SITE DEVELOPMENT PLAN
BETHEL MINISTRIES, INC.
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

INDEX OF DRAWINGS

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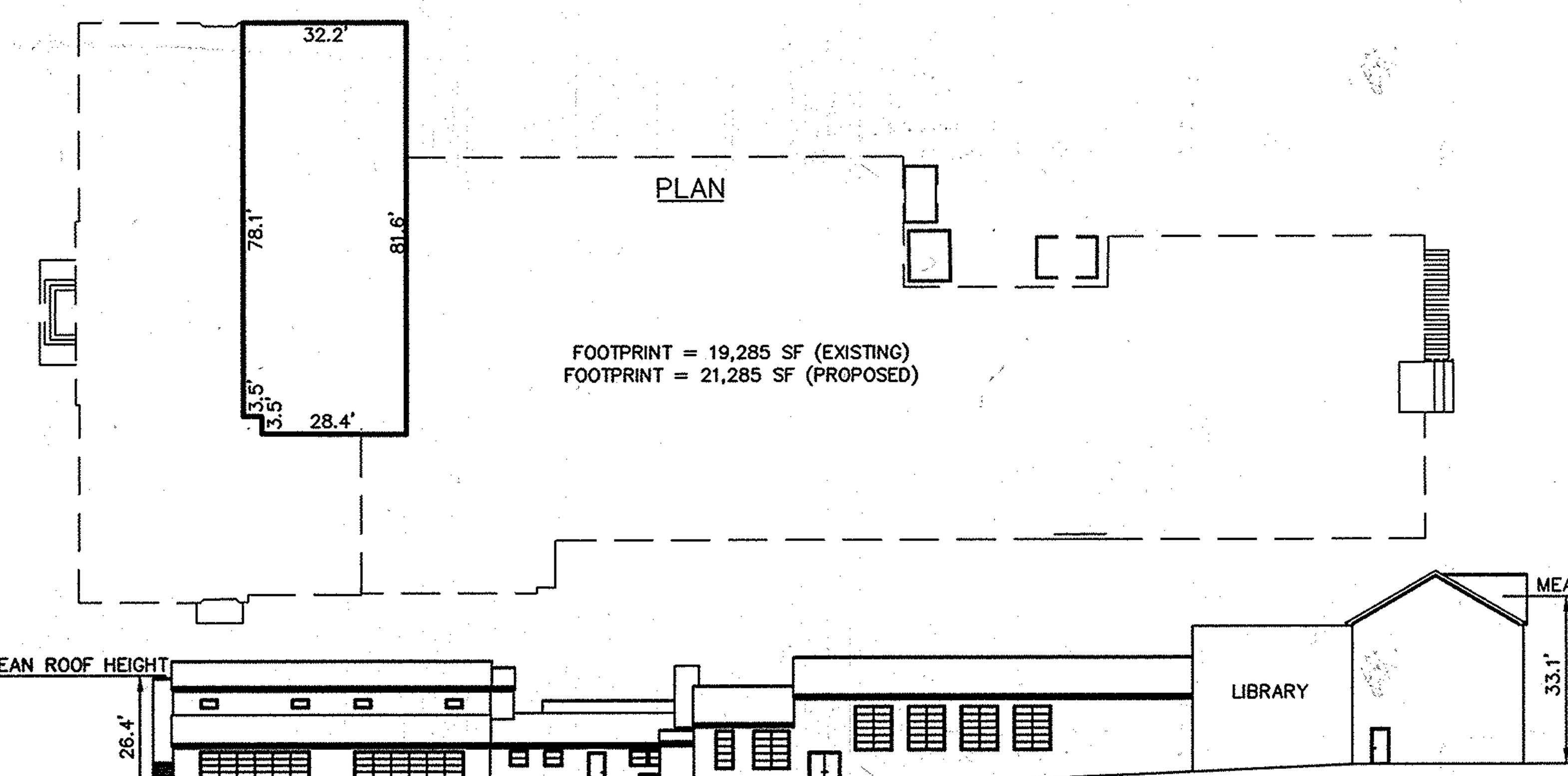
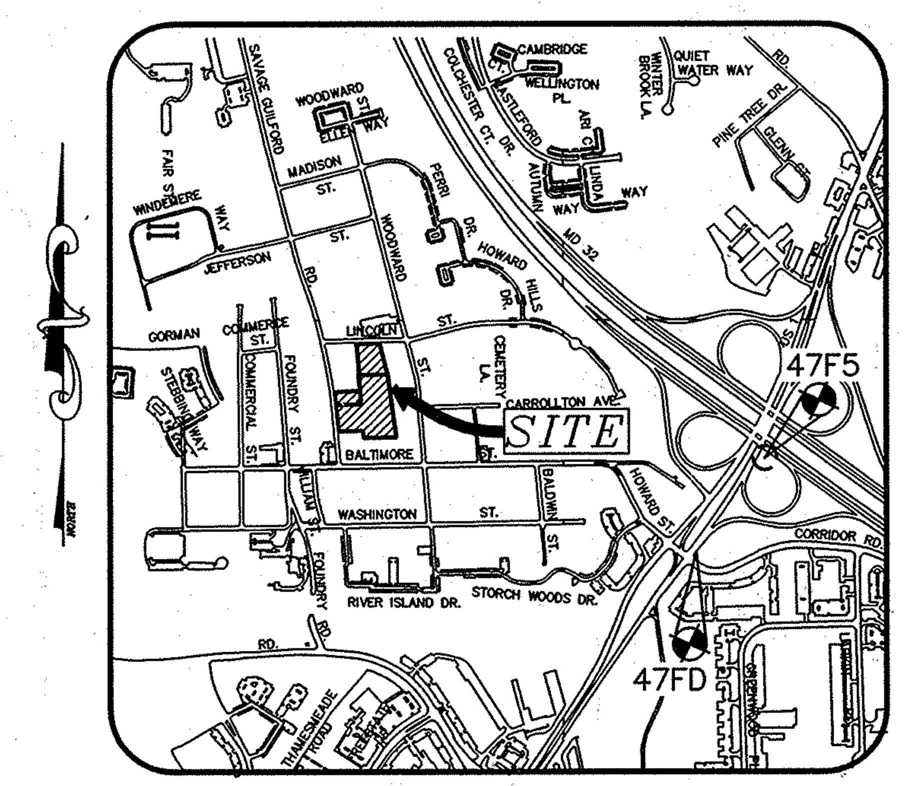


ELEVATION
LIBRARY (PHASE 3)
1"=30'



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 40 GRID E4

GREEN SPACE CALCULATIONS
AREA WITHIN BUILDING ENVELOPE: 4.13 Ac
REQUIRED GREEN SPACE WITHIN BUILDING ENVELOPE 20% = 0.83 ACRES.
PROVIDED GREEN SPACE: WITHIN BUILDING ENVELOPE 22% = 0.91 ACRES
BUILDING ENVELOPE BASED ON REQUIRED BRL OR USE SETBACK, WHICHEVER GREATER RESTRICTS THE BUILDING ENVELOPE

ZONING HISTORY

A. Case No.: BA-11-022C
Petitioner: Bethel Ministries, Inc.
Request: Conditional Use for an expansion to a Private Academic School (Section 131.N.48) Add two classrooms.
Action: Approved August 30, 2011 subject to the following advisory comments:
1. The Conditional Use shall be conducted in conformance with and shall apply only to the Conditional Use for an expansion to a Private Academic School as described in the petition and as depicted on the Conditional Use plan submitted on July 22, 2011 and as may be revised by the Hearing Examiner, and not to any other activities, uses, or structures on the Property.
2. Petitioner shall verify that the height of the proposed classroom units is 15 feet or less.
3. The owner shall be advised the fire resistance rating of the trailer exterior wall, which is located in close proximity to the existing building shall be designed in accordance e with Table 602.0 and Section 705.8 of the 2009 IBC.

B. Case No.: BA-98-039E&V
Petitioner: Bethel Assembly of God
Request: Special Exception to expand a Private Academic School and Variances to reduce the 30 foot use setback from a collector street right-of-way to 16.4 feet for parking and the 20 feet setback from a lot line to 10 feet for a driveway
Action: Approved December 10,1998 subject to the following conditions:
1. The special exception and variances shall apply only to the proposed building addition, the trailer, the parking area and the driveway, as described in the petition and ' as depicted on the revised special exception plan submitted on September 28, 1998, and not to any other activities, uses, or structures on the subject property.
2. The maximum number of enrolled students shall not exceed 365 pupils.
3. A Type C landscape-edge shall be installed along the eastern lot line starting from the southeast corner of the property to a point 300 feet north and along the southern lot line to a point 100 feet west and also along the southern lot line where it is adjacent to Parcel 915.
4. Any dumpster on the Property shall be screened from view from the adjacent residential properties.
5. The building addition height may not exceed the roofline of the existing school structure.
6. The Petitioner shall continue to offer bus service, and dismissal times for the various grade levels shall continue to be staggered.
7. The Petitioner shall comply with all applicable Federal, State, and County laws and regulations.

C. Case No.: BA-91-43E
Petitioner: Bethel Assembly of God/Bethel Christian Academy
Request: Special Exception to install a modular classroom unit
Action: Approved January 7, 1992 subject to the following conditions:
1. The Petitioner shall comply with all applicable Federal, State and County laws and regulations.
2. The Petitioner shall comply with the requirements of the Department of Inspections, Licenses and Permits and with the-Department of Fire and Rescue Services regarding fire resistant construction and State certification of the modular classroom unit.

D. Case No.: BA-90-11E
Petitioner: Bethel Assembly of God
Request: Special Exception to modify a previously approved Special Exception for a private school to allow the expansion of enrollment through the twelfth grade.
Action: Approved June 28, 1990 subject to the following conditions:
1. The Petitioner shall comply with all applicable Federal, State and County laws and regulations.
2. Twenty five (25) additional striped parking spaces shall be provided on the site.
3. Landscaping shall be provided along the portion of the eastern property line, which is not currently screened with natural vegetation, to be comprised of evergreen trees planted ten (10)' feet on center.
4. The Special. Exception shall apply solely to the expansion of the existing Special Exception to include grades nine (9) through twelve (12), and not to any other structures, additions, number of students, or uses.
5. The condition imposed in the Decision & Order in Board of Appeals case number. 84-10E, requiring that the driveway be set back 40 feet from property lines, be and the same is hereby DELETED.

E. Case No.: BA-87-23E
Petitioner: Bethel Assembly of God
Request: Expansion of Special Exception to extend the school program to include kindergarten through twelfth grade.
Action: Approved March, 24, 1988 subject to the following conditions:
1. That the expanded enrollment [shall] be only through the eighth grade.
2. Those conditions noted in (a) through (e) of Paragraph 11 of the Findings of Fact:
a. Petitioner post signs prohibiting long term parking in front parking spaces adjoining the semicircular driveway;
b. That the school bus discharge the children, in the front driveway, onto the front sidewalk;
c. That a stop sign be placed at the end of the semi-circular driveway where it meets the straight driveway on the north end of the property;
d. That there be only one ingress and egress to and from the street. To that end, the traffic flow colored in blue on Petitioners Exhibit 3 would be modified. Cars entering the south driveway would either stop in front of the entrance to the school building, or make a right turn at the stop sign noted in condition (c) drop the child off in the rear of the property, and then exit from the north driveway onto Savage Guilford Road, The north driveway would be used only as egress, not ingress.
e. That an adult crossing guard be located in the front of the school at the entrance and exits.

F. Case No. ZB 822R
Petitioner: Bethel Assembly of God
Request: Amendment to the Zoning Regulations which would authorize the Board of Appeals to vary the lot size and lot width requirements for private academic schools utilizing existing buildings.
Action: On 8/19/86, the Zoning Board adopted alternative amendments, which eliminated the lot size and width requirements for private schools, retaining only the standard of a maximum density of 60 pupils per acre. The amendments also eliminated the requirement that access drives be located at least 40' from adjacent property lines.

G. Case No.: BA 85-12E
Petitioner: Bethel Assembly of God
Request: Expansion of Special Exception to extend the school program to include kindergarten through twelfth grade and to use the building for church use on Sunday mornings.
Action: Approved September 3, 1985 for church use and for expansion of school program through the 5th grade only.

H. Case No.: BA 84-10R
Petitioner: Bethel Assembly of God
Request: Special Exception to convert an existing structure (the former Savage Elementary School) to a private academic school.
Action: Approved August 7, 1984 subject to the following conditions:
1. The petitioner [[shall]] move the access to the property to a location at least 40' from the adjoining property line within two years from the date of the decision.
2. The enrollment of the school [[shall]] not exceeds 219 students.
3. The petitioner [[shall]] obey all regulations, laws, and requirements as may be imposed by local, state or. federal authority.
4. The petitioner shall conform the use of the property to the testimony at the hearings.
5. The petitioner shall provide parking for 45 vehicles as shown on the plat attached to the petition.
6. The petitioner shall restrict the school program to kindergarten through second grade

WATER AND SEWER GENERAL NOTES

1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON APRIL, 2013 BY MILDENBERG, BOENDER AND ASSOCIATES, INC.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS:

   THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 47F5 AND 47FD. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE MILDENBERG, BOENDER AND ASSOCIATES.SHALL PROVIDE DESCRIPTION OF VERTICAL CONTROL POINTS, I.E., IRON BARS, CROSS CUTS ON CONCRETE STRUCTURES, ETC).
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL ▣ AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

   AT&T.......... 1-800-252-1133
   BGE (CONSTRUCTION SERVICES).......... 10-637-8713
   BGE (EMERGENCY).......... 410-685-0123
   BUREAU OF UTILITIES.......... 410-313-4900
   COLONIAL PIPELINE CO.......... 410-795-1390
   MISS UTILITY.......... 1-800-257-7777
   STATE HIGHWAY ADMINISTRATION.......... 410-531-5533
   VERIZON.......... 1-800-743-0033
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

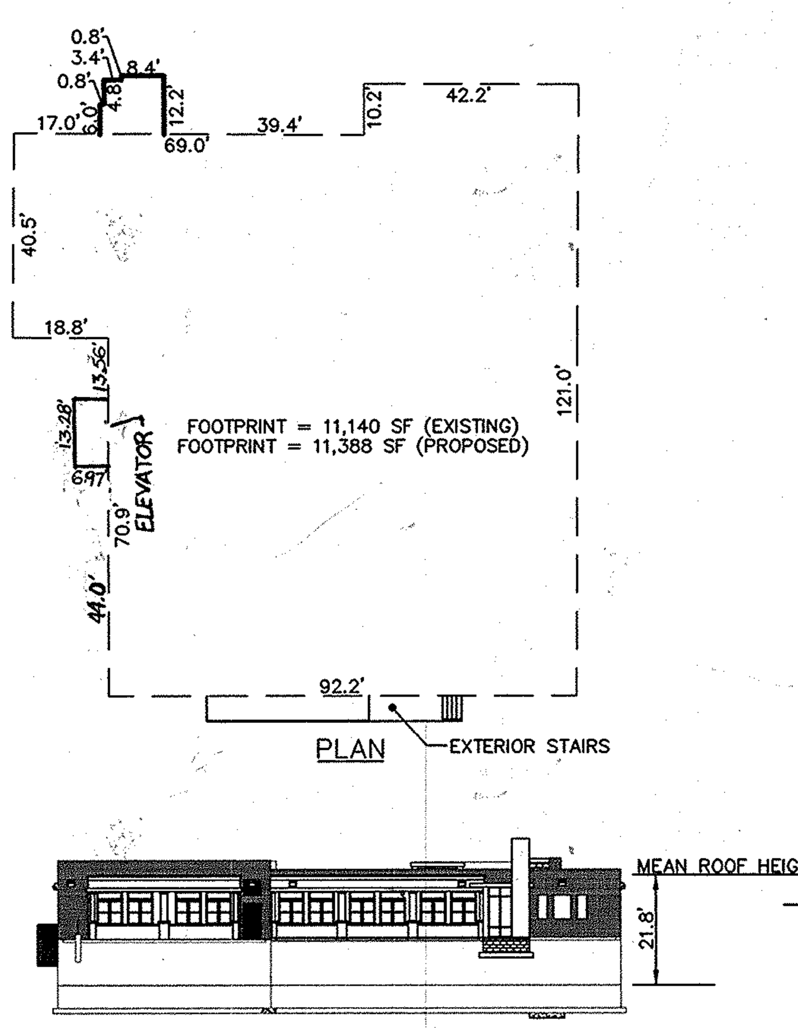
WATER

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. TRACER WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. TWELVE (12) POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
10. PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
11. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

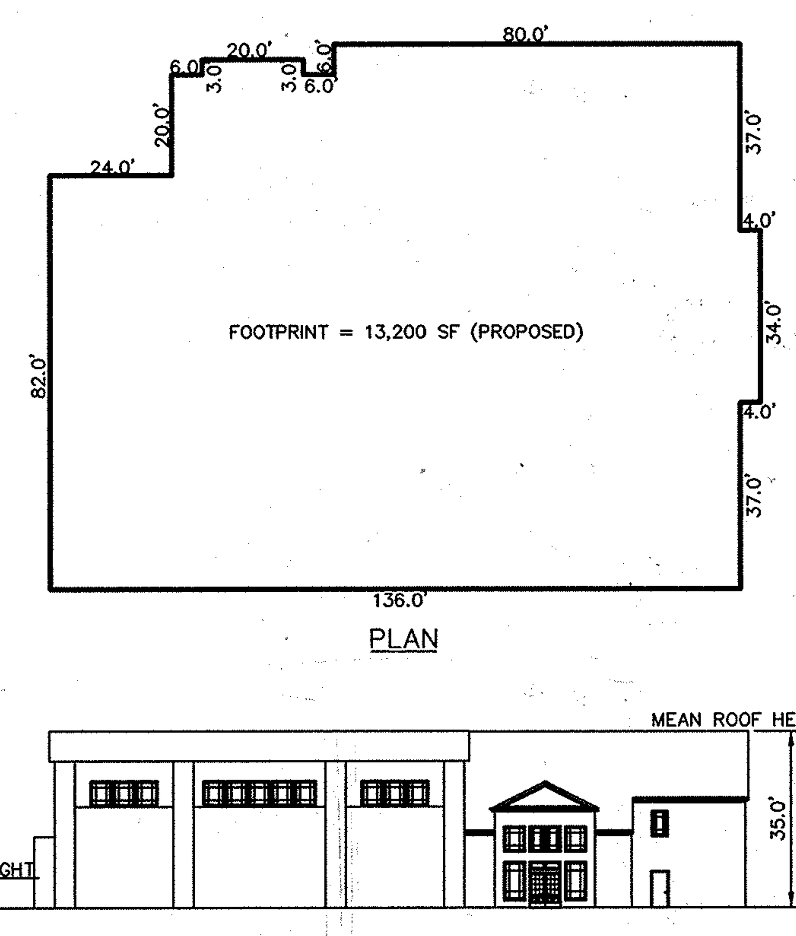
    PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFECTION OF 3-DEGREES (1½-DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
    FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
12. WHEN PVC HIGH DEFECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFECTION COUPLINGS AND 5 DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

SEWER

1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.



ELEVATION
CAMPUS III BUILDING
(PHASE 1)
(CLASSROOM BUILDING)
1"=30'



ELEVATION
MULTIPURPOSE FACILITY
(PHASE 2)
(GYMNASIUM / CLASSROOM BUILDING)
1"=30'

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

[signature] 3/20/2015
COUNTY HEALTH OFFICER — DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 3-3-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 3-26-15
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 3/26/15
DIRECTOR — DATE

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

[signature] 12/22/14
JEFFREY SLOMAN, P.E. — DATE

BA 12-028C&V (APPROVED JULY 23, 2013) NOTES

PETITIONER: BETHEL MINISTRIES, INC.
REQUEST: TO EXPAND A CONDITIONAL USE TO ALLOW FOR THE CONVERSION OF AN EXISTING FIRE STATION TO A CLASSROOM BUILDING, THE CONSTRUCTION OF A NEW GYMNASIUM / CLASSROOM BUILDING AND THE EXPANSION OF THE EXISTING SCHOOL BUILDING FOR A NEW LIBRARY.

1. REDUCTION OF THE 50-FOOT SETBACK (AS ESTABLISHED IN THE CONDITIONAL USE CRITERIA FOR PRIVATE SCHOOLS) TO 20 FEET FOR THE EASTERN PORTION OF THE PARKING AREA SOUTH OF THE FIRE STATION ON PARCEL 725.
2. REDUCTION OF THE 50-FOOT SETBACK (AS ESTABLISHED IN THE CONDITIONAL USE CRITERIA FOR PRIVATE SCHOOLS) TO 30 FEET FROM THE PROPOSED GYMNASIUM ON THE EAST LOT LINE OF PARCEL 768.
3. REDUCTION OF THE 50-FOOT SETBACK (AS ESTABLISHED IN THE CONDITIONAL USE CRITERIA FOR PRIVATE SCHOOLS) TO 20 FEET FOR THE INTERNAL SERVICE ROAD AND PARKING LOT SPACES PROPOSED ON PARCEL 537 (ENCROACHMENT INTO TWO 50-FOOT SETBACKS).
4. REDUCE THE 20-FOOT USE SETBACK TO 17 FEET TO ALLOW 14 S.F. OF THE EXISTING FIRE STATION TO BE USED FOR SCHOOL PURPOSES.
5. FROM THE 20-FOOT REDUCED SETBACK, REDUCE FURTHER TO 2 FEET FROM THE EASTERN PROPERTY LINE.
6. REDUCE THE 20-FOOT USE SETBACK TO 3 FEET BETWEEN THE EXISTING FIRE STATION AND LINCOLN STREET ROW FOR A PICK-UP/DROP-OFF AREA.

CONDITIONAL USE APPROVED SUBJECT TO:

1. THE USE SHALL BE CONDUCTED IN CONFORMANCE WITH AND SHALL APPLY ONLY TO THE NOVEMBER 2012 PLAN FOR AN EXPANSION OF A PRIVATE ACADEMIC SCHOOL AS DESCRIBED IN THE PETITION AND AS DEPICTED ON THE PLAN AND NOT TO ANY NEW STRUCTURES OR USES ON THE SITE OR ANY ADDITIONS THERETO.
2. THE PETITIONER SHALL REMOVE THE TEMPORARY CLASSROOMS BEFORE THE START OF THE SCHOOL YEAR OR SEMESTER IN WHICH THE SCHOOL UTILIZES THE GYMNASIUM CLASSROOMS.
3. PETITIONER SHALL RELOCATE THE DUMPSTER TO AN INTERIOR LOCATION AS FAR FROM NEIGHBORING PROPERTIES AS POSSIBLE.
4. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTES.
6. BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN SURVEY BY MILDENBERG, BOENDER AND ASSOCIATES, INC. IN APRIL, 2013.
7. ONSITE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN SURVEY BY MILDENBERG, BOENDER AND ASSOCIATES, INC IN APRIL, 2013. OFFSITE TOPOGRAPHY BASED ON HOWARD COUNTY GIS.
8. HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 47F5 & 47FD
   STA. No. 47F5 N 535,985.0412 E 1,365,653.4555 EL. 235.00
   STA. No. 47FD N 535,277.4002 E 1,365,059.691 EL. 201.20
9. WATER IS PUBLIC.
10. SEWER IS PUBLIC.
11. STORMWATER MANAGEMENT IS PROVIDED BY PRIVATELY OWNED AND MAINTAINED PERVIOUS MICRO-BIORETENTION FACILITIES (M-6), IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I AND II.
12. EXISTING UTILITIES ARE TAKEN FROM FIELD RUN SURVEY PREPARED BY MILDENBERG, BOENDER AND ASSOCIATES, INC. DATED APRIL, 2013.
13. THERE ARE NO STEEP SLOPES OR FLOODPLAINS ON THIS SITE.
14. THERE ARE NO STREAMS, WETLANDS, OR THEIR ASSOCIATED BUFFERS ON THIS SITE.
15. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE MARS GROUP, INC. DATED NOVEMBER, 2013 AND WAS APPROVED ON JUNE 25, 2014.
16. ANY DAMAGE TO THE COUNTY RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
17. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OR CONSTRUCTION OF THIS SITE MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER, PETITION OR BUILDING/GRADING PERMIT.
18. SITE ANALYSIS DATA:
    LOCATION: TAX MAP: 47 PARCELS 768, 725, AND 537
    ELECTION DISTRICT : SIXTH
    ZONING: R-12, R-SA-8
    TOTAL AREA: 5.39 AC.±
    LIMIT OF DISTURBED AREA: 2.02 AC.± (INCLUDES 0.14 Ac OFFSITE)
    PROPOSED USE FOR SITE : INSTITUTIONAL (PRIVATE SCHOOL)
    DEED REFERENCES: 2805 / 54, 298 / 343, 2805 / 57 , 15424/235.
    PREVIOUS DPZ FILES: BA 12-028C&V, TU 12-005, TU 11-002, BA 11-022C, BA 98-039E&V, BA 91-43E, BA 90-11E, BA 87-23E, ZB 822R, BA 85-12E, BA 84-10E, WP-12-056 ,SDP-85-106.
    MAXIMUM ALLOWABLE STUDENTS: 539 (100 PER ACRE)
    PROPOSED STUDENTS: 510
    PARKING REQUIREMENT: 1 SPACE / 6 STUDENTS (PRIVATE, ELEMENTARY AND MIDDLE)
    PARKING SPACES REQUIRED: 510 / 6 = 85 SPACES
    PARKING SPACES PROVIDED: 122 (88 ASPHALT PAVEMENT, 34 GRASS)
    HANDICAP ACCESSIBLE PARKING SPACES PROVIDED: 8
    MAXIMUM NUMBER OF EMPLOYEES: 53
    GROSS SQUARE FOOTAGE (PROPOSED):
    CAMPUS III BUILDING (CLASSROOMS): 15,362 GSF
    MULTI-PURPOSE FACILITY (CLASSROOMS / GYM): 17,700 GSF
    SCHOOL BUILDING (W/LIBRARY): 30,305 GSF
    TOTAL: 63,367 GSF
19. THIS SUBJECT PROPERTY IS ZONED R-12 AND R-SA-8 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
20. BASED ON AVAILABLE COUNTY DATA, NO BURIAL GROUNDS EXITS ON THE SITE, AND THE STRUCTURES ON THE PROPERTY ARE NOT LISTED ON THE HISTORIC REGISTRY AND ARE NOT LOCATED IN A HISTORIC DISTRICT. HOWEVER, THE STRUCTURES ARE OVER 50 YEARS OLD, WHICH CLASSIFIES THEM AS A HISTORIC STRUCTURE IN ACCORDANCE WITH SECTION 16.603A OF THE HOWARD COUNTY CODE. THE DPZ, RESOURCE CONSERVATION DISTRICT HAS DETERMINED THE SITE DID NOT REQUIRE HDC APPROVAL FOR THE SDP.
21. FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 0.81 ACRES OF REQUIRED AFFORESTATION INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY, PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE HOBBS ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A REDLINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 0.81 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FC EASEMENT LOCATED ON ROSEBAR. FINANCIAL SURETY FOR REFORESTATION WAS PROVIDED UNDER F-99-019-A.
22. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE, LANDSCAPE MANUAL, AND THE APPROVED DECISION AND ORDER FOR BA-12-028C&V. FINANCIAL SURETY FOR PERIMETER AND PARKING LOT LANDSCAPING IN THE AMOUNT OF $34,680.00 FOR 57 SHADE TREES, 100 EVERGREEN TREES AND 86 SHRUBS SHALL BE POSTED WITH THE ~~DEVELOPER'S AGREEMENT~~ FOR THIS SITE DEVELOPMENT PLAN, SDP-14-042. DEVELOPER'S AGREEMENT
23. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING PLANT MATERIALS, BERMS, FENCES AND WALLS ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
24. THE EXISTING STRUCTURE ON PARCEL 537 WILL BE REMOVED. ALL OTHER STRUCTURES WILL REMAIN.
25. SINCE NO FOREST RESOURCES EXIST ON-SITE A SIMPLIFIED FSD WAS PROVIDED. WAIVER PETITION WP-14-091 TO SECTION 16.1205(a)(7)&(10) TO ALLOW FOR THE REMOVAL OF ONE (1) SPECIMEN TREE WAS APPROVED ON MARCH 24, 2014. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
    A) NO SPECIMENT TREES OTHER THAN THE TREE IDENTIFIED AS "SPECIMEN TREE #1" IN THE WAIVER EXHIBIT BE REMOVED.
    B) REMOVAL OF THE SPECIMEN TREE WILL REQUIRE MITIGATION OF TWO (2) 3"-4" CALIPER TREES. THE MITIGATION PLANTINGS SHALL BE PLANTED IN AN AREA THAT WILL PROVIDE A SUSTAINABLE LOCATION FOR GROWTH AND AN ADEQAUTE USABLE OPEN AREA FOR THE USE. THE MITIGATED TREES SHALL BE OF SIMILAR SPECIES AS THE REMOVED TREE, BE SHOWN AS PART OF THE LANDSCAPE PLAN WITH THE SDP, AND BE BONDED WITH THE LANDSCAPE OBLIGATION.
26. THE PROJECT WILL BE CONSTRUCTED IN PHASES AS FOLLOWS:
    PHASE I: CONVERSION OF EXISTING FIRE STATION TO CAMPUS III CLASSROOM ON PARCEL 725, AND REMOVAL OF PAVEMENT ON PARCEL 725.
    PHASE II: CONSTRUCTION OF MULTI-PURPOSE FACILITY ON PARCEL 768 AND REMOVAL OF EXISTING STRUCTURE AND CONSTRUCTION OF GRASS PARKING AREA ON PARCEL 537 AND CONSTRUCTION OF CONNECTION DRIVE BETWEEN PARCELS 725 AND 768
    PHASE III: CONSTRUCTION OF LIBRARY ON PARCEL 768.
27. THIS PROJECT IS AN EXPANSION OF AN EXISTING CONDITIONAL USE APPROVED PRIOR TO CB-11-2001 AND AS PER SECTIONS 131.0.D.1 AND D.4 OF THE 10/6/2013 HOWARD COUNTY ZONING REGULATIONS.
28. THIS PROJECT IS SUBJECT TO ALL TERMS AND CONDITIONS (INCLUDING IN VARIANCES) LISTED THE DECISION AND ORDER APPROVED ON JULY 23, 2013 FOR HEARING EXAMINER CASE BA-12-028C&V 028C&V AND THE OTHER DPZ FILES LISTED IN GENERAL NOTE #18.
29. IN ACCORDANCE WITH SECTION 128.0.A.10&A.11 OF THE ZONING REGULATIONS, ALL PARCELS (768,725 AND 537)ARE CONSIDERED AN INTEGRATED DEVELOPMENT THEREFORE THE STRUCTURE AND USE SETBACKS FROM THE INTERNAL PROPERTY LINES AND ZONING BOUNDARIES SHALL NOT APPLY.
30. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED (QUICK PUNCH TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) -3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. THE R1-1 (STOP) SIGN MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
31. THE PROPOSED BUILDING HEIGHT SHOWN IS IN ACCORDANCE WITH SECTION 131.0.N.48.c OF THE ZONING REGULATIONS AND BA-12-028C&V WHICH ALLOWS A PRIVATE SCHOOL TO BE ERECTED TO A GREATER HEIGHT THAN PERMITTED IN THE RESPECTIVE DISTRICT PROVIDED THAT NO STRUCTURE IS MORE THAN THREE STORIES IN HEIGHT.

PERMIT INFORMATION BLOCK

SUBDIVISION NAME:			SECTION/AREA:		PARCEL: 537, 725, 768
ES SAVAGE			N/A		
PLAT NO.	BLOCK(S)	ZONING	TAX MAP NO.	ELECTION DISTRICT	CENSUS TRACT
N/A	11	R-12 R-SA-8	47	6TH	6069.02

ADDRESS CHART

BUILDING	ADDRESS
CAMPUS III BUILDING	8925 LINCOLN STREET
MULTI-PURPOSE BUILDING (GYM/CLASSROOM)	8445 SAVAGE-GUILFORD ROAD
EXISTING SCHOOL BUILDING (CONTAINING LIBRARY)	8455 SAVAGE-GUILFORD ROAD

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description	date
1	CORRECT ELEVATOR LOCATION	11/15

revisions

BETHEL MINISTRIES, INC.
CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

SDP-14-042

SPECIMEN TREE CHART

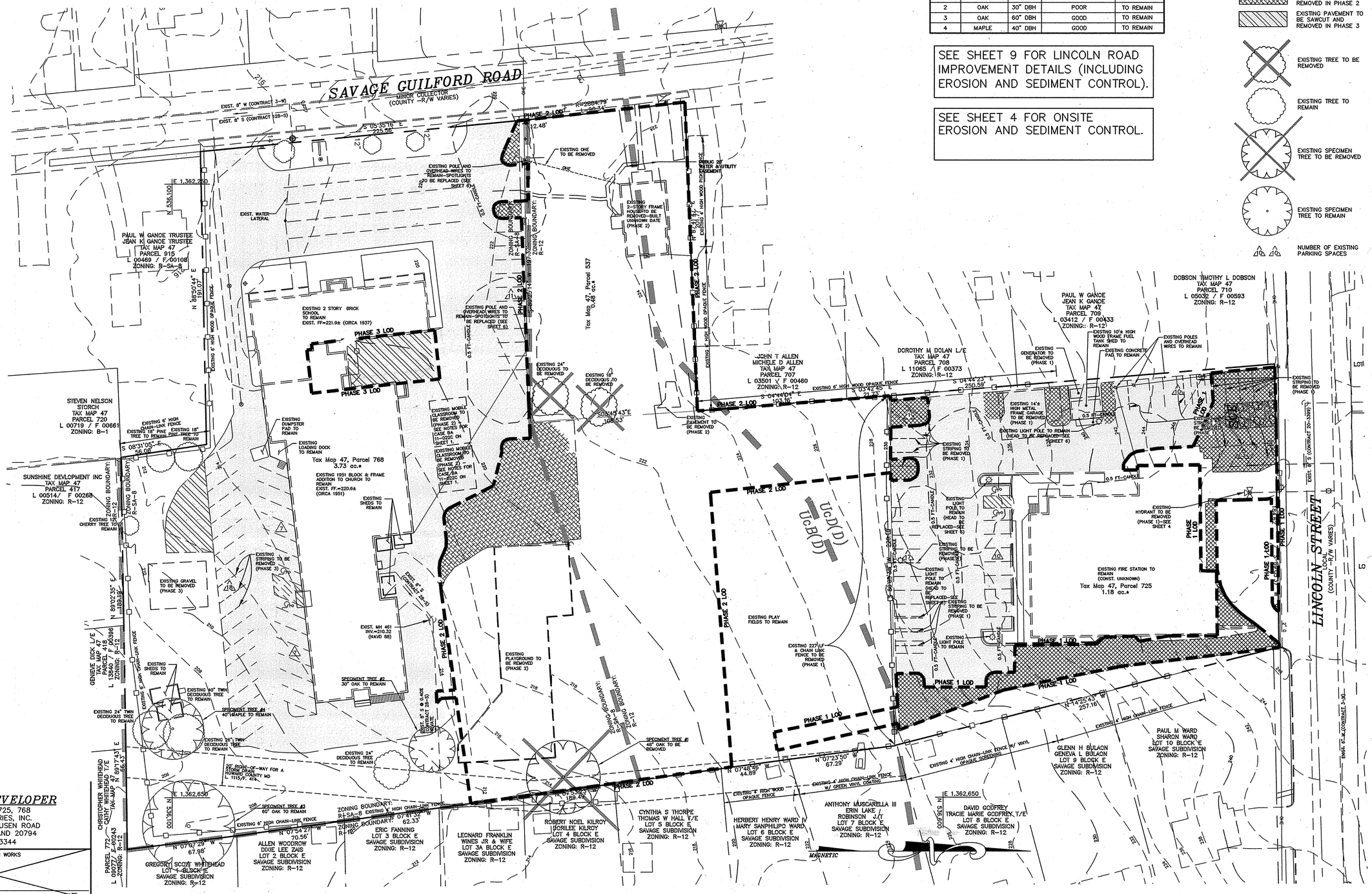
SPECIMEN TREE NO.	SPECIES	SIZE	CONDITION	TO REMAIN / TO BE REMOVED
1	OAK	48" DBH	FAIR	TO BE REMOVED
2	OAK	30" DBH	POOR	TO REMAIN
3	OAK	60" DBH	GOOD	TO REMAIN
4	MAPLE	40" DBH	GOOD	TO REMAIN

SEE SHEET 9 FOR LINCOLN ROAD IMPROVEMENT DETAILS (INCLUDING EROSION AND SEDIMENT CONTROL).

SEE SHEET 4 FOR ONSITE EROSION AND SEDIMENT CONTROL.

LEGEND

- EXISTING PAVEMENT TO BE SAWCUT AND REMOVED IN PHASE 1
- EXISTING PAVEMENT TO BE SAWCUT AND REMOVED IN PHASE 2
- EXISTING PAVEMENT TO BE SAWCUT AND REMOVED IN PHASE 3
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING SPECIMEN TREE TO REMAIN
- NUMBER OF EXISTING PARKING SPACES



GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3-3-15

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3-26-15

DIRECTOR — DATE 3/26/15

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY SLOMAN, P.E. — DATE 12/22/14

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

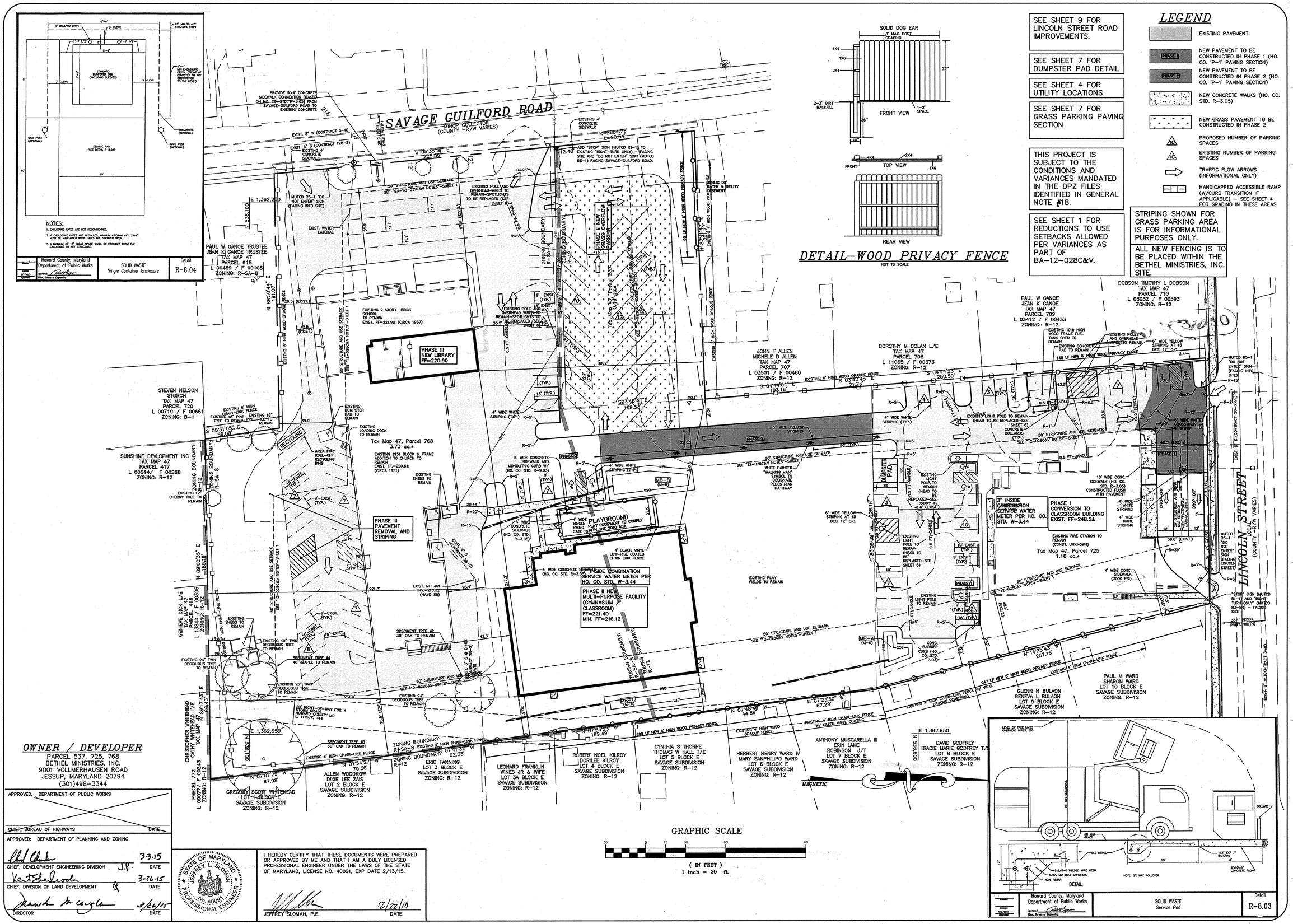
no.	description	date
	revisions	

BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DEMOLITION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax



OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3-3-15

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3-26-15

DIRECTOR — DATE 3/26/15

STATE OF MARYLAND JEFFREY L. SLOMAN No. 40091 PROFESSIONAL ENGINEER

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JEFFREY SLOMAN, P.E. — DATE 12/22/14

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description / revisions	date

BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
HOWARD COUNTY, MARYLAND
SIXTH ELECTION DISTRICT

STRIPING AND LAYOUT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

X = 1362400.1984 Y = 536428.5666

SEE SHEET 1 FOR REDUCTIONS TO USE SETBACKS ALLOWED PER VARIANCES AS PART OF BA-12-028C&V.

SEE SHEET 7 FOR GRASS PARKING PAVEMENT SECTIONS

SEE SHEET 9 FOR LINCOLN ROAD IMPROVEMENT DETAILS (INCLUDING EROSION AND SEDIMENT CONTROL).

WATER / SEWER MAIN TABULATION CHART

APPURTENANCE	NORTHING	EASTING
6"x6" TAPPING SLEEVE AND VALVE (WATER MAIN #1)	536,851.8833	1,362,376.2934
FIRE HYDRANT #1 (WATER MAIN #1)	536,816.2002	1,362,377.0931
8"x8" TAPPING SLEEVE AND VALVE (WATER MAIN #2)	536,395.2203	1,362,168.7797
8"x6" F.H.T. & V. (WATER MAIN #2)	536,428.0885	1,362,397.0011
FIRE HYDRANT #2 (WATER MAIN #2)	536,422.8273	1,362,397.7821
8"x4" REDUCER (WATER MAIN #2)	536,428.5666	1,362,400.1984

QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED
8" WATER MAIN (PVC C-900, DR-18)	270 LF
4" WATER HOUSE CONNECTION	191 LF
# 4" WHC	2 EACH
8"x6" F.H. TEE & VALVE	1 EACH
FIRE HYDRANT	2 EACH
6"x6" F.H. TAPPING SLEEVE AND VALVE	1 EACH
# 6" SHC	1 EACH
6" SEWER HOUSE CONNECTION	20 LF

WATER AND SEWER UTILITIES AND THEIR APPURTENANCES ARE TO BE CONSTRUCTED UNDER THE ADVANCED DEPOSIT ORDER (ADO) PROCESS AND SHALL CONFORM WITH ALL APPLICABLE HOWARD COUNTY DESIGN MANUAL II AND IV STANDARDS.

NOTE: THIS WORK SHALL BE DONE BY ADD #2139. AS PART OF THE REDLINE.

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLKMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

DEVELOPERS 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. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERIODIC ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc.
PRINTED NAME OF DEVELOPER

SIGNATURE OF DEVELOPER — DATE 1/28/15

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 NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER — DATE 12/22/14

JEFFREY SLOMAN, PE
PRINTED NAME OF ENGINEER

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 2/19/15

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER — DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3-3-15
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3-26-15
DIRECTOR — DATE 3/30/15

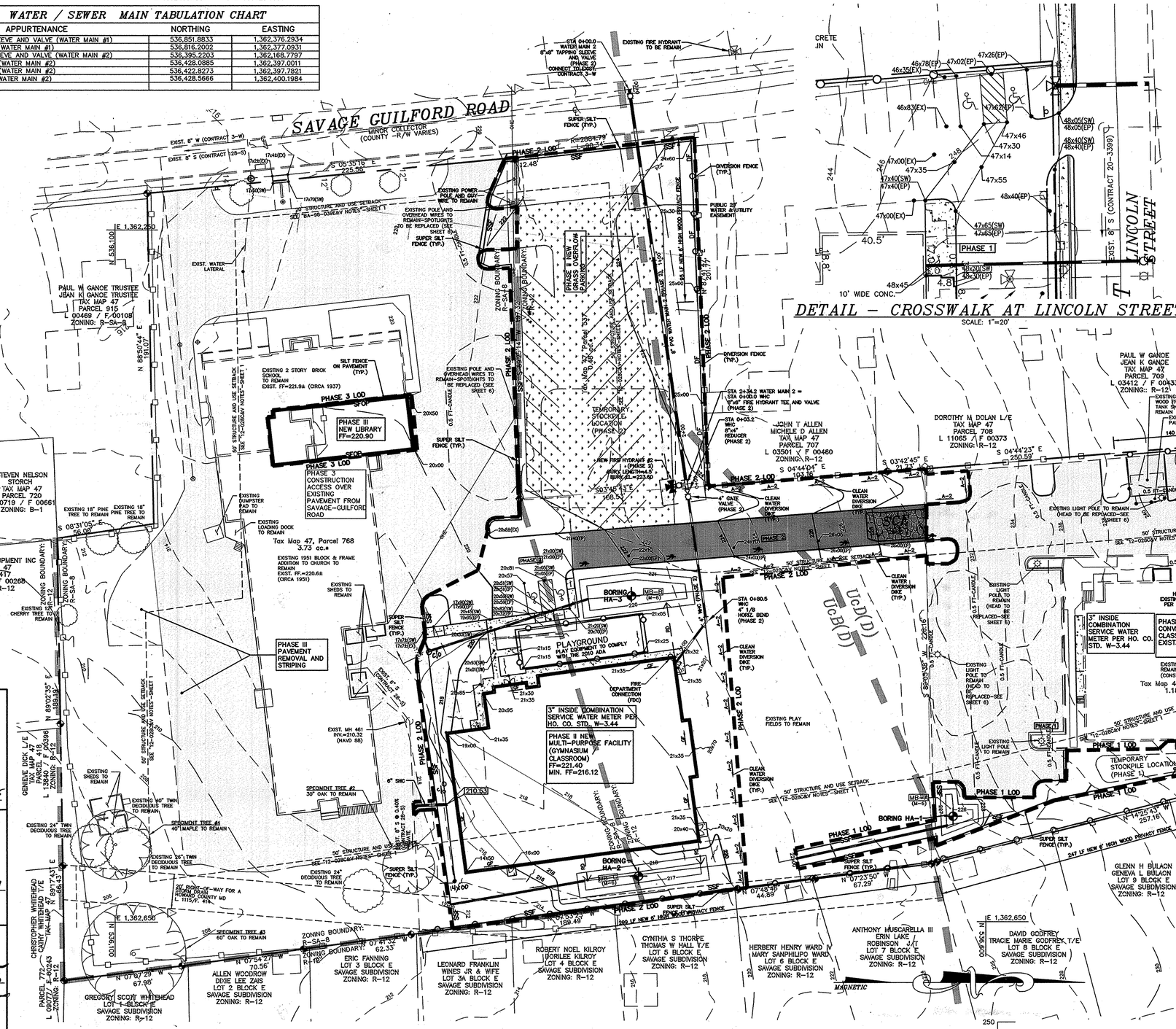
APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY SLOMAN, P.E. — DATE 12/22/14



DETAIL - CROSSWALK AT LINCOLN STREET

SCALE: 1"=20'

LEGEND

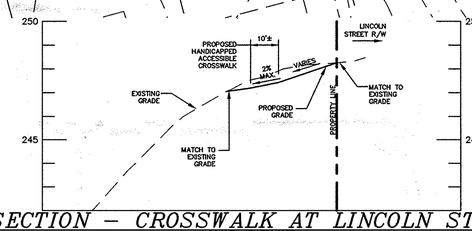
220 / 218	EXISTING CONTOURS
220 / 218	PROPOSED CONTOURS
20x70	PROPOSED SPOT GRADE
20x70(P)	PROPOSED SPOT GRADE AT EDGE OF PAVEMENT
20x70(W)	PROPOSED SPOT GRADE AT EDGE OF SIDEWALK
20x70(E)	EXISTING GRADE
LOD	LIMIT OF DISTURBANCE
UcD(D) UcB(D)	SOIL DIVISION LINE
SCE	STABILIZED CONSTRUCTION ENTRANCE
SSF	SUPER SILT FENCE
SFOP	SILT FENCE ON PAVEMENT
DF	DIVERSION FENCE
A-2	CLEAN WATER DIVERSION DIKE
	EXISTING PAVEMENT
PHASE 1	NEW PAVEMENT TO BE CONSTRUCTED IN PHASE 1 (HO. CO. "P-1" PAVING SECTION)
PHASE 2	NEW PAVEMENT TO BE CONSTRUCTED IN PHASE 2 (HO. CO. "P-1" PAVING SECTION)
	NEW CONCRETE WALKS (HO. CO. STD. R-3.05)
	NEW GRASS PAVEMENT TO BE CONSTRUCTED IN PHASE 2

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

SOILS DESCRIPTION

SYMBOL	HYDROLOGICAL GROUP	DESCRIPTION
UcB	D	URBAN LAND, BELTSVILLE-CHILLUM COMPLEX 0-5% SLOPE
UcD	D	URBAN LAND, BELTSVILLE-CHILLUM COMPLEX 5-15% SLOPE



SECTION - CROSSWALK AT LINCOLN STREET

SCALE: 1"=30' HOR
1"=3' VER

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description	date
1	RELOCATION OF FIRE STATION AND WHC	7/2/15

revisions

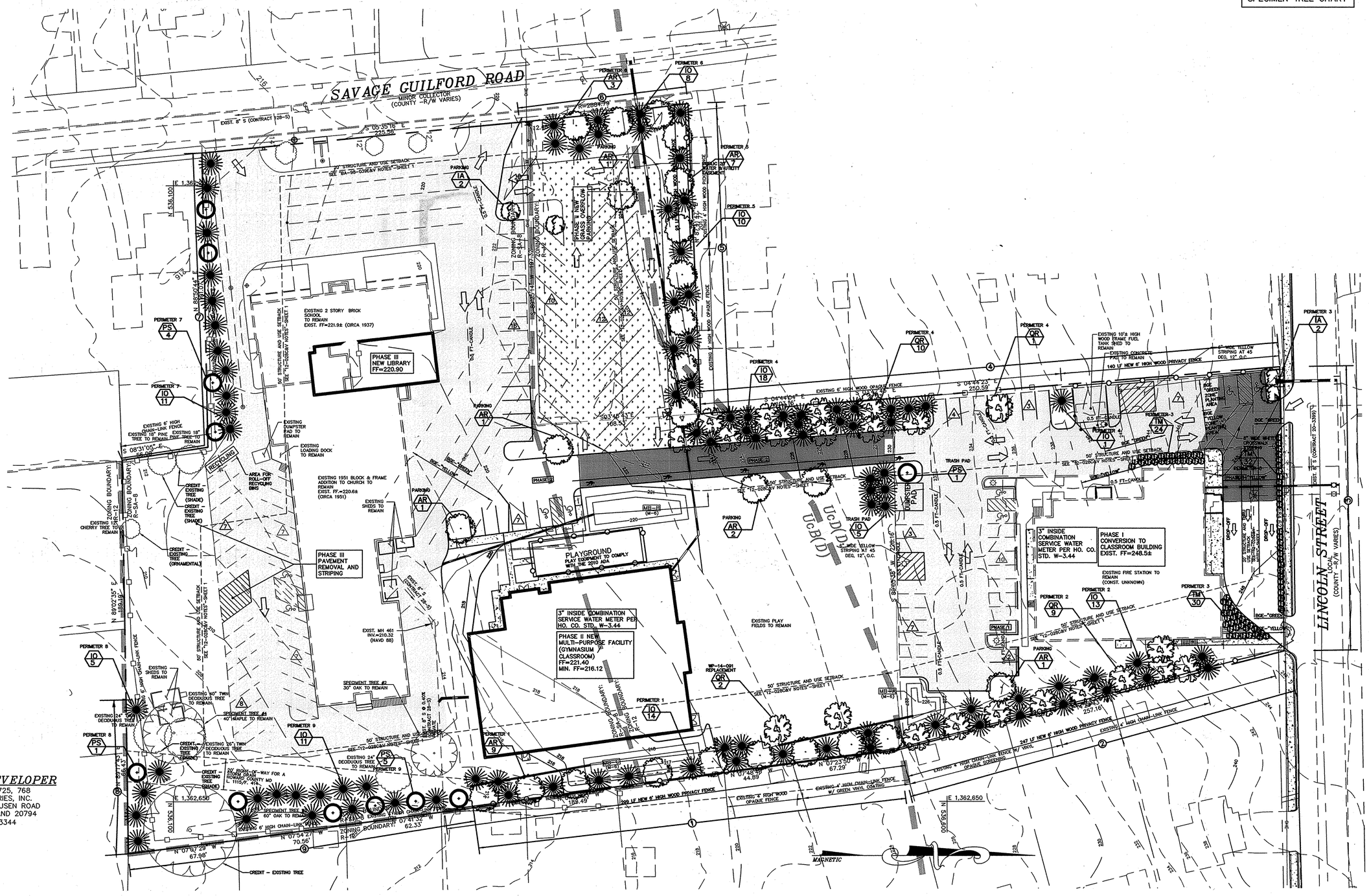
BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

GRADING, SEDIMENT AND EROSION CONTROL, AND UTILITY PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

SEE SHEET 2 FOR SPECIMEN TREE CHART



OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 3-3-15
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 3-26-15
DIRECTOR	DATE 3/26/15

STATE OF MARYLAND JEFFREY L. SLOMAN No. 40091 PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY SLOMAN, P.E. — DATE 12/22/14

DEVELOPER'S/OWNER'S CERTIFICATE

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

OWNER — DATE 1/28/15

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description	date
	revisions	

BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES							ADJACENT TO ROADWAYS			TOTAL
LANDSCAPE TYPE	C+ (PERIMETER 1)*	C+ (PERIMETER 2)*	C, C+ (PERIMETER 4)*	C+ (PERIMETER 5)*	C (PERIMETER 7)	C (PERIMETER 8)	C (PERIMETER 9)	E (PERIMETER 3)	C+ (PERIMETER 6)*	TRASH PAD	
LINEAR FEET OF PERIMETER	278 LF	257 LF	225 LF (C) 151 LF (C+)	202 LF	245 LF	100 LF	225 LF	185 LF	110 LF	54 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	N/A
CREDIT FOR FENCE, WALLS OR BERMS (YES, NO, LINEAR FEET)	NO			NO	NO	NO	NO	NO	NO	NO	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	9 SHADE TREES 14 EVERGREEN TREES 0 SHRUBS	9 SHADE TREES 13 EVERGREEN TREES 0 SHRUBS	11 SHADE TREE 19 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 10 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 12 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 5 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 11 EVERGREEN TREES 0 SHRUBS	5 SHADE TREES 0 EVERGREEN TREES 46 SHRUBS	4 SHADE TREES 6 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 5 EVERGREEN TREES 0 SHRUBS	61 SHADE TREES 95 EVERGREEN TREES 46 SHRUBS
CREDIT FOR EXISTING VEGETATION SHADE TREES EVERGREEN TREES	N/A	N/A	N/A	N/A	YES , 2 SHADE TREES 1 ORNAMENTAL TREE	YES , 2 SHADE TREES	YES , 1 SHADE TREE	N/A	N/A	N/A	5 SHADE TREES 0 EVERGREEN TREES 1 SUBSTITUTION TREE 0 SHRUBS
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUBS	9 SHADE TREES 14 EVERGREEN TREES 0 SHRUBS	9 SHADE TREES 13 EVERGREEN TREES 0 SHRUBS	11 SHADE TREE 19 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 10 EVERGREEN TREES 0 SHRUBS	4 SHADE TREES 11 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 5 EVERGREEN TREES 0 SHRUBS	5 SHADE TREES 11 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 2 EVERGREEN TREES 86 SHRUBS	3 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 5 EVERGREEN TREES 0 SHRUBS	50 SHADE TREES 98 EVERGREEN TREES 86 SHRUBS

NOTE: FOR THE "C+" BUFFER THE NUMBER OF REQUIRED SHADE TREES WAS CALCULATED USING 1 SHADE TREE PER 30 FEET INSTEAD OF 1 PER 40 FEET
"C+" BUFFER REQUIRED PER BOARD OF ADJUSTMENT CASE BA 12-028C&V

LANDSCAPE NOTES

1. NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
2. THE OWNER, TENANT AND / OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
3. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
4. SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH CREDIT IS GIVEN, BE REMOVED OR DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL.
5. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE, LANDSCAPE MANUAL, AND THE APPROVED DECISION AND ORDER FOR BA-12-028C&V. FINANCIAL SURETY FOR PERIMETER AND PARKING LOT LANDSCAPING IN THE AMOUNT OF $34,680.00 FOR 57 SHADE TREES, 100 EVERGREEN TREES AND 86 SHRUBS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SITE DEVELOPMENT PLAN, SDP-14-042.

GRADING PERMIT

SCHEDULE B : PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	122 SPACES
NUMBER OF TREES REQUIRED SHADE TREES (1 PER 20 SPACES)	6 SHADE TREES
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	5 SHADE TREES 2 EVERGREEN TREES

SCHEDULE C : REPLACEMENT TREES

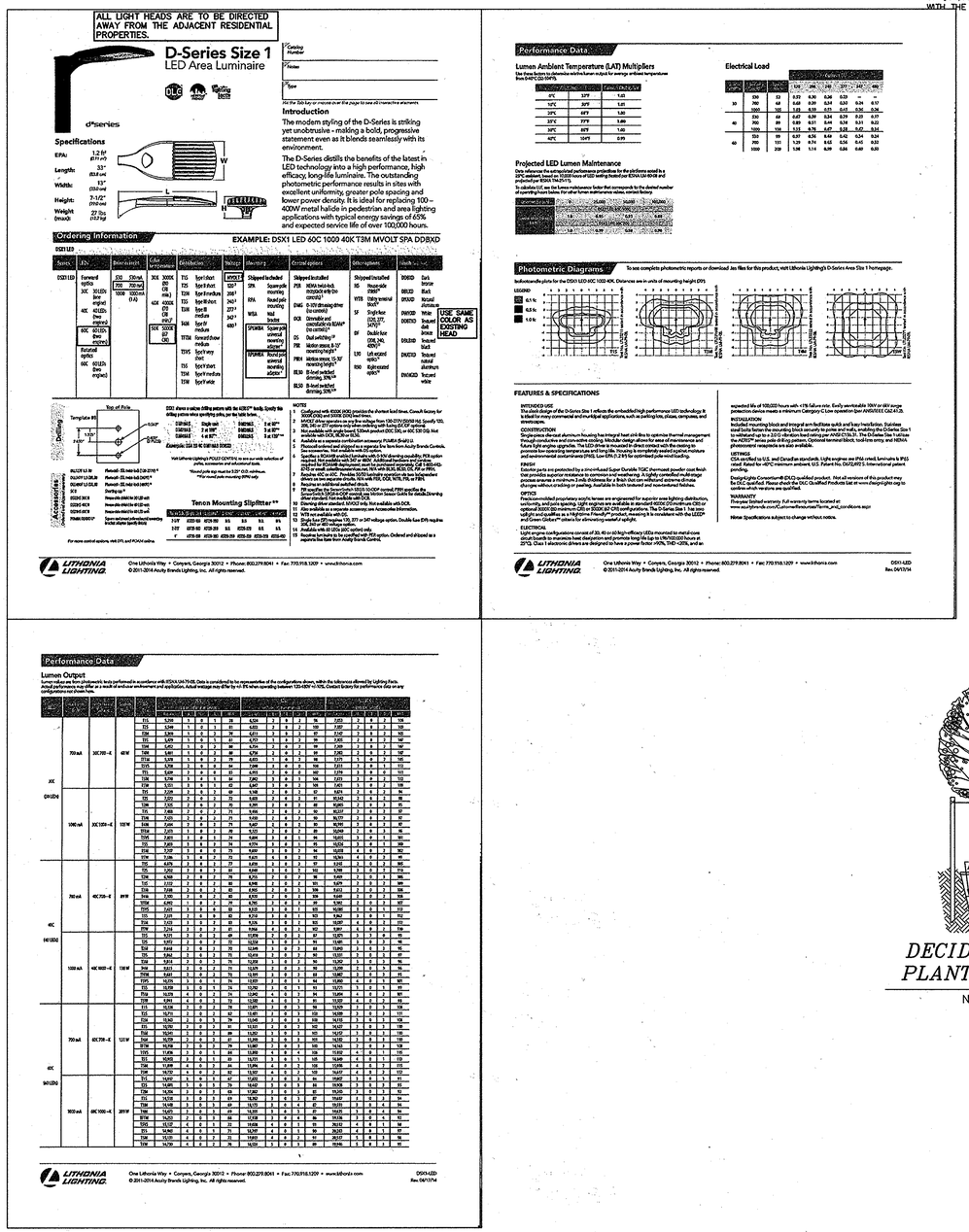
PER THE CONDITIONS OF WAIVER PETITION WP-14-091, APPROVED OM MARCH 24, 2014, TWO (2) REPLACEMENT TREES ARE TO BE PLANTED TO COMPENSATE FOR THE EXISTING 48" OAK THAT IS TO BE REMOVED.

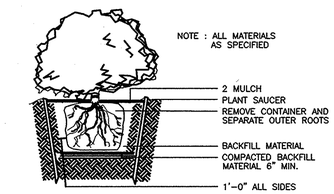
LANDSCAPE PLANT LIST (SCHEDULES A, B, C)

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
24 19 (PERIMETER) 5 (PARKING LOT)		ACER RUBRUM 'RED SUNSET' (AR)	RED SUNSET RED MAPLE	2 1/2" – 3" CAL.
22 20 (PERIMETER) 2 (REPLACEMENT)		QUERCUS RUBRA (QR)	RED OAK	2 1/2" – 3" CAL. [SEE NOTE BELOW]
11 11 (PERIMETER)		PRUNUS SARGENTII (PS)	SARGENT CHERRY	2 1/2" – 3" CAL.
96 96 (PERIMETER)		ILEX OPACA (IO)	AMERICAN HOLLY	5' – 6' HT.
4 2 (PARKING LOT) 2 (PERIMETER)		ILEX ATTENUATA (IA)	FOSTER HOLLY	5' – 6' HT.
86 86 (PERIMETER)		TAXUS MEDIA 'HICKSII' (TM)	HICKS YEW	2 1/2' – 3' HT.

TOTALS
157 TREES (57 SHADE, 100 EVERGREEN)
86 SHRUBS

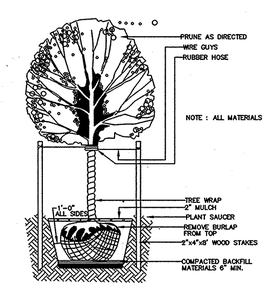
NOTE: TREES PLANTED AS REPLACEMENT TREES ARE TO HAVE A 3"-4" CALIPER.





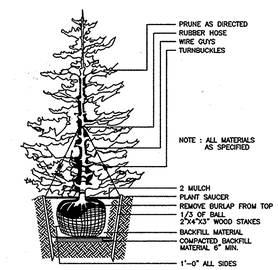
TYPICAL SHRUB PLANTING DETAIL

NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

DEVELOPER'S/OWNER'S CERTIFICATE

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

OWNER — DATE 1/28/15

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 3-3-15
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 3-26-15
DIRECTOR	DATE 3/26/15

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP. DATE 2/13/15.

JEFFREY SLOMAN, P.E. — DATE 12/22/14

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

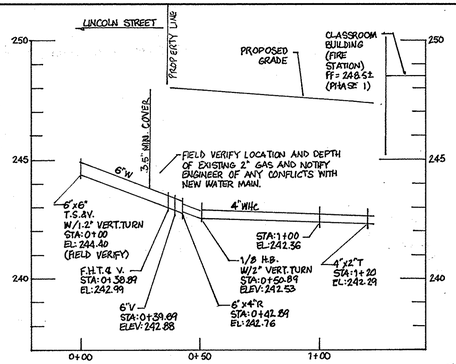
no.	description	date
	revisions	

BETHEL MINISTRIES, INC.
CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
LANDSCAPE AND LIGHTING NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Bal. (410) 997-0298 Fax.

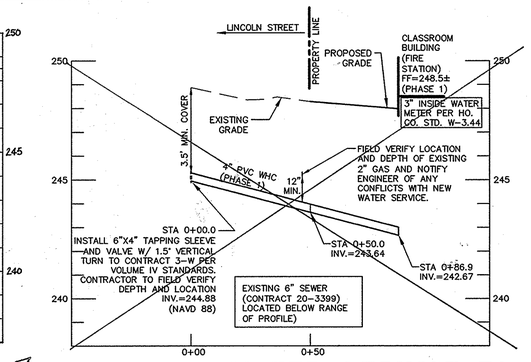
6 OF 10

SDP-14-042



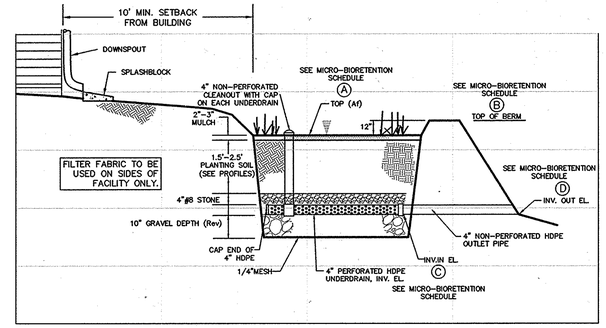
SHC PROFILE – GYMNASIUM (PHASE 2)

SCALE: 1"=30' VER
1"=3' VER



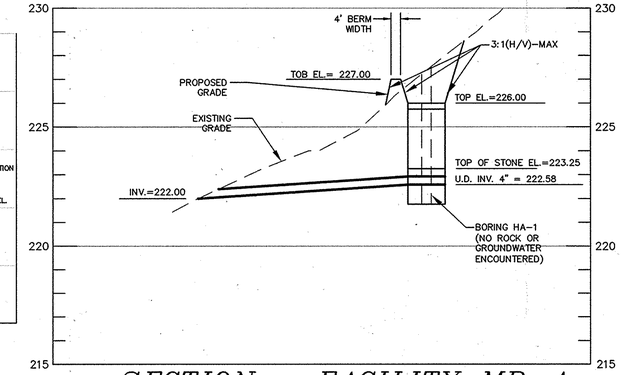
PROFILE – WATER SERVICE TO CAMPUS III BUILDING (EXIST. FIRE STATION) – PHASE 1)

SCALE: 1"=30' VER
1"=3' VER



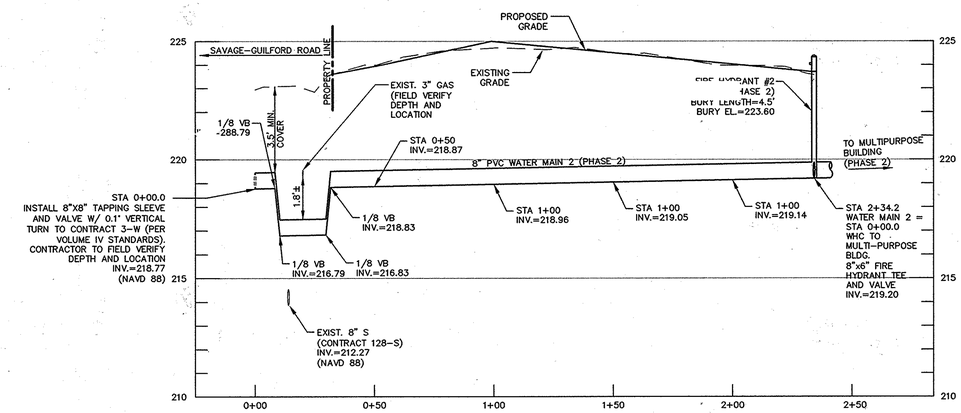
MICRO-BIORETENTION (M-6) DETAIL

NOT TO SCALE



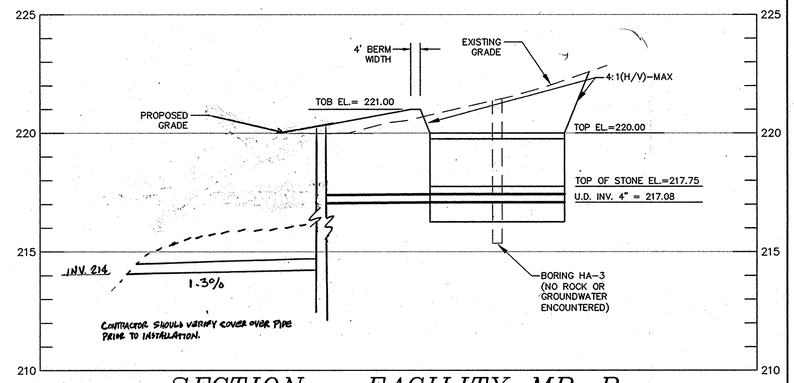
SECTION – FACILITY MB-A

SCALE: 1"=30' VER
1"=3' VER



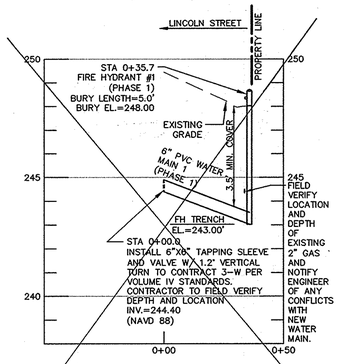
PROFILE – WATER MAIN 2 (PHASE 2)

SCALE: 1"=30' VER
1"=3' VER



SECTION – FACILITY MB-B

SCALE: 1"=30' VER
1"=3' VER



PROFILE – WATER MAIN 1 (PHASE 1)

SCALE: 1"=30' VER
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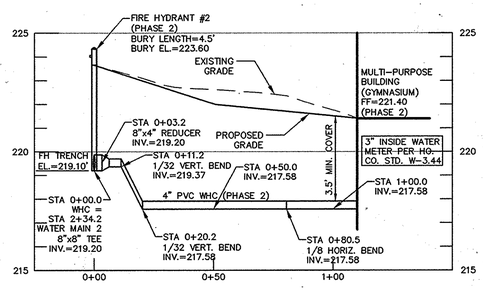
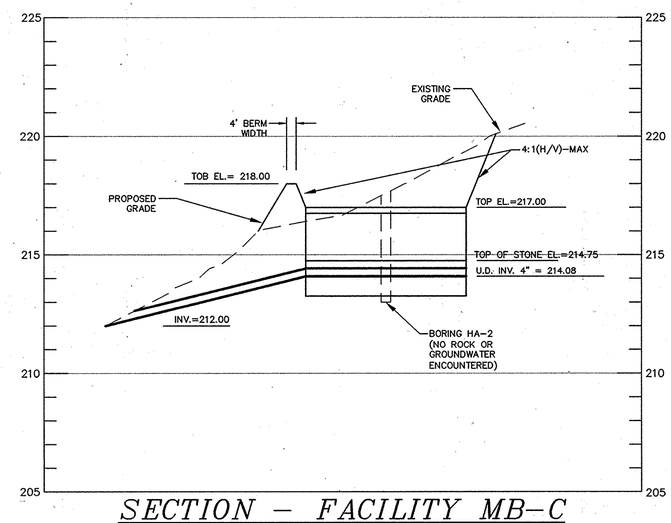


PROFILE – WATER SERVICE TO MULTI-PURPOSE BUILDING (PHASE 2)

SCALE: 1"=30' VER
1"=3' VER



SECTION – FACILITY MB-C

SCALE: 1"=30' VER
1"=3' VER

DEVELOPERS 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. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERIODIC ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc
PRINTED NAME OF DEVELOPER

SIGNATURE OF DEVELOPER — DATE 1/28/15

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 NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER — DATE 12/22/14

JEFFREY SLOMAN, PE
PRINTED NAME OF ENGINEER

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 2/10/15

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER — DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3-3-15

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3-26-15

DIRECTOR — DATE 3/26/15

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

12/22/14
JEFFREY SLOMAN, P.E. — DATE

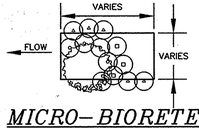
OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

A. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.

SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

B. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

C. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

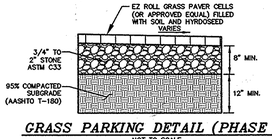


MICRO-BIORETENTION PLANTING DETAIL

N.T.S.

MICRO-BIORETENTION SCHEDULE

FACILITY	TOP EL. (A)	TOP OF BERM(B)	INV. IN (C)	INV. OUT (D)	AREA AT TOP EL. (Af)
MB-A	226.00	227.00	222.58	222.00	155 SF
MB-B	220.00	221.00	217.08	217.00	723 SF
MB-C	217.00	218.00	214.08	213.25	420 SF



GRASS PARKING DETAIL (PHASE 2)

NOT TO SCALE

MICRO-BIORETENTION FACILITY PLANTLIST

QUANTITY MB-A	QUANTITY MB-B	QUANTITY MB-C	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	RATIO
3	12	7		ILEX GLABRA	INK BERRY	2'-3' HT.	1/60 SF
8	37	21		LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1 GAL. CONTAINER	1/20 SF
6	25	14		ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL. CONTAINER	1/30 SF
4	19	11		ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER	1/40 SF

TOTAL: 145 PERENNIALS, 22 SHRUB

ALL PLANTINGS MAY BE SUBSTITUTED WITH APPROVED EQUALS

project	date
12-018	DEC 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description	date
1	REV PROFILE OF WATER MAIN #1 AND SHC TO CAMPUS III BUILDING	7/2015

revisions

BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
HOWARD COUNTY, MARYLAND
SIXTH ELECTION DISTRICT

STORMWATER MANAGEMENT, CONSTRUCTION AND UTILITY NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS (B-4-2)

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION
a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION
a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
I. SOIL PH BETWEEN 6.0 AND 7.0.
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF SOIL TEST.
e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS,
GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
6. TOPSOIL APPLICATION
a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING (B-4-3)

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P_2O_5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K_2O (POTASSIUM), 200 POUNDS PER ACRE.
II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION
a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING
a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION (B-4-4)

DEFINITION
TO STABILIZE DISTURBED SOIL WITH VEGETATION FOR UP TO 6 MONTHS.

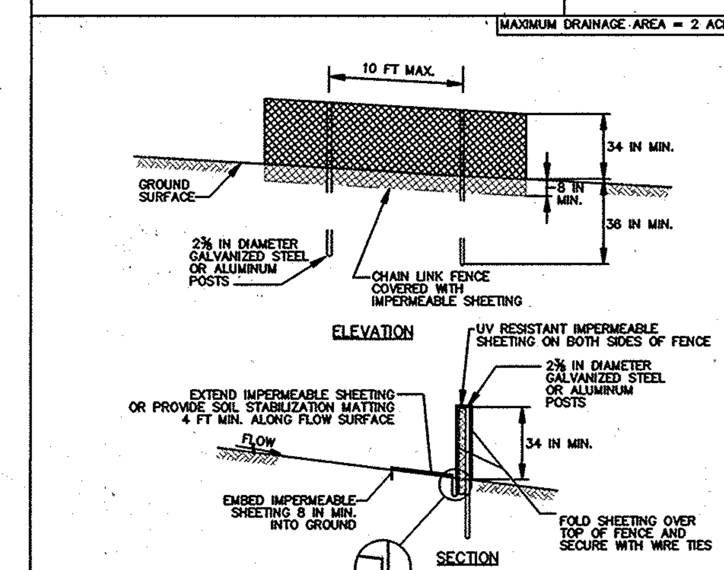
PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURB SOIL.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B-1 PLUS FORTELIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1b, AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: —DF—
MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS
1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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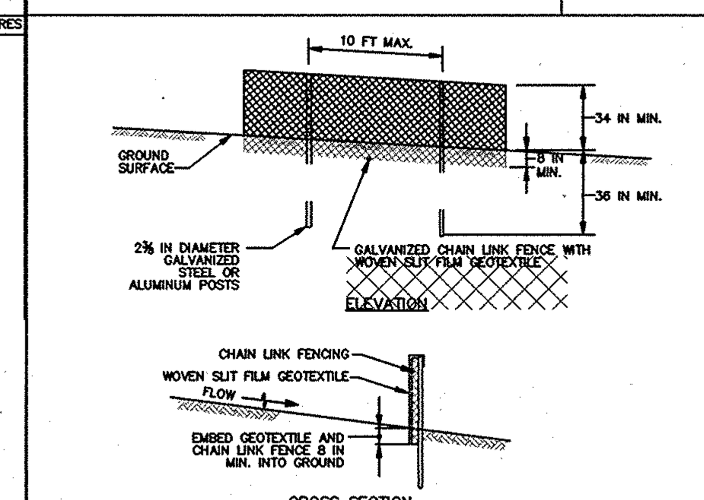
DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: —SSF—



CONSTRUCTION SPECIFICATIONS
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

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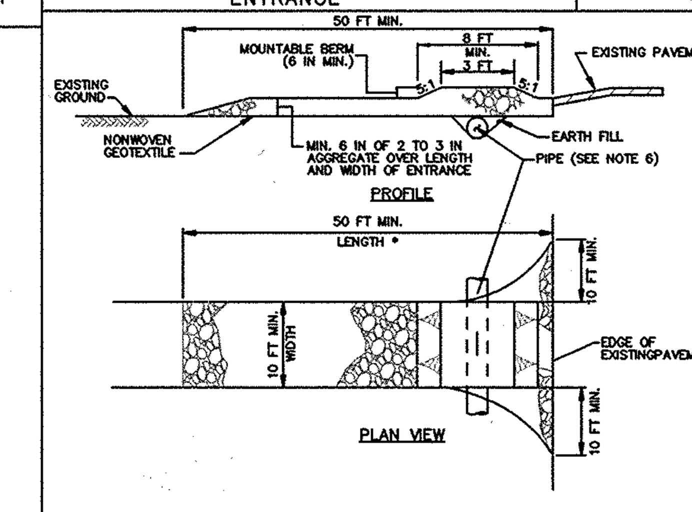
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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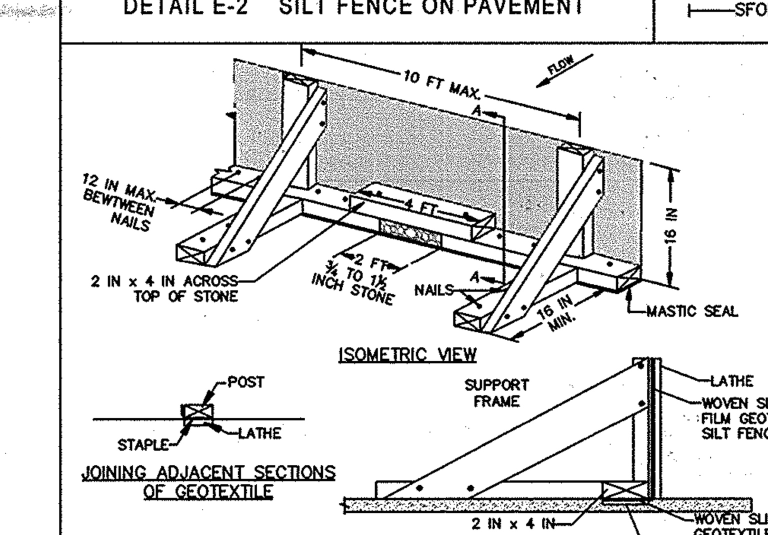
DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL: —SFOP—



CONSTRUCTION SPECIFICATIONS
1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
3. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION (B-4-5)

DEFINITION
TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION.

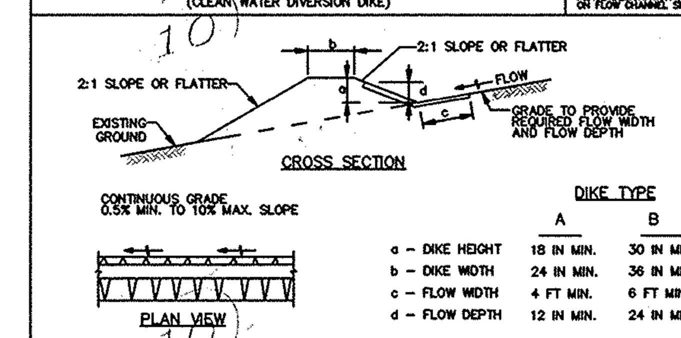
PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA
A. SEED MIXTURES
1. GENERAL USE
A. SELECT ONE OR MORE OF THE SPIECES OF MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED IN THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.
B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD GUIDE, SECTION 342-CRITICAL AREA PLANTING.
C. FOR SITES HAVING DISTURBAD AREA OVER 5 ACRES, USE AND SHOW RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZED (40-0-01) AT 3 1/2 POUNDS PER 1000 S.F. (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
2. TURFGRASS MIXTURES
A. AREAS WHERE TURFGRASS MAY BE DESIRE INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
B. SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLOCATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.
I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASRERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RETA: 1.5 TO 2.0 POUNDS PER 1000 S.F. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
II. KENTUCKY BLUEGRASS/PERENIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY ABD WHEN TURF WILL RECEIVE MEDIUM TO INTENSUVE MANAGEMENT. CERTIFIED PERENIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDINGRATE: 2 POUNDS MIXTURE PER 1000 S.F. SHOOSE A MINIMUM OF THREE KENTUCKYBLUEGRASS CULTIVARS EITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL MIXTURE: FOR USE IN DROUGHT AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 65 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 PERCENT PER 1000 S.F. ONE OR MORE CULTIVARS MAY BE BLENDED.
IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TIRF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCANT AND CERTIFIES FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER 1000 S.F.
C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURE
WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B,6A)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 7A, 7B)
D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONE AND DEBRIS OVER 1.5 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASS WILL POSE NO DIFFICULTY.
E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH 0.5 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASON, OR ON ADVERSE SITES.

DETAIL C-1 EARTH DIKE
(CLEAN WATER DIVERSION DIKE)

STANDARD SYMBOL: A-1 (PLACE DESIGNATION (e.g. A-1) ON FLOW CHANNEL SIDE OF DIKE.)



DIKE TYPE	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION
A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS
1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE LB/AC	SEEDING RATE LB/1000SF	SEEDING DEPTH (INCHES)	5B AND 6A	6B	7A AND 7B
COOL SEASON GRASSES						
ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM)	40	1.0	0.5	MAR 15 TO MAY 31; AUG 1 TO SEP 30	MAR 1 TO MAY 15; AUG 1 TO OCT 15	FEB.15 TO APR 30; AUG 15 TO NOV 30
BARLEY (HORDEUM VULGARE)	96	2.2	0.5	MAR 15 TO MAY 31; AUG 1 TO SEP 30	MAR 1 TO MAY 15; AUG 1 TO OCT 15	FEB.15 TO APR 30; AUG 15 TO NOV 30
OATS (AVENA SATIVA)	72	1.7	0.5	MAR 15 TO MAY 31; AUG 1 TO SEP 30	MAR 1 TO MAY 15; AUG 1 TO OCT 15	FEB.15 TO APR 30; AUG 15 TO NOV 30
WHEAT (TRITICUM AESTIVUM)	120	2.8	0.5	MAR 15 TO MAY 31; AUG 1 TO SEP 30	MAR 1 TO MAY 15; AUG 1 TO OCT 15	FEB.15 TO APR 30; AUG 15 TO NOV 30
CEREAL RYE (SECALE ITALICA)	112	2.8	0.5	MAR 15 TO MAY 31; AUG 1 TO OCT 31	MAR 1 TO MAY 15; AUG 1 TO OCT 15	FEB.15 TO APR 30; AUG 15 TO DEC 15
WARM SEASON GRASSES						
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14

(Last three columns: RECOMMENDED SEEDING DATED BY PLANT HARDINESS ZONE)

STANDARD SEDIMENT CONTROL NOTES

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, (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 DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1,
B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SDC.B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
6) SITE ANALYSIS:
TOTAL AREA OF SITE: 5.39 ACRES
AREA DISTURBED: 2.02 ACRES (INCLUDES 0.14 Ac OFFSITE)
AREA TO BE ROOFED OR PAVED: 0.63 ACRES
AREA TO BE VEGITATIVELY STABILIZED: 1.39 ACRES
TOTAL CUT: 200 CU. YDS.
TOTAL FILL: 1,500 CU. YDS.
OFFSITEWASTE/BORROW AREA LOCATION: TBD
THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.
7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED BY THE END OF EACH WORKING DAY, WHICHEVER IS SHORTER.
11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCESSING WITH CONSTRUCTION.
12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITIES, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6b
SEED MIXTURE (FROM TABLE B.3): 8

NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20) N	P_2O_5	K_2O	LIME RATE
1	TALL FESCUE	100	MARCH 1-MAY 15 AUG 15-OCT 15	1/4"-1/2"	45 LBS. PER ACRE (1 LB./1000 SF)	90 LBS. PER ACRE (2 LB./1000 SF)	90 LBS. PER ACRE (2 LB./1000 SF)	2 TONS / ACRE (90 LBS / 1000 SF)

MIXTURES 1, 4-7, 9, AND 10 FROM TABLE B.3 OF THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MAY BE USED.

DEVELOPERS 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. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERIODIC ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc.
PRINTED NAME OF DEVELOPER

[signature] 1/28/15
SIGNATURE OF DEVELOPER — DATE

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 CONDTIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

[signature] 12/22/14
SIGNATURE OF ENGINEER — DATE

JEFFREY SLOMAN, PE
PRINTED NAME OF ENGINEER

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

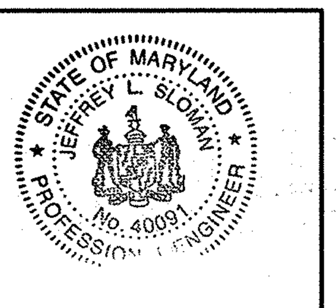
[signature] 2/19/15
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 3-3-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 3-26-15
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 3/26/15
DIRECTOR — DATE



OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

[signature] 12/22/14
JEFFREY SLOMAN, P.E. — DATE

SEQUENCE OF CONSTRUCTION

PHASE I
1. REQUEST PRE-CONSTRUCTION MEETING IF NECESSARY AND OBTAIN GRADING PERMIT. (1 DAY).
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN (1 DAY)
3. INSTALL SUPER SILT FENCE AND DIVERSION FENCING (1 DAY).
4. SAWVUT AND REMOVE PAVEMENT AS SHOWN (2 DAYS).
5. CONSTRUCT SITE TO GRADES INDICATED AND CONSTRUCT PARKING LOT PAVEMENT, AND SIDEWALK, CURB AND GUTTER ON LINCOLN STREET (30 DAYS).
6. STABILIZE DISTURBED AREAS DRAINING TO STORMWATER MANAGEMENT FEATURES (MICRO-BIORETENTION) (2 DAYS).
7. CONSTRUCT STORM WATER MANAGEMENT FEATURES (MICRO-BIORETENTION) (3 DAYS).
8. SEED AND MULCH ALL REMAINING DISTURBED AREAS. (3 DAYS).
9. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE CONTROLS AND STABILIZE AREAS THAT ARE DISTURBED BY REMOVAL OF CONTROLS (2 DAYS).

PHASE II
1. REQUEST PRE-CONSTRUCTION MEETING IF NECESSARY AND OBTAIN GRADING PERMIT. (1 DAY).
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN (1 DAY)
3. INSTALL SUPER SILT FENCE AND DIVERSION FENCING (1 DAY).
4. DEMOLISH EXISTING HOUSE (5 DAYS).
5. CONSTRUCT SITE TO GRADES INDICATED AND CONSTRUCT GYMNASIUM, CONNECTOR ROAD AND GRASS PARKING (180 DAYS).
6. STABILIZE DISTURBED AREAS DRAINING TO STORMWATER MANAGEMENT FEATURES (MICRO-BIORETENTION) (3 DAYS).
7. CONSTRUCT STORM WATER MANAGEMENT FEATURES (MICRO-BIORETENTION) (5 DAYS).
8. SEED AND MULCH ALL REMAINING DISTURBED AREAS. (3 DAYS).
9. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE CONTROLS AND STABILIZE AREAS THAT ARE DISTURBED BY REMOVAL OF CONTROLS (2 DAYS).

PHASE III
1. REQUEST PRE-CONSTRUCTION MEETING IF NECESSARY AND OBTAIN GRADING PERMIT. (1 DAY).
2. INSTALL SILT FENCE ON PAVEMENT (1 DAY). ACCESS TO THIS FACE WILL BE OVER THE EXISTING PAVEMENT AROUND THE EXISTING SCHOOL BUILDING.
3. SAWCUT AND REMOVE EXISTING PAVEMENT (1 DAY).
4. REMOVE PORTION OF THE EXISTING BUILDING (20 DAYS)
5. REMOVE SILT FENCE ON PAVEMENT AT FACE OF EXISTING BUILDING WHERE NEW LIBRARY WILL BE ADJACENT TO EXISTING BUILDING (1 DAY).
6. CONSTRUCT LIBRARY (120 DAYS).
7. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE CONTROLS AND STABILIZE AREAS THAT ARE DISTURBED BY REMOVAL OF CONTROLS (2 DAYS).

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

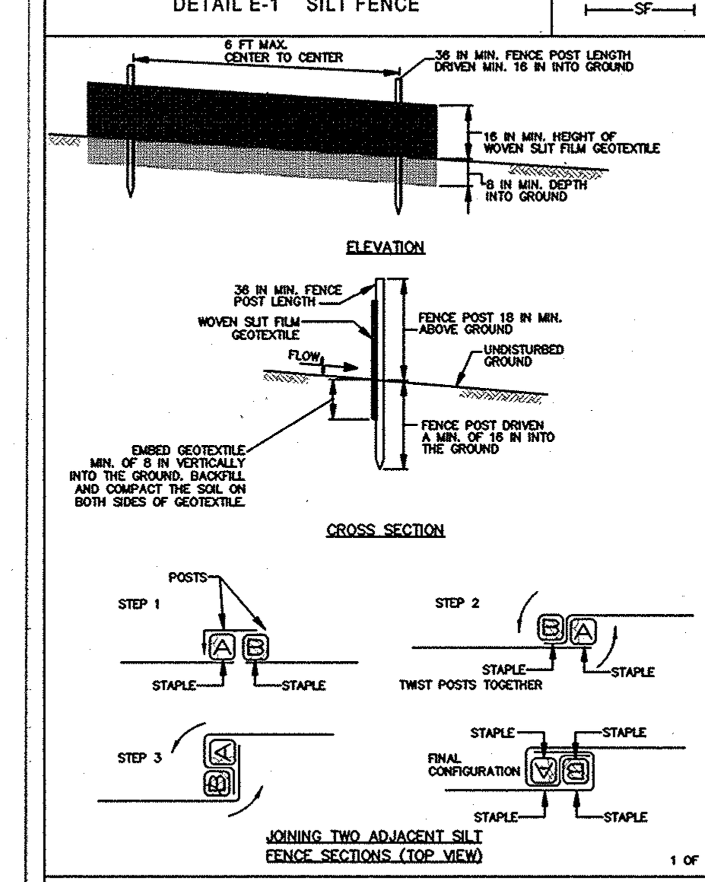
Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

B.43

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: —SF—



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: —SF—

CONSTRUCTION SPECIFICATIONS
1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

project	date
12-018	DEC 2014
illustration JLS	engineering JLS
scale 1"=30'	approval MMM

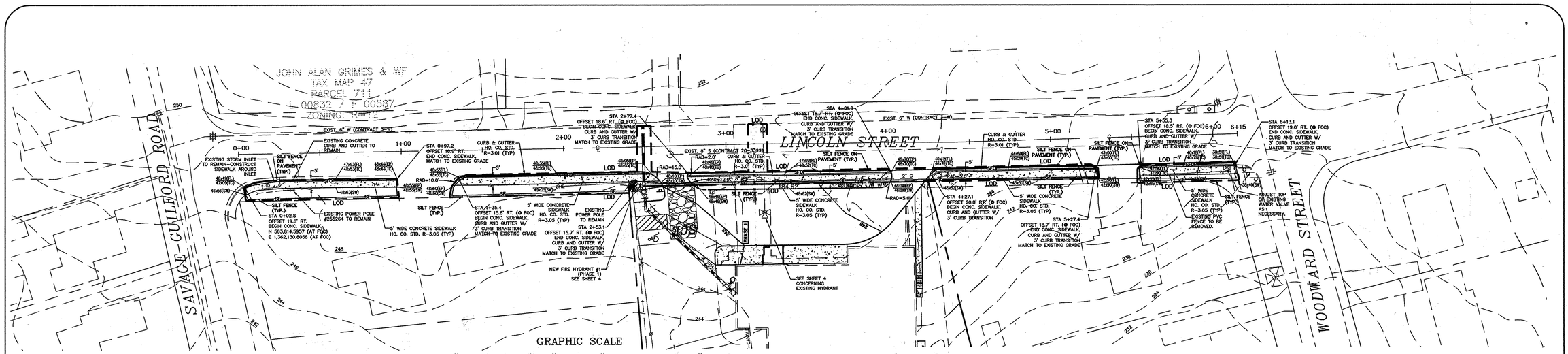
no.	description (revisions)	date

BETHEL MINISTRIES, INC.

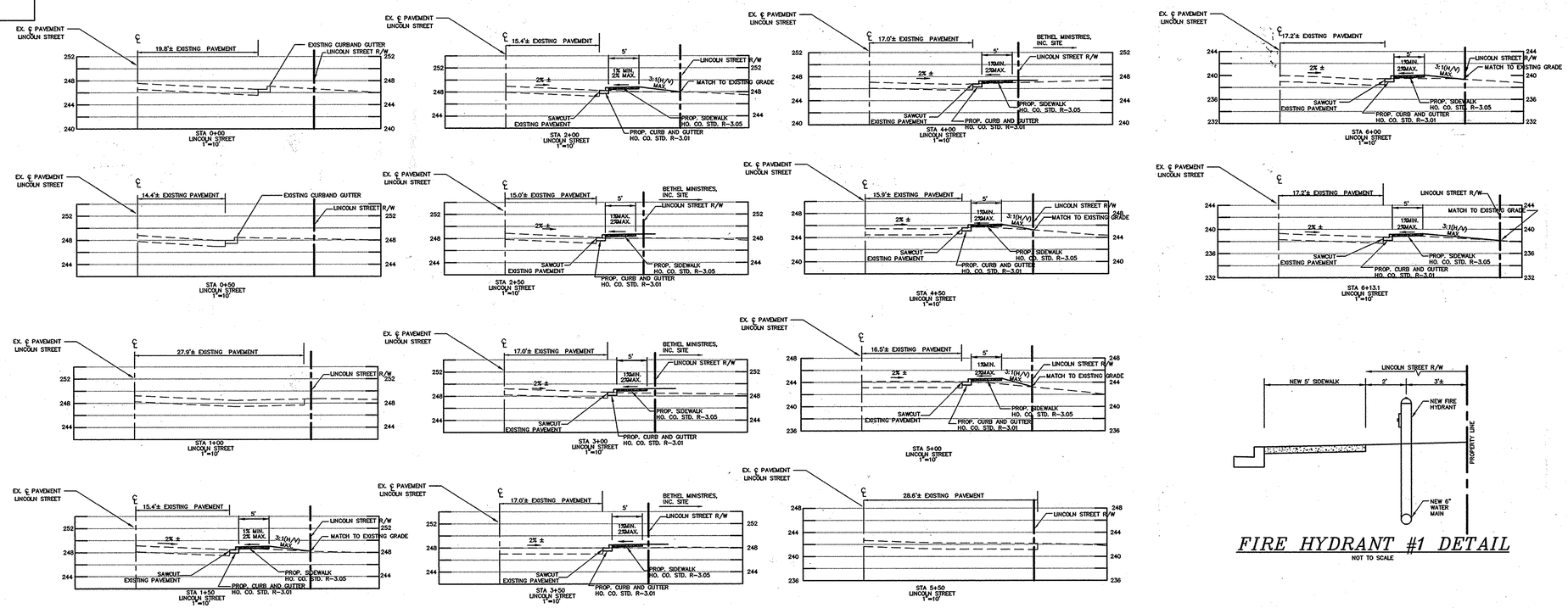
CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
SIXTH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.



SEE SHEET 4 FOR EROSION AND SEDIMENT CONTROL, LOD, GRADING, ETC. FOR AREAS OUTSIDE OF PUBLIC RIGHT-OF-WAY.



OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL MINISTRIES, INC.
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

DEVELOPERS 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. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERIODIC ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc.
PRINTED NAME OF DEVELOPER

SIGNATURE OF DEVELOPER — DATE 1/28/15

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 NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER — DATE 12/22/14

JEFFREY SLOMAN, PE
PRINTED NAME OF ENGINEER

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 2/10/15

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3-3-15

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3-26-15

DIRECTOR — DATE 4/24/15

STATE OF MARYLAND — JEFFREY L. SLOMAN — No. 40091 — PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY SLOMAN, P.E. — DATE 12/22/14

FIRE HYDRANT #1 DETAIL

NOT TO SCALE

project	date
12-018	JUL 2014
illustration	engineering
JLS	JLS
scale	approval
1"=30'	MMM

no.	description	date
1	REV LOCATION OF FIRE HYDRANT AND WATER	7/12/15
	revisions	

BETHEL MINISTRIES, INC.

CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASTUM AND LIBRARY
TAX MAP 47, PARCEL 768, 725, 537
HOWARD COUNTY, MARYLAND
SIXTH ELECTION DISTRICT
LINCOLN STREET IMPROVEMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

SDP-14-042

PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

1. PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
4. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
5. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

1. FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
2. FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
4. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
2. PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
3. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
4. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
5. FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
6. FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
7. AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
8. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO TO TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

FERTILIZING

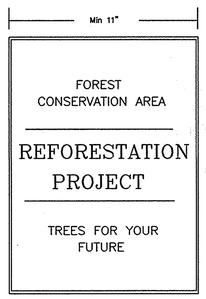
1. DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
2. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
3. IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALLY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD:
2. ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
3. VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
4. REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
5. REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
6. A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

SUPERVISION

1. ALL FOREST CONSERVATION ACTIVITIES SHALL BY DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.



SIGNAGE DETAILS

NOT TO SCALE

REFORESTATION PLANT LIST

ALTERNATIVE 1

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
35	Acer rubrum Red Maple	VT	D-W	FAC	15'	CONT/B & B 1" CALIPER
20	Lindera benzoin Spicebush	T	M	FACW-	15'	CONT/B & B 3"-5' HEIGHT
35	Quercus Rubra Red Oak	I	M-W	FAC	15'	CONT/B & B 1" CALIPER
32	Liriodendron tulipifera Tulliptree	MT	D-M	FAC	15'	CONT/B & B 1" CALIPER
30	Nyssa sylvatica Black Gum	T	M-W	FAC	15'	CONT/B & B 1" CALIPER
30	Prunus sargentii Sargent Cherry	I	M	FACU	15'	CONT/B & B 1" CALIPER

TOTAL
162 TREES, 20 BUSHES

ALTERNATIVE 2

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
60	Acer rubrum Red Maple	VT	D-W	FAC	11'	SEEDLING/WHIP WITH TREE SHELTER
40	Lindera benzoin Spicebush	T	M	FACW-	11'	SEEDLING/WHIP WITH TREE SHELTER
60	Quercus Rubra Red Oak	I	M-W	FAC	11'	SEEDLING/WHIP WITH TREE SHELTER
60	Liriodendron tulipifera Tulliptree	MT	D-M	FAC	11'	SEEDLING/WHIP WITH TREE SHELTER
54	Nyssa sylvatica Black Gum	T	M-W	FAC	11'	SEEDLING/WHIP WITH TREE SHELTER
50	Prunus sargentii Sargent Cherry	I	M	FACU	11'	SEEDLING/WHIP WITH TREE SHELTER

TOTAL
284 WHIPS WITH TREE SHELTERS, 40 BUSHES

OWNER / DEVELOPER

PARCEL 537, 725, 768
BETHEL ASSEMBLY OF GOD
SAVAGE MD
9001 VOLLMERHAUSEN ROAD
JESSUP, MARYLAND 20794
(301)498-3344

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	A.V.	3.3.15 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT		3-26-15 DATE
DIRECTOR		3/26/15 DATE

STATE OF MARYLAND JEFFREY L. SLOMAN NO. 40091 PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY SLOMAN, P.E. 12/22/14 DATE

NOTE :

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

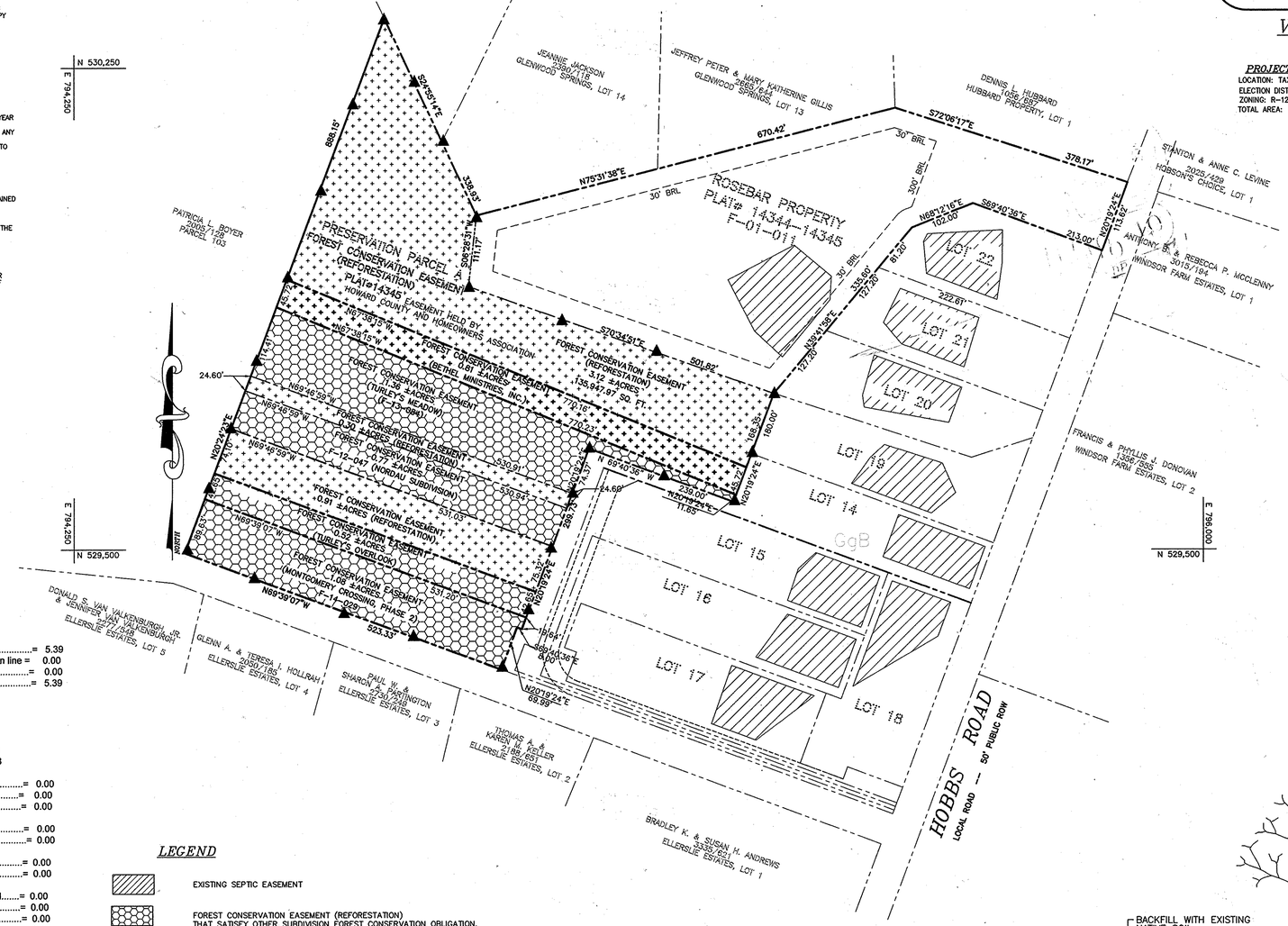
SOILS CLASSIFICATION

SYMBOL	DESCRIPTION
BoA	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES (D)
ChB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES (B)
GgA	GLENELG LOAM, 0 TO 3 PERCENT SLOPES (B)
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES (B)

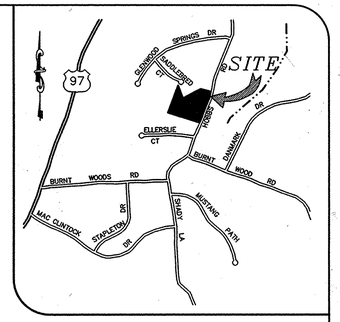
OFF-SITE FOREST CONSERVATION EASEMENT AREAS

TOTAL EASEMENT AVAILABLE FOR PLANTING: 8.87 ACRES±

PROJECT	EASEMENT AREA PROVIDED	REMAINING EASMENT AREA	FINAL PLAN #
NORDAU PROPERTY	0.77 ACRES±	8.10 ACRES±	F-12-047
TURLEY'S MEADOW	1.36 ACRES±	6.74 ACRES±	F-13-084
MONTGOMERY CORSSING, PHASE 2	1.08 ACRES±	5.66 ACRES±	F-14-029
TURLEY'S OVERLOOK	0.52 ACRES±	5.14 ACRES±	F-14-079
BETHEL MINISTRIES, INC.	0.81 ACRES±	4.33 ACRES±	SDP-14-042



VICINITY MAP



SCALE : 1" = 2000'
ADC MAP 17 B-4

PROJECT BACKGROUND:

LOCATION: TAX MAP: 47 PARCELS 768, 725, AND 537
ELECTION DISTRICT : SIXTH
ZONING: R-12, R-SA-8
TOTAL AREA: 5.39 AC.±

LEGEND

- EXISTING SEPTIC EASEMENT
- FOREST CONSERVATION EASEMENT (REFORESTATION) THAT SATISFY OTHER SUBDIVISION FOREST CONSERVATION OBLIGATION.
- EXISTING FOREST CONSERVATION EASEMENT (REFORESTATION) F-01-11 AVAILABLE.
- PROPOSED FOREST CONSERVATION EASEMENT FOR BETHEL MINISTRIES, INC.
- DENOTES FOREST CONSERVATION SIGNAGE

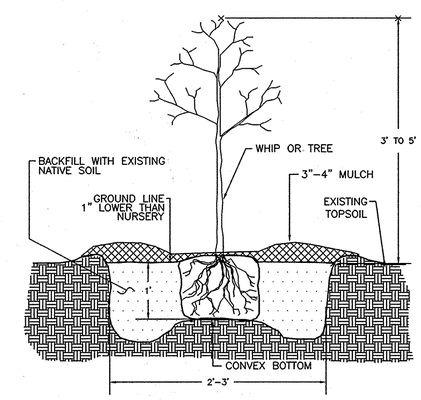
FOREST CONSERVATION WORKSHEET

NET TRACT AREA:
A. Total tract area ..... = 5.39
B. Area within 100 year floodplain & overhead transmission line = 0.00
C. Area to remain in agricultural production ..... = 0.00
D. Net tract area ..... = 5.39
LAND USE CATEGORY:
Input the number "1" under the appropriate land use zoning, and limit to only one entry.
ARA MDR IDA HDR MPD CIA
0 0 1 0 0 0
E. Afforestation Threshold ..... 15% x D = 0.81
F. Conservation Threshold ..... 20% x D = 1.08
EXISTING FOREST COVER:
G. Existing forest cover (excluding floodplain) ..... = 0.00
H. Area of forest above afforestation threshold ..... = 0.00
I. Area of forest above conservation threshold ..... = 0.00
BREAK EVEN POINT:
J. Forset retention above threshold with no mitigation ..... = 0.00
K. Clearing permitted without mitigation ..... = 0.00
PROPOSED FOREST CLEARING
L. Total area of forest to be cleared ..... = 0.00
M. Total area of forest to be retained ..... = 0.00
PLANTING REQUIREMENTS:
N. Reforestation for clearing above conservation threshold ..... = 0.00
P. Reforestation for clearing below conservation threshold ..... = 0.00
Q. Credit for retention above conservation threshold ..... = 0.00
R. Total reforestation required ..... = 0.00
S. Total afforestation required ..... = 0.00
T. Total reforestation and afforestation required ..... = 0.81
Total reforestation and afforestation provided ..... = 0.81

FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 0.81 ACRES OF REQUIRED AFFORESTATION FOR THE BETHEL MINISTRIES, INC. INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY, PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE OF HOBBS ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A RED-LINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 0.81 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FC EASEMENT LOCATED ON ROSEBAR. ~~SURETY IN THE AMOUNT OF $17,642.00 FOR 0.81 ACRES OF REQUIRED AFFORESTATION SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THE SITE DEVELOPMENT PLAN, SDP 14-042/BETHEL MINISTRIES, INC.~~

FINANCIAL SURETY FOR REFORESTATION WAS PROVIDED UNDER F-99-019A.

MD DNR QUALIFIED PROFESSIONAL
MASHID TRINGA 12/22/14



TREE PLANTING DETAIL

CONTAINER GROWN

project 12-008	date DEC 2014
illustration JLS	engineering JLS
scale 1"=100'	approval RJH

no.	description	date
	revisions	

BETHEL MINISTRIES, INC.

FOREST CONSERVATION EASEMENT GRANTED FROM ROSBAR PROPERTY, PRESERVATION PARCEL "A"
TAX MAP 14, PARCEL 221, BLOCK 23
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OFFSITE FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075
(410) 997-0296 Balt. (410) 997-0298 Fax.