

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

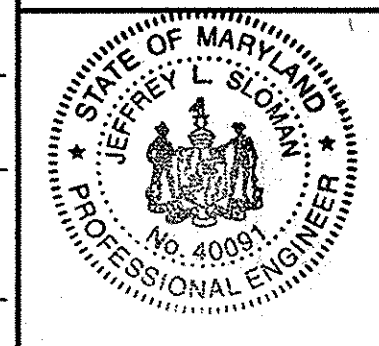
OWNER / DEVELOPER
 PARCEL 537, 725, 768
 BETHEL MINISTRIES, INC.
 9001 VOLLMERHAUSEN ROAD
 JESSUP, MARYLAND 20794
 (301)498-3344

APPROVED: DEPARTMENT OF PUBLIC WORKS

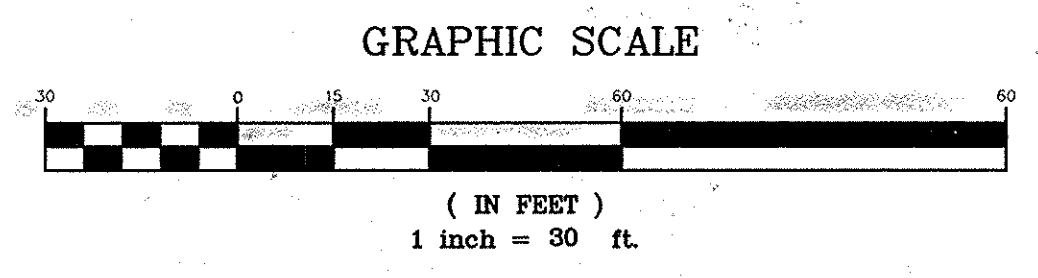
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Jeffrey L. Slovan 3-3-15 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Keith A. ... 3-26-15 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
Derek M. ... 3/26/15 DATE
 DIRECTOR



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. 40991, EXP. DATE 2/13/15.
Jeffrey L. Slovan
 JEFFREY SLOVAN, P.E. DATE 12/22/14



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

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
 HOWARD COUNTY, MARYLAND
 SIXTH ELECTION DISTRICT
 DEMOLITION PLAN

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

WATER / SEWER MAIN TABULATION CHART

Table with columns: APPURTENANCE, NORTHING, EASTING. Rows include 6"x6" TAPPING SLEEVE AND VALVE, FIRE HYDRANT #1, etc.

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).

QUANTITY TABLE

Table with columns: ITEMS, QUANTITIES ESTIMATED. Rows include 8" WATER MAIN, 4" WATER HOUSE CONNECTION, etc.

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 VOLLMEYER 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.

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.

Jeffrey Sloman, PE SIGNATURE OF ENGINEER DATE 12/22/14 PRINTED NAME OF ENGINEER

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

John M. Robertson 2/14/15 DATE APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

HOWARD SOIL CONSERVATION DISTRICT

COUNTY HEALTH OFFICER DATE

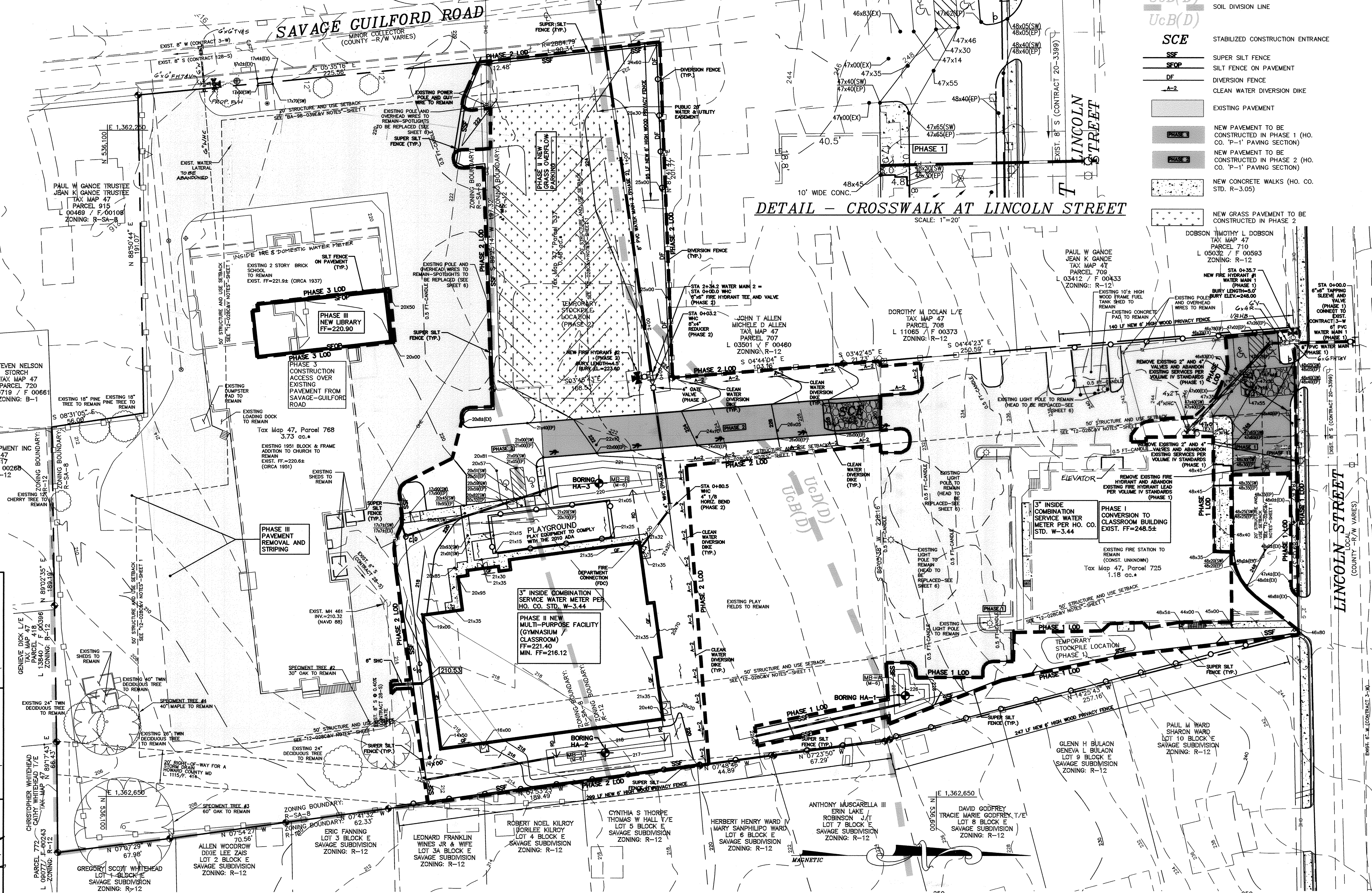
APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE 3-3-15

DATE 3-20-15

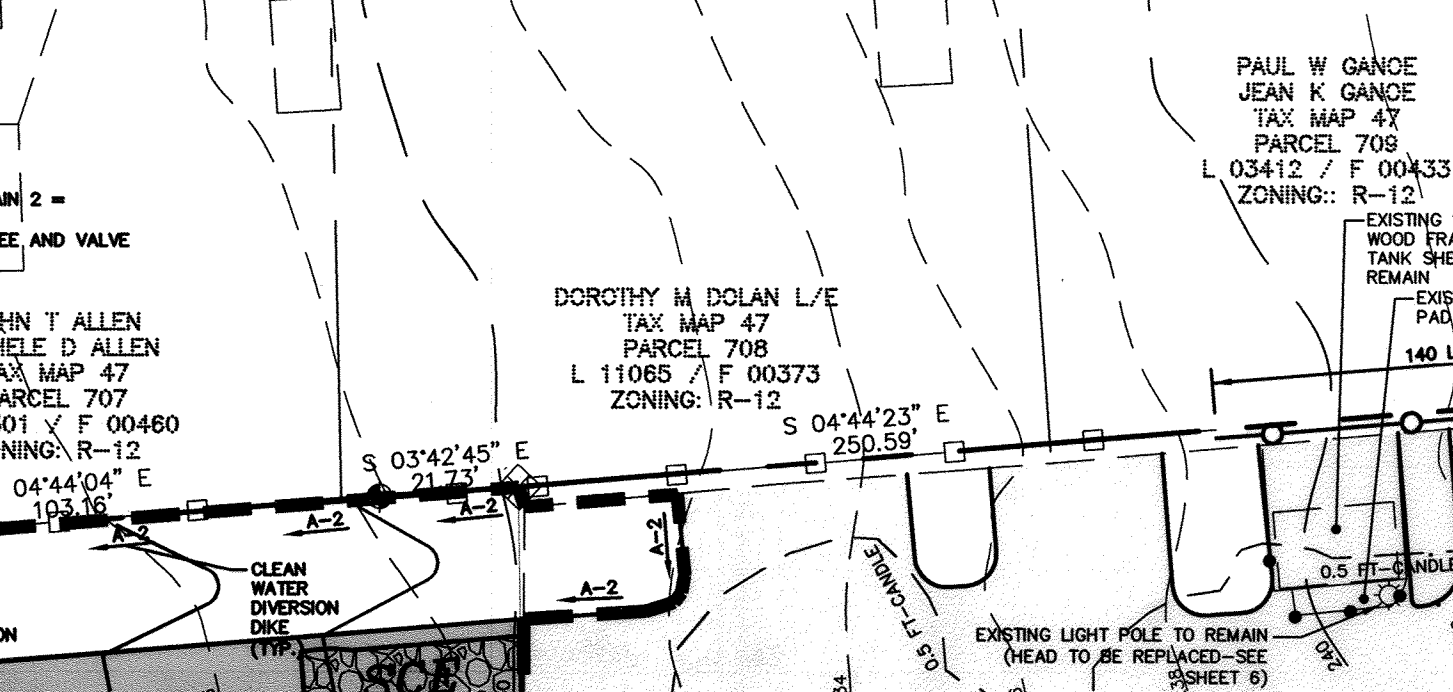
DATE 3/20/15

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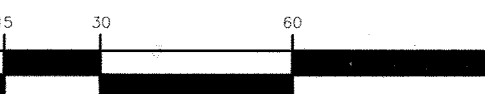


DETAIL - CROSSWALK AT LINCOLN STREET

SCALE: 1"=20'



GRAPHIC SCALE



SOILS DESCRIPTION

Table with columns: SYMBOL, HYDROLOGICAL DESCRIPTION, GROUP. Rows include UGB, UGD.

SECTION - CROSSWALK AT LINCOLN STREET

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

LEGEND

- 220 EXISTING CONTOURS
215 PROPOSED CONTOURS
20x70 PROPOSED SPOT GRADE AT EDGE OF PAVEMENT
20x100 PROPOSED SPOT GRADE AT EDGE OF SIDEWALK
202(X) EXISTING GRADE
(100) LIMIT OF DISTURBANCE
UcD(D) SOIL DIVISION LINE
UcB(D)
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

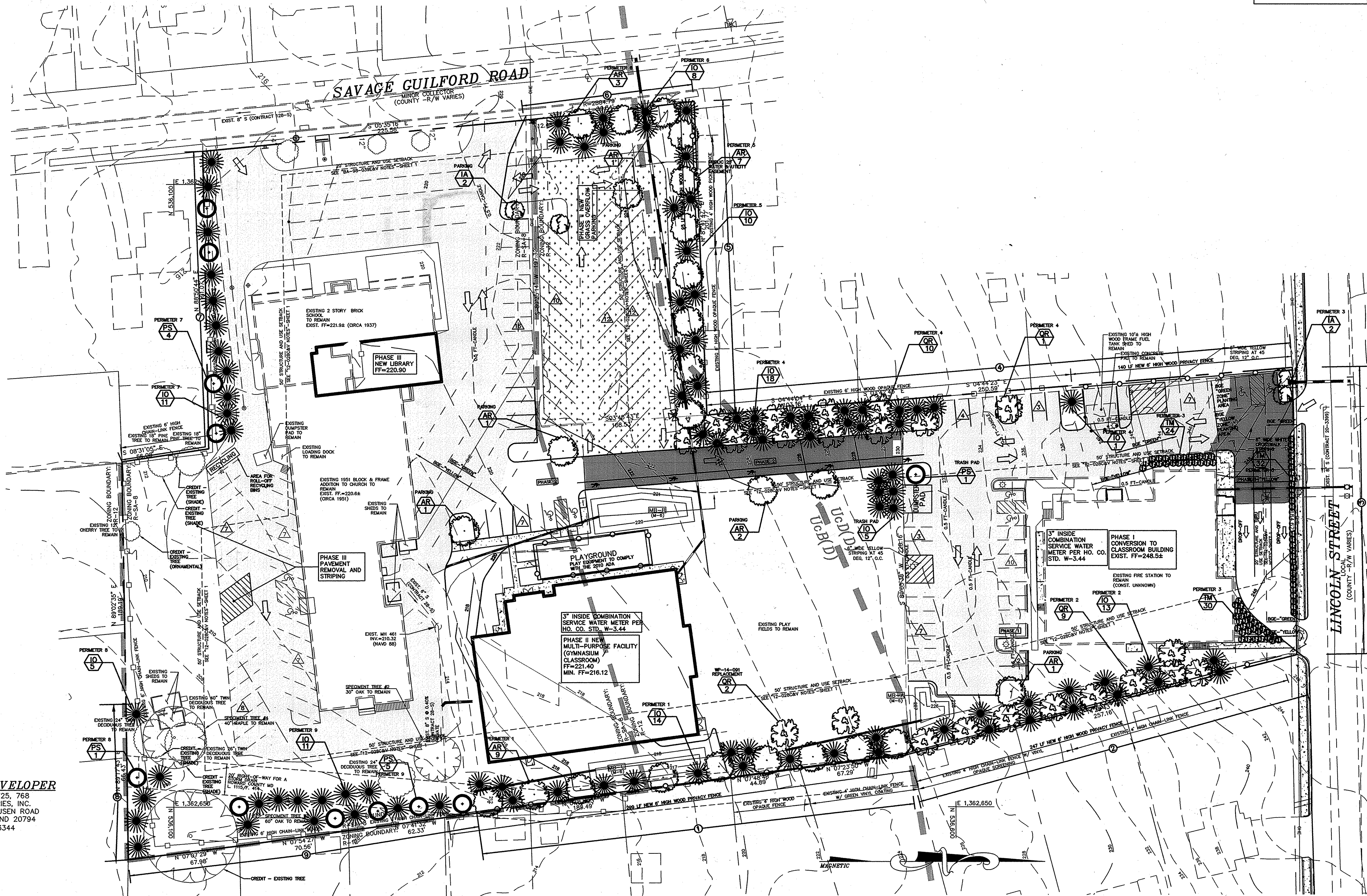
Project information table with columns: date, illustration, scale, project no., revision no., description, date.

Table with columns: no., description, date, revision no., description, 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. GRADING, SEDIMENT AND EROSION CONTROL, AND UTILITY PLAN.

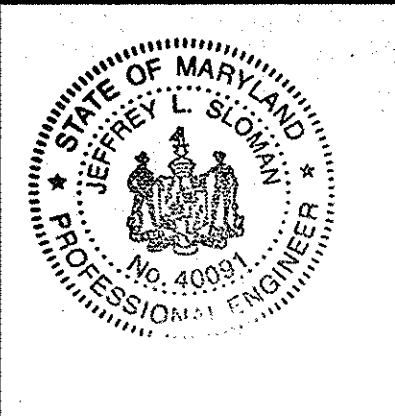
MILDENBERG, BOENDER & ASSOC., INC. Surveyors, Planners, Engineers. 7850-B Grace Drive, Columbia, Maryland 21044 (410) 997-0286. 4 OF 10 SDP-14-042

SEE SHEET 2 FOR SPECIMEN TREE CHART



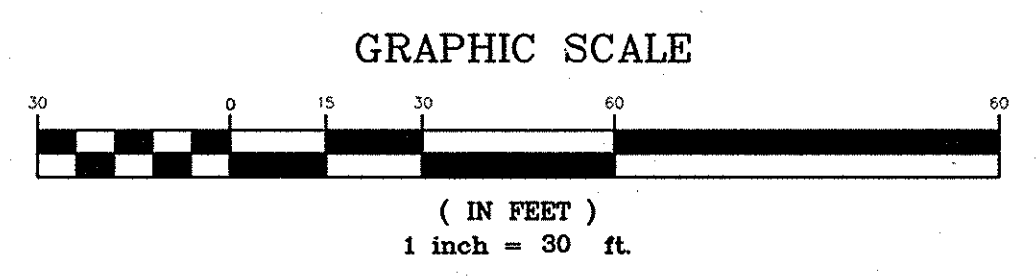
OWNER / DEVELOPER
 PARCEL 537, 725, 768
 BETHEL MINISTRIES, INC.
 9001 WOLLMERHAUSEN ROAD
 JESSUP, MARYLAND 20794
 (301)498-3344

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



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 L. SLOMAN, P.E. DATE

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.
 [Signature] 1/28/15
 OWNER DATE



Project	DEC 2014	date	DEC 2014	approval
Illustration	JLS	scale	1"=30'	MMM
Engineering	JLS	description		
Revisions		no.		
		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
 LANDSCAPE PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 7350-B Grace Drive, Columbia, Maryland 21044
 (410) 997-0296 Ext. (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	TOTAL
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	N/A
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	NO	NO	N/A
NUMBER OF PLANTS REQUIRED	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 9 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	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	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

- NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- 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.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS 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.
- 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.
- 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 BUILDING PERMIT AGREEMENT FOR THIS SITE DEVELOPMENT PLAN, SDP-14-042.

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 (2:1 SUBSTITUTION))	5 SHADE TREES 2 EVERGREEN TREES

SCHEDULE C : REPLACEMENT TREES

PER THE CONDITIONS OF WAIVER PETITION WP-14-091, APPROVED ON 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 (OR)	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 'HICKSI' (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.

DEVELOPER'S/OWNER'S CERTIFICATE

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OWNER / DEVELOPER

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

M. J. De...
OWNER
DATE: 1/28/15

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-3-15
DATE
[Signature] 3-26-15
DATE
[Signature] 3/26/15
DATE



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[Signature]
JEFFREY L. SLOVAN, P.E.
DATE: 12/20/14

D-Series Size 1 LED Area Luminaire

Specifications
EPA: 1.2 ft
Length: 33"
Width: 13"
Height: 7-1/2"
Weight: 27 lbs

Ordering Information
EXAMPLE: DSK1 LED 45C 1000 40K T3M MVOL SPA DDBX0 820 LED

Symbol	Code	Description	Color	Temp	Beam	Mount	Notes
DSK1	LED	LED Luminaire	45C	1000	40K	T3M	...

LITHONIA LIGHTING
One Lithonia Way • Conley, Georgia 30121 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
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Performance Data

Model	Beam	Temp	Color	Temp	Beam	Mount	Notes
DSK1	LED	45C	1000	40K	T3M

LITHONIA LIGHTING
One Lithonia Way • Conley, Georgia 30121 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
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Performance Data

Lumen Ambient Temperature (LAT) Multiplier

LAT	Multiplier
10°C	1.0
20°C	0.9
30°C	0.8
40°C	0.7
50°C	0.6

Projected LED Lumen Maintenance

Photometric Diagrams

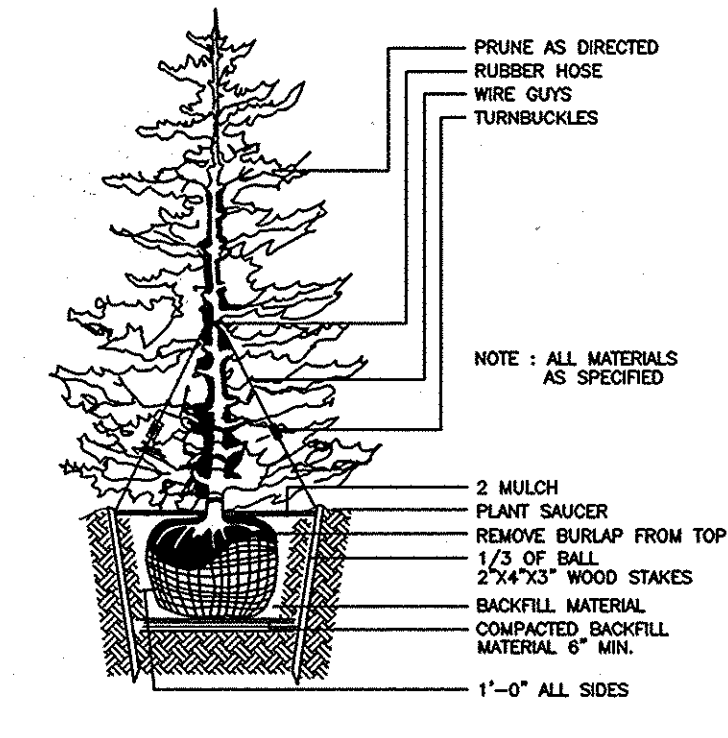
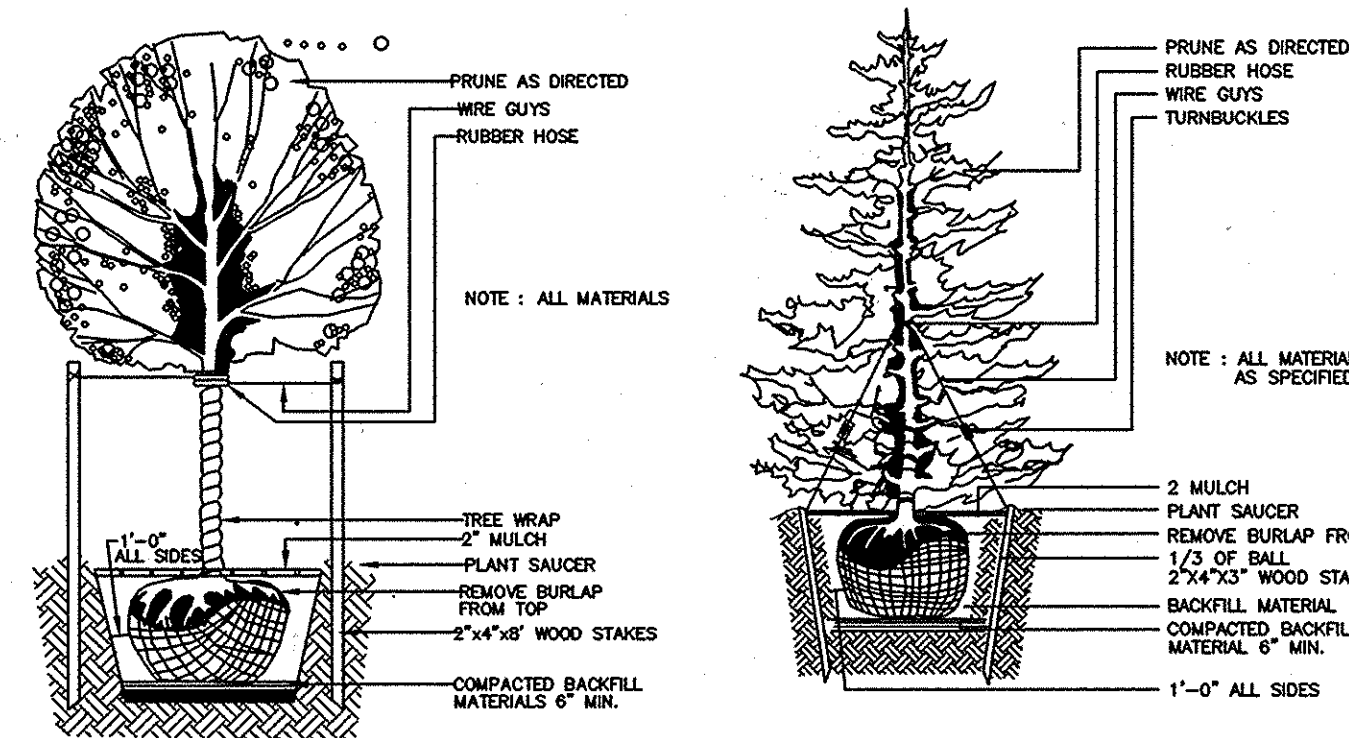
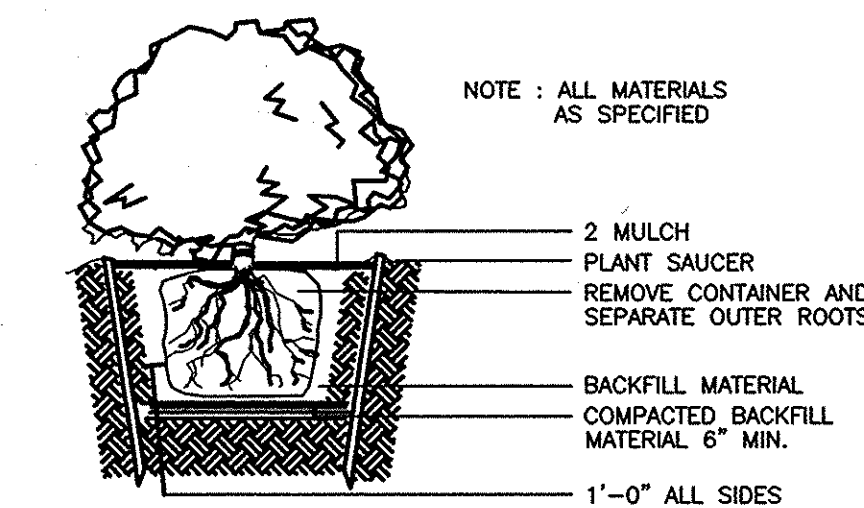
FEATURES & SPECIFICATIONS

INTENDED USE

CONSTRUCTION

WARRANTY

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One Lithonia Way • Conley, Georgia 30121 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
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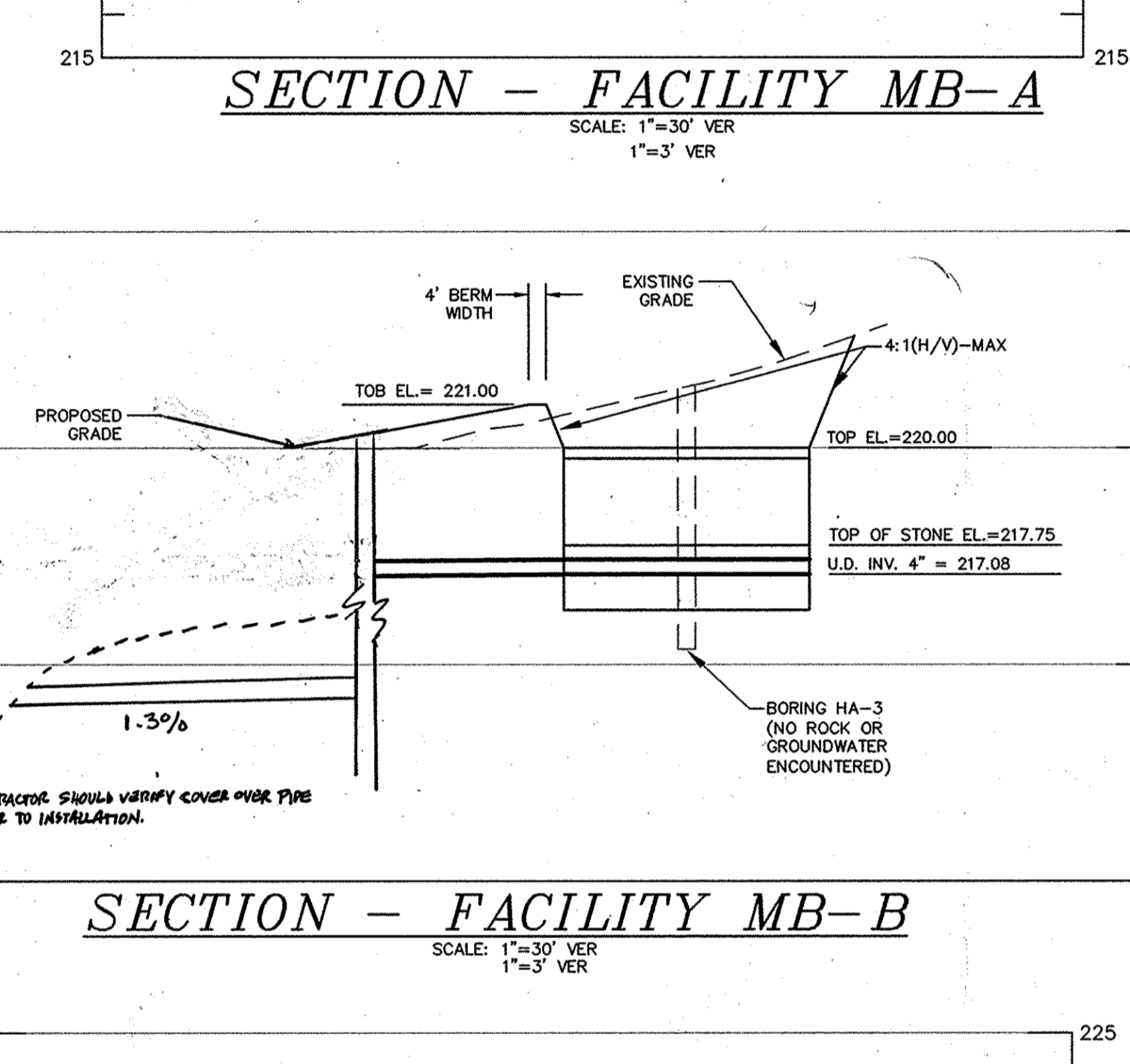
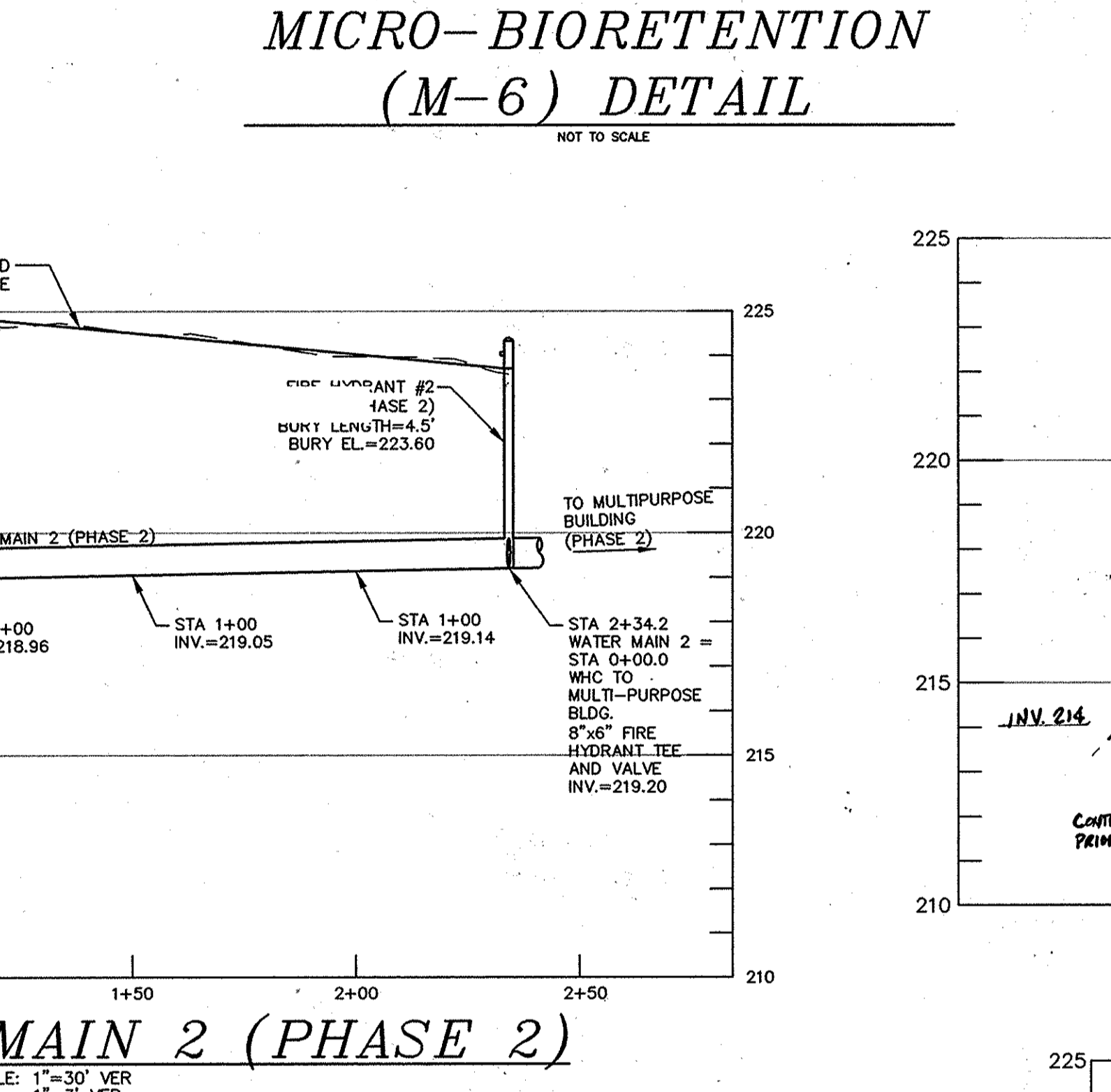
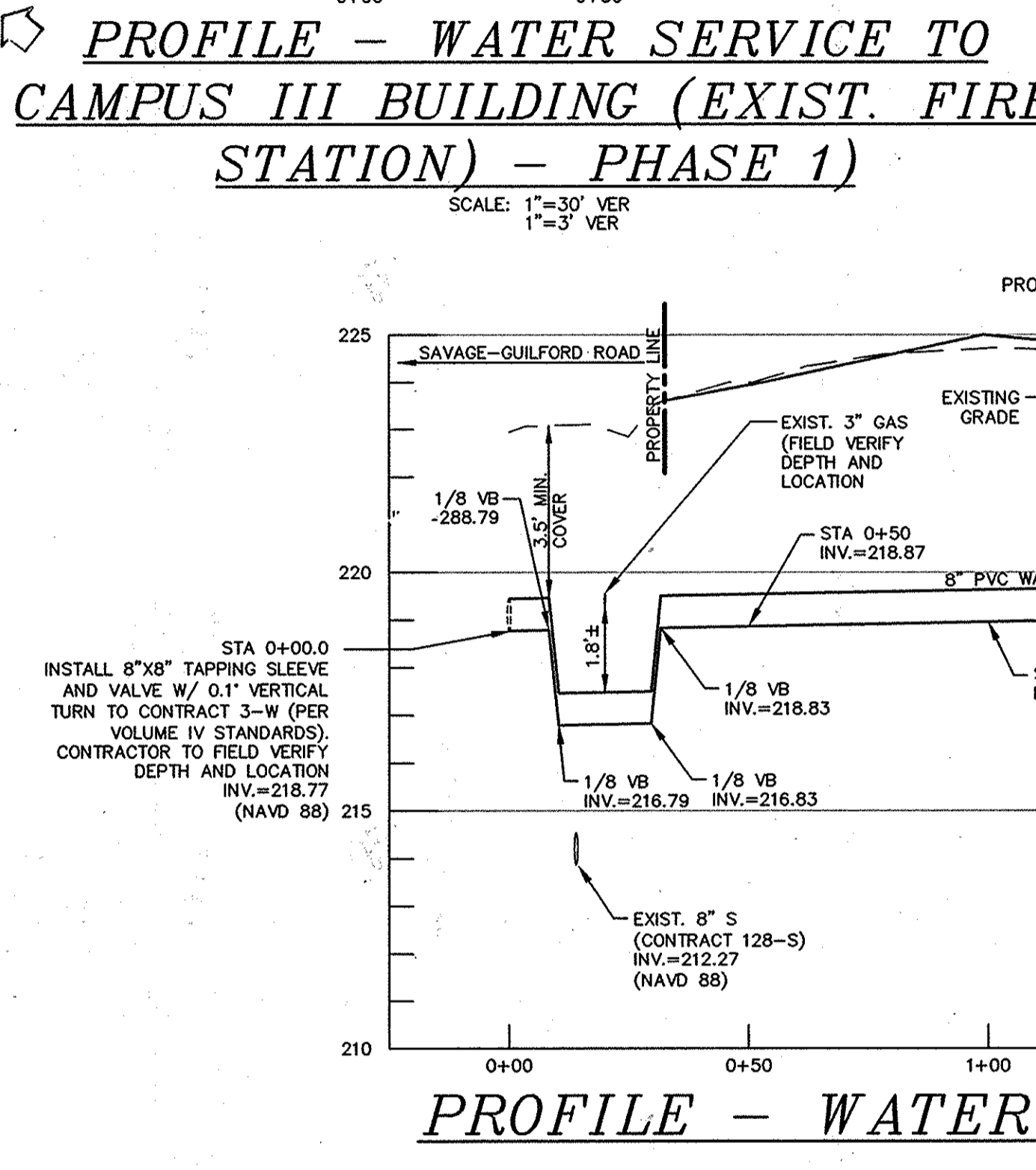
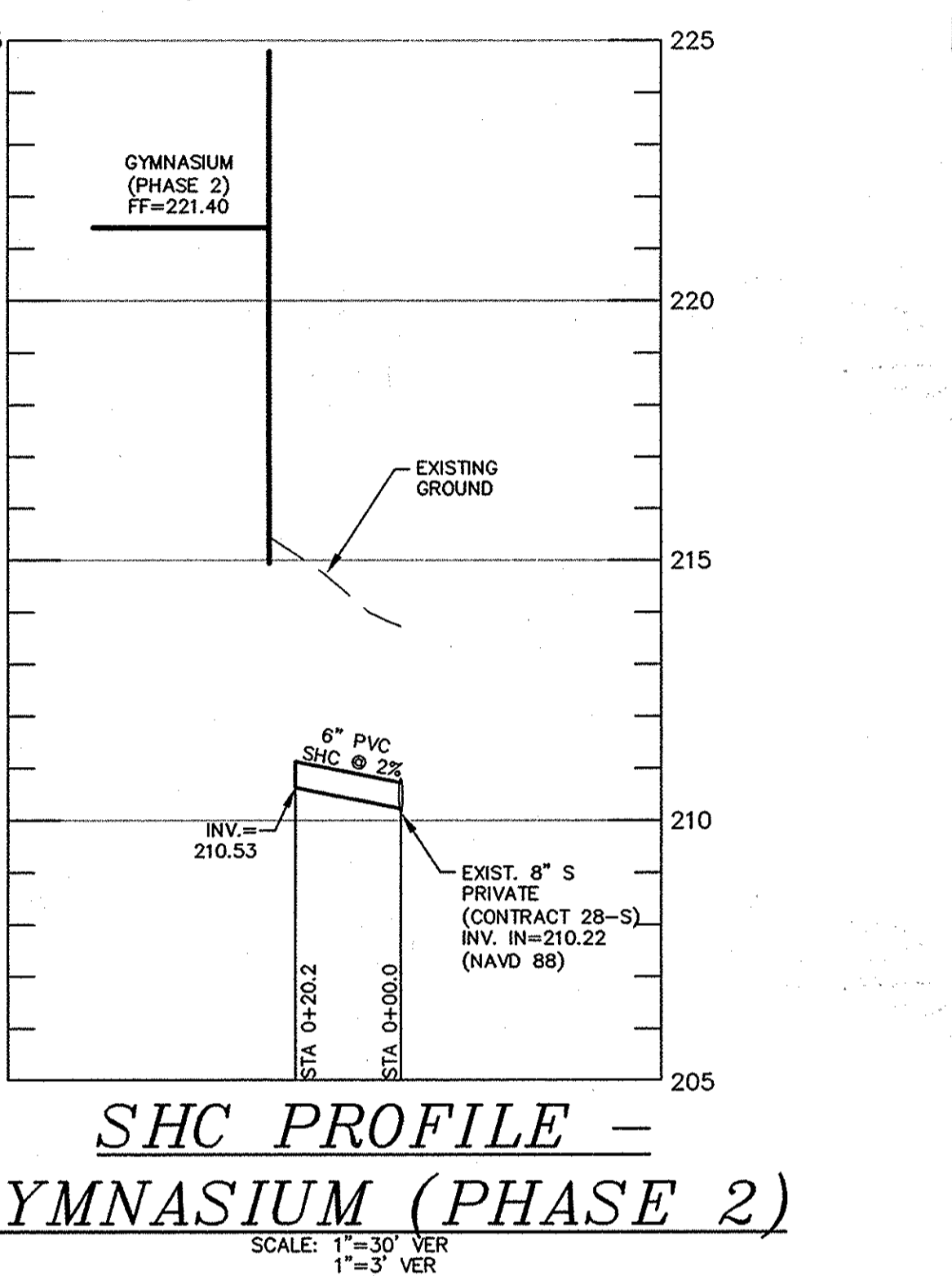
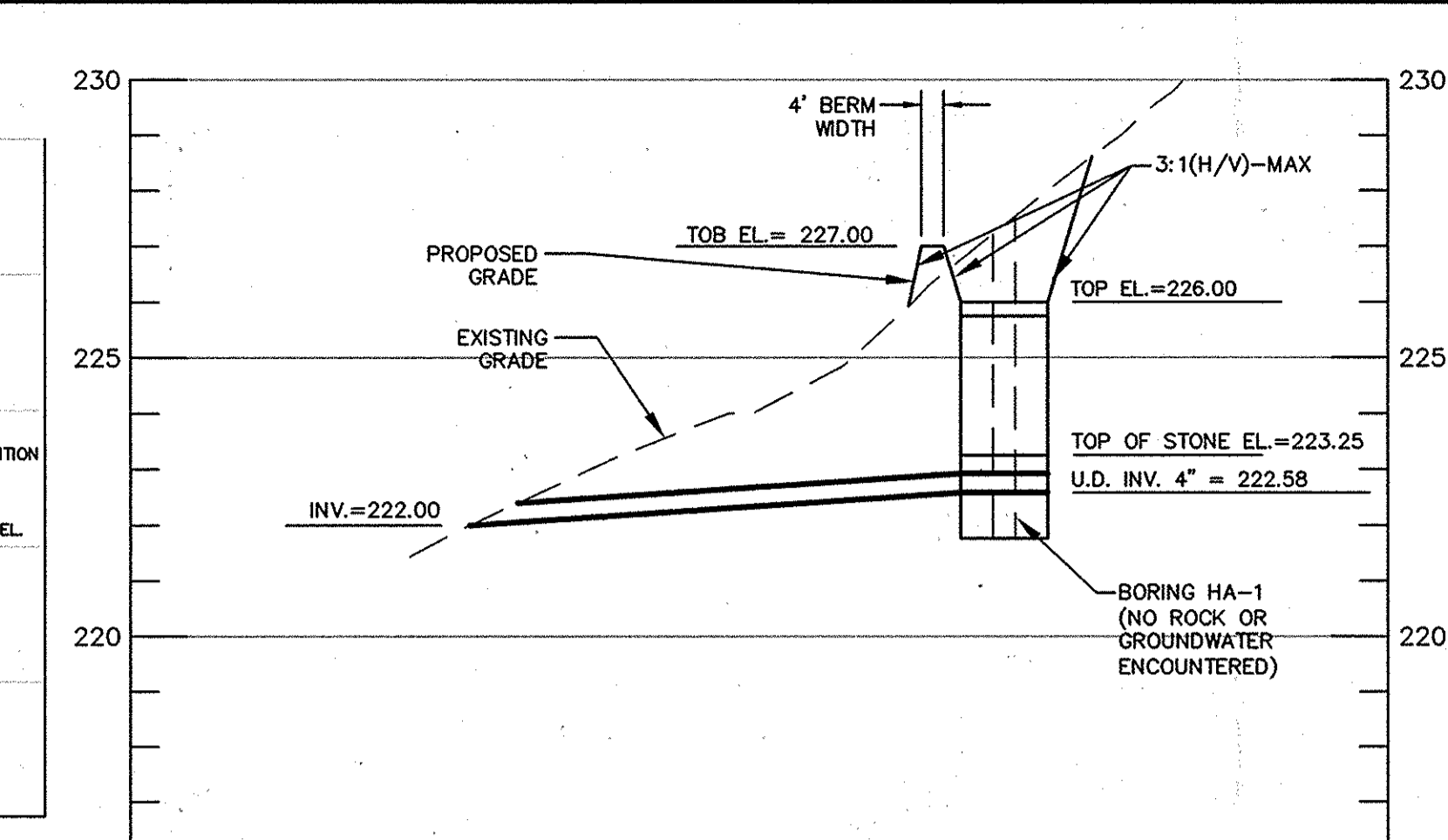
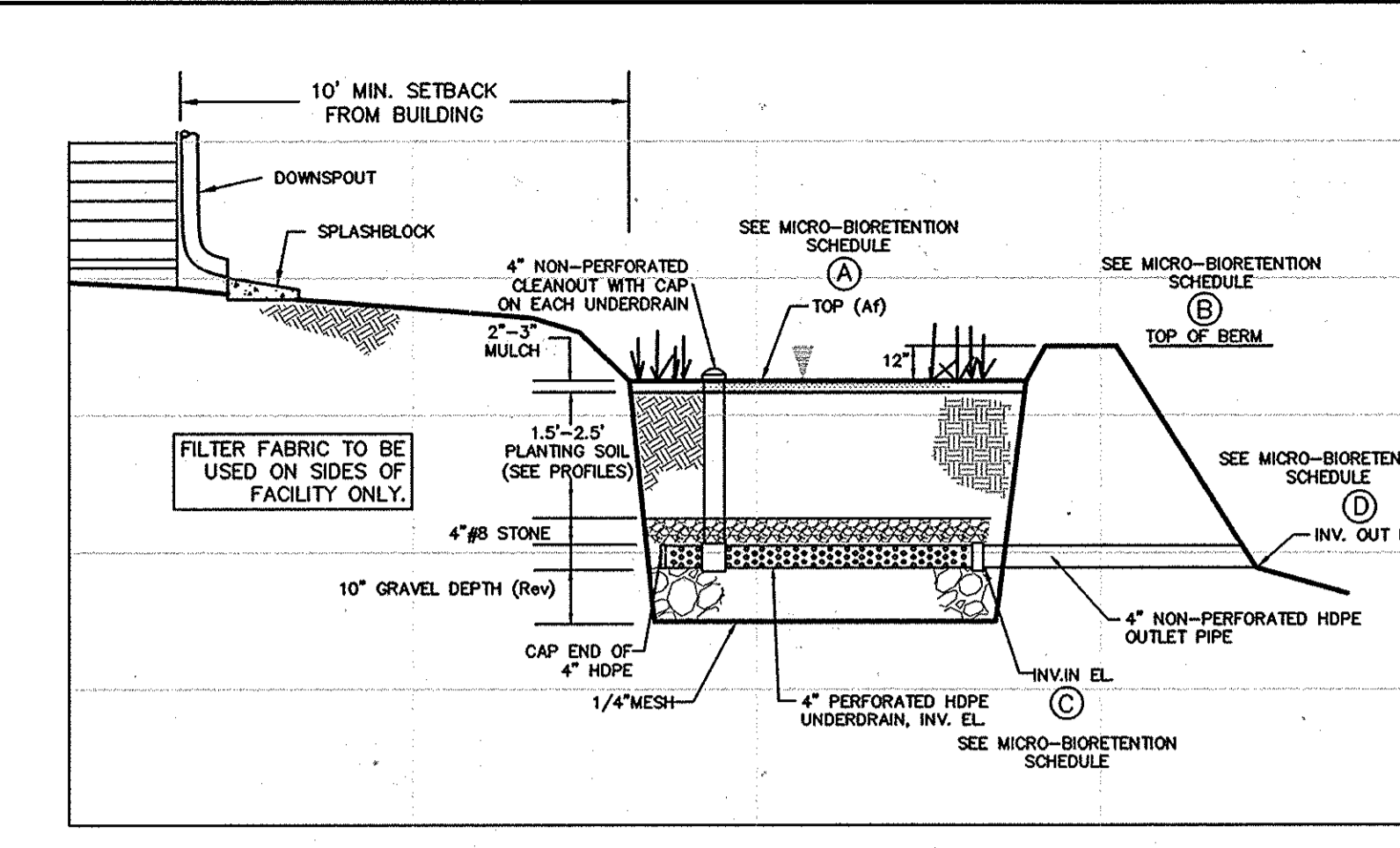
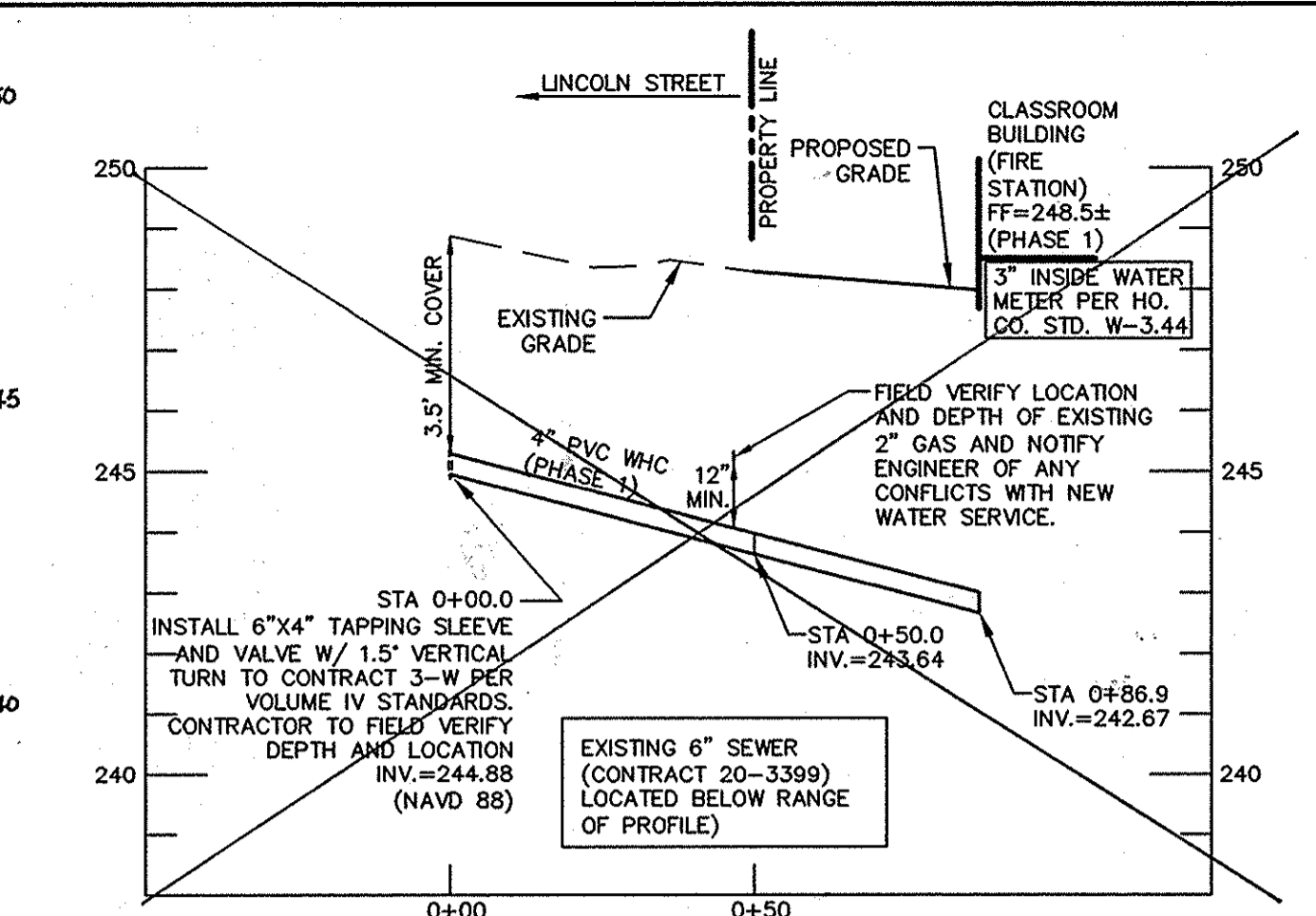
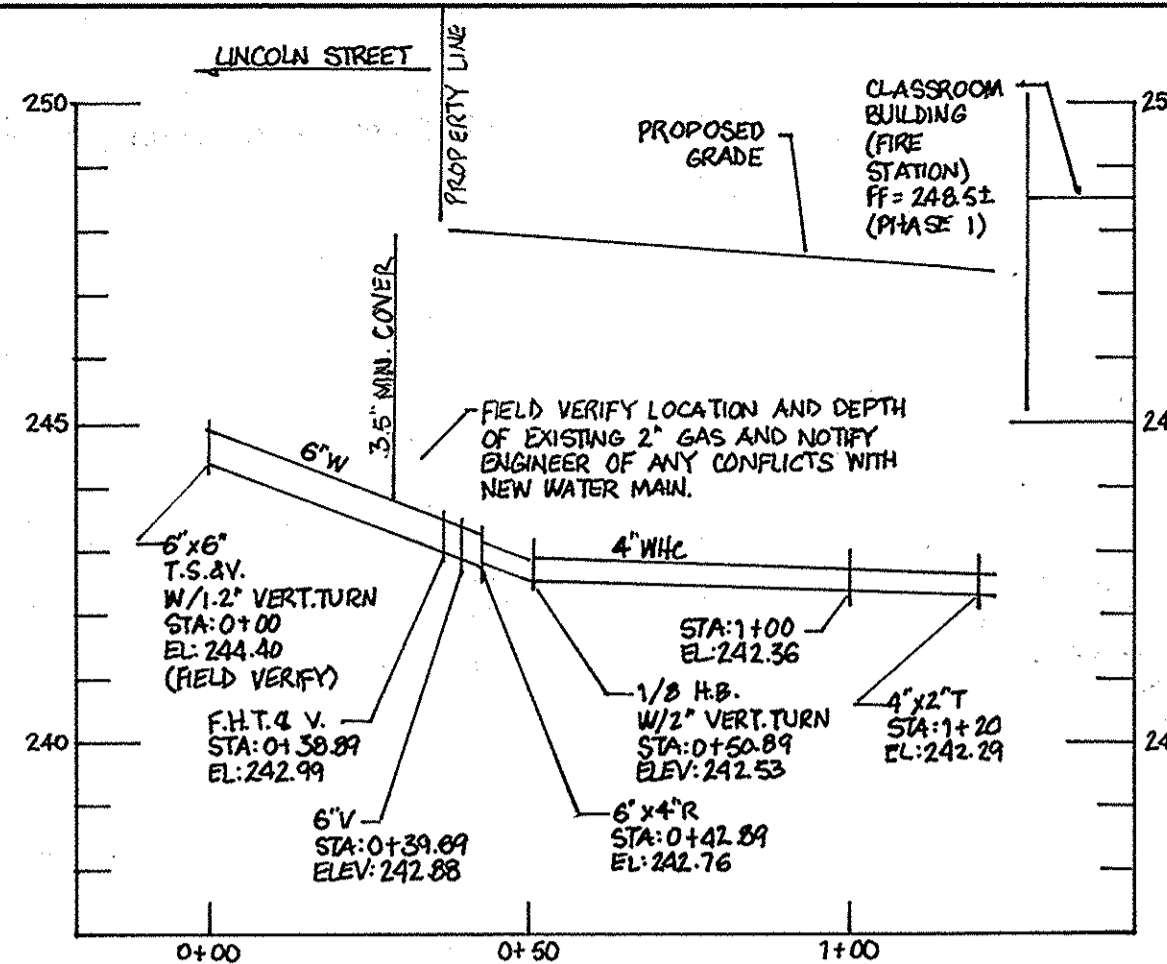


date	DEC-2014	approval	MAM
project	12-018	scale	1"=30'
illustration	JLS	description	
	JLS	revisions	

date	
description	
revisions	
no.	

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
LANDSCAPE AND LIGHTING NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7550-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Ext. (410) 997-0298 Fax



DEVELOPER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERFORM ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc.
PRINTED NAME OF DEVELOPER
Signature: [Signature] DATE: 1/23/15

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.

Jeffrey Sloman, PE
SIGNATURE OF ENGINEER DATE: 12/22/14

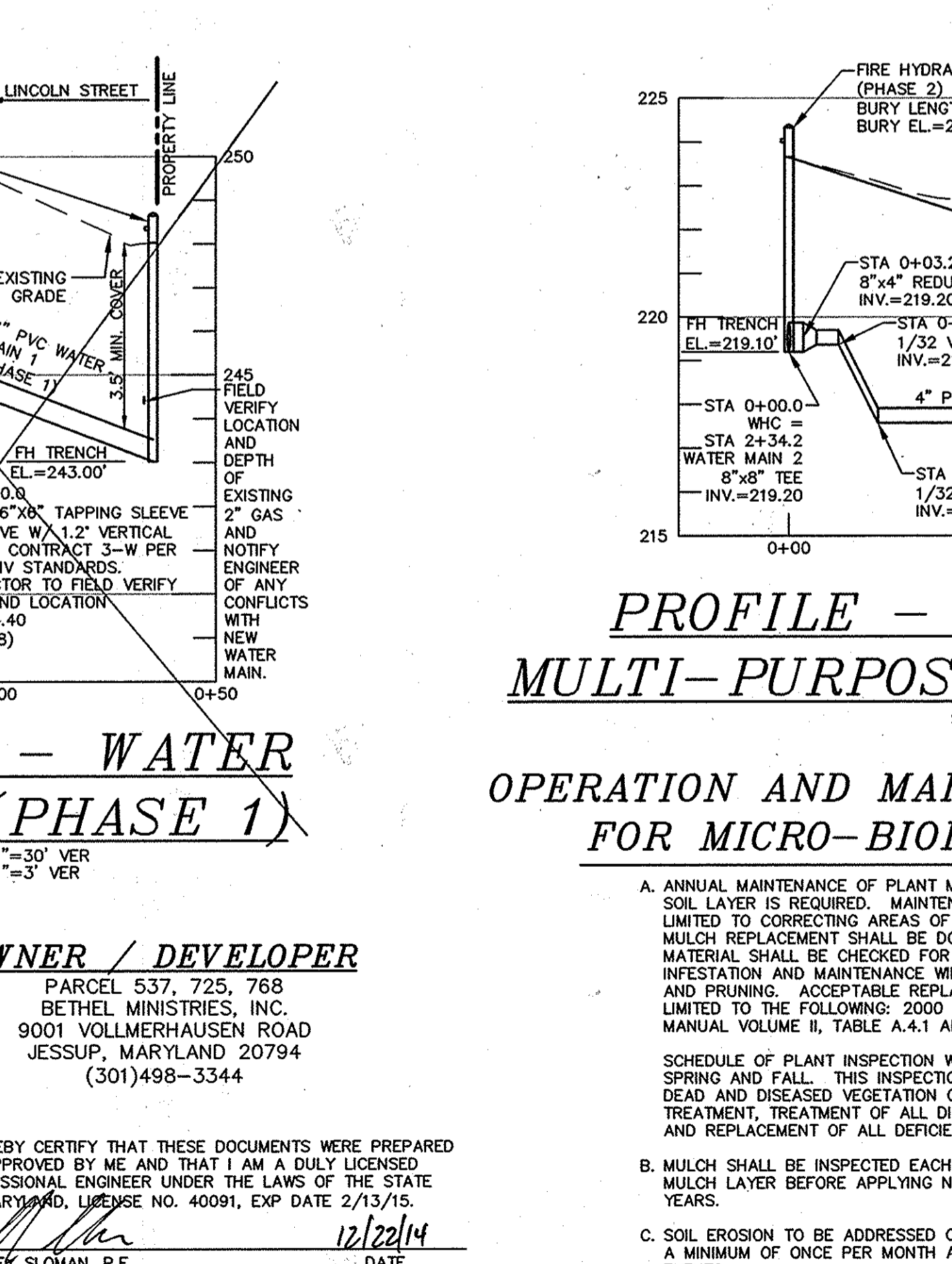
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Howard Soil Conservation District
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

Howard County Health Department
COUNTY HEALTH OFFICER DATE: 3-3-15

Department of Planning and Zoning
APPROVED: DATE: 3-22-15

Jeffrey Sloman, P.E.
DATE: 12/22/14



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

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.

B. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER 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 SCHEDULE

FACILITY	TOP EL. (A)	TOP OF BERM (B)	INV. IN (C)	INV. OUT (D)	AREA AT TOP EL. (A)
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

MICRO-BIORETENTION PLANTING DETAIL

VARIES

FLOW

VARIES

GRASS PARKING DETAIL (PHASE 2)

NOT TO SCALE

MICRO-BIORETENTION FACILITY PLANTLIST

QUANTITY	QUANTITY	QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	RATIO
3	12	7	○	ILEX GLABRA	INK BERRY	2'-3" HT.	1/60 SF
8	37	21	○	LOBELIA SPICULATA	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-ANGIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER	1/40 SF

TOTAL: 145 PERENNIALS, 22 SHRUB
ALL PLANTINGS MAY BE SUBSTITUTED WITH APPROVED EQUALS

BETHEL MINISTRIES, INC.
CONVERSION OF FIRE STATION TO SCHOOL BUILDING, CONSTRUCTION OF NEW GYMNASIUM AND LIBRARY
TAX MAP 47, PARCEL 766, 725, 537
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT, CONSTRUCTION AND UTILITY NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0286 Fax: (410) 997-0286

Project: 12-018
Date: DEC 2014
Illustration: JLS
Scale: 1"=30'
Approval: JLS
Date: 7/22/15
Description: REV PROFILE OF WATER MAIN #1 AND SHC TO CAMPUS III BUILDING

7 OF 10
SDP-14-042

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
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.

1. SOIL PREPARATION

A. TEMPORARY STABILIZATION

- SEEDING PRACTICE 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 RIPPEREAS PREPARED FOR 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 TRACED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

B. PERMANENT STABILIZATION

- A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - 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 LOESS/LIKE WOULD BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1.5 PERCENT PERMANENT ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF THE SOIL DOES NOT MEET THE ABOVE CONDITIONS.
- 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.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF SOIL TESTS.
- MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAMM 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 SEEDING PREPARATION. TRACTOR FLATTER IS PERMITTED TO FLATTER THE TOP OF THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP OF SOIL LOOSE AND FRAGILE. SEEDING LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

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
ON THE SURFACE OF ALL PERMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA
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.

A. SEEDING

- SEEDS 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 MUST HAVE BEEN TESTED WITHIN 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.
- MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE INSPECTOR IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWs.
- INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA 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 INOCULANTS AS COOL AS POSSIBLE UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MAX) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

B. APPLICATION

- DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 - INCORPORATE SEED INTO THE SOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - ADJUST THE DIRECTION OF SEEDING TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH A WEIGHTED ROLLER TO PREVENT GOOD SEED TO SOIL CONTACT.
- DISK OR CULTIPACK SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - CULTIPACK SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEED MUST BE FIRMLY PLANTED.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - 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; P₂O₅ (PHOSPHOROUS), 200 POUNDS PER ACRE; K₂O (POTASSIUM), 200 POUNDS PER ACRE.
 - 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 SPLIT APPLICATIONS. REPLACE GEOTEXTILE LIME WHEN HYDROSEEDING.
 - MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

C. MULCHING

- MULCH MATERIALS (IN ORDER OF PREFERENCE)
 - 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, MOULDY, CAKED, RECYCLED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
 - WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 - WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROXIMATE COE TO FIGHT THE VISUAL INSPECTION OF THE UNIFORM SPREAD SLURRY.
 - WCFM INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - 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 PLANTATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTCH AND BE APPLIED WITH THE USE OF SPECIALIZED APPLICATION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 - WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - PERFORM WCFM MULCHING TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 4.0 TO 8.5 MILLIMETER (RANGE FROM APPROXIMATELY 1.0 MILLIMETER PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
- APPLICATION
 - 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.
 - WOOD CELLULOSE FIBER MULCH AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER 1000 S.F. OF SOIL. WCFM IS TO BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER 1000 S.F. OF SOIL.
- ANCHORING
 - PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MAXIMIZE 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:
 - A MULCH ANCHORING 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 IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY.
 - WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 50 POUNDS PER 1000 S.F. OF SOIL. APPLY THE WCFM APPLICATION RATE AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - SYNTHETIC BINDERS SUCH AS ACRYLIC OR (ACRO-TACK), DCA-70, PETROSEAL, TERRA TAP, TERRA TACK OR OTHER APPROVED EQUIVALENTS MAY BE USED. APPLICATION RATES SHOULD BE DETERMINED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND GUSTS WOULD BE MOST EFFECTIVE.
 - ANCHORING OF ASPHALT IS STRICTLY PROHIBITED.
 - LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER SPECIFICATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 500 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 DISTURBED 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.

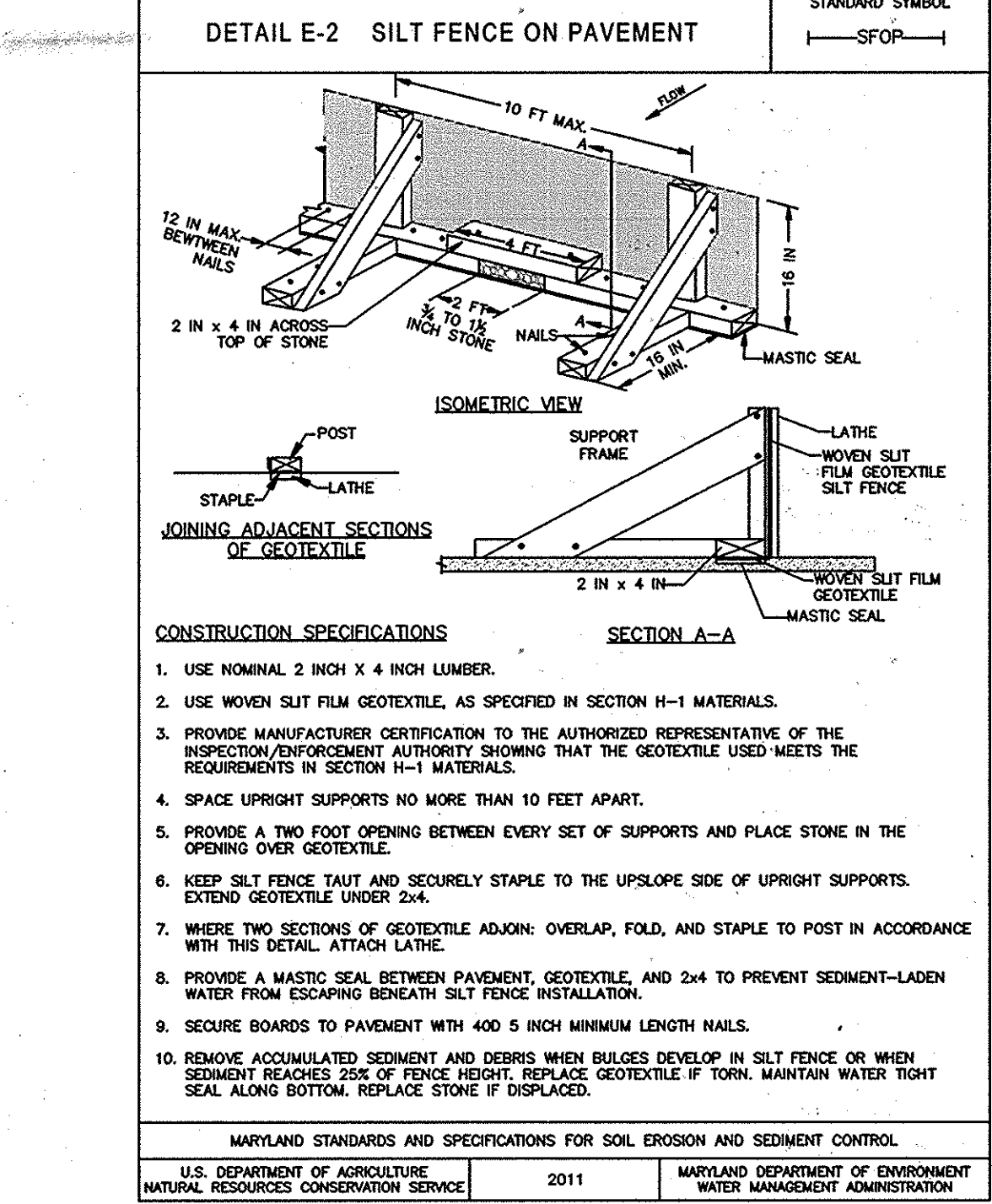
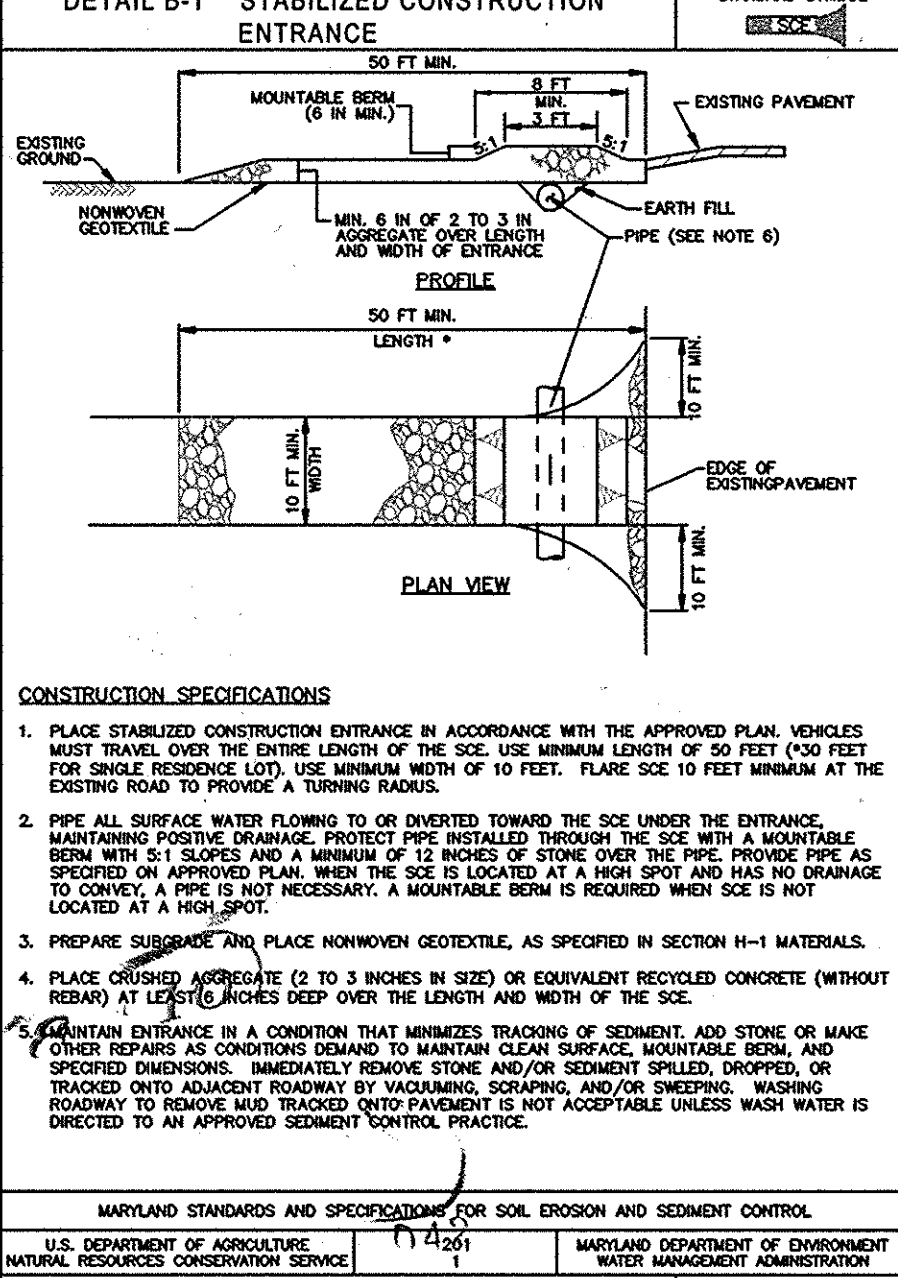
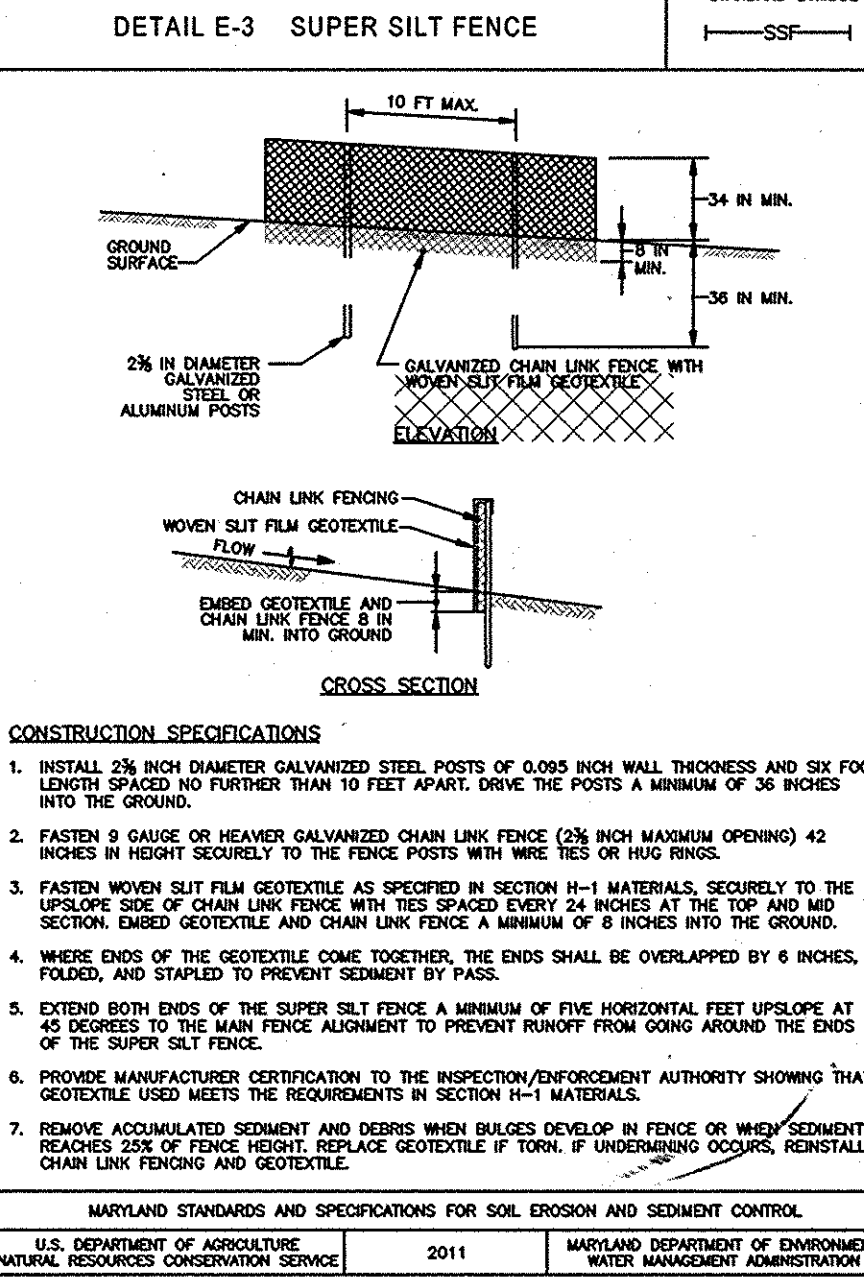
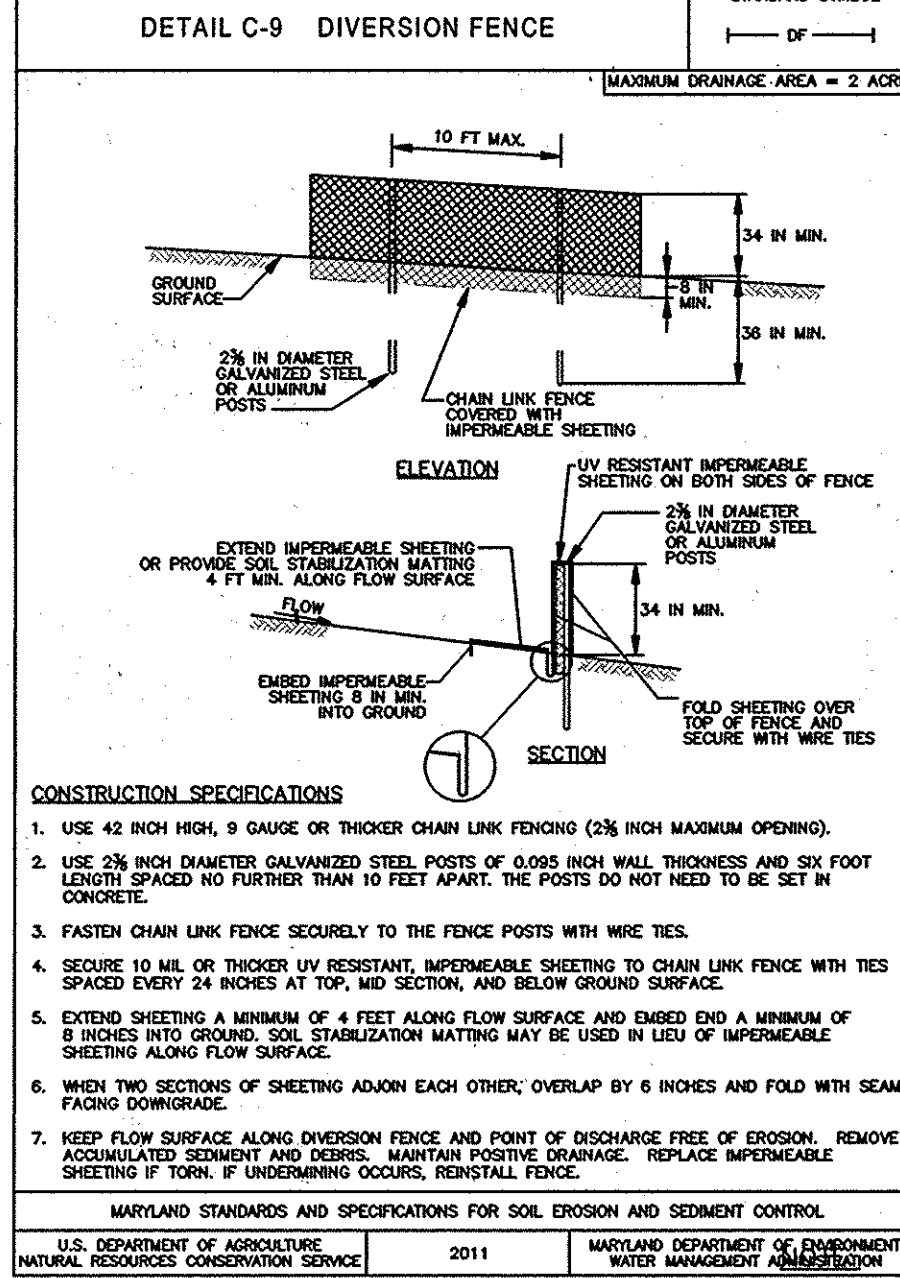
CRITERIA
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS.

A. SEED MIXTURES

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

B. CONSTRUCTION SPECIFICATIONS

- USE 42 INCH HIGH, 6 GAUGE OR THICKER CHAIN LINK FENCING (26 INCH MAXIMUM OPENING).
- USE 2 INCH DIAMETER GALVANNEED STEEL POSTS OF 0.625 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
- FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
- SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SEWED EVERY 24 INCHES AT TOP AND BOTTOM, AND SEAM BENEATH SURFACE.
- EXTEND SHEETING UPWARD AT LEAST 4 FEET ABOVE FLOW SURFACE AND BURY UNDER A MINIMUM OF 6 INCHES INTO GROUND. SOIL STABILIZATION MATING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING UP TO 6 INCHES ABOVE FLOW SURFACE.
- WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNWARD.
- KEEP FLOW SURFACE UNDER DIVERSION FENCE AND POINT OF DISCHARGE FREE OF OBSTRUCTION. REMOVE TIME, DO NOT USE RUNOFF TO UNDERMINE DIVERSION FENCE. REPLACE GEOTEXTILE WHEN UNDERMINING OCCURS, REINSTALL FENCE.



STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION (B-4-5)

DEFINITION
TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LEIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED SOIL.

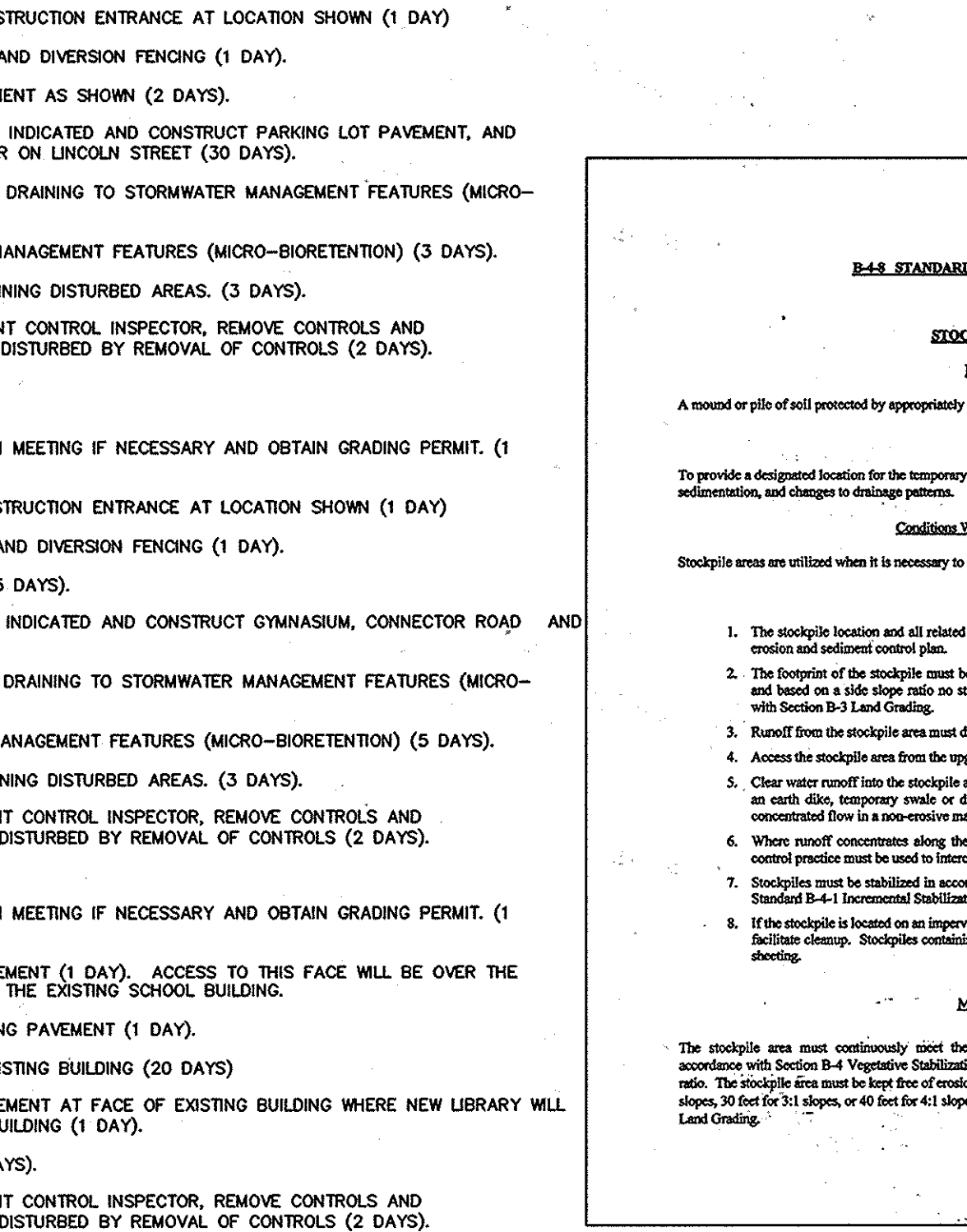
CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

A. SEED MIXTURES

- GENERAL USE
 - SELECT ONE OR MORE OF THE SPECIES 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 FOLD ON TABLE B.2, ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHOULDER, STREAM BANKS, OR DINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN US-ARNS TECHNICAL FIELD GUIDE, SECTION 342-CRITICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES, USE AND SHOW RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZED (40-0-0) AT 1 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.
- TURFGRASSES MIXTURES
 - AREAS WHERE TURFGRASSES MAY BE DESIRE IN LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.
 - KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE (IRIGATION REQUIRED) IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 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.
 - KENTUCKY BLUEGRASS/PERENIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MAINTENANCE (IRIGATION REQUIRED). RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2.0 POUNDS MIXTURE 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.
 - TALL FESCUE/KENTUCKY BLUEGRASS: FULL MIXTURE: FOR USE IN DROUGHT AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 65 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS TO 5 PERCENT. SEEDING RATE: 5 TO 8 PERCENT PER 1000 S.F. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER 1000 S.F.
- IDEAL TIME OF SEEDING FOR TURF GRASS MIXTURE: WESTERN MD. MARCH 15 TO JUNE 1, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 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)
- 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 AND OVER 12 INCHES LONG. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASS WILL NOT BE DIFFICULT.
- IF SOIL MOISTURE IS DEFICIENT, SUPPLY NET SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH 0.5 TO 1 INCH DEPTH TO 4 DAYS DEPENDENT ON SOIL TEXTURE UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE IN AREAS WHERE SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASON, OR ON ADVERSE SITES.

SEQUENCE OF CONSTRUCTION



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 ATTACHED TO THEIR PLANS. I AM AWARE OF THE ENVIROMENT 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 Corbin, Bethel Ministries, Inc.
Printed name of Developer
Signature of Developer
12/21/14
DATE

Jeffrey SLOMAN, P.E.
Printed name of Engineer
Signature of Engineer
12/22/14
DATE

PERMANENT SEEDING SUMMARY

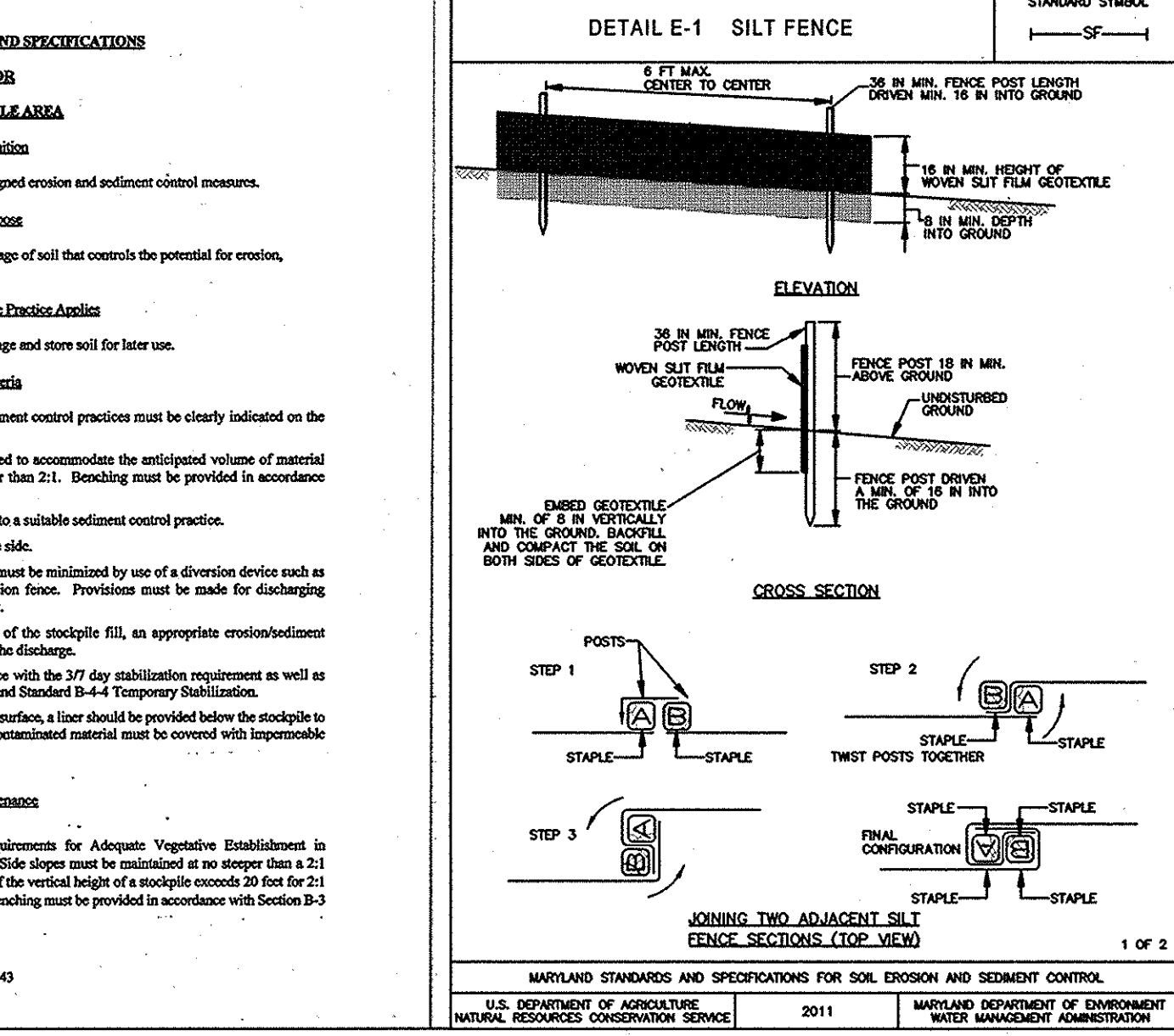
NO.	SPECIES	APPLICATION RATE (LB./AC)	SEEDING DATE	SEEDING DEPTHS	LIME RATE				
					N	P ₂ O ₅	K ₂ O	TOTAL	2 TONS / ACRE
1	TALL FESCUE	100	MARCH 1 - MAY 15 AUG 15 - OCT 15	1/4" - 1/2"	45 LB./AC (2 LB./1000 SF)	90 LB./AC (2 LB./1000 SF)	90 LB./AC (2 LB./1000 SF)	135 LB./AC (3 LB./1000 SF)	2 TONS / ACRE (100 SF)

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

12/22/14
DATE

TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE (LB./AC)	SEEDING DATE	RECOMMENDED SEEDING DATED BY PLANT HARDINESS ZONE			
			5B	6A	7A	7B
COOL SEASON GRASSES						
ANNUAL PROROSE (LUXURN PROROSE SSP. MULTIFLORUM)	40	1.0	MAR 15 TO MAY 31 AUG 15 TO SEP 30	MAR 15 TO MAY 15 AUG 15 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO NOV 30	
BARLEY (HARDEN VARIETY)	96	2.2	MAR 15 TO MAY 31 AUG 15 TO SEP 30	MAR 15 TO MAY 15 AUG 15 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO NOV 30	
OATS (VENA SATIVA)	172	1.7	MAR 15 TO MAY 31 AUG 15 TO SEP 30	MAR 15 TO MAY 15 AUG 15 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO NOV 30	
WHEAT (BROWN AESTIVUM)	120	2.8	MAR 15 TO MAY 31 AUG 15 TO SEP 30	MAR 15 TO MAY 15 AUG 15 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO NOV 30	
CERIAL AVE (SCARLETT ITALICA)	112	2.8	MAR 15 TO MAY 31 AUG 15 TO OCT 31	MAR 15 TO MAY 15 AUG 15 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO DEC 15	
WARM SEASON GRASSES						
FOXTAIL MILLET (SETCHUANA)	30	0.7	JUN 1 TO JUL 31 AUG 15 TO OCT 31	MAR 15 TO MAY 15 AUG 15 TO OCT 15	MAY 1 TO AUG 14	
PEARL MILLET (CORNIFOLIUM GIGANTEUM)	20	0.5	JUN 1 TO JUL 31 AUG 15 TO OCT 31	MAR 15 TO MAY 15 AUG 15 TO OCT 15	MAY 1 TO AUG 14	



CONSTRUCTION SPECIFICATIONS

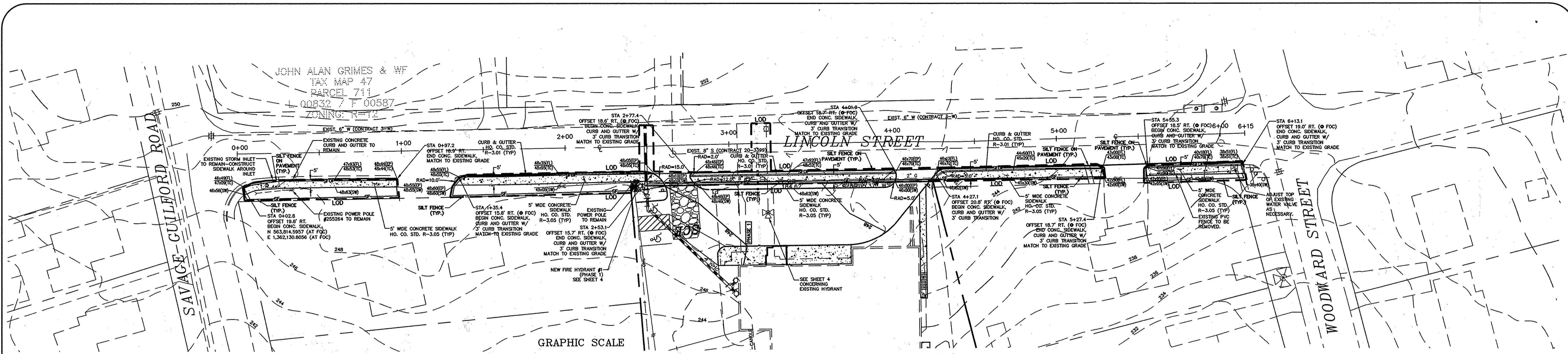
- USE WOOD POSTS 1 1/2 x 4 x 6 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" CORNER STEEL POSTS NO MORE THAN 12 FEET LONG PER LINEAR FOOT.
- USE 3/8 INCH MINIMUM POSTS DRIVEN IN 18 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SILT FILL GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND BOTTOM.
- 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.
- EMBED ENDERS OF GEOTEXTILE 4 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FENCE.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN, OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH SECTION H-1 MATERIALS.
- 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.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

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

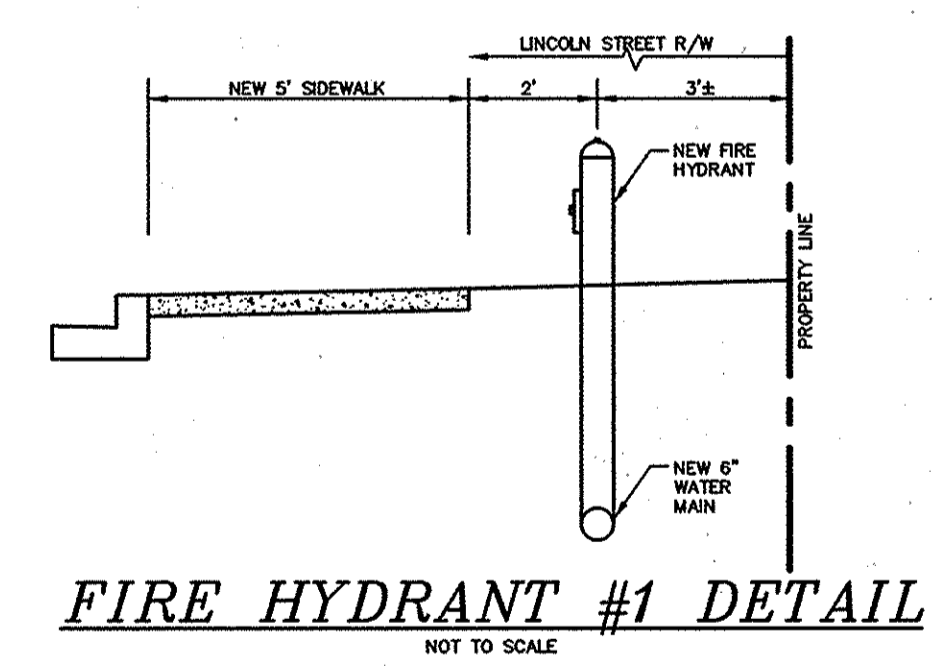
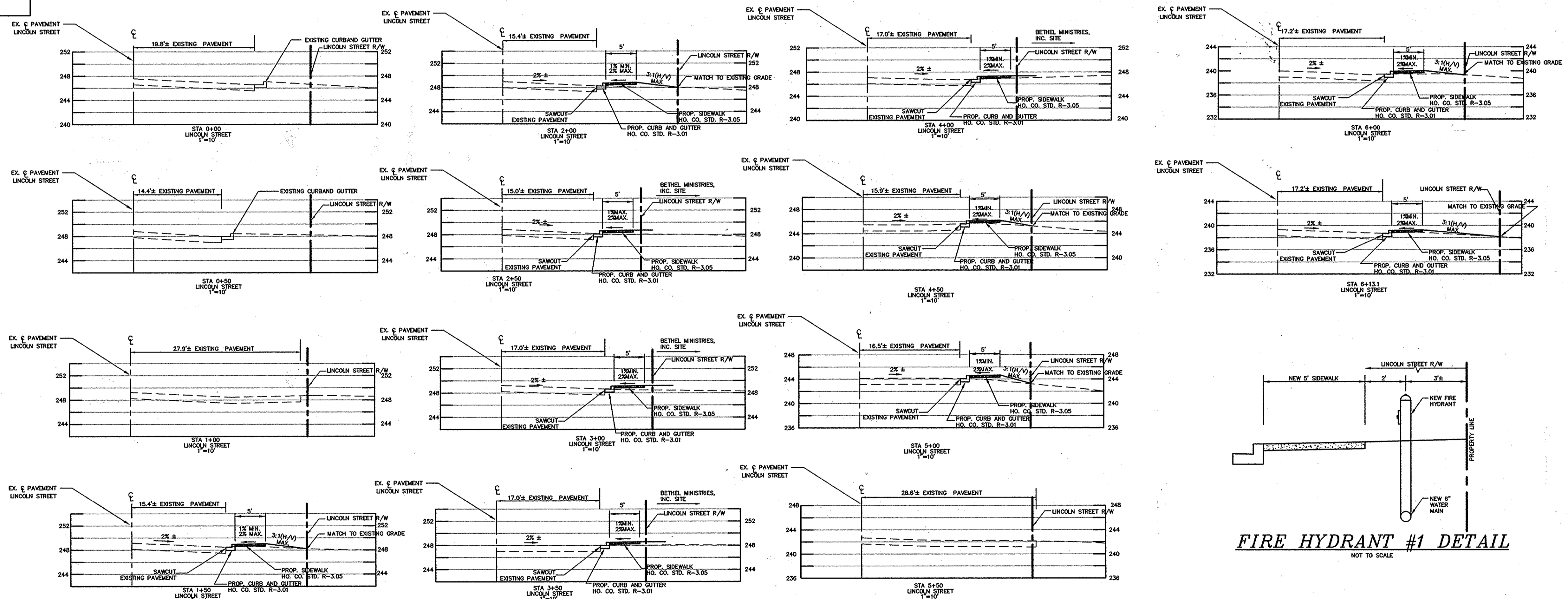
MILDENBERG & ASSOC., INC.
Engineers Planners Surveyors
7950-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Fax

DATE: DEC 2014
12-018
description: engineering
scale: ILS
revision: JLS
approval: MAM
1"=30'

8 OF 10
SDP-14-042



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

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO PERIODIC ON-SITE INSPECTION.

Mark Conklin, Bethel Ministries, Inc.
 PRINTED NAME OF DEVELOPER
 [Signature]
 SIGNATURE OF DEVELOPER
 1/28/15
 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

[Signature]
 SIGNATURE OF ENGINEER
 12/22/14
 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]
 APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
 DATE 3-3-15

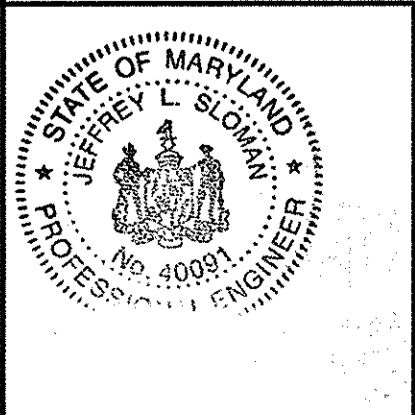
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature]
 DATE 3-26-15

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature]
 DATE 4/24/15

DIRECTOR



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]
 DATE 12/22/14

JEFFREY SLOMAN, P.E.

Project	12-018	date	JUL 2014
Illustration	JIS	engineering	JIS
scale	1"=30'	approval	MMM

REV	DESCRIPTION	DATE
1	REV LOCATIONS OF ARES, REBAR, AND W/LS	

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
LINCOLN STREET IMPROVEMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 7350-B Grace Drive, Columbia, Maryland 21044
 (410) 997-0286 Fax: (410) 997-0286 Fax

PLANTING SPECIFICATIONS AND NOTES

- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- 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.
- 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 SLOJDE. 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.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONTINUED 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

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

PLANT INSTALLATION

- 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.
- 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.

- 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.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
- J-SHAPED OR RINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE. DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- 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.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES 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.
- 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.
- NEWLY PLANTED TREES WILL 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 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

- 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.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY 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

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
- ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE NEGATIVELY EFFECTING THE PLANTED STOCK.
- REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NODDING, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- 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.
- 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

- ALL FOREST CONSERVATION ACTIVITIES SHALL BE 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.

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.

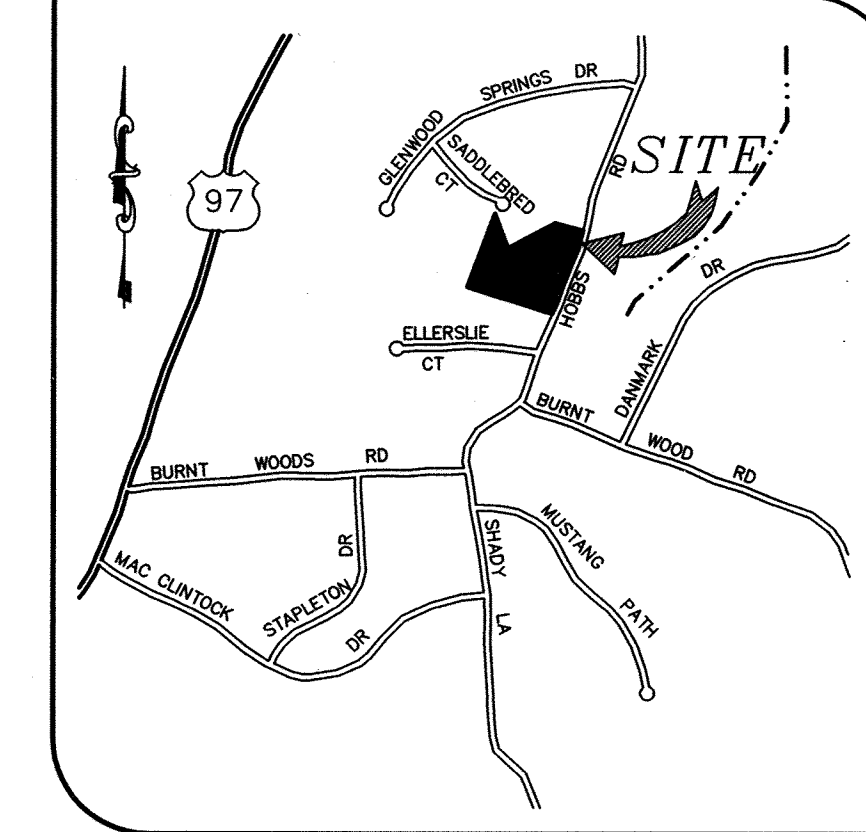
SOILS CLASSIFICATION

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

OFF-SITE FOREST CONSERVATION EASEMENT AREAS

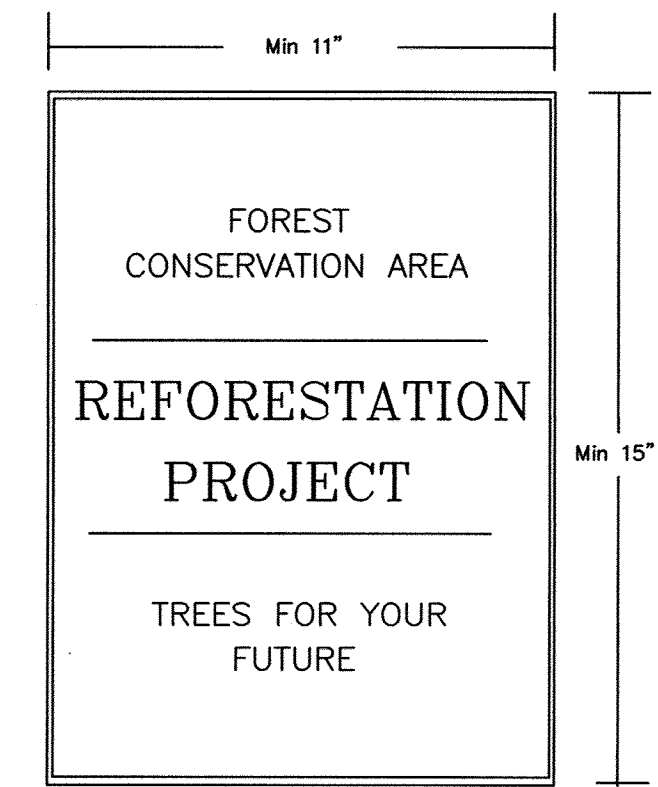
TOTAL EASEMENT AVAILABLE FOR PLANTING: 6.87 ACRES±

PROJECT	EASEMENT AREA PROVIDED	REMAINING EASEMENT 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 CROSSING 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±	SOP-14-042

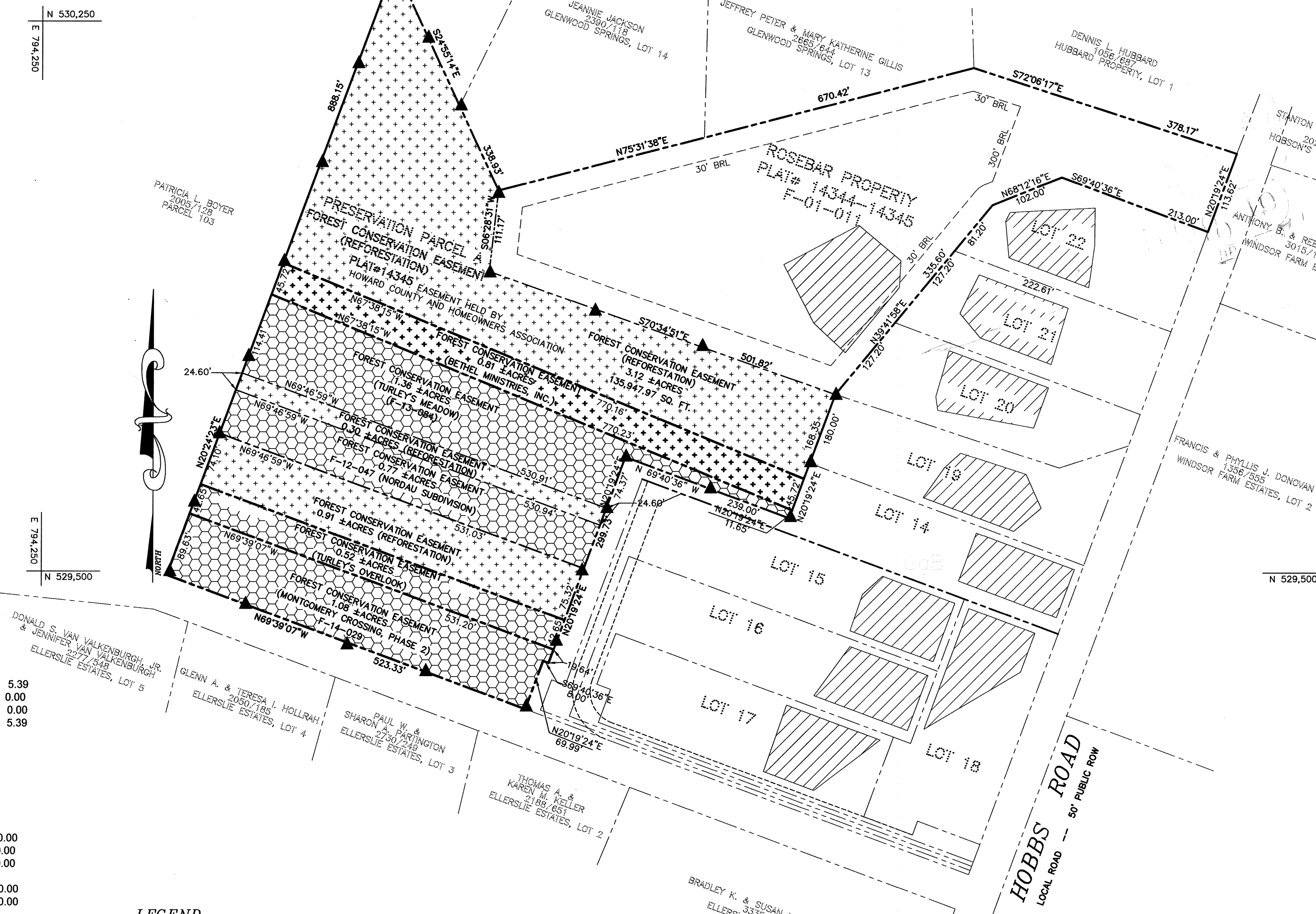


VICINITY MAP
SCALE: 1" = 200'
ADC MAP 17 B-4

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.±



SIGNAGE DETAILS
NOT TO SCALE



REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. O.C.	SIZE & SPACING	REMARKS
35	Acer rubrum	VT	D-W	FAC	15'	CONT/B & B 1" CALIPER	
20	Lindera benzoin	T	M	FACW	15'	CONT/B & B 3"-5" HEIGHT	
35	Quercus Rubra	I	M-W	FAC	15'	CONT/B & B 1" CALIPER	
32	Liriodendron tulipifera	MT	D-M	FAC	15'	CONT/B & B 1" CALIPER	
30	Nyssa sylvatica	T	M-W	FAC	15'	CONT/B & B 1" CALIPER	
30	Prunus sargentii	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.	SIZE & SPACING	REMARKS
60	Acer rubrum	VT	D-W	FAC	11"	SEEDLING/WHIP WITH TREE SHELTER	
40	Lindera benzoin	T	M	FACW	11"	SEEDLING/WHIP WITH TREE SHELTER	
60	Quercus Rubra	I	M-W	FAC	11"	SEEDLING/WHIP WITH TREE SHELTER	
60	Liriodendron tulipifera	MT	D-M	FAC	11"	SEEDLING/WHIP WITH TREE SHELTER	
54	Nyssa sylvatica	T	M-W	FAC	11"	SEEDLING/WHIP WITH TREE SHELTER	
50	Prunus sargentii	I	M	FACU	11"	SEEDLING/WHIP WITH TREE SHELTER	
TOTAL							
284 WHIPS WITH TREE SHELTERS, 40 BUSHES							

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. Forest 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:

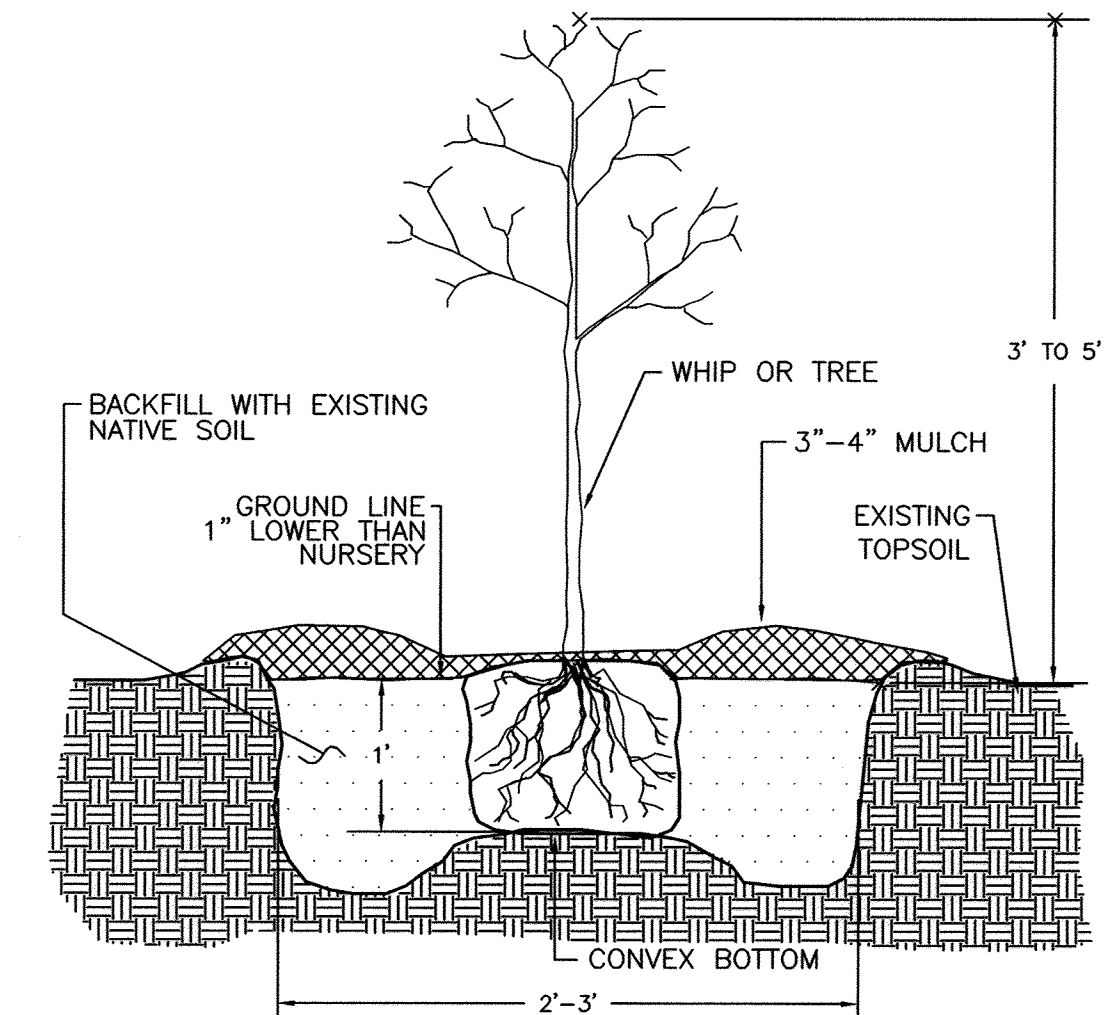
N. Reforestation for clearing above conservation threshold.....	= 0.00
P. Reforestation for clearing below conservation threshold.....	= 0.00
Q. Credit for retention above conservation threshold.....	= 0.00
R. Total reforestation required.....	= 0.00
S. Total afforestation required.....	= 0.00
T. Total reforestation and afforestation required.....	= 0.81
Total reforestation and afforestation provided.....	= 0.81

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 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 DEVELOPMENT AGREEMENT FOR THE SITE DEVELOPMENT PLAN, SDP-14-042/BETHEL MINISTRIES, INC.

FINANCIAL SURETY FOR REFORESTATION WAS PROVIDED UNDER F-99-D19A.



TREE PLANTING DETAIL
CONTAINER GROWN

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-3-15
DATE

[Signature] 3-26-15
DATE

[Signature] 3/24/15
DATE



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

MD DNR QUALIFIED PROFESSIONAL

[Signature] 12/22/14
MASHID TRINGA

project	date	description	no.
12-008	DEC 2014	engineering	
JLS	JLS	approval	RJH

BETHEL MINISTRIES, INC.
FOREST CONSERVATION EASEMENT GRANTED FROM ROSEBAR 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, Ellicott City, Maryland 21075
(410) 997-0286 Fax: (410) 997-0288 Fax