CONSTRUCTION NOTES FOR THE PLACEMENT OF WRAP'S REINFORCEMENT AND BACKFILL SOILS FOR TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS

1.0 DESIGN CRITERIA

1.1 SOIL PARAMETERS

See wall control drawings for soil characteristics of foundation material to be used in the design of the wall system. The contractor shall provide soil design parameters for backfill material based on the actual soil characteristics utilized at the site. The value of φ, C, and k shall be provided in the shop drawings.

1.2 MINIMUM FACTOR OF SAFETY

1.2.1 EXTERNAL STABILITY

SLIDING 1.5
OVERTURNING 2.0
BEARING CAPACITY 2.5

1.2.2 INTERNAL STABILITY

Rupture 1.5
Pullout 1.5

1.2.3 GLOBAL STABILITY 1.5

1.2.4 UNIFORML Y SUBGRADE 250 PSF

1.2.5 HYDROSTATIC FORCES

NONE

1.2.6 SEISMIC FORCES

In accordance with AASHTO and Foot Plan Preparation Manual.

2.0 MATERIALS

2.1 GEOSYNTHETIC REINFORCEMENT AND RETENTION FABRIC WRAP'S, INC. SHALL BE MANUFACTURED BY TC MIRAFI, PENDERGRASS, GEORGIA.

2.2 REINFORCED BACKFILL SHALL MEET THE REQUIREMENTS IN FLORIDA DOT SPECIFICATIONS - SECTION 546 RETAINING WALL SYSTEMS.

2.3 WALL FACES SHALL BE PRE-FABRICATED STEEL WIRE FORMS COMPRISED OF A MINIMUM #5.5 SIZE STANDARD WIRE MODERATELY 4 HUNDMES ON CENTER. STEEL WIRE FORMS SHALL BE AS DETAILED IN THE DRAWINGS.

2.4 RING FASTENERS SHALL BE RING STYLE #5-20 X 1/4 IN. GAUGE GALVANIZED, MANUFACTURED BY DECKER MANUFACTURING CO. OR EQUIVALENT.

3.0 WALL CONSTRUCTION

3.1 FOR LOCATION AND ALIGNMENT OF REINFORCED SOIL STRUCTURES SEE RETAINING WALL CONSTRUCTION PLANS.

3.2 STEEL WIRE FORMS, REINFORCEMENT, SOIL RETENTION FABRIC, AND COMPACTED FILL SHALL BE PLACED IN SUCCESSIVE LIFTS IN THE SEQUENCE SHOWN IN THE CONSTRUCTION DRAWINGS.

3.3 GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AT THE ELEVATION, LOCATION, TYPE, ORIENTATION AND TO THE LIMITS SHOWN ON THE CONSTRUCTION DRAWINGS. THE REINFORCEMENT SHALL BE PLACED IN A MANNER SO AS TO AVOID SLACK OR WRINKLES. PAVING OR STAKES MAY BE REQUIRED TO MAINTAIN WRINKLE-FREE PLACEMENT DURING INSTALLATION.

3.4 AT EACH REINFORCEMENT FIXATION, BACKFILL SOILS SHALL BE COMPACTED TO A LEVEL SURFACE BEFORE PLACING THE REINFORCEMENT. ALL REINFORCEMENT SHALL BE PLACED NORMAL TO THE FACE OF THE WALL.

3.5 ADJACENT WIRE FORMS SHALL BE CONNECTED ALONG VERTICAL AND HORIZONTAL SEAMS WITH GALVANIZED INTERLOCKING FASTENERS Placed 6 INCHES ON CENTER.

3.6 BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH FOOT SPECIFICATIONS - SECTION 546.

3.7 TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE REINFORCEMENT; A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED FOR THE OPERATION OF TRACKED VEHICLES OVER THE REINFORCEMENT. TURING OF TRACKED VEHICLES SHOULD BE AVOIDED TO PREVENT TRACKS FROM DISPLACING THE FILL AND THE REINFORCEMENT.

3.8 RUBBER TIRED VEHICLES MAY PASS OVER THE REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

3.9 TC MIRAFI ENGINEERING SERVICES, INC. IS RESPONSIBLE FOR THE INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY IS THE RESPONSIBILITY OF OTHERS.
Installation around pipe running parallel to machine (roll) direction of reinforcement.

- Slit reinforcement from end closest to pipe to 6 feet beyond.
- Lay reinforcement in around pipe.

Convex corner detail

- Fold reinforcement around obstruction.
- Cut reinforcement parallel to edge.
- Placement around obstructions.

Front face of wall

CONVEX CORNER DETAIL

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RETAINING WALL SYSTEM
TC MIRAFE WIRE FORM TEMPORARY

THIS SYSTEM MAY BE USED IN ALL ENVIRONMENTS.
CONSTRUCTION SEQUENCE

STEP 1
- Excavate for level base to a length adequate for reinforcement embedment.
- Set grading stakes at a 4" offset to facilitate proper wire form alignment.
- Bore bottom basket 4" below finished grade at front face of wall or as shown on wall profile.

STEP 2
- For the first course of the wall, align baskets without spaces and attach with ring fasteners.
- Install struts at about 5 foot spacing.

STEP 3
- Place 0.5% protection/soil retention fabric at excavation at struts.
- Place face fabric against wire form face.
- Staple fabric over wire form allowing for required wrap embedment.

STEP 4
- Place backfill soil in 4" increments and compact using light weight compaction equipment.
- Compact remaining backfill soil with standard compaction equipment to required density.
- Compact wire form fill.

STEP 5
- Repeat steps 2 thru 5 until desired height of wall is reached.

STEP 6
- Cut or bend the welded wire form to match the proposed grade.

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TC Mirafi Wire Form Temporary