

FINAL DESIGN DRAWINGS FOR

# EAGLE HEIGHTS

# STORM WATER & EROSION MITIGATION

PREPARED FOR:

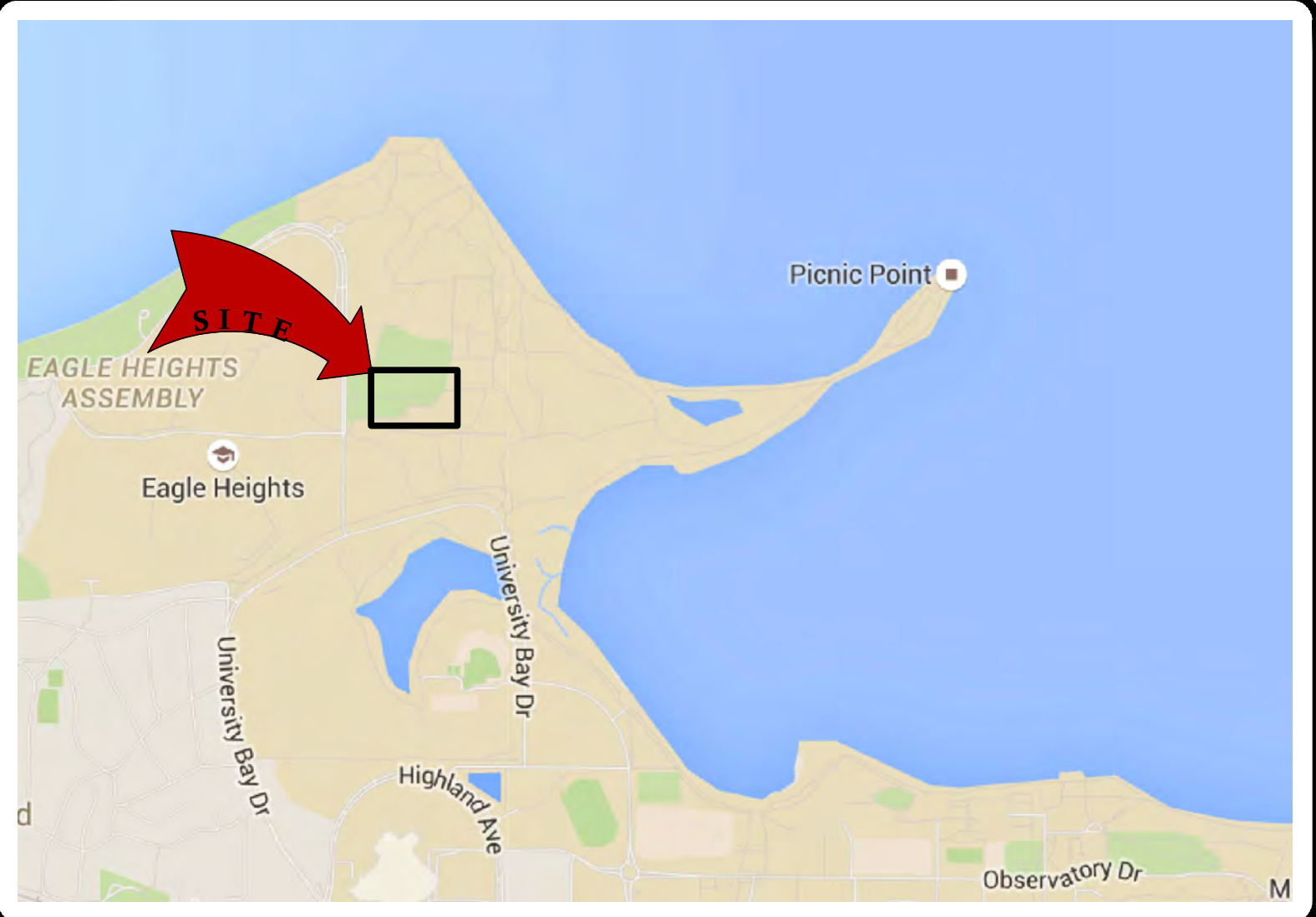
**FRIENDS OF THE LAKESHORE  
NATURE PRESERVE**

**3016 LAKE MENDOTA DRIVE  
MADISON WI 53705**

**APRIL 26, 2016**

**INDEX OF DRAWINGS**

1	COVER SHEET
2	EXISTING CONDITIONS & TOPOGRAPHY
3	CONSTRUCTION MANAGEMENT PLAN
4	PROPOSED CONDITIONS
5	ACCESS ROAD IMPROVEMENTS
6	RAIN GARDEN
7	DETAILS



**SITE LOCATION MAP**

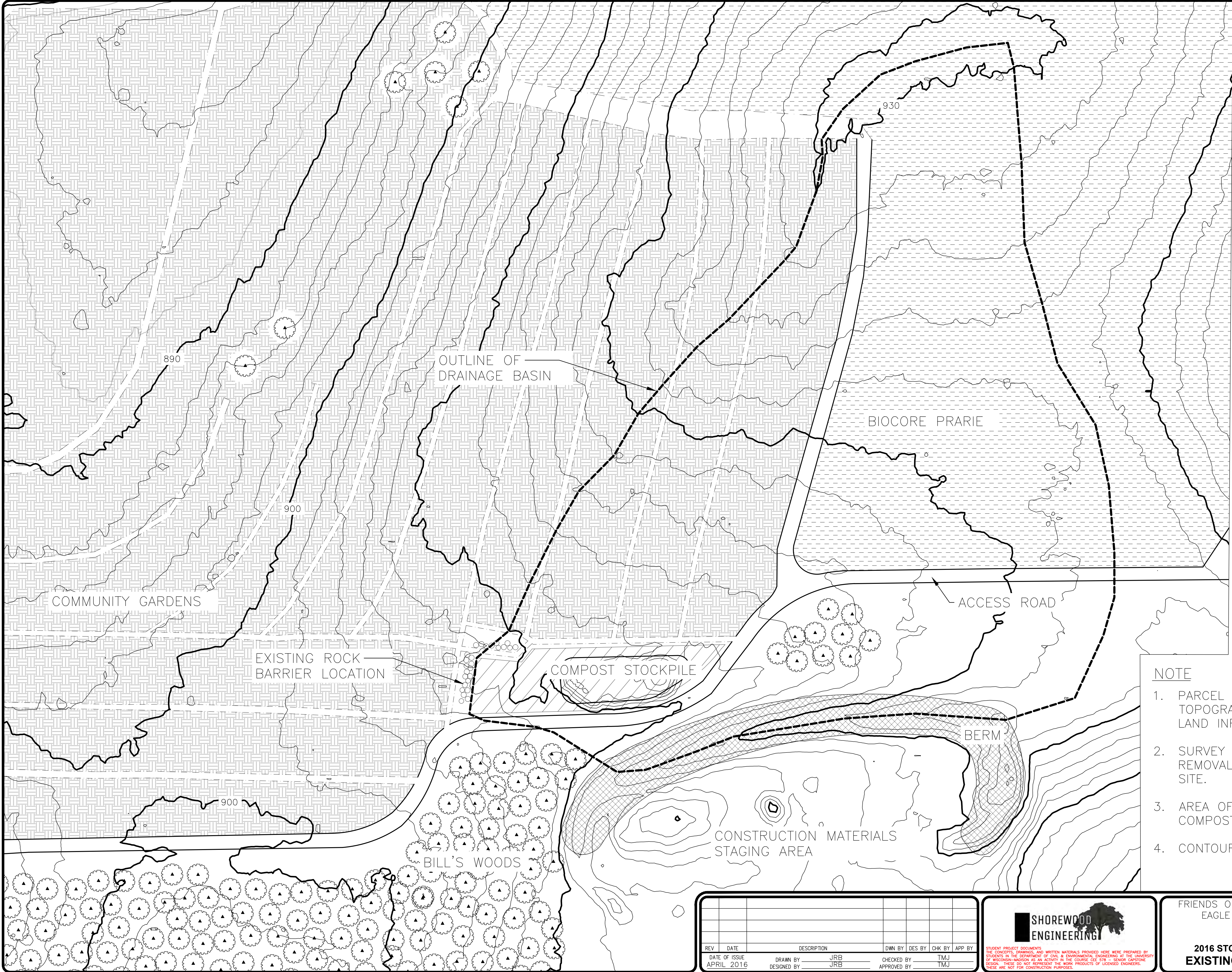
**PREPARED BY:**



1728 VAN HISE AVE.  
MADISON, WISCONSIN, 53726  
Tel. (319) 541-9665

STUDENT PROJECT DOCUMENTS  
THE CONCEPTS, DRAWINGS, AND WRITTEN MATERIALS  
PROVIDED HERE WERE PREPARED BY STUDENTS IN THE  
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING AT  
THE UNIVERSITY OF WISCONSIN-MADISON AS AN ACTIVITY  
IN THE COURSE CEE 578 – SENIOR CAPSTONE DESIGN.  
THESE DO NOT REPRESENT THE WORK PRODUCTS OF  
LICENSED ENGINEERS. THESE ARE NOT FOR  
CONSTRUCTION PURPOSES.





#### LEGEND

- BIOCORE PRAIRIE
- VEGETATED BIOSWALE
- COMPOST PILE
- BERM
- COMMUNITY GARDENS
- TOPOGRAPHIC LINE
- DRAINAGE AREA
- ROCK BARRIER
- TREE

#### NOTE

- PARCEL PROPERTY INFORMATION AND SITE TOPOGRAPHY PROVIDED BY DANE COUNTY LAND INFORMATION OFFICE.
- SURVEY NOT AVAILABLE FOR TREES. REMOVAL MAY BE NECESSARY THROUGHOUT SITE.
- AREA OF DRAINAGE BASIN FLOWING TO THE COMPOST PILE IS APPROXIMATELY 4.5 ACRES
- CONTOURS ARE SHOWN AT A 2 FT. INTERVAL.

#### FINAL DESIGN

FRIENDS OF THE LAKESHORE NATURE PRESERVE  
EAGLE HEIGHTS STORMWATER REDESIGN  
MADISON, WISCONSIN

2016 STORMWATER AND EROSION MITIGATION  
EXISTING CONDITIONS & TOPOGRAPHY

SHEET NO.

02

PROJECT NO.

001

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	APRIL 2016	DATE OF ISSUE	DRAWN BY JRB	CHECKED BY TMJ		
		DESIGNED BY JRB	APPROVED BY TMJ			

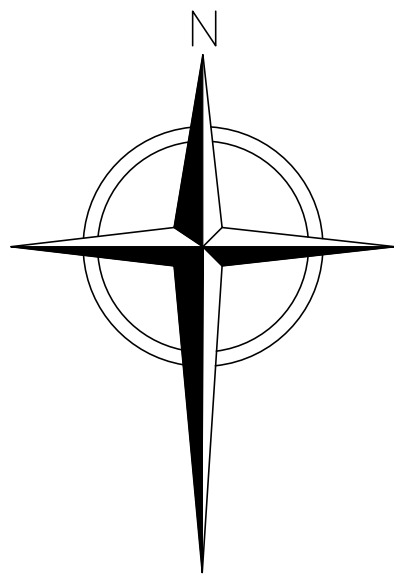
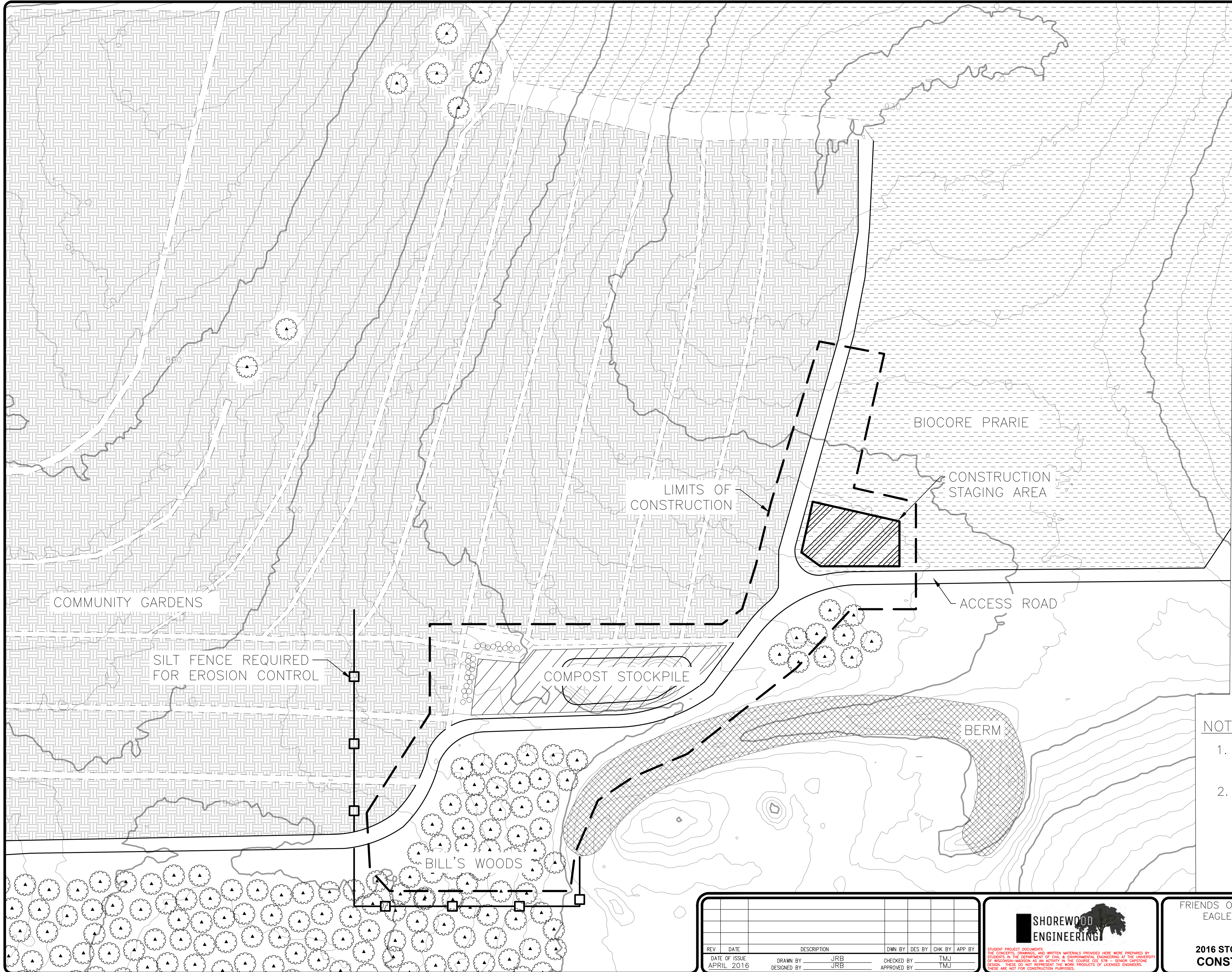


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1" 1/2" 0"

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0 40 80  
SCALE IN FEET

LEGEND


- BIOCORE PRAIRIE
- VEGETATED BIOSWALE
- COMPOST PILE
- BERM
- COMMUNITY GARDENS
- CONSTRUCTION STAGING AREA
- LIMITS OF CONSTRUCTION
- TOPOGRAPHIC LINE
- SILT FENCE
- ROCK BARRIER
- TREE

NOTE

1. CONTOURS ARE SHOWN AT A 2 FT. INTERVAL.
2. ROAD NEEDS TO BE MOVED AND GRADED BEFORE BIOSWALE CONSTRUCTION. GRAVEL SHOULD BE PLACED ON ROAD LAST TO LIMIT MUD TRACKING.

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SHOREWOOD  
ENGINEERING

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FRIENDS OF THE LAKESHORE NATURE PRESERVE  
EAGLE HEIGHTS STORMWATER REDESIGN  
MADISON, WISCONSIN

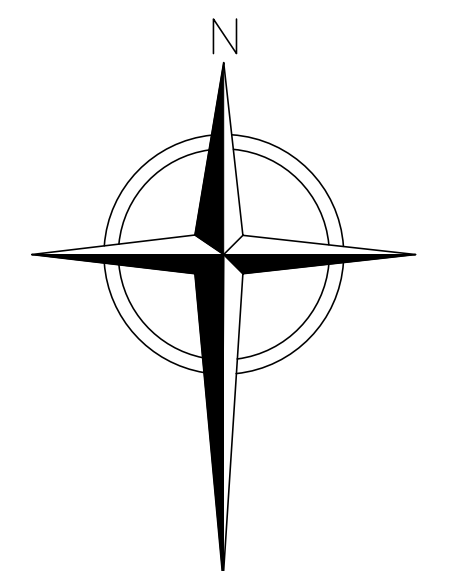
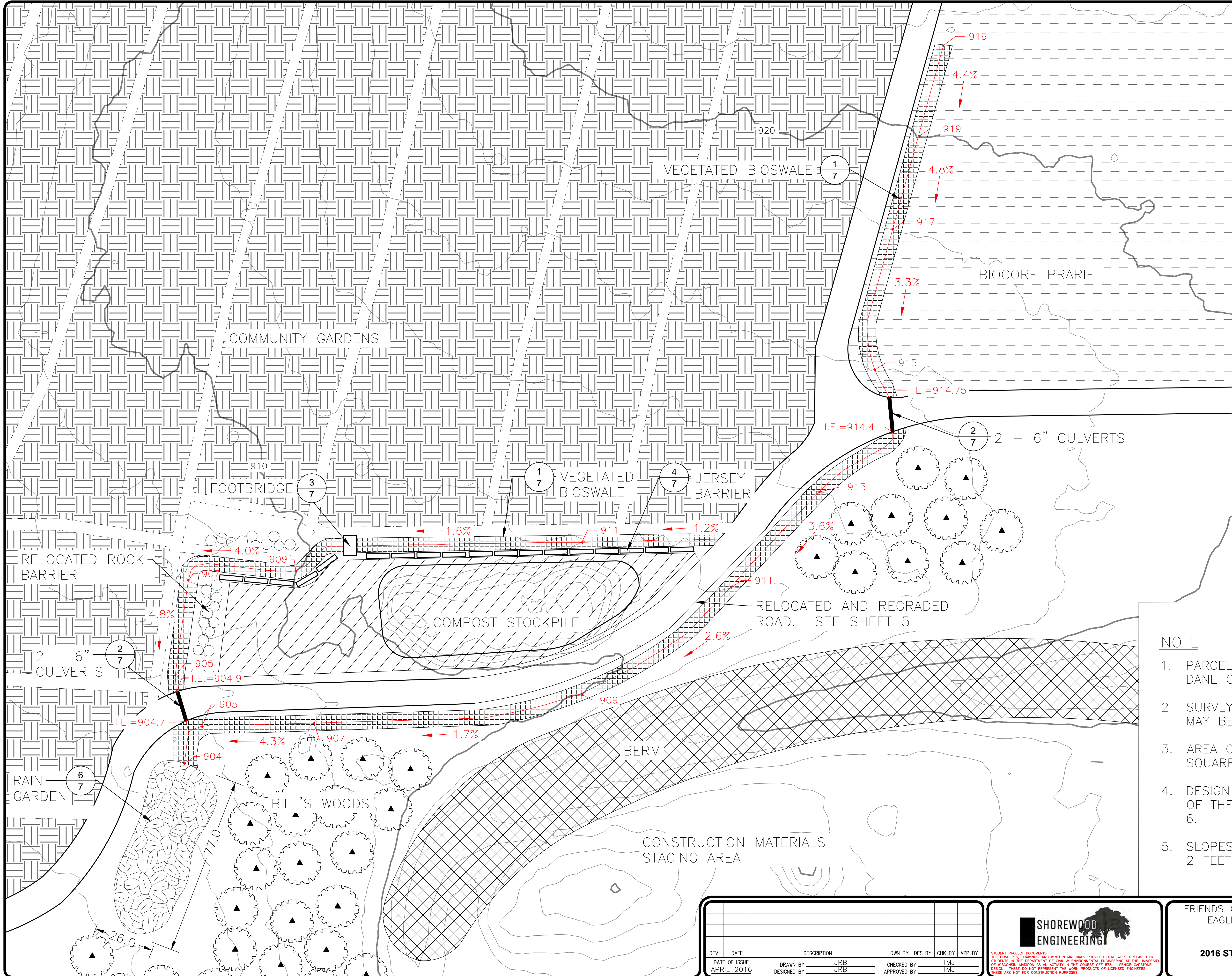
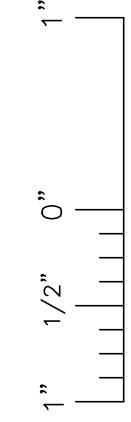
**2016 STORMWATER AND EROSION MITIGATION  
CONSTRUCTION MANAGMENT PLAN**

SHEET NO.  
**03**

PROJECT NO.  
001



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LEGEND

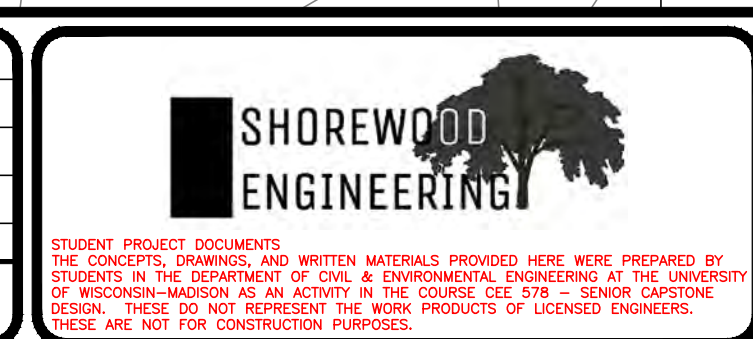
- BIOCORE PRAIRIE
- VEGETATED BIOSWALE
- COMPOST PILE
- BERM
- COMMUNITY GARDENS
- TOPOGRAPHIC LINE
- ROCK BARRIER
- TREE

NOTE

- PARCEL PROPERTY INFORMATION PROVIDED BY DANE COUNTY LAND INFORMATION OFFICE.
- SURVEY NOT AVAILABLE FOR TREES. REMOVAL MAY BE NECESSARY THROUGHOUT SITE.
- AREA OF RAIN GARDEN AREA IS APPX. 2,002 SQUARE FEET.
- DESIGN ALTERNATIVE 2 REQUIRES A SECTION OF THE ROAD TO BE RELOCATED. SEE SHEET 6.
- SLOPES SHOWN BETWEEN SPOT GRADES EVERY 2 FEET.

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FRIENDS OF THE LAKESHORE NATURE PRESERVE  
EAGLE HEIGHTS STORMWATER REDESIGN  
MADISON, WISCONSIN

2016 STORMWATER AND EROSION MITIGATION  
PROPOSED CONDITIONS

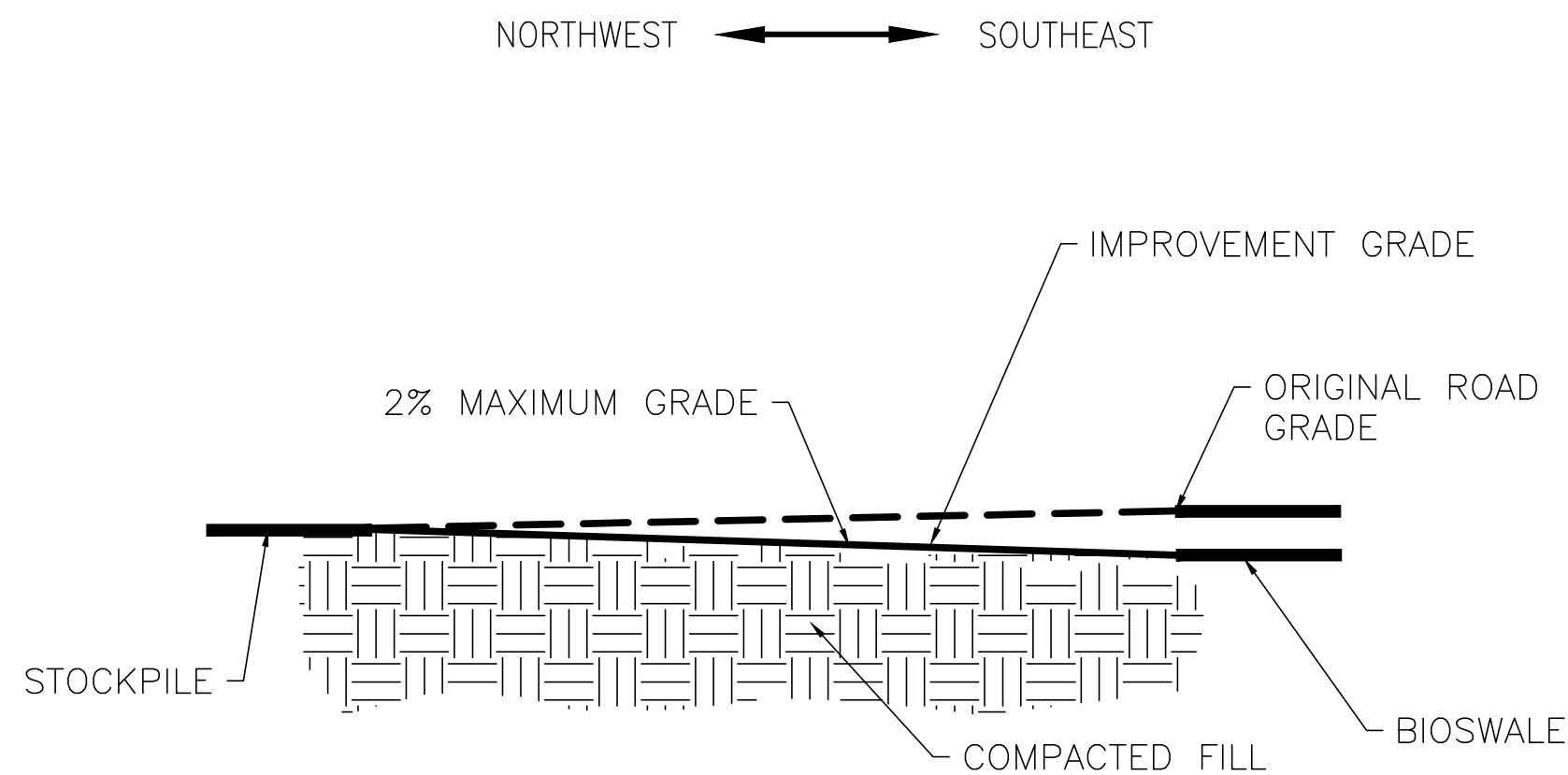
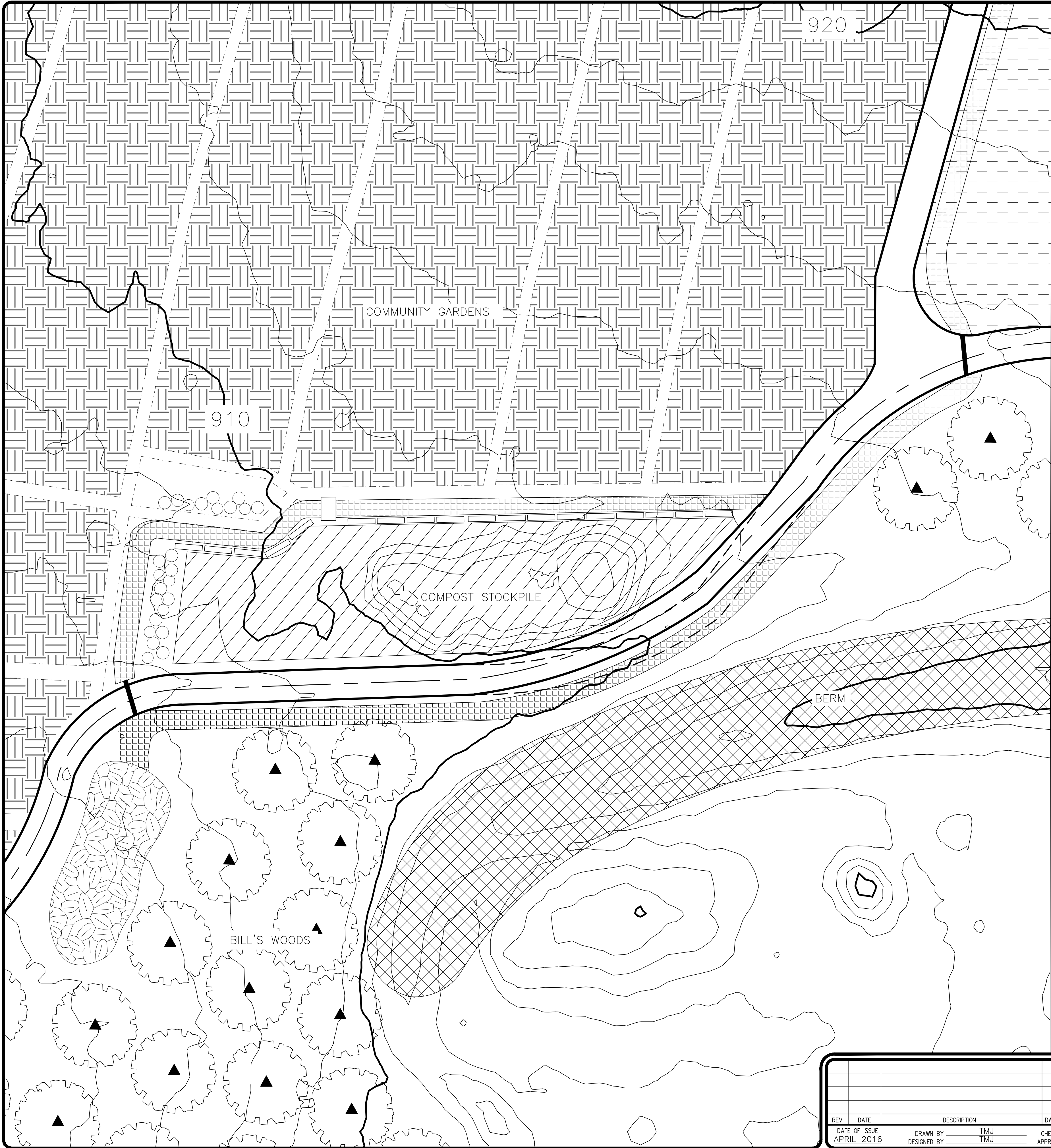
SHEET NO.  
**04**

PROJECT NO.  
001



1" 1/2" 0" 1"

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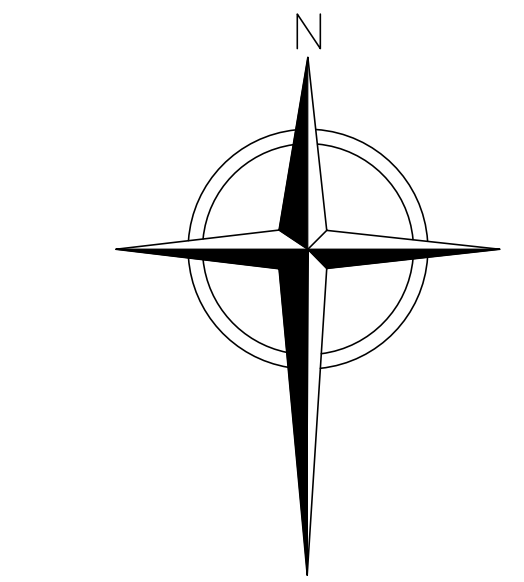


## ROAD REGRADING

GRADE CHANGE FOR DRAINAGE OF WATER

### INSTRUCTIONS FOR IMPROVEMENTS:

1. LOCATION OF RELOCATED ROAD SHOULD BE MINIMUM OF 1 FOOT FROM EDGE OF BIOSWALE. FURTHER CONSIDERATIONS FOR LOCATION TO BE MADE BY OWNER WHEN CONSTRUCTION BEGINS.
2. ROAD TO BE CONSTRUCTED USING A COMPACTED SUBGRADE WITH MINIMUM 6" OF GRAVEL COVER ON TOP. SUBGRADE AND GRAVEL SUBBASE LAYERS TO BE SEPARATED BY A GEOTEXTILE LAYER.
3. ROAD TO BE GRADED AWAY FROM COMPOST PILE AT MAXIMUM OF 2 PERCENT.
4. SUBGRADE TO BE COMPLETED DURING FIRST PHASE OF CONSTRUCTION.
5. SUBBASE AND GEOTEXTILE LAYERS TO BE COMPLETED DURING THIRD PHASE OF CONSTRUCTION.



0 20 40  
SCALE IN FEET

### LEGEND

- BIOCORE PRAIRIE
- VEGETATED BIOSWALE
- COMPOST PILE
- BERM
- COMMUNITY GARDENS
- TREE
- RELOCATED ROAD LOCATION
- CURRENT ROAD LOCATION
- ROAD CENTERLINE

### NOTE

1. PARCEL PROPERTY INFORMATION PROVIDED BY DANE COUNTY LAND INFORMATION OFFICE.
2. SURVEY NOT AVAILABLE FOR TREES. REMOVAL WILL BE NECESSARY THROUGHOUT THE SITE. NUMBER AND SIZE OF TREES SUBJECT TO CHANGE.

FINAL DESIGN

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FRIENDS OF THE LAKESHORE NATURE PRESERVE  
EAGLE HEIGHTS STORMWATER REDESIGN  
MADISON, WISCONSIN

2016 STORMWATER AND EROSION MITIGATION  
ACCESS ROAD IMPROVEMENTS

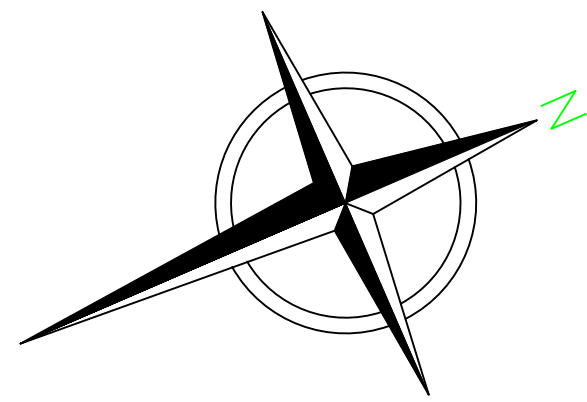
SHEET NO.

05

PROJECT NO.

001



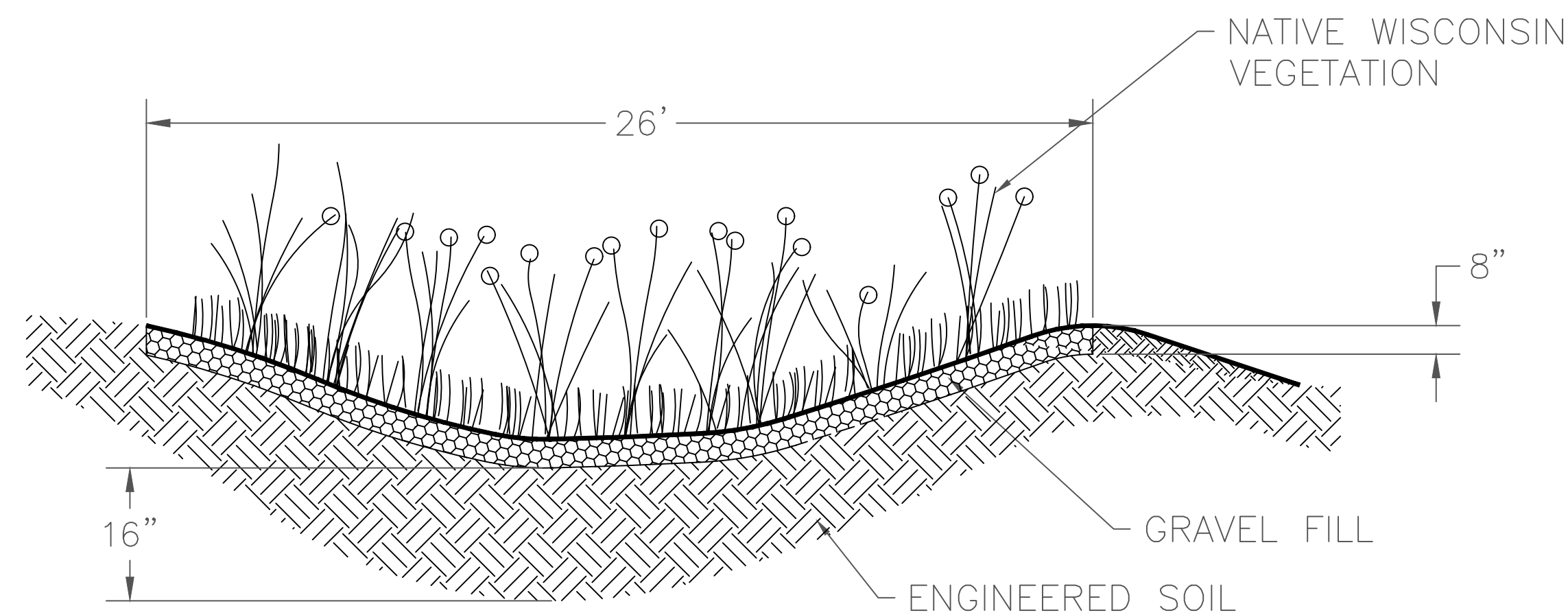
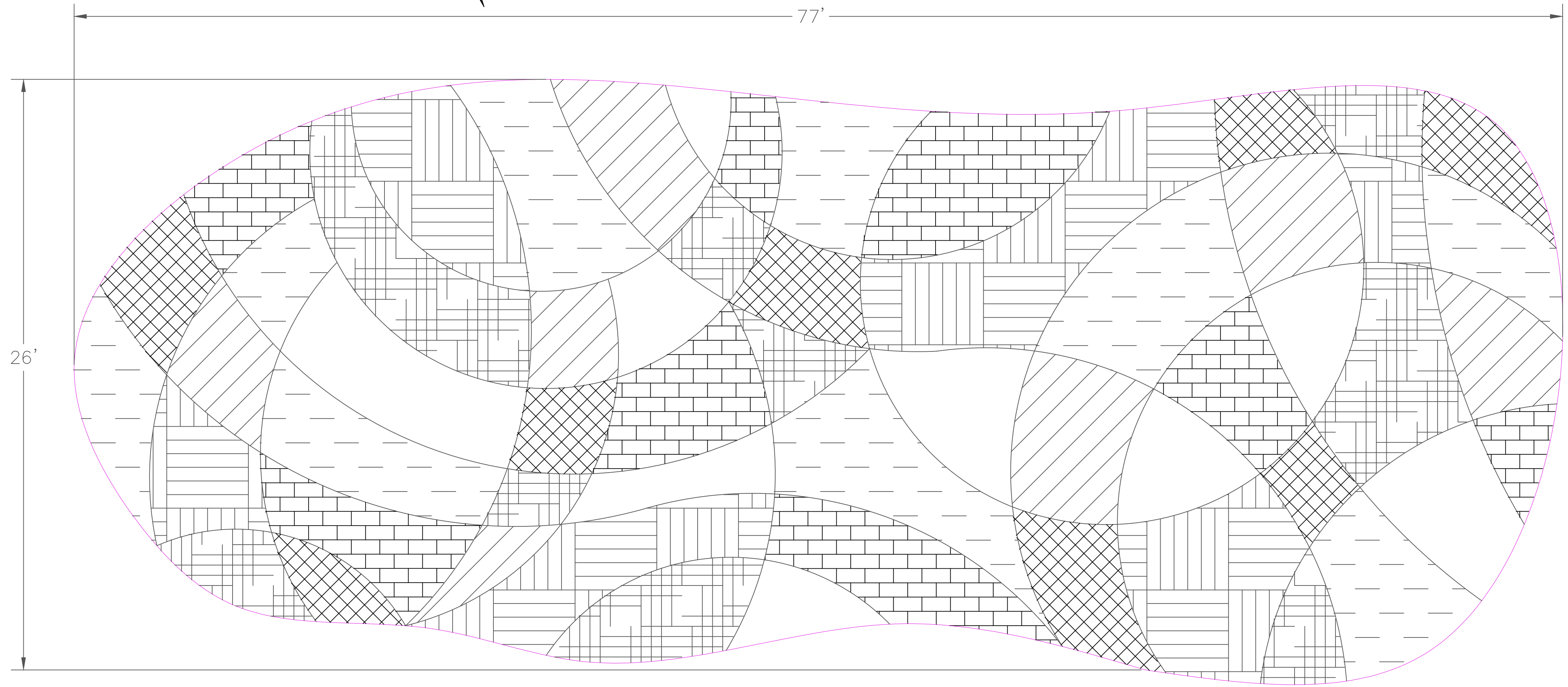


6A

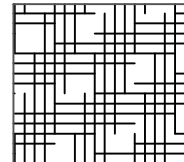
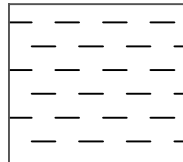
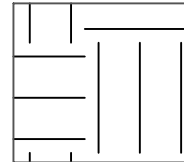
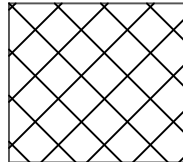
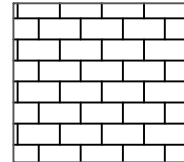

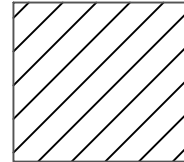
6

RAIN GARDEN PLAN VIEW

RAIN GARDEN FOR INFILTRATION AND EROSION CONTROL



- NOTES
1. NATIVE VEGETATION USED IN RAIN GARDEN. SEE DETAIL 6A.
  2. GRAVEL FILL IN BED OF RAIN GARDEN TO INCREASE INFILTRATION OF STORM WATER.
  3. GEOTEXTILE LAYER SEPARATING GRAVEL FROM ENGINEERED SOIL.
  4. DRAWING NOT TO SCALE.

 GOLDEN ALEXANDER GAYFEATHER	 WILD BERGAMOT GREAT BLUE LOBELA
 RIDDEL'S GOLDENROD MARSH PLOX	 MOUNTAIN MINT SNEEZEWEED
 WINGED LOOSESTRIFE CARDINAL FLOWER	 SWITCH GRASS SPOTTED JOE-PYE WEED
 NEW ENGLAND ASTER SWEET CONEFLOWER	

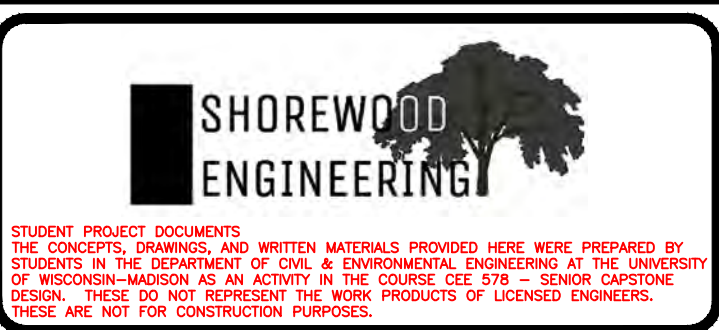
6B

6

RAIN GARDEN PROFILE VIEW

RAIN GARDEN FOR INFILTRATION AND EROSION CONTROL

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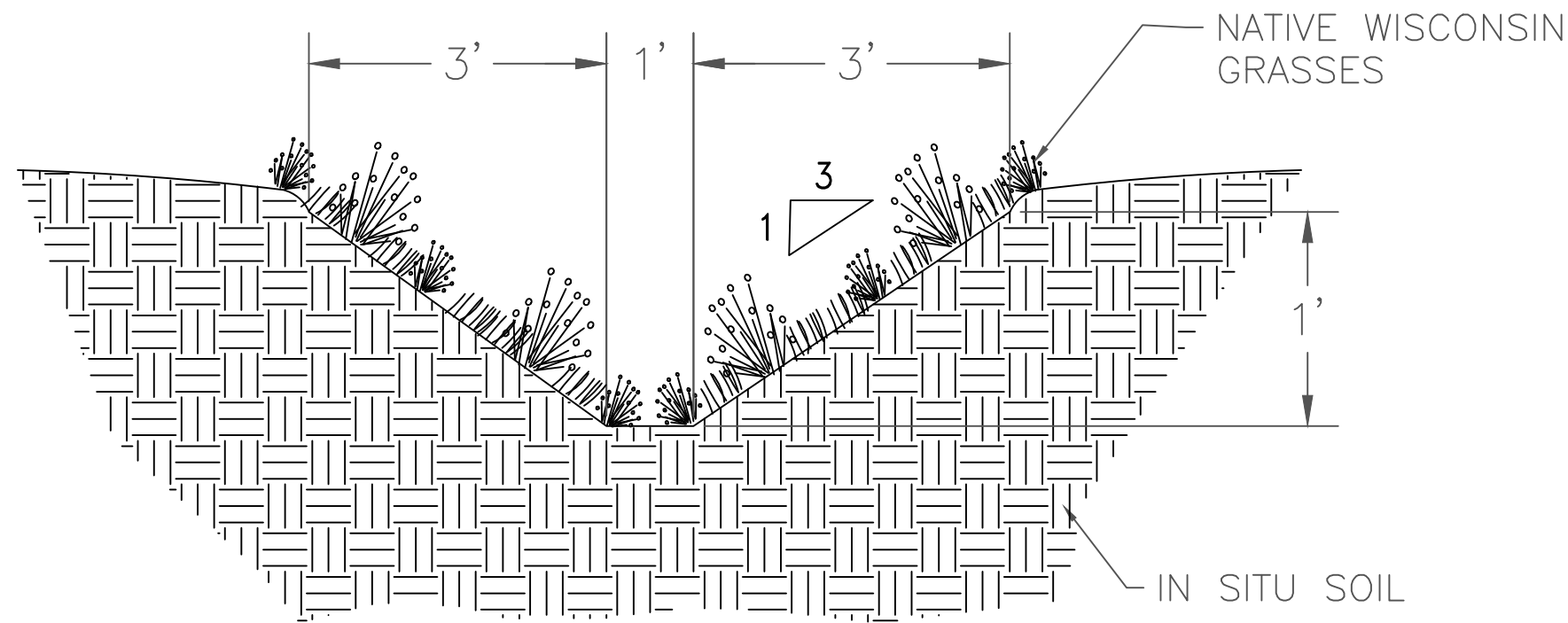
FRIENDS OF THE LAKESHORE NATURE PRESERVE  
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MADISON, WISCONSIN

2016 STORMWATER AND EROSION MITIGATION  
RAIN GARDEN DETAILS

SHEET NO.  
**06**

PROJECT NO.  
001

FINAL DESIGN

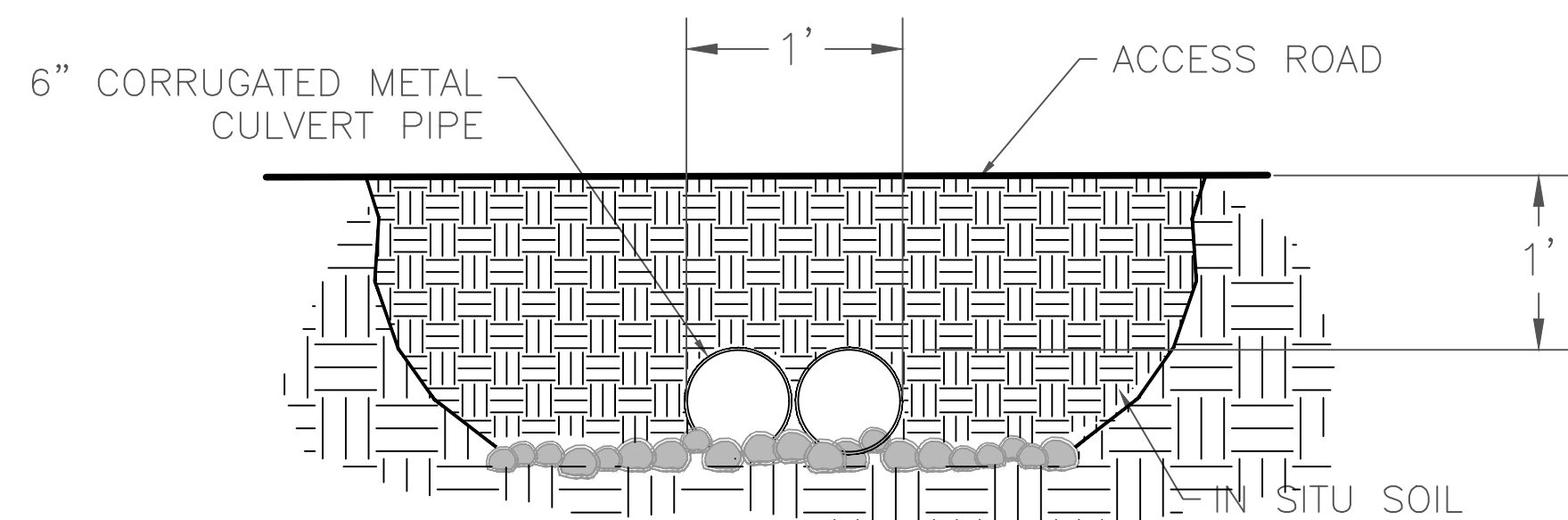


#### NOTES

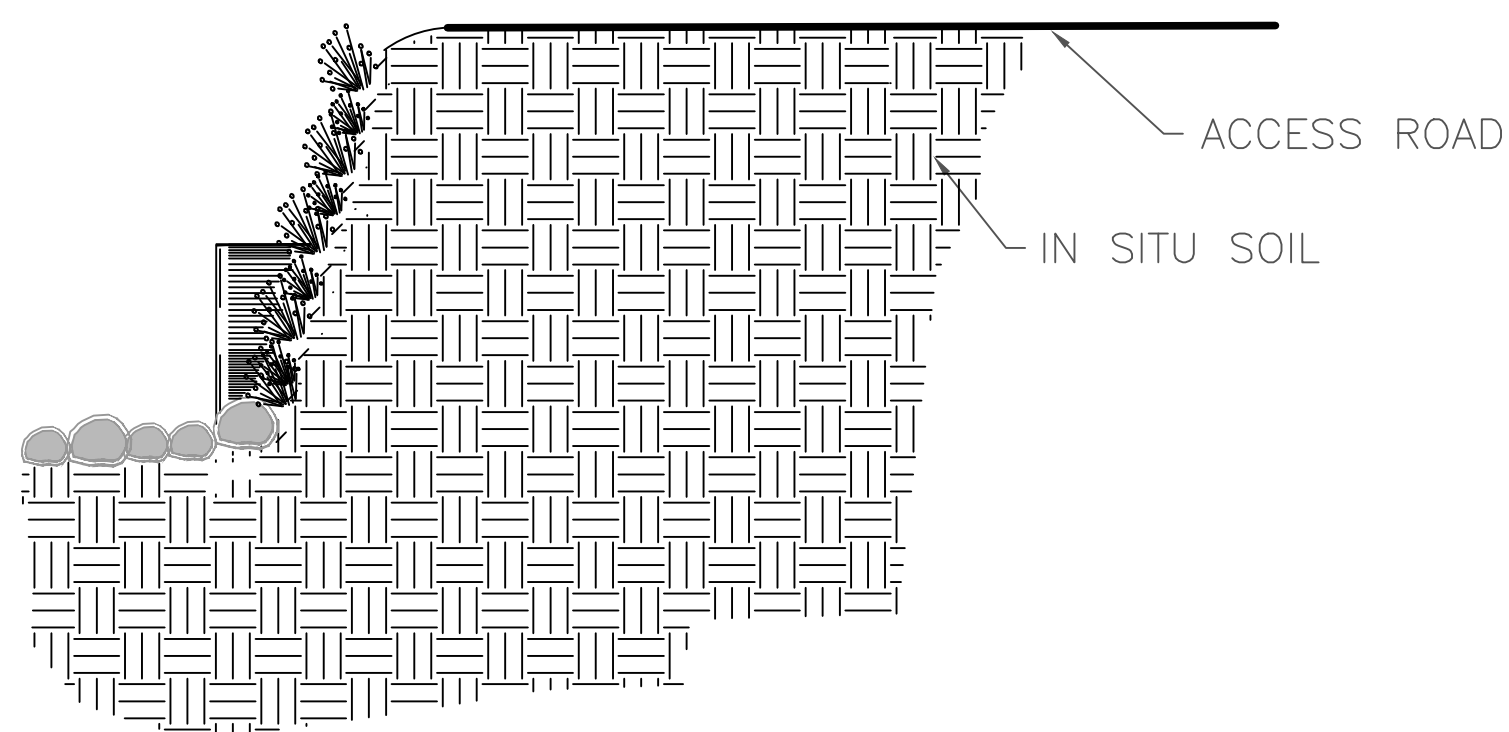
- BIOSWALE TO BE LINED WITH SELECTED VEGETATION NATIVE TO WISCONSIN.
- DRAWING NOT TO SCALE.

### 1 VEGETATED BIOSWALE

CROSS SECTION OF BIOSWALE FOR INFILTRATION



#### ELEVATION



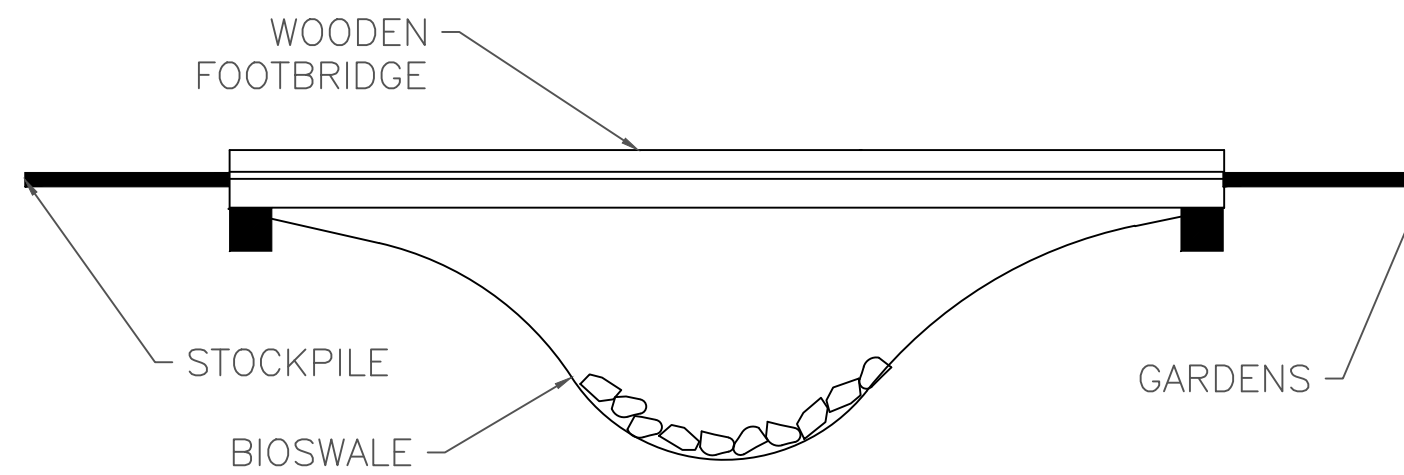
#### SECTION

#### NOTES

- TWO 6" CORRUGATED METAL CULVERTS TO RUN UNDER ACCESS ROAD.
- 12" BUFFER BETWEEN TOP OF CULVERT AND GRAVEL ACCESS ROAD.
- RIP RAP AND SCOUR PROTECTION WILL BE PLACED NEAR THE INLET AND OUTLET OF EACH CULVERT.
- DRAWING NOT TO SCALE.

### 2 6" CULVERTS

CULVERT UNDER ACCESS ROAD

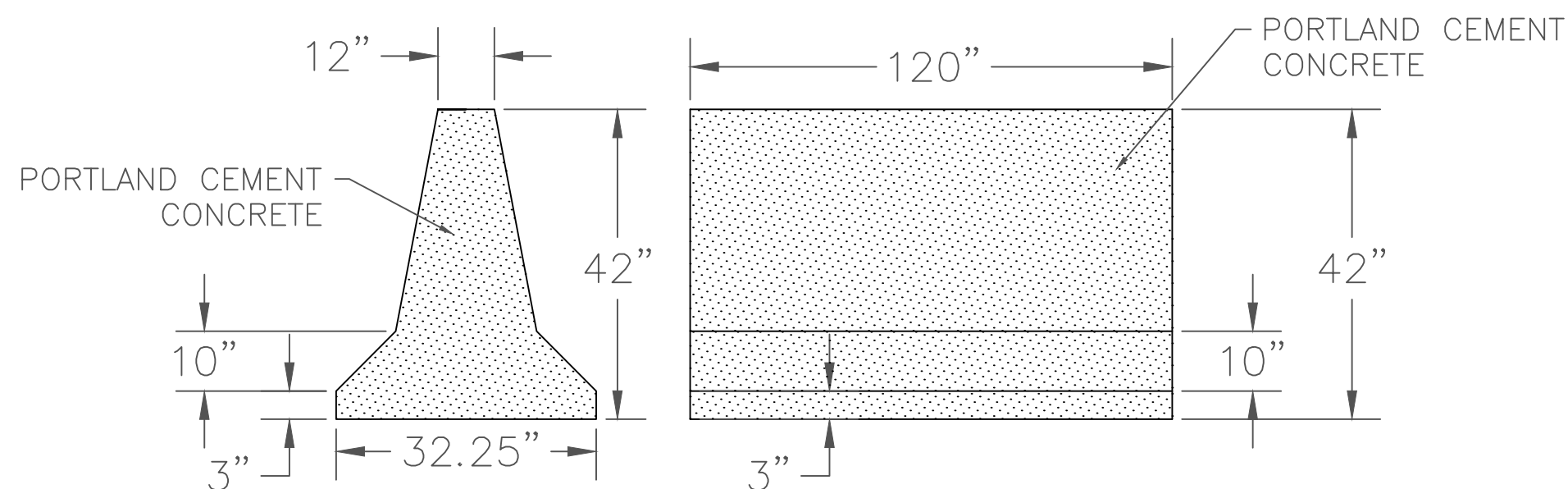


#### NOTES

- FOOTBRIDGE TO BE BUILT OVER BIOSWALE ON NORTH END OF COMPOST PILE.
- FOOTBRIDGE CONSTRUCTION SPECIFICATIONS WILL BE ADDRESSED IN FINAL DESIGN.
- FOOTBRIDGE MUST SPAN 7' BIOSWALE.
- DRAWING NOT TO SCALE.

### 3 FOOTBRIDGE

FOOT BRIDGE OVER DRAINAGE BIOSWALE

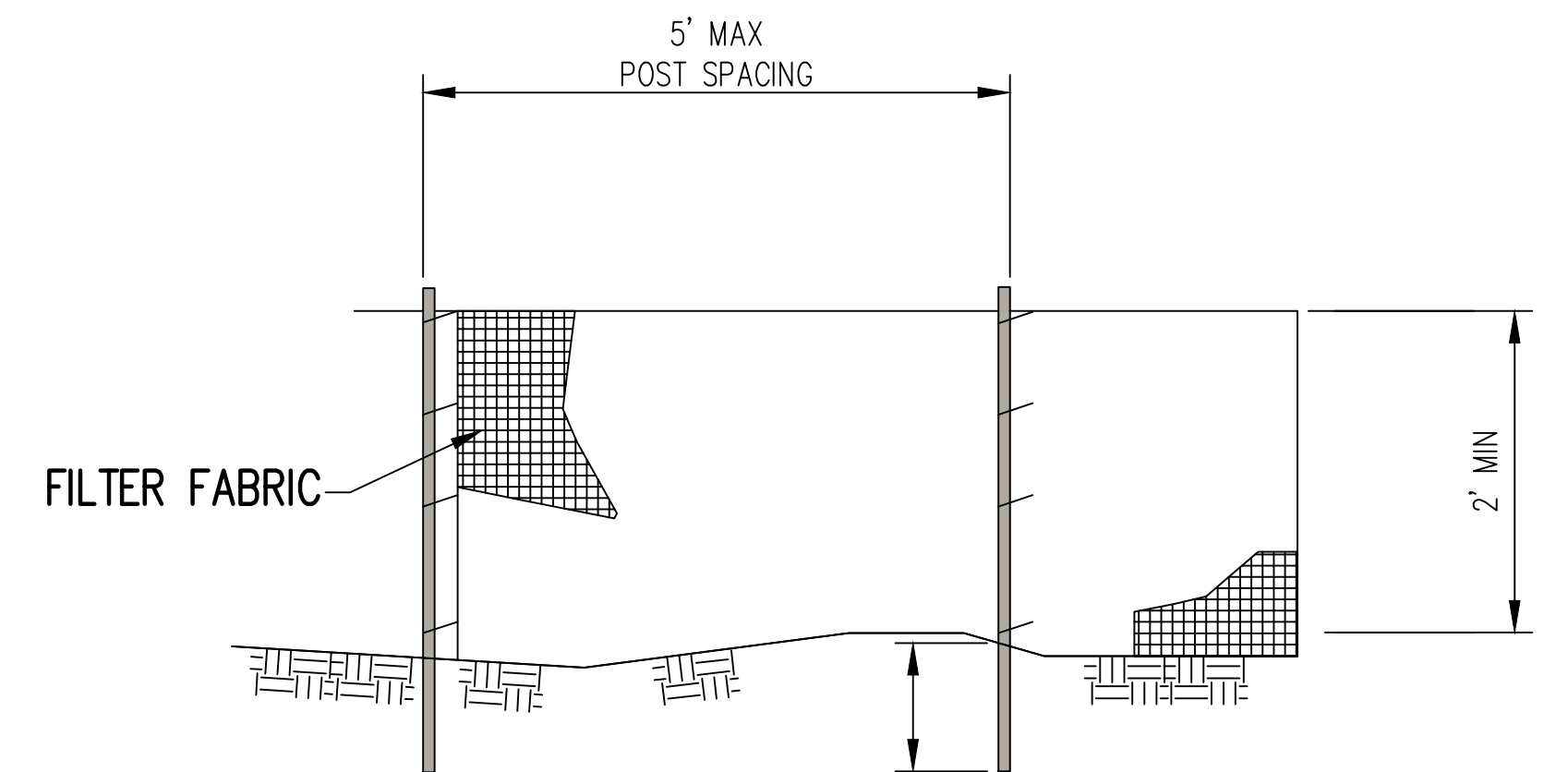


#### NOTES

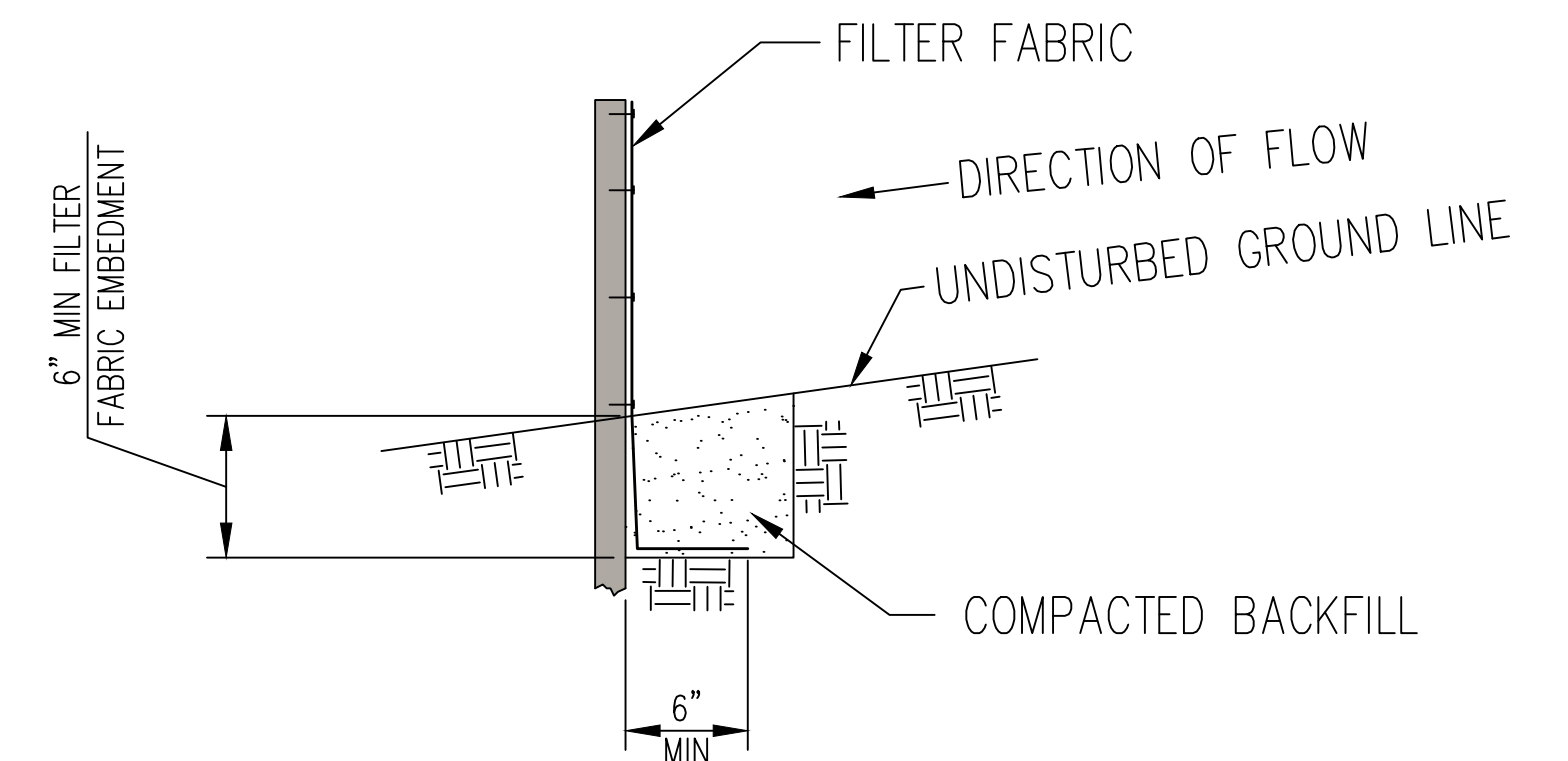
- PORTLAND CEMENT CONCRETE JERSEY BARRIERS TO LINE NORTH END OF COMPOST PILE.
- JERSEY BARRIER DIMENSIONS SUBJECT TO CHANGE.
- DRAWING NOT TO SCALE.

### 4 JERSEY BARRIERS

BARRIER FOR COMPOST CONTAINMENT



#### ELEVATION



#### FABRIC ANCHOR DETAIL

#### NOTES

- TEMPORARY SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA. FENCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- FENCE POSTS SHALL BE EITHER WOOD POST WITH A MINIMUM CROSS-SECTIONAL AREA OF 1.5" X 1.5" OR A STANDARD STEEL POST.
- DRAWING NOT TO SCALE.

### 5 SILT FENCE

SILT FENCE FOR EROSION CONTROL

FINAL DESIGN

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DETAILS

SHEET NO.

07

PROJECT NO.

001