WOLF CREEK STREAM RESTORATION

THE CITY OF FOLEY

FOLEY, BALDWIN COUNTY, ALABAMA

GMC PROJECT NO. EM11506

DRAFT 2 PLANS

SHEET NUMBER AND DESCRIPTION

1 COVER
2 EXISTING CONDITIONS
3 PROPOSED FLOODPLAIN LAYOUT
4 FLOODPLAIN LONGITUDINAL PROFILE
5 OVERALL STREAM LAYOUT
6 PLAN VIEW DETAIL A
7 PLAN VIEW DETAIL B
8 PLAN VIEW DETAIL C
9 LONGITUDINAL PROFILE 1
10 LONGITUDINAL PROFILE 2
11 LONGITUDINAL PROFILE 3
12 LONGITUDINAL PROFILE 4
13 STREAM CROSS SECTION TYPICALS
14 EXISTING VS PROPOSED CROSS SECTIONS
15 IN-STREAM STRUCTURE TYPICALS 1
16 IN-STREAM STRUCTURE TYPICALS 2
17 BMP AND WORKING ENGINEERING TYPICALS
18 EROSION CONTROL PLAN
19 NOTES AND QUANTITIES

PHOTO TO PROJECT

VICINITY MAP

PROJECT LOCATION

SHEET NUMBER 1/2

GOODWIN HILLS CAWOOD

300 East Avenue North  •  Montgomery, AL 36105
Tel: 334-242-1168  •  FAX: 334-242-4559

PLANS PREPARED BY:
1. Mix layers of topsoil on top of coarse woody debris. Alternate layers of woody debris and topsoil.

2. For the bottom layer install live stakes on top of coarse woody debris and cover with a layer of topsoil. This shall be at a depth of 1/2 ft or 1/2 bankfull below the bottom of the bed.

3. Wood debris shall not extend into the channel more than 4 ft.

4. Install live stakes into the coconut core matting on the entire bank of the structure.

5. For log vane structures, straight logs with diameters of at least 16" and length of approximately 15-20' shall be used. On-site trees removed due to construction may be used.

6. Prepare a trench in the bank where the root end of the log vane will tie into the bank, and set a root wad in the trench. The top of the root wad shall be 1/2 bankfull elevation.

7. Excavate another trench in the channel, for placement of the log. The first couple feet of the log should be reentered in the channel between the centerline and toe of the bank such that the top surface of the log is below the channel invert. The log should be at a 45-degree angle from the bank and run at a 60% slope up into the bank to approximately 1/2 bankfull elevation. The upper surface of the log may be placed at a slope if necessary.

8. A non-woven geotextile shall be placed in the excavated trench upstream of the log and run along the upstream face of the log to prevent channel material from passing underneath the log. The fabric should be secured to the face of the log with 2" galvanized common nails on 4" spacing.

9. Once the log and geotextile are in place, backfill the remnants of the trench and geotextile with bed material. Trim any exposed geotextile.

10. A large boulder should be placed just downstream of the end of the log to secure the log. The boulder should be set below invert elevation of the channel. Where the log vane ties into the channel, its root wad end should be set on top of a root wad. One or two boulders should be keyed into the bank that will secure the log vane and root wad. Though recommended, boulders may be omitted if resources are not readily available.

11. Repair any areas of the channel bank disturbed by the installation. Live staking may be installed around the structure for added bank stability.
LOG SILLS, TYPICAL

NOTES
1. LOG SILLS MAY BE CONSTRUCTED USING TREES FROM WITHIN THE CONSTRUCTION AREA.
2. EACH LOG SHALL BE APPROXIMATELY 4-5 FT IN DIAMETER, 12 FT IN LENGTH, AND STRAIGHT. IF THE LOG IS LESS THAN ONE FOOT IN DIAMETER, A SECOND LOG SHALL BE USED IN CONJUNCTION WITH THAT LOG, WITH ONE STACKED ON TOP OF THE OTHER. TO CREATE A LOG SILL WITH AN EFFECTIVE DIAMETER OF AT LEAST ONE FOOT.
3. THE MOST DOWNSTREAM LOG SILL IN A SERIES OF SILLS SHALL HAVE A FOOTER LOG, REGARDLESS OF THE HEADER LOG'S DIAMETER. THE EFFECTIVE DIAMETER OF THIS LOG SILL SHALL BE AT LEAST TWO FEET.
4. EXCAVATE A TRENCH FOR EACH LOG. TRENCH SHALL BE DEEP AND LONG ENOUGH FOR PLACEMENT OF LOGS AND WIDE ENOUGH FOR PLACEMENT OF FABRIC FILTER ON THE UPSTREAM SIDE OF THE LOGS. SET LOGS INTO THE TRENCH SUCH THAT THE TOP OF EACH LOG IS FLUSH WITH THE CHANNEL INVERT AND LEVEL. THE TOP OF THE LOG MAY BE PLANED TO MAKE IT LEVEL.
5. PLACE NON-MOVABLE FILTER FABRIC ALONG THE UPSTREAM FACE OF LOGS, SECURED WITH NAILS OR GALVANIZED COMMON NAIL, ON 1 FT SPACING ALONG THE VERTICAL FACE OF THE LOGS.
6. BACKFILL TRENCH WITH BED MATERIAL AND RESHAPE THE CHANNEL TO THE APPROPRIATE DIMENSIONS. ENSURE FABRIC FILTER IS NOT EXPOSED AND TRIM AWAY ANY THAT MAY BE EXPOSED. ONLY THE TOP SURFACE OF THE LOG SHALL BE EXPOSED.
7. INSTALL LIVE STAKES AROUND THE LOGS WHERE THEY ARE KEYED INTO THE BANK. APPROXIMATELY 8 STAKES SHALL BE USED PER LOG SILL. STAKES SHALL BE SPACED APPROXIMATELY 6 TO 12 INCHES FROM EACH OTHER.

PLAN VIEW

SECTION A-A
## NOTES AND QUANTITIES

### GENERAL CONSTRUCTION NOTES

1. The work on the project shall conform to the following specifications, standards, and/or regulations:
   - Alaska NDOTB Handbook for Erosion Control
   - ADEM NPIES Construction General Permit conditions
   - United States Army Corps of Engineers National Permit Number 27
   - The Project Plans and Specifications

2. Portions of the project are located in a Zone of Flooding as indicated by FEMA FIRM Floodplain Maps. The project will involve the construction of structures that will result in a new inundation of over forty cubic yards of material from the floodplain. Therefore, floodplain alterations are not exempted to rise as a result of the project.

3. Construction of the stream shall be performed by a qualified contractor experienced with natural channel restoration construction procedures.

4. Construction safety fencing shall be installed between the construction zone and public access areas.

5. Instream structures shall be installed as the channel is being constructed and meet the post construction filter fabric installed as part of the stream structures shall be a nonwoven geotextile.

6. A Sediment/erosion control measures shall be installed to protect in-stream structures and prevent siltation and sediment movement.

7. Trees, shrubs, and brush structures shall be installed near the downriver end of temporary pads, later to be removed and reseeded for permanent pads.

8. Prickly pear cactus and vegetation shall be left in place to facilitate natural rejuvenation and stabilization.

### EROSION/SEDIMENTATION CONTROL NOTES

1. All Erosion Control Measures shall be implemented and maintained in accordance with the Alaska NDOTB Handbook for Erosion Control and ADEM NPIES Construction General Permit conditions. Measures shown on the project plans shall be considered minimums. The Engineer, OCP, ADEM, and/or Local authorities may require changes in the sediment control measures or additional erosion control measures at any time during the life of the project.

2. All erosion control measures shall be installed and maintained as required by the Corps of Engineers. Members of the project team shall be trained in erosion control techniques.

3. The Construction Entrance shall be maintained as required by the Corps of Engineers. Members of the project team shall be trained in erosion control techniques.

4. All erosion control measures shall be installed as required by the Corps of Engineers. Members of the project team shall be trained in erosion control techniques.

5. Erosion control measures shall be installed as required by the Corps of Engineers. Members of the project team shall be trained in erosion control techniques.

### EROSION CONTROL

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffin Matting</td>
<td>5,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wooded Stakes</td>
<td>12.5' O.D. Stakes Recommended by Manufacturer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streambank</td>
<td>8.5</td>
<td>Acres</td>
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</tr>
<tr>
<td>Permanent Seed</td>
<td>3</td>
<td>Acres</td>
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</tr>
<tr>
<td>Permanent Seed</td>
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<td>Acres</td>
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</tr>
<tr>
<td>Silt Fence</td>
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<td>LF</td>
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### VEGETATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare Root Seedlings</td>
<td>TBD</td>
<td>EA</td>
<td>Seedling variety to be determined based on target forest type and be planted at 3 ft spacing</td>
</tr>
<tr>
<td>Blue Grown Seedlings (6' x 12')</td>
<td>TBD</td>
<td>EA</td>
<td>Blue Grown Tubers to be planted at 3 ft spacing</td>
</tr>
<tr>
<td>Blue Grown Seedlings (6' x 6')</td>
<td>TBD</td>
<td>EA</td>
<td>Blue Grown Tubers to be planted at 3 ft spacing</td>
</tr>
<tr>
<td>Wooded Stakes (6' x 6')</td>
<td>TBD</td>
<td>EA</td>
<td>Stakes shall be installed between the two layers of the blue tubes for stability.</td>
</tr>
</tbody>
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