6004  
 FAX: (410) 991-5494  
 CONTACT: AL EDWARDS

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, ltd.  
 1772 columbia gateway drive (suite 100) - columbia, md 21049-2900  
 410.872.8890 - fax: 301.811.0148 - fax: 410.872.8893

**ADDRESS CHART**

LOT/PARCEL: 223 STREET ADDRESS: 10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

**PERMIT INFORMATION CHART**

PROJECT NAME: PRESBYTERIAN CHURCH	LOT/PARCEL NO.: PARCEL 223	CENSUS TRACT: 6054.01
PLAT NO.: ---	GRID NO. ZONE: R-20	TAX MAP: 30
ELECTION DISTRICT: 5	WATER CODE: 14	SEWER CODE: ---

TITLE: AS-BUILT SOIL BORING PLAN

DESIGN: ENJ SCALE: 1" = 50'  
 DRAWN: DAM DATE: APRIL 2010  
 CHECKED: RCE APPROVED: RCE

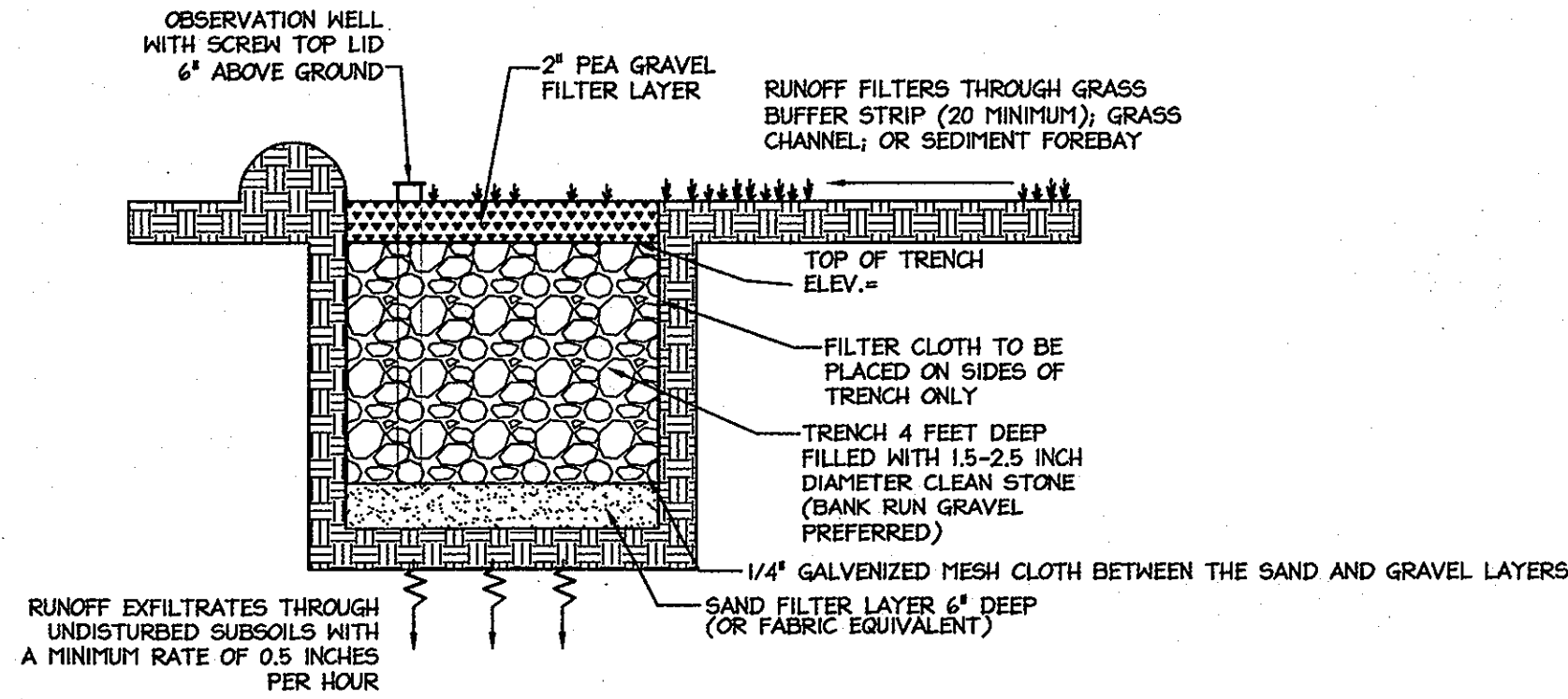
PROJECT: 060801.00

**11 OF 16**

**SOP-08-119**

MDC-878(SDP)





NOTE:  
THE INFILTRATION TRENCH PROVIDES ROW AND  
WAY IN ONE LOCATION.

**TYPICAL INFILTRATION TRENCH PROFILE**  
NOT TO SCALE

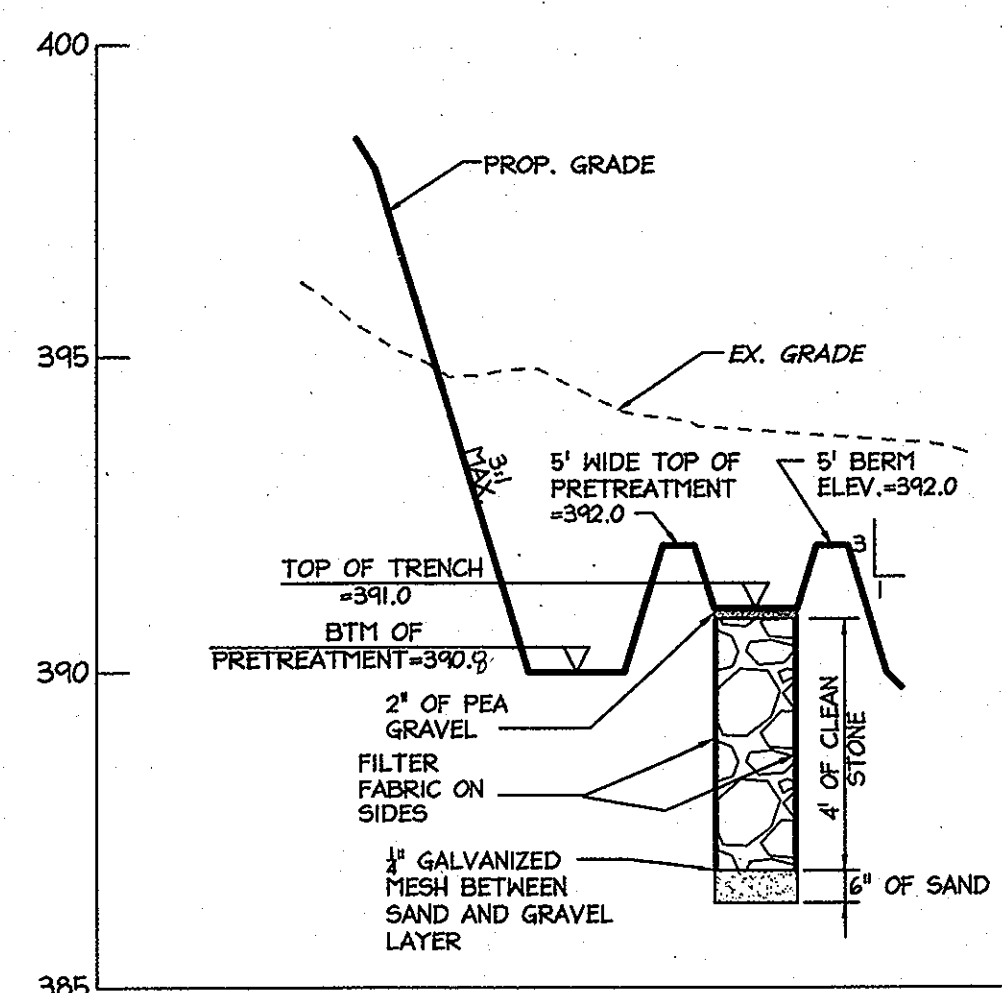
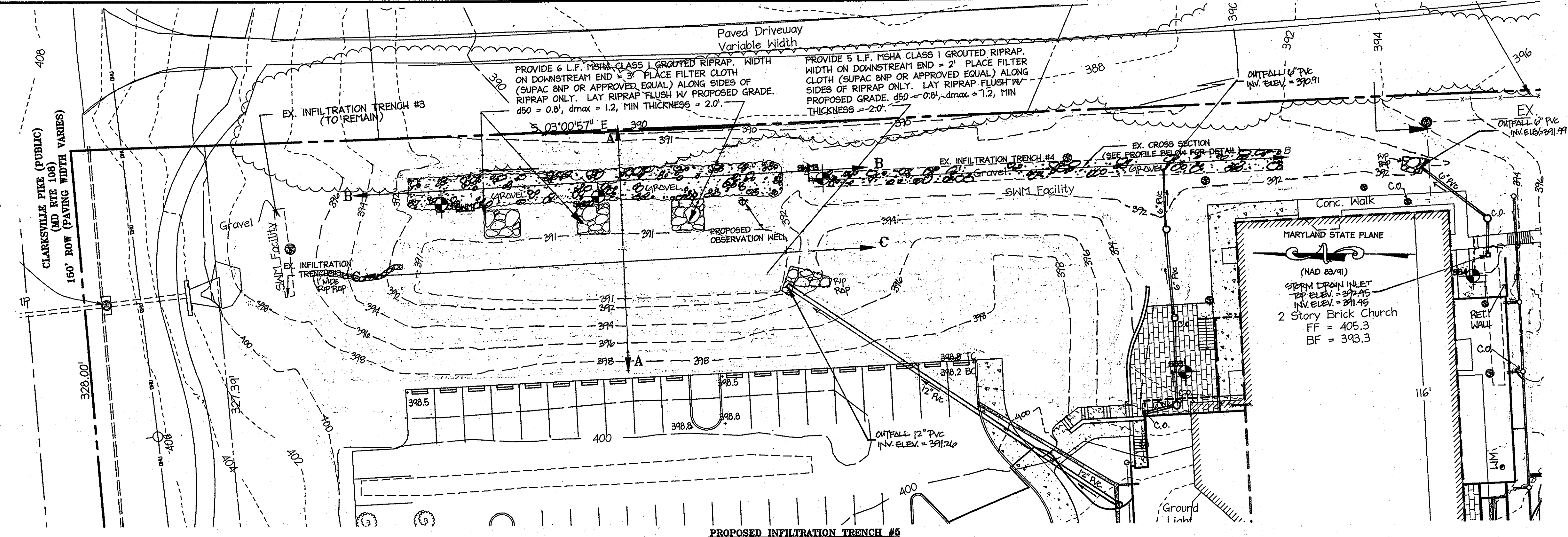
**INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS**

- AN INFILTRATION TRENCH MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION TRENCH HAS RECEIVED FINAL STABILIZATION.
- HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION TRENCH TO MINIMIZE COMPACTION OF THE SOIL.
  - EXCAVATE THE INFILTRATION TRENCH TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDEWALLS OF THE TRENCH SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
  - A CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, MDE, 1994) SHALL INTERFACE BETWEEN THE TRENCH SIDEWALLS AND A GALVANIZED MESH LAYER SHALL BE BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NON-WOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA FOLLOWS. ANY ALTERNATIVE FILTER FABRIC MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.

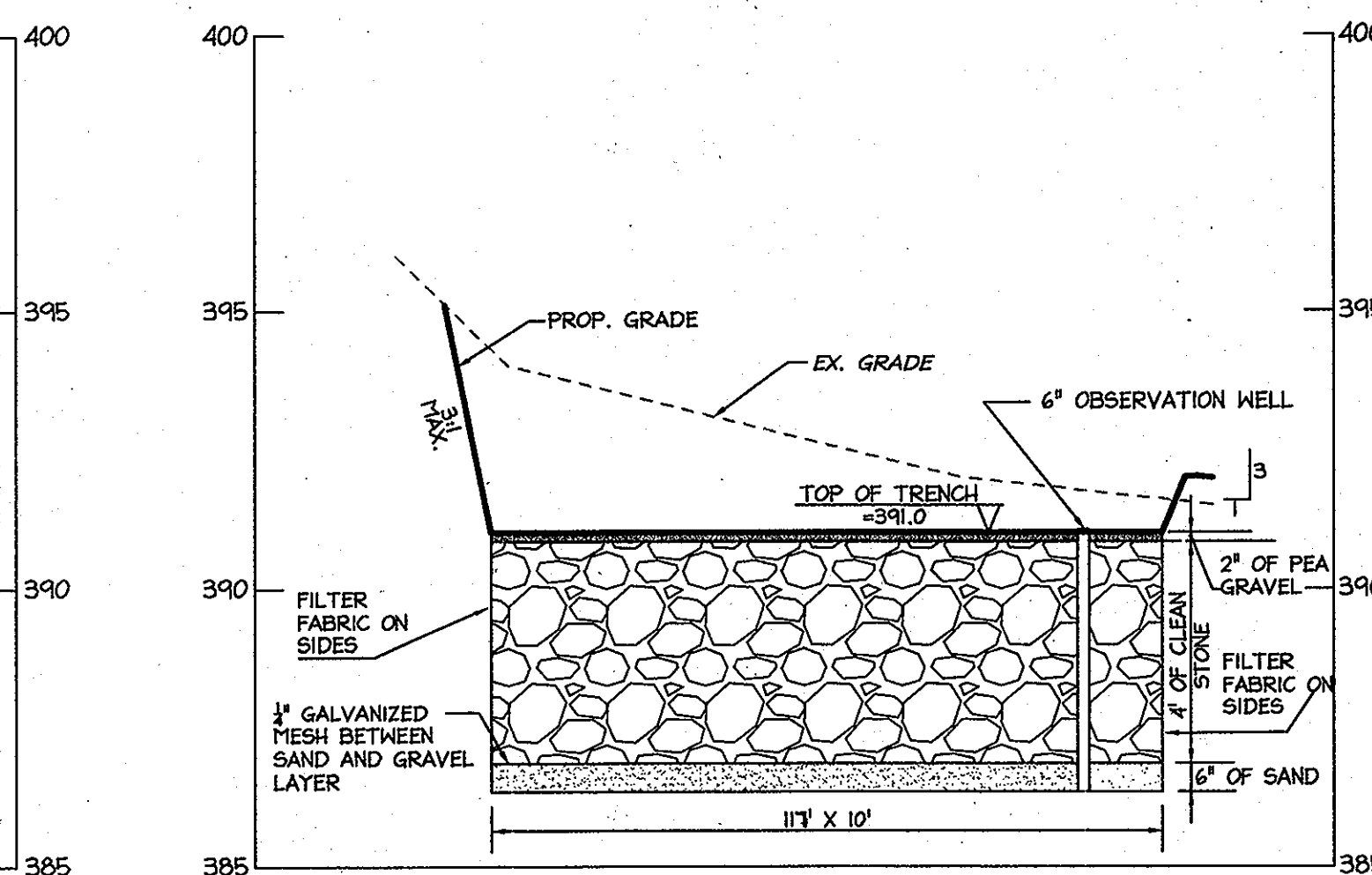
AMOCO 4552 GEOLON N70 HEBTEC N07  
CARTHAGE FX-805 MIRAFI 180-N

THE WIDTH OF THE GEOTEXTILE MUST INCLUDE SUFFICIENT MATERIAL TO CONFORM TO TRENCH PERIMETER IRREGULARITIES AND FOR A 6-INCH MINIMUM TOP OVERLAP AND 1" AT THE JOINT. STONES OR OTHER ANCHORING OBJECTS SHOULD BE PLACED ON THE FABRIC AT THE EDGE OF THE TRENCH TO KEEP THE TRENCH OPEN DURING WINDY PERIODS. WHEN OVERLAPS ARE REQUIRED BETWEEN ROLLS, THE UPHILL ROLL SHOULD LAP A MINIMUM OF 2 FEET OVER THE DOWNHILL ROLL IN ORDER TO PROVIDE A SHINGLED EFFECT.

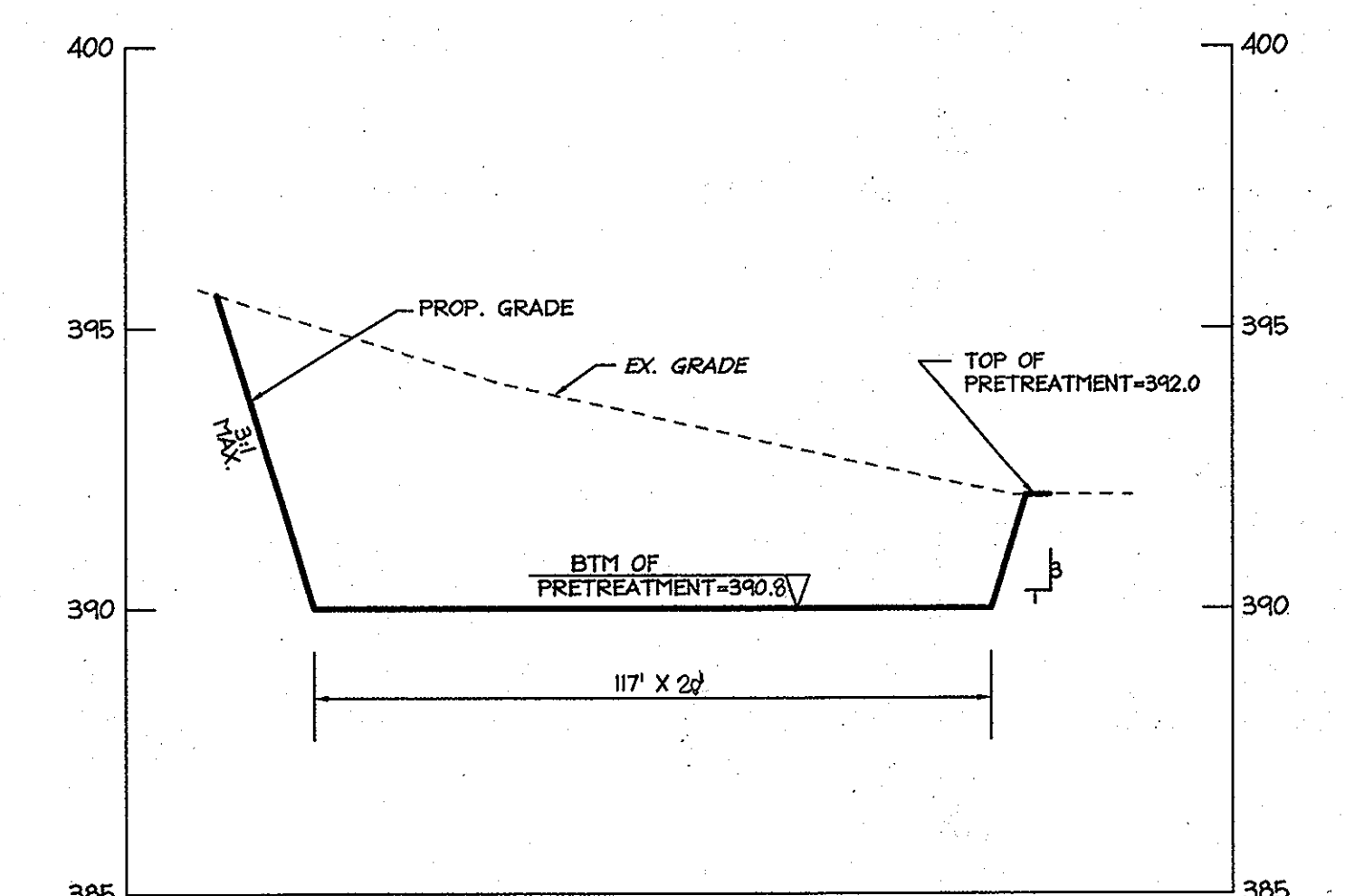
- IF A 6 INCH SAND FILTER LAYER IS PLACED ON THE BOTTOM OF THE INFILTRATION TRENCH, THE SAND FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET AASHTO-M-45, SIZE NO. 9 OR NO. 10. ANY ALTERNATIVE SAND GRADATION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
- THE STONE AGGREGATE SHOULD BE PLACED IN A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES. THE GRAVEL (ROUNDED "BANK RUN" GRAVEL IS PREFERRED) FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ONE OF THE FOLLOWING AASHTO-M-45, SIZE NO. 2 OR NO. 3.
- FOLLOWING THE STONE AGGREGATE PLACEMENT, THE FILTER FABRIC SHALL BE FOLDED OVER THE STONE AGGREGATE TO FORM A 12-INCH MINIMUM LONGITUDINAL LAP. THE DESIRED FILL SOIL OR STONE AGGREGATE SHALL BE PLACED OVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.
- CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE. ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.
- VOIDS MAY OCCUR BETWEEN THE FABRIC AND THE EXCAVATION SIDES SHALL BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOID. THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOID AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
- VERTICALLY EXCAVATED WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR COHESIVENESS SOILS ARE DOMINANT. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE SLOPES TO MAINTAIN STABILITY.
- THE OBSERVATION WELL IS TO CONSIST OF 6-INCH DIAMETER PERFORATED PVC SCHEDULE 40 PIPE (M 278 OR F750, TYPE PS 28) WITH A CAP SET 6 INCHES ABOVE GROUND LEVEL AND IS TO BE LOCATED NEAR THE LONGITUDINAL CENTER OF THE INFILTRATION TRENCH. THE PIPE SHALL HAVE A PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING THE CAP. THE SCREEN TOP LID SHALL BE A CLEANOUT WITH A LOCKING MECHANISM OR SPECIAL BOLT TO DISCOURAGE VANDALISM. THE DEPTH TO THE INVERT SHALL BE MARKED WITH A LOCKING LID. THE PIPE SHALL BE PLACED VERTICALLY WITHIN THE GRAVEL PORTION OF THE INFILTRATION TRENCH AND A CAP PROVIDED AT THE BOTTOM OF THE PIPE. THE BOTTOM OF THE CAP SHALL REST ON A PIECE OF MARINE PLYWOOD ON THE INFILTRATION TRENCH BOTTOM.
- CORRUGATED METAL DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, AND SHALL BE ALUMINIZED IN ACCORDANCE WITH AASHTO-M-274. ALUMINIZED PIPE IN CONTACT WITH CONCRETE SHALL BE COATED WITH AN INERT COMPOUND CAPABLE OF PREVENTING THE DELETERIOUS EFFECT OF THE ALUMINUM ON THE CONCRETE. PERFORATED DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, CLASS 2 AND SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. AN ALUMINIZED METAL PLATE SHALL BE WELDED TO THE END OF THE PIPE.
- IF A DISTRIBUTION STRUCTURE WITH A MET WELL IS USED, A 4-INCH DRAIN PIPE SHALL BE PROVIDED AT OPPOSITE ENDS OF THE INFILTRATION TRENCH DISTRIBUTION STRUCTURE. TWO (2) CUBIC FEET OF POROUS BACKFILL MEETING AASHTO-M-45, SIZE NO. 57 SHALL BE PROVIDED AT EACH DRAIN.
- IF A DISTRIBUTION STRUCTURE IS USED, THE MANHOLE COVER SHALL BE BOLTED TO THE FRAME.



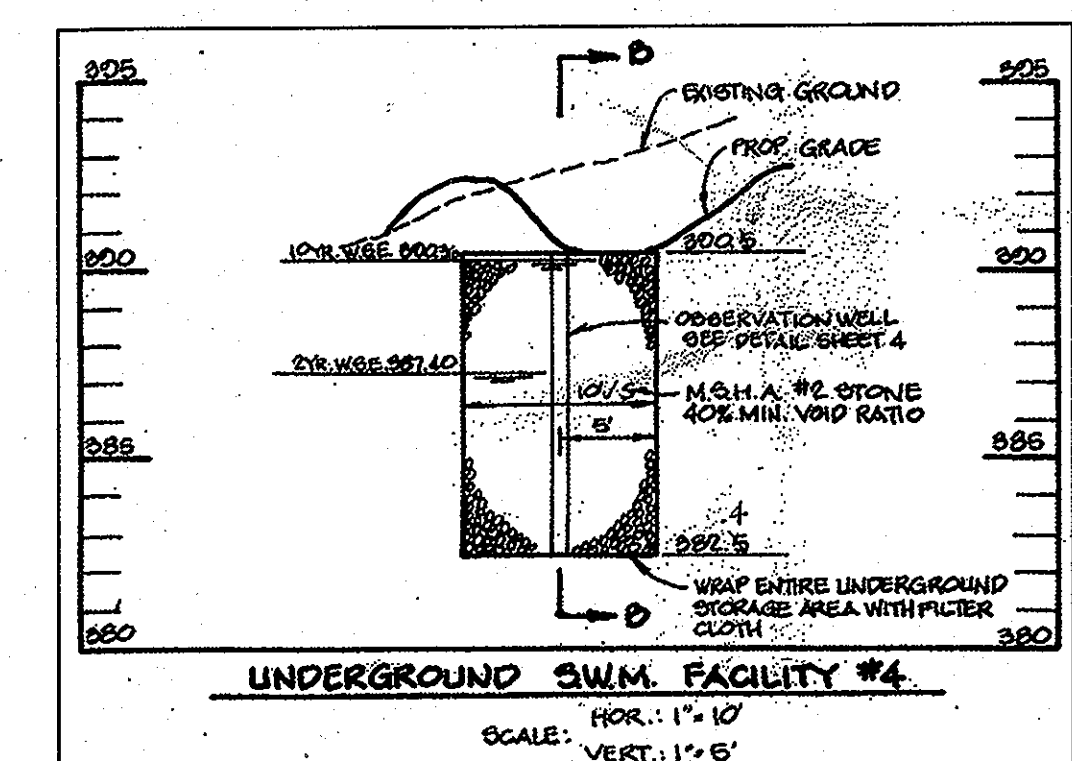
**PROPOSED INFILTRATION TRENCH A-A**  
HORIZ: 1"=30'  
VERT: 1"=3'



**PROPOSED INFILTRATION TRENCH B-B**  
HORIZ: 1"=30'  
VERT: 1"=3'

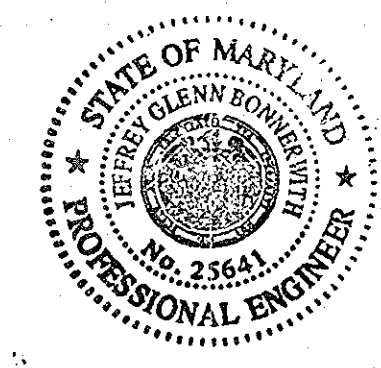


**PROPOSED INFILTRATION TRENCH C-C**  
HORIZ: 1"=30'  
VERT: 1"=3'



**UNDERGROUND SWM FACILITY #4**  
SCALE: HOR: 1"=10'  
VERT: 1"=5'

AS-BUILT CERTIFICATION  
I HEREBY CERTIFY BY MY SEAL, THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOSING OF THE UNDERGROUND SWM FACILITY.  
A.J.S. Smith 2013-01-10 DATE



**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.

4-5-10 DATE  
STATE OF MARYLAND PROFESSIONAL ENGINEER

MISS UTILITY  
Service Protection Center  
CALL TOLL FREE 1-800-257-7777

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date
Chief, Development Engineering Division	Date
Director, Department of Planning and Zoning	Date

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**  
OWNER/DEVELOPER  
COLUMBIA PRESBYTERIAN CHURCH  
10001 CLARKSVILLE PIKE  
COLUMBIA, MD 21044  
PHONE: (410) 750-6004  
FAX: (410) 997-5484  
CONTACT: AL EDWARDS

**christopher consultants**  
engineering - surveying - land planning  
1172 columbia gateway drive (suite 100) - columbia, md 21046-2880  
410.872.8880 - mpls 301.821.0148 - fax 410.872.8888

ADDRESS CHART

LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01
PLAT NO.	GRID NO.	ZONE
14	14	R-20
TAX MAP	ELECTION DISTRICT	
30	5	

TITLE: **AS-BUILT STORMWATER MANAGEMENT NOTES AND DETAILS**

DESIGN: ENJ	SCALE: AS SHOWN	PROJECT: 080801.00
DRAWN: SSA	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	

MDC-878(SDP)



**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORM WATER FACILITIES**

**ROUTINE MAINTENANCE:**

1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPES OF THE FACILITY SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

**NON-ROUTINE MAINTENANCE:**

1. STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE OBSERVATION WELL AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHALL BE REMOVED FROM THE FACILITY, NO LATER THAN WHEN THE CAPACITY OF THE FACILITY, IS HALF FULL OF SEDIMENT, OR WHEN DEEMED NECESSARY FOR AESTHETIC REASON, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

**OPERATION, MAINTENANCE AND INSPECTION**

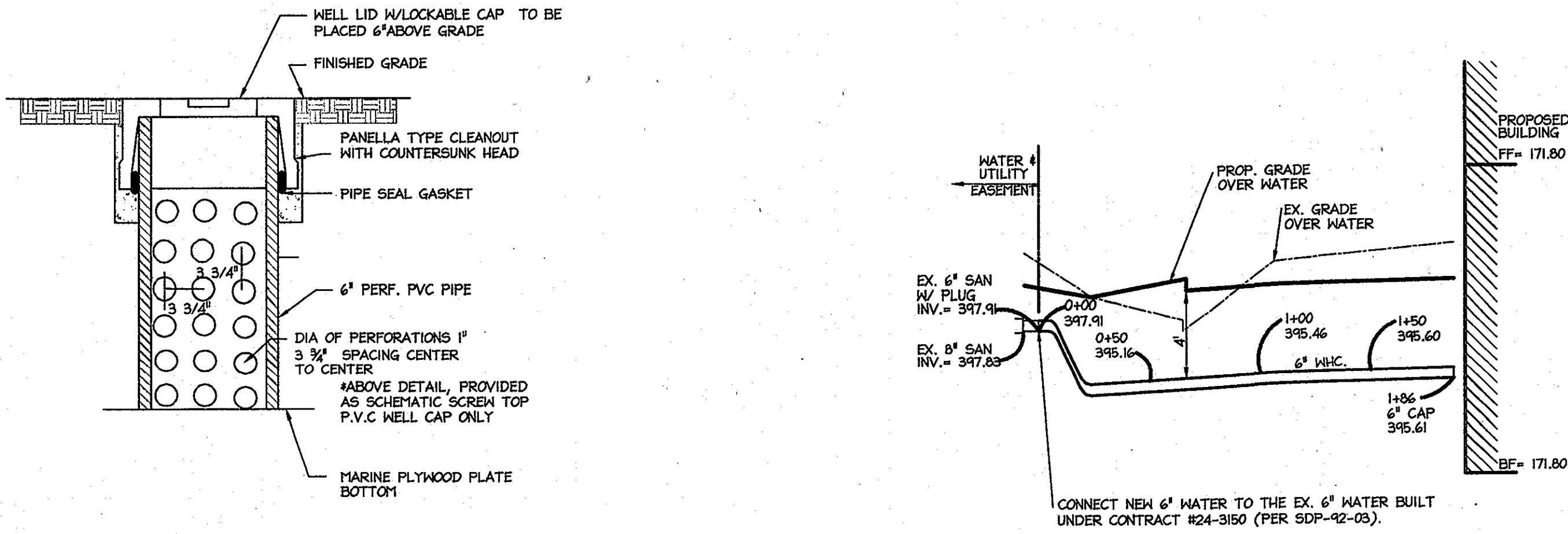
INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY. THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1)**

1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

**NOTES:**

1. ON THE SOUTH & EAST SIDES OF THE BUILDING RELOCATE EX. ROOF DRAIN DOWNSPOUTS TO 5' OUTSIDE OF THE PROPOSED EDGE OF BUILDING. THE ROOF DRAINS WILL NEED TO BE EXTENDED TO CONNECT TO THE CURRENT ROOF DRAIN SYSTEM. A NEW 6" HDPE (OR PVC) PIPE SHALL BE INSTALLED AT 2' TO CONNECT THE ROOF DRAINS FROM THE PROPOSED EXPANSION ON THE NORTH AND EAST SIDES TO INFILTRATION TRENCH #5
2. FND MEANS FOUNDATION DRAINS. REFER TO HIGH DRAWINGS FOR LOCATIONS
3. 12" DRAIN BASIN TO BE 12" NYLOPLAST DRAIN BASIN WITH H-10 RATED GRATE OR EQUAL
4. TEST PIT TO LOCATE EX ROOF DRAINS LOCATIONS, MATERIAL AND INVERTS. NOTIFY THE ENGINEER WITH ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

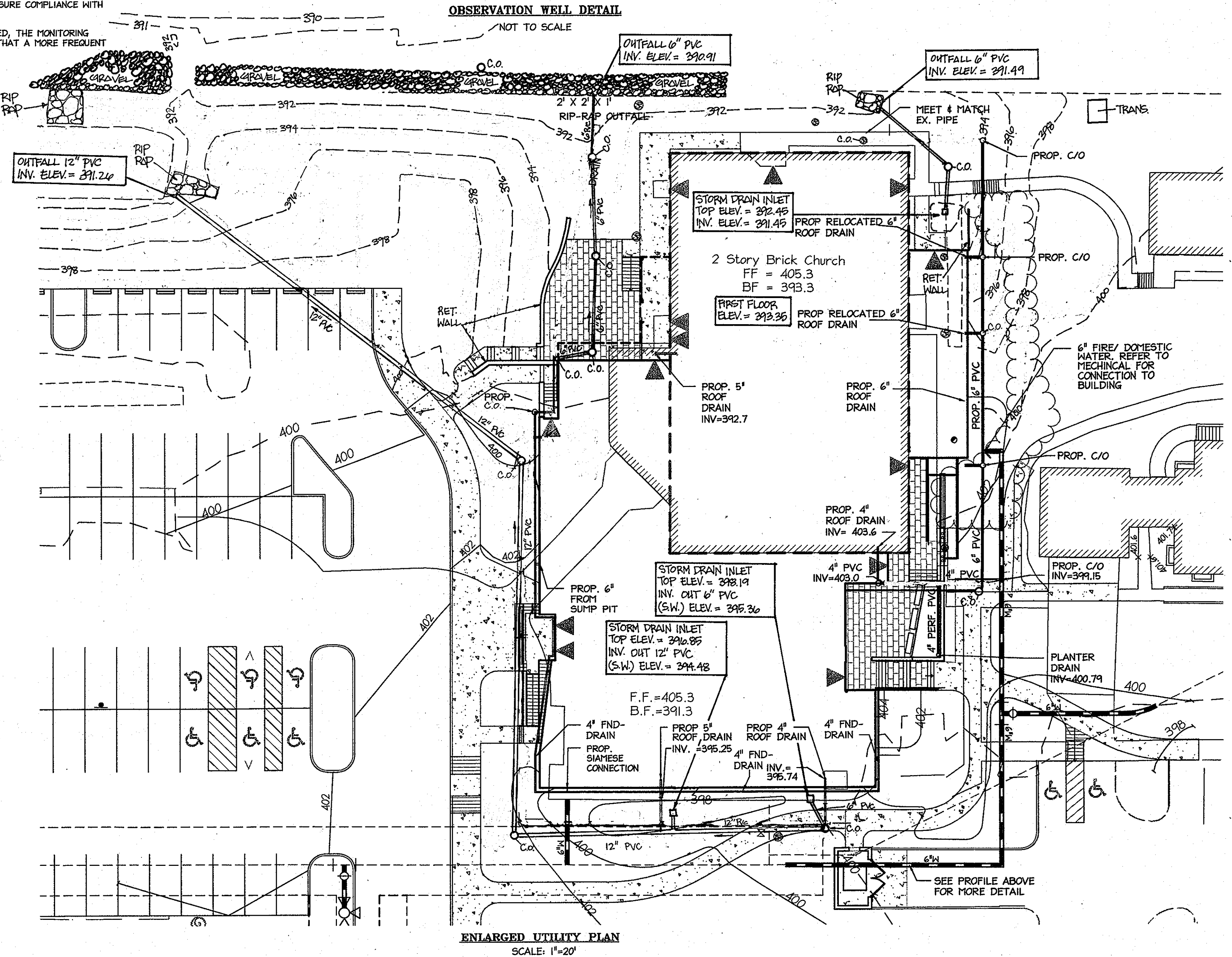


- EACH OBSERVATION WELL/CLEANOUT SHALL INCLUDE THE FOLLOWING:
1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL/CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL, LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
  2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREEN TOP LID. THE SCREEN TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.
  3. LID SHALL HAVE A LOCKABLE CAP. THE SCREEN TOP.
  4. A PLATE BOTTOM SHALL BE PROVIDED AT THE BOTTOM OF THE TRENCH.

**OBSERVATION WELL DETAIL**

**PROPOSED 6" WATER LINE PROFILE**

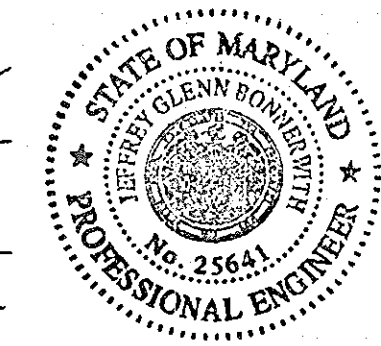
SCALE: HORIZONTAL: 1"=50'  
VERTICAL: 1"=5'



**ENLARGED UTILITY PLAN**  
SCALE: 1"=20'

**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT COLLAPSE OF THE UNDERGROUND SWM FACILITY.

*[Signature]* 2013-01-10  
DATE



**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.

4/5/10  
DATE

*[Signature]*  
PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i> Chief, Division of Land Development	4/2/10 Date
<i>[Signature]</i> Chief, Development Engineering Division	4/2/10 Date
<i>[Signature]</i> Director, Department of Planning and Zoning	4/2/10 Date

12-26-12	1	AS-BUILT REVISION
Date	No.	

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
COLUMBIA PRESBYTERIAN CHURCH  
1000 CLARKSVILLE PIKE  
COLUMBIA, MD 21044  
PHONE: (410) 730-6004  
FAX: (410) 977-5484  
CONTACT: AL EDWARDS



ADDRESS CHART	
LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PERMIT INFORMATION CHART			
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT	
COLUMBIA PRESBYTERIAN CHURCH	PARCEL 223	6054.01	
PLAT NO.	GRID NO.	ZONE	TAX MAP
14	14	R-20	30
WATER CODE			ELECTION DISTRICT
			5
			SEWER CODE

TITLE: **AS-BUILT STORMWATER MANAGEMENT NOTES & DETAILS AND UTILITY PROFILES**

DESIGN: EIJ	SCALE: AS SHOWN	PROJECT: 080801.00
DRAWN: DAM	DATE: APRIL 2010	
CHECKED: RCE	APPROVED: RCE	

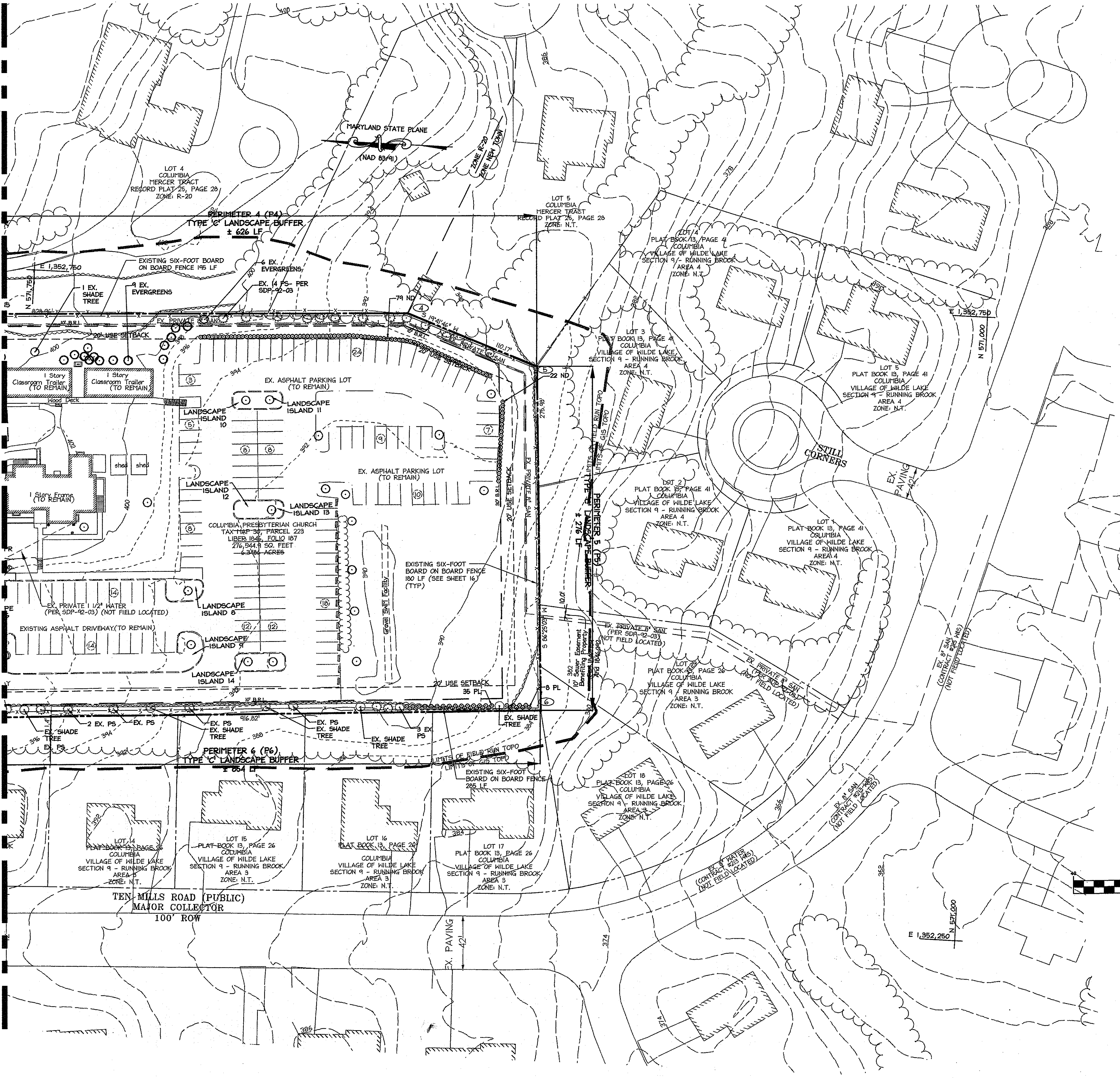
MDC-878(SDP)





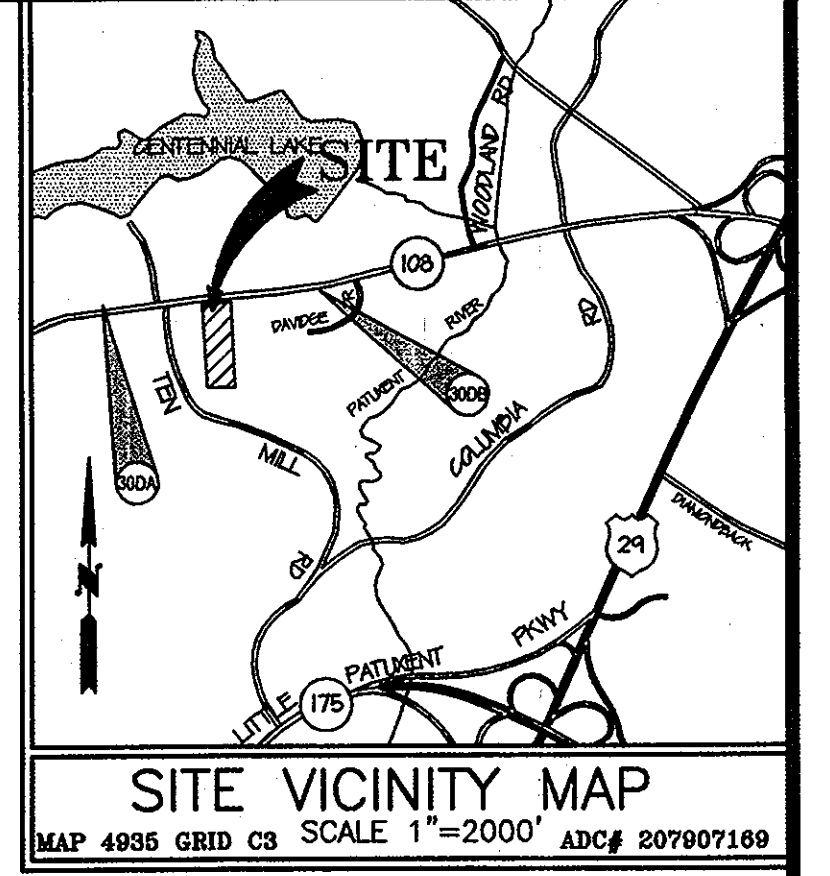


MATCHLINE SEE SHEET 14 FOR CONTINUATION



**LEGEND**

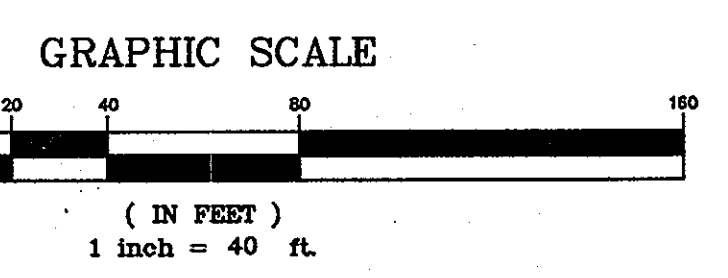
- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TREELINE
- EXISTING TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE



AS-BUILT CERTIFICATION  
THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.  
*M.P. B...* 2013-01-10  
DATE



MISS UTILITY  
Before You Dig  
Call  
MISS UTILITY  
Service Protection Center  
1-800-257-7777



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Glenn B. ...</i>	4/22/10
Chief, Division of Land Development	Date
<i>Thomas B. ...</i>	4/22/10
Chief, Development Engineering Division	Date
<i>Thomas B. ...</i>	4/22/10
Director, Department of Planning and Zoning	Date

12-20-12 1 AS-BUILT REVISION

Date No.

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

**OWNER/DEVELOPER**  
COLUMBIA PRESBYTERIAN CHURCH  
10001 CLARKSVILLE PIKE  
COLUMBIA, MD 21044  
PHONE: (410) 750-6004  
FAX: (410) 997-5499  
CONTACT: AL EDWARDS

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, ltd.  
7172 columbia gateway drive suite 100 | columbia, md 21046-2990  
410.722.8500 · mco-91.911.0146 · fax 410.722.8529

ADDRESS CHART

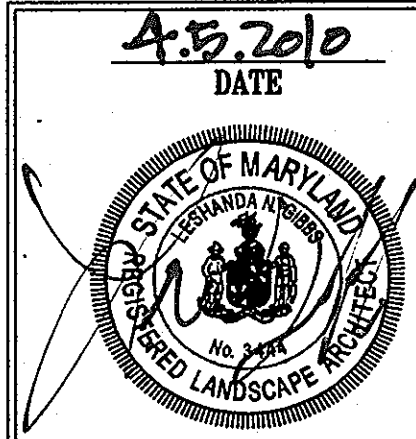
LOT/PARCEL	STREET ADDRESS
223	10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PERMIT INFORMATION CHART

PROJECT NAME COLUMBIA PRESBYTERIAN CHURCH	LOT/PARCEL NO. PARCEL 223	CENSUS TRACT 6054.01
PLAT NO. ---	GRID NO. 14	ZONE R-20
TAX MAP 30	ELECTION DISTRICT 5	SEWER CODE ---

TITLE: **AS-BUILT LANDSCAPE PLAN**

DESIGN: CRH	SCALE: 1" = 40'	PROJECT: 080801.00
DRAWN: SSA	DATE: APRIL 2010	
CHECKED: LNG	APPROVED: RCE	



MDC-878(SDP)



**GENERAL PLANTING NOTES**

- ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
- LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LCAPMA.
- NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
- IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOQ QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
- ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
- LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
- LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL. AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
- LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC, WATER, DRAINAGE, AND FOUNTAIN UTILITIES, AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDAMAGED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
- CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERRIES, 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.
- TOPSOIL MIX
  - PLANTING MIX SHALL BE PREPARED AT APPROVED ON-SITE STAGING AREA USING APPROVED ON-SITE EXISTING SOIL. MIX MINIMUM QUANTITIES OF 20 CUBIC YARDS OR SUFFICIENT MIX FOR ENTIRE JOB IF LESS THAN 20 CUBIC YARDS IS REQUIRED.
  - THOROUGHLY MIXED IN THE FOLLOWING PROPORTIONS FOR TREE AND SHRUB PLANTING MIX: 5 CY EXISTING SOIL, 2 CY SHARP SAND, 3 CY HOOD RESIDUALS, 4.5 LBS TREBLE SUPERPHOSPHATE, 5 LBS DOLYMITIC LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
  - FOR BED PLANTING, SHRUBS AND GROUNDCOVER SPACES 24 INCHES OR CLOSER, INCORPORATE THE FOLLOWING INGREDIENTS PER 20 SF AND INCORPORATE INTO TOP 8 INCHES OF EXISTING SOILS BY ROTOTILLING OR SIMILAR METHOD OF INCORPORATION: 2 CY SHARP SAND, 3 CY ORGANIC MATERIAL, 4.5 LBS TREBLE SUPERPHOSPHATE, 5 LBS DOLYMITIC LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 13 SHADE TREES AND 7 EVERGREEN TREES AND 9 SHRUBS PROVIDED WITH LANDSCAPE SURETY IN THE AMOUNT OF \$7600.00 WITH THE DPW DEVELOPER'S AGREEMENT. LANDSCAPE SURETY IS BASED ON THE NUMBER OF REQUIRED PLANTS PER THE LANDSCAPE MANUAL (13 SHADE TREES x \$300.00 EA., 7 EVG. TREES x \$150.00, AND 9 SHRUBS x \$30.00 EA.)
- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE 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 THE APPLICABLE PLANS.

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

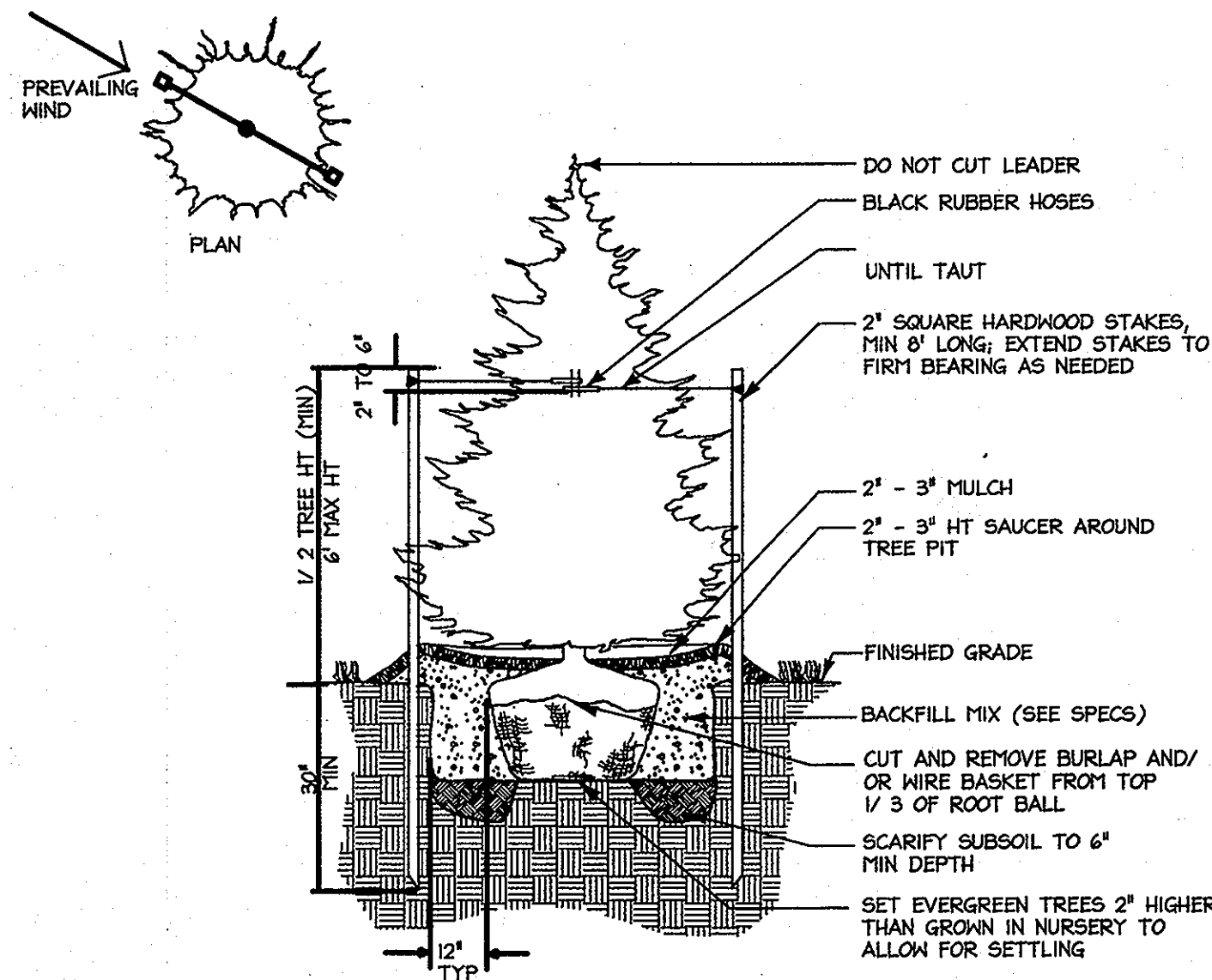
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON TREES COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE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

*Stephen B. Hise* 4/5/2010  
NAME DATE

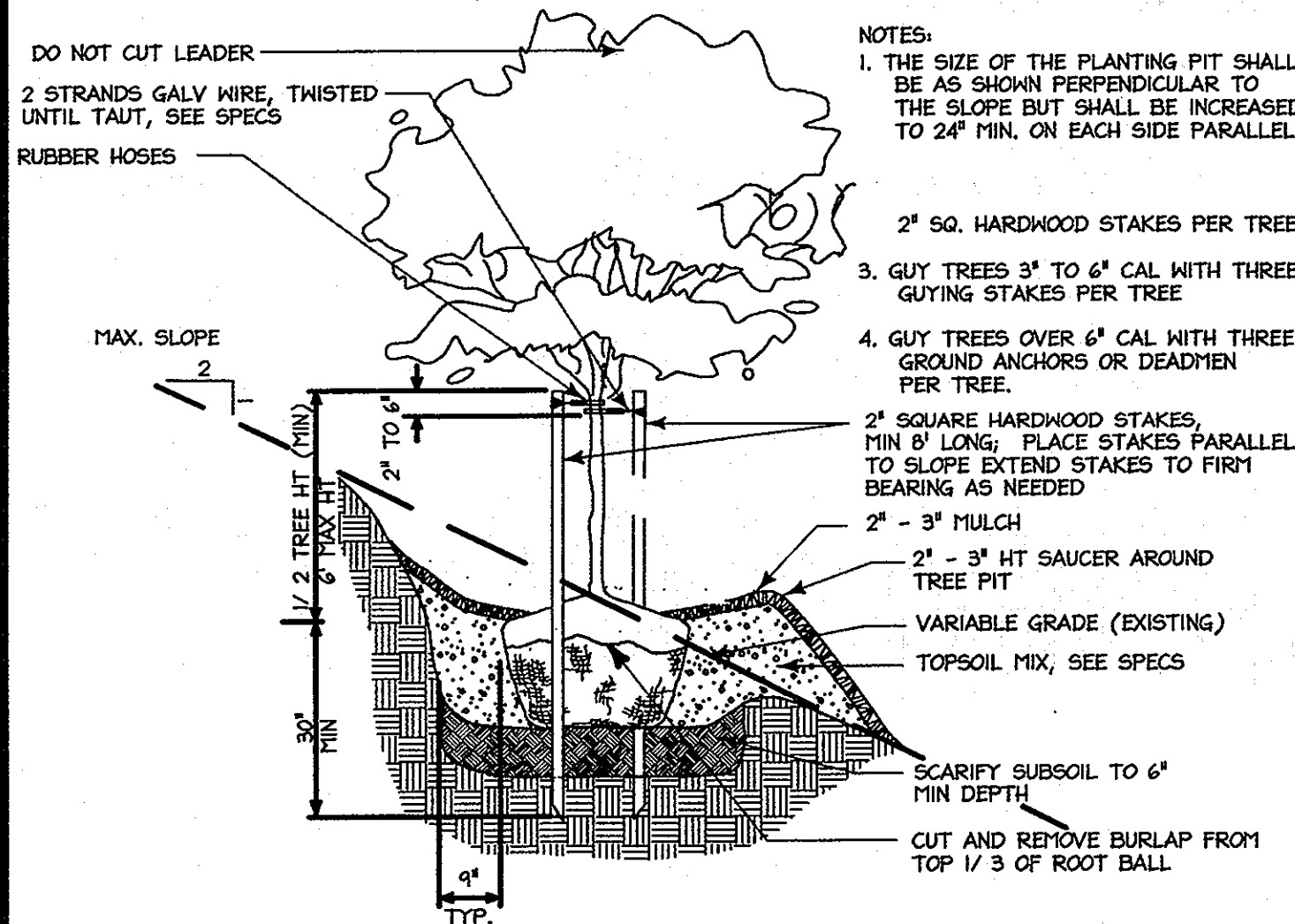
**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
	P1	P2	P3	P4	P5	P6
PERIMETER						
LANDSCAPE TYPE 'A' 1 SHADE TREE PER 60 L.F.			±20%			
LANDSCAPE TYPE 'B' 1 SHADE TREE PER 50 L.F. 1 EVERGREEN TREE PER 40 L.F.	±294					
LANDSCAPE TYPE 'C' 1 SHADE TREE PER 40 L.F. OF PER. 1 SHRUB PER 20 L.F.		±55		±626	±276	±854
CREDIT FOR EX. VEG. BELOW IF NEEDED	*YES, 1 EXISTING SHADE # 7 ORNAMENTALS	YES, 2 EXISTING SHADE TREES	NO	**YES, 32 EX. EVERGREENS # 4 1/2" FS PER SDP-92-03	NO	**YES, 12 SHADES # 22 EVERGREENS # 1/2" FS PER SDP-92-03
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	YES, 450' LF BOARD ON BOARD FENCE	YES, 276' LF BOARD ON BOARD FENCE	YES, 481' LF BOARD ON BOARD FENCE
NO. OF PLANTS REQ.						
SHADE TREES	2	0	4	0	0	0
EVG. TREES	7	0	0	0	0	0
SHRUBS	0	2	1	32	0	43
NO. OF PLANTS PROV.						
SHADE TREES	2	0	4	0	0	0
EVG. TREES	7	0	0	0	0	0
OTHER TREES	0	0	0	0	0	0
SHRUBS	0	3	0	74	22	43

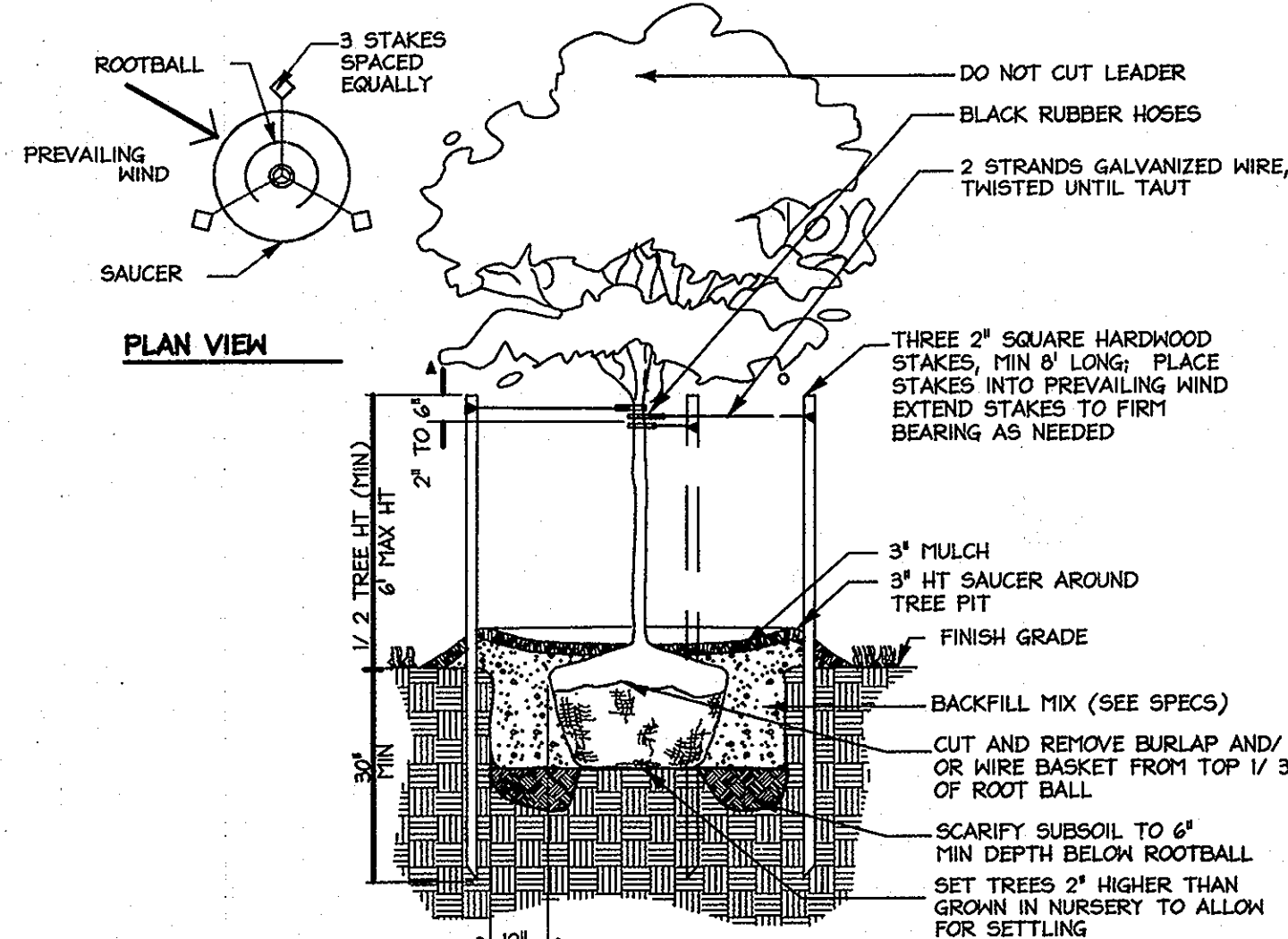
\*CREDIT REQUESTED FOR 1 EX. SHADE TREE AND 6 EX. ORNAMENTAL TREES TO SUBSTITUTE FOR 4 SHADE TREES  
 \*\*CREDIT REQUESTED FOR 14 PINUS STROBUS PER SDP-92-03 TO SUBSTITUTE FOR 7 SHADE TREES  
 \*\*\*CREDIT REQUESTED 5 EVERGREEN TREES PER SDP-92-03



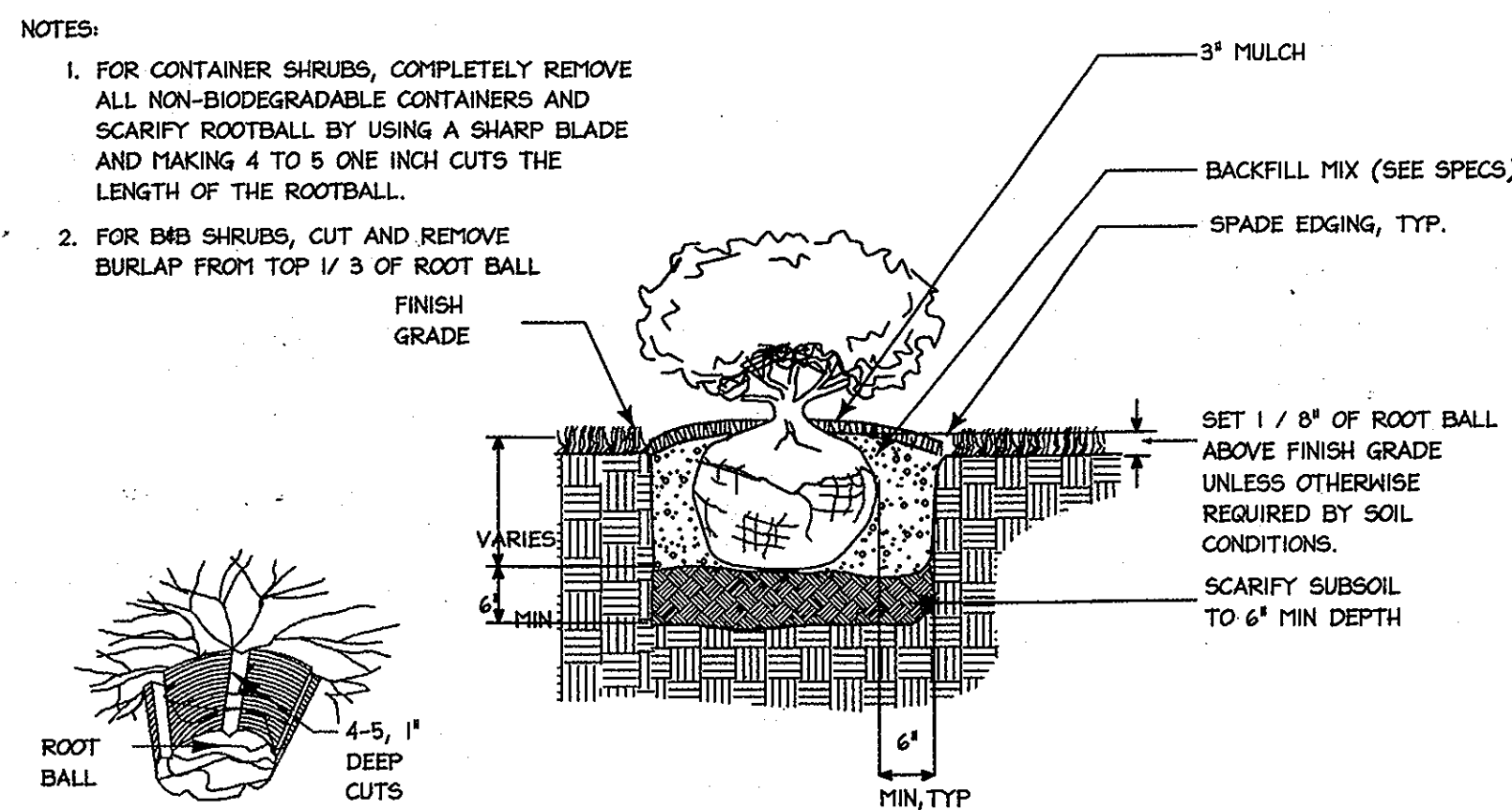
**B Evergreen Tree Planting Detail**  
Not To Scale



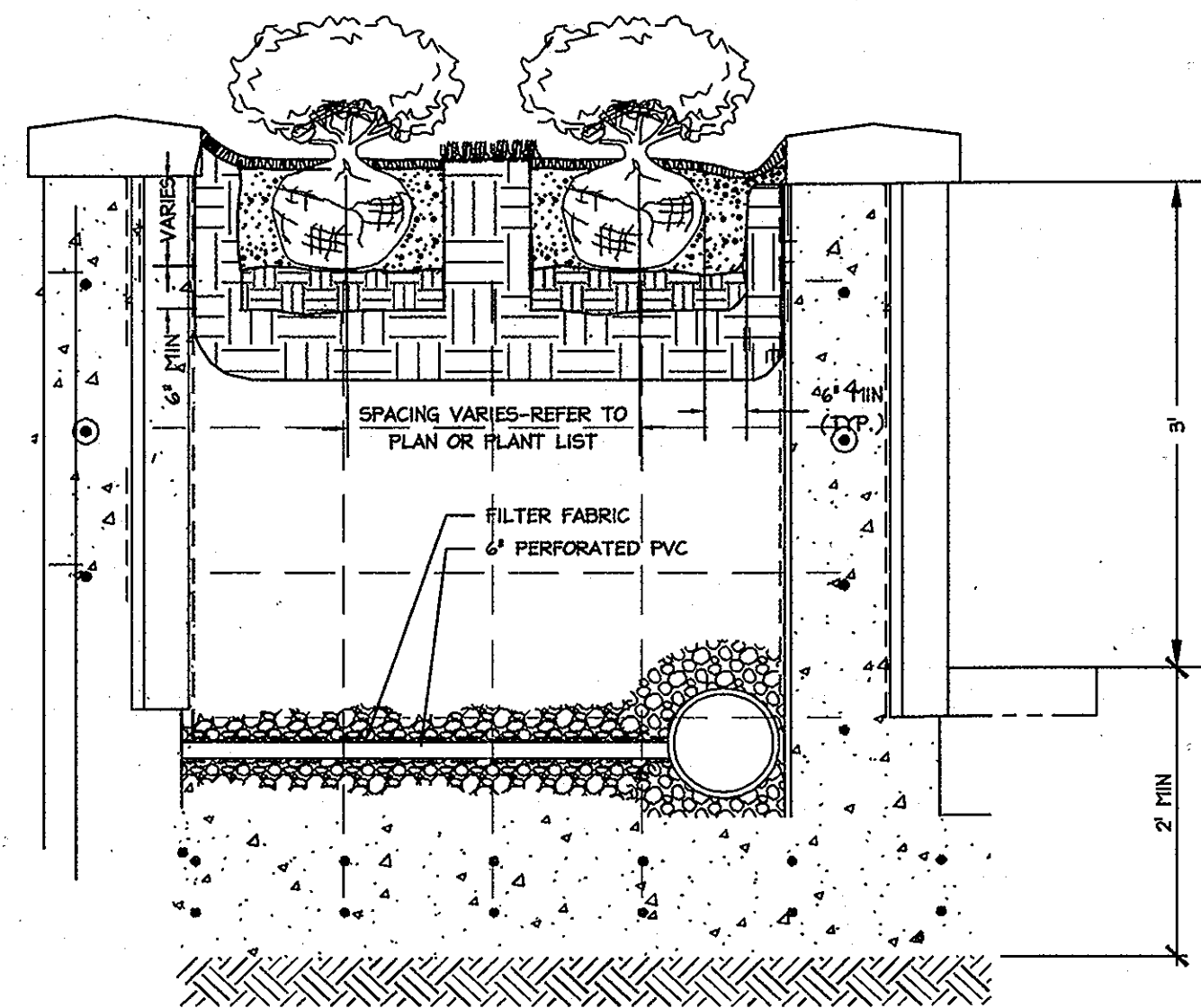
**A Tree Planting on Slope**  
Not To Scale



**C Tree Planting Detail**  
Not To Scale



**E Shrub Bed Planting Detail**  
Not To Scale

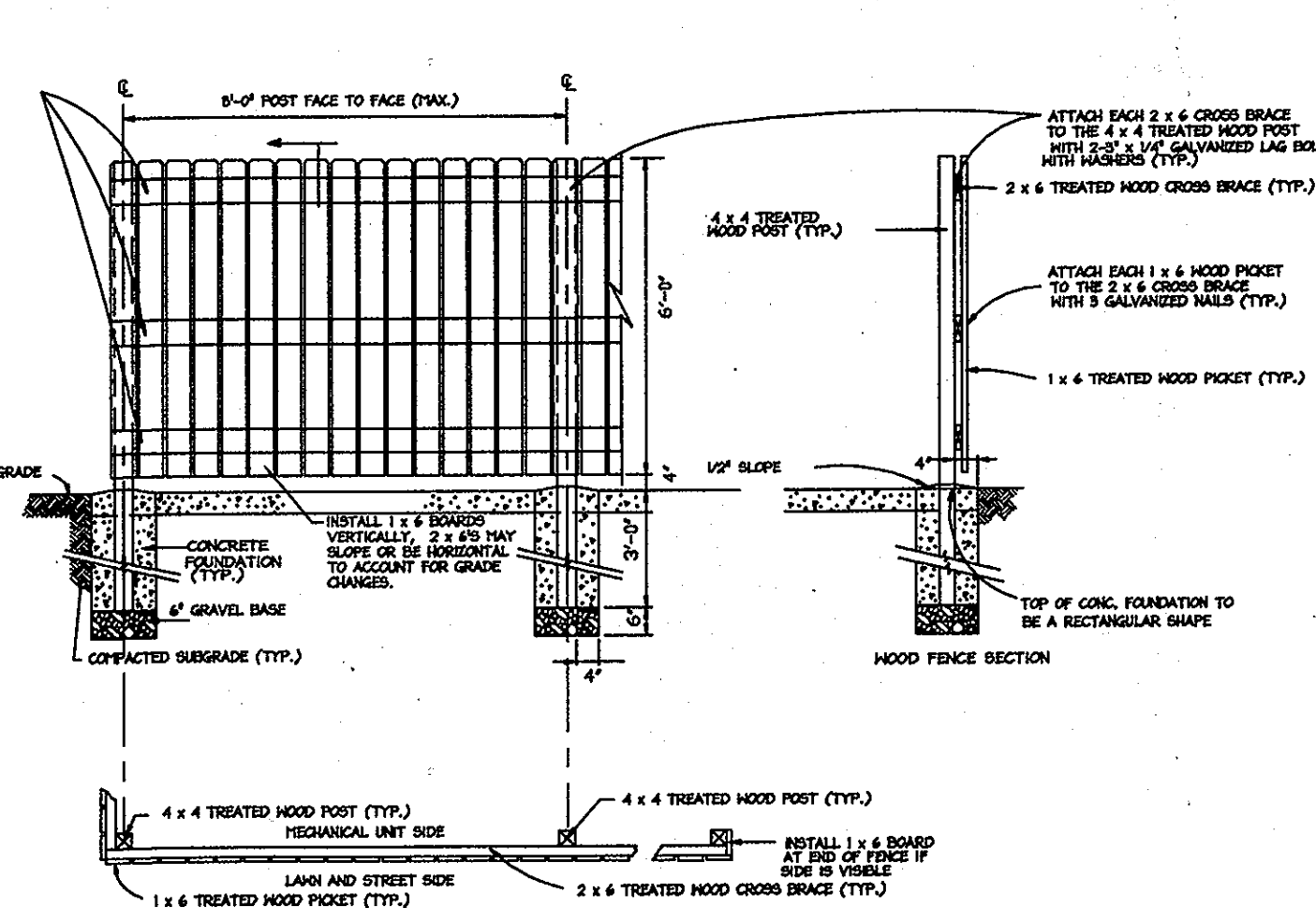


**F Planter Detail**  
Not To Scale

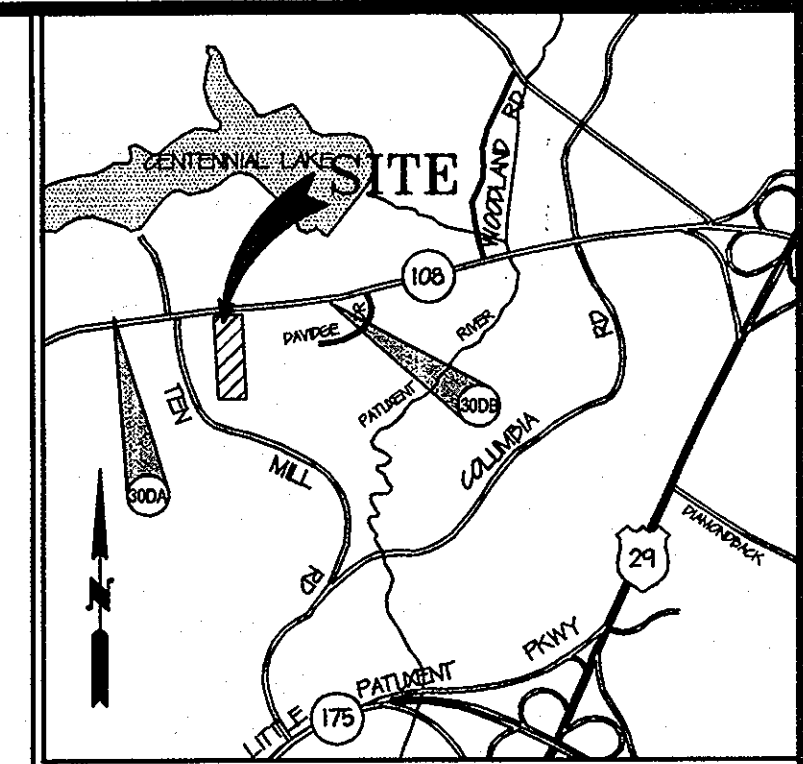
**SCHEDULE B PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PROPOSED PARKING SPACES	262
INTERNAL ISLANDS REQUIRED (1 ISLAND/ 20 PARKING SPACES)	14
INTERNAL ISLANDS PROVIDED (200 SQ. FT. ISLAND)	14*
NUMBER OF TREES REQUIRED (1 SHADE TREE/ 20 PARKING SPACES)	14
NUMBER OF TREES PROVIDED (SHADE TREES (2:1 SUBSTITUTION) OTHER TREES)	10 (PLUS 10 EX. SHADE TREES) 0

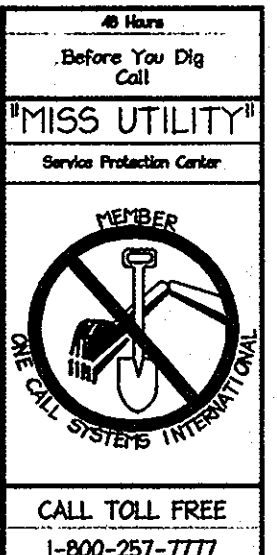
REQUIRED LANDSCAPE ISLANDS ARE LABELED ON SHEETS 14 AND 15. VEGETATION REQUIRED FOR LANDSCAPE ISLAND #5 HAS BEEN RELOCATED TO THE NORTHERN CORNER OF THE PARKING LOT, DUE TO UTILITY EASEMENTS.



**D Board on Board Fence Detail**  
Not To Scale



**SITE VICINITY MAP**  
MAP 4895 GRID C3 SCALE 1"=2000' AD# 207807169

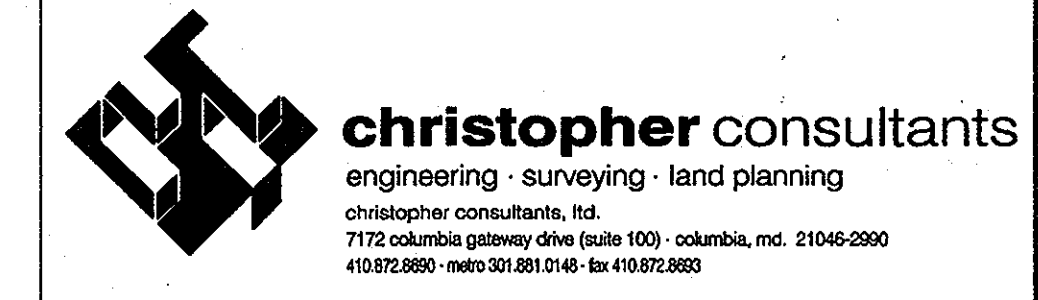


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Verdell Seabrook* 4/27/10  
 Chief, Division of Land Development Date  
*Thomas E. Butler* 4/28/10  
 Chief, Development Engineering Division Date  
 Director, Department of Planning and Zoning Date

1. AS-BUILT REVISION  
 Date No.

**COLUMBIA PRESBYTERIAN CHURCH BUILDING AND PARKING LOT EXPANSION**

OWNER/DEVELOPER  
 COLUMBIA PRESBYTERIAN CHURCH  
 1001 CLARKSVILLE PIKE  
 COLUMBIA, MD 21044  
 PHONE: (410) 750-6004  
 FAX: (410) 997-5494  
 CONTACT: AL EDWARDS



ADDRESS CHART  
 LOT/PARCEL STREET ADDRESS  
 223 10001 CLARKSVILLE PIKE, COLUMBIA, MD 21044

PERMIT INFORMATION CHART  
 PROJECT NAME: COLUMBIA PRESBYTERIAN CHURCH  
 LOT/PARCEL NO.: PARCEL 223  
 CENSUS TRACT: 6054.01  
 PLAT NO.: 14  
 GRID NO.: R-20  
 TAX MAP: 30  
 ELECTION DISTRICT: 5  
 WATER CODE: SEWER CODE

TITLE: AS-BUILT LANDSCAPE DETAILS

DESIGN: CRH SCALE: NOT TO SCALE PROJECT: 080801.00  
 DRAWN: SBA DATE: APRIL 2010  
 CHECKED: LNG APPROVED: RCE

MDC-878(SDP)