3-D MODEL IMAGES OF FIVE HIGH FIBER ROLL REINFORCED LIFT

WILKINSON

Top View

Side View

Perspective View

Front View
20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX.
TOP FOUR FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC

TOP FOUR FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC

BOTTOM SIX FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING

6"X6" ANCHOR POSTS SPACED 5' O.C.

COIR MARSH PILLOWS MADE OF 700 GRAM COIR BLANKET ENVELOPE FILLED WITH MIXED LOOSE COIR FIBER AND COMPOST

REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-700 COIR NETTING AND MESH COMPARABLE TO THE CASING OF FIBER ROLLS

COMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4"-6" OF COVER OVER PRE-VeGETATED FIBER ROLLS

DBBB DUCKBILL ANCHORS ATTACHED TO 42" CABLES, ANCHORS SPACED 2.5" +/- OC ACROSS FACE OF FIBER ROLLS

BOTTOM FIBER ROLLS TO BE COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING

EXISTING GRADE
PROPOSED GRADE

30' DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX.
TOP FOUR FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC

REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

COASTAL STABILIZATION

Scaling: 1/4" = 1'
900-GRAM 100% BIODEGRADABLE COIR FABRIC

6" DEEP HAND DUG LOCK-IN TRENCH PER MANUFACTURER INSTRUCTIONS

Erosion Control Blanket (ECB) On Bank

20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC

Compatibility Sediment to Provide Average Cover of 4-6" of Cover Over Pre-vegetated Fiber Rolls

Paired DB88 Duckbill Anchors Attached to Cables, Anchors Spaced 2.5'-O.C. Across Face of Fiber Rolls into Undisturbed Soil

Bottom Fiber Rolls to Be High-Density (#9) and Covered with Layer of Erosion Control Mesh

Remains of Sand Nourishment Placed Over High-Density Fiber Rolls at Greater Depth to Provide Specified Volume of Sand Nourishment

900-GRAM 100% BIODEGRADABLE COIR FABRIC

FIBER ROLL SECTION, TYPICAL

Detail Provided By Wilkinson Ecological Design, Specialists in Coastal Stabilization Construction

Scale: 3/8" = 1'

Notes:
1. Only Zinc-Plated Copper Crimps to Be Used to Fasten All Cables.
2. Set Each Duck Bill Anchor with Proper Force Applied to the Cable as Recommended by Manufacturer.
3. Paired DB88 Duckbill Anchors Shall Be Placed over Each Course of Fiber Rolls and Spaced So Each Overlap Is Properly Supported on Either Side to Secure the Joint.

Legend:

Drawn By: JS
Checked By: JS

For Permitting Purposes Only
Time Drawing Is Not Intended For Construction

Coastal Stabilization CS301
900-GRAM 100% BIODEGRADABLE COIR FABRIC

6" DEEP HAND DUG LOCK-IN TRENCH, PER MANUFACTURER INSTRUCTIONS

1.5:1 TYP.

Erosion Control Blanket (ECB) on Bank

20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUICK GRASS @ 2" OC

COMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4.6" OF COVER OVER PRE-VEGETATED FIBER ROLLS

Paired DB88 Duckbill Anchors Attached to Cables. Anchors Spaced 2.5" +/- OC across face of fiber rolls into undisturbed soil

Bottom Fiber Rolls to be high-density (#9) and covered with layer of erosion control mesh

Sand filled envelope constructed of single layer of biodegradable burlap and two layers of 900 gram coir fabric

900-GRAM 100% BIODEGRADABLE COIR FABRIC

NOTES:

1. ONLY zinc-plated copper crimps to be used to fasten all cables.
2. SET EACH DUCK BILL ANCHOR WITH PROPER FORCE APPLIED TO THE CABLE AS RECOMMENDED BY MANUFACTURER.
3. PAIRED DB88 DUCKBILL ANCHORS SHALL BE PLACED OVER EACH COURSE OF FIBER ROLLS AND SPACED SO EACH OVERLAP IS PROPERLY SUPPORTED ON EITHER SIDE TO SECURE THE JOINT.

FIBER ROLL SECTION, TYPICAL

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

PATENT PENDING 2018

Scale: 3/8" = 1'

WILKINSON ECOLOGICAL DESIGN

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SURVEY PROVIDED BY:

FIBER ROLL SECTION, TYPICAL

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

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SURVEY PROVIDED BY:
900-GRAM COIR FABRIC
SAND NOURISHMENT OF COMPATIBLE SEDIMENT
20" DIAMETER FIBER ROLLS
900-GRAM COIR FABRIC
HIGH TENACITY MESH
CABLES ATTACHED TO DRR88 DUCKBILL ANCHORS SPACED 2.5 +/- OC
900-GRAM COIR FABRIC

FIBER ROLL DETAIL, TYPICAL

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION
PATENT PENDING 2018

Scale: 2' = 1'

COASTAL STABILIZATION CS305
SOIL LIFTS CONSISTING OF COMPACTED SAND SURROUNDED BY A SINGLE LAYER OF C-700 COIR NETTING AND HIGH TENACITY MESH COMPARABLE TO THE CASING OF FIBER ROLLS

DUCKBILL, HELICAL OR OTHER EARTH ANCHOR

CROSS WIRE CABLE CLAMP FASTENED PERPENDICULARLY TO ANCHOR CABLE TO ALLOW FOR LONGITUDINAL AND/OR CABLES TO PROVIDE ADDITIONAL ANCHORING AT TERMINAL ENDS AND/OR INTERVALS SPACED ALONG THE FACE OF THE ARRAY

DUCKBILL, HELICAL OR OTHER EARTH ANCHOR

DUCKBILL ANCHORS MUST BE EMBEDDED MINIMUM OF 42" INTO SEDIMENT

LONGITUDINAL ANCHORING ALTERNATIVE #2

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

PATENT PENDING 2018

Scale: 2" = 1'
20" DIAMETER FIBER ROLLS INSTALLED
AT 1.5:1 SLOPE APPROX.
WITH COVERING OF SAND TO
PROTECT FROM UV BREAKDOWN

900-GRAM 100% BIODEGRADABLE
COIR FABRIC
SAND NOURISHMENT OF
COMPATIBLE SEDIMENT

HELICAL ANCHORS
ATTACHED TO CABLES.
ANCHORS SPACED 2.5' +/- .0C
ACROSS FACE OF FIBER ROLLS
INTO UNDISTURBED SOIL

6" DEEP HAND DUG LOCK-IN TRENCH,
PER MANUFACTURER INSTRUCTIONS

EROSION CONTROL BLANKET (ECB)
ON BANK

1.5:1 TYP.

900-GRAM 100% BIODEGRADABLE
COIR FABRIC WITH SYNTHETIC MESH
(OPTIONAL FOR VELOCITY ZONES)

SAND NOURISHMENT OF
COMPATIBLE SEDIMENT
1.5:1 TYP

20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX.
TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC

COMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4-6" OF COVER OVER PRE-VEGETATED FIBER ROLLS

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-750 COR NETTING

DBBB DUCKBILL ANCHORS ATTACHED TO 42" CABLES. ANCHORS SPACED 2.5" +/- OC ACROSS FACE OF FIBER ROLLS

REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-750 COR NETTING AND MESH COMPAREABLE TO THE CASING OF FIBER ROLLS

6"X6" ANCHOR POSTS SPACED 5' O.C.

EXISTING GRADE

PROPOSED GRADE

09/12/2016

COASTAL STABILIZATION DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION PATENT PENDING 2018
1.5:1 TYP

20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUICK GRASS @ 12" OC

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING

6"X6" ANCHOR POSTS SPACED 5' O.C.

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-700 COIR NETTING AND MESH COMPAREABLE TO THE CASING OF FIBER ROLLS

20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUICK GRASS @ 12" OC

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING

6"X6" ANCHOR POSTS SPACED 5' O.C.

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-700 COIR NETTING AND MESH COMPAREABLE TO THE CASING OF FIBER ROLLS

DB88 DUCKBILL ANCHORS ATTACHED TO 40" CABLES. ANCHORS SPACED 2.5" +/- OC ACROSS FACE OF FIBER ROLLS

SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

1/4" = 1'-0"
20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC COMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4-6" OF COVER OVER PRE-VEGETATED FIBER ROLLS

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING

REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

6"X6" ANCHOR POSTS SPACED 5' O.C.

DB88 DUCKBILL ANCHORS ATTACHED TO 42" CABLES; ANCHORS SPACED 2.5' +/- OC ACROSS FACE OF FIBER ROLLS

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-700 COIR NETTING AND MESH COMPARABLE TO THE CASING OF FIBER ROLLS

FIBER ROLL REINFORCED LIFT SECTION, TYPICAL

Scale: 1/4" = 1'

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

PATENT PENDING 2018
20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OC COMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4-6" OF COVER OVER PRE-VEGETATED FIBER ROLLS

SOIL LIFTS CONSISTING OF A SINGLE LAYER OF C-700 COR NETTING AND MESH COMPARABLE TO THE CASING OF FIBER ROLLS

2" UNTREATED HARDWOOD STAKES TO SECURE CORFABRIC

DB88 DUCKBILL ANCHORS ATTACHED TO 40" CABLES. ANCHORS SPACED 2.5'-7" OC ACROSS FACE OF FIBER ROLLS

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COR NETTING

REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

BOTTOM FIBER ROLLS TO BE COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COR NETTING

DB88 DUCKBILL ANCHORS ATTACHED TO 40" CABLES. ANCHORS SPACED 2.5'-7" OC ACROSS FACE OF FIBER ROLLS

FIBER ROLL REINFORCED LIFT SECTION ,TYPICAL

Detail provided by Wilkinson Ecological Design, Specialists in Coastal Stabilization Construction

Patent Pending 2018

Scale: 1/4" = 1'
FIBER ROLL REINFORCED LIFT SECTION, TYPICAL

Detail provided by Wilkinson Ecological Design, Specialists in Coastal Stabilization Construction

PATENT PENDING 2018

Scale: 2" = 1'

1. HIGH TENACITY MESH
2. 900-GRAM COIR FABRIC
3. SAND NOURISHMENT OF COMPATIBLE SEDIMENT
4. 20" DIAMETER FIBER ROLLS
5. SOIL LIFTS CONSISTING COMPACTED SAND SURROUNDED BY A SINGLE LAYER OF C-700 COIR NETTING AND MESH COMPARABLE TO THE CASING OF FIBER ROLLS
6. 2" UNTREATED HARDWOOD STAKES TO SECURE COIR FABRIC
7. CABLES ATTACHED TO DBB BUCKBILL ANCHORS SPACED 2.5 +/- OC
MATERIAL LAYERS OF FIBER ROLL REINFORCED LIFT

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

PATENT PENDING 2018

Scale: 6" = 1'

20" DIAMETER FIBER ROLLS
CABLES ATTACHED TO DB88 DUCKBILL ANCHORS SPACED 2.5' +/- OC ACROSS FACE OF FIBER ROLLS
HIGH TENACITY MESH
700 or 900-GRAM COIR FABRIC
DOUBLE EROSION CONTROL
BLANKET 900 GRAM COIR
BLANKET AND 18-MONTH ECB

INSTALL 20" FIBER ROLL

DB88 DUCKBILL ANCHORS
ATTACHED TO CABLES,
ANCHORS SPACED 2.5' +/- OC

BioDblock BY ROLANKA, OR EQ.
TO BE INSTALLED PER
MANUFACTURER INSTRUCTIONS

5' REINFORCING UNTREATED
HARDWOOD STAKES

ANNUAL SAND NOURISHMENT,
IF NECESSARY

SLOPE AT 3:1 TO MEET EXISTING LANDWARD
GRADE

COMPATIBLE SEDIMENT
SLOPE AT 3:1 TO MEET EXISTING LANDWARD GRADE

NATIVE MARITIME GRASSES (REFER TO PLANT SPECIFICATIONS)

DOUBLE EROSION CONTROL BLANKET 900 GRAM COIR BLANKET AND 18-MONTH ECB

BiodBlock BY ROLANKA, OR EQ. TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS

2" UNTREATED HARDWOOD STAKES TO SECURE COIR FABRIC

5" REINFORCING UNTREATED HARDWOOD STAKES

COMPATIBLE SEDIMENT

ANNUAL SAND NOURISHMENT, IF NECESSARY

EXISTING GRADE AT BEACH

BIODBLOCk SECTION, TYPICAL

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

Scale: 3/8" = 1'
20" DIAMETER FIBER ROLLS INSTALLED AT 1.5:1 SLOPE
APPROX. TOP FIBER ROLLS TO BE LOW-DENSITY (#7) AND PLUGGED WITH AMERICAN BEACHGRASS & QUACK GRASS @ 12" OCCOMPATIBLE SEDIMENT TO PROVIDE AVERAGE COVER OF 4-6" OF COVER OVER PRE-VEGETATED FIBER ROLLS

BOTTOM FIBER ROLLS TO BE HIGH-DENSITY (#9) AND COVERED WITH LAYER OF EROSION CONTROL MESH AND C-700 COIR NETTING REMAINS OF SAND NOURISHMENT PLACED OVER HIGH-DENSITY FIBER ROLLS AT GREATER DEPTH TO PROVIDE SPECIFIED VOLUME OF SAND NOURISHMENT

6" DEEP HAND DUG LOCK-IN TRENCH, PER MANUFACTURER INSTRUCTIONS

COASTAL BANK TO BE PLANTED WITH NATIVE WOODY & HEMICRUSUS SPECIES WHERE DISTURBED BY FIBER ROLL INSTALLATION

2:1 TYP

1' x 2' x 6" GABION, VINYL COATED WELDED GALVANIZED WIRE BASKET

900-GRAM 100% BIODEGRADABLE COIR FABRIC

DB88 DUCKBILL ANCHORS ATTACHED TO 42" CABLES. ANCHORS SPACED 2.5' +/- 12" ACROSS FACE OF FIBER ROLLS
DB88 DUCKBILL ANCHORS ATTACHED TO 1/4" CABLES. ANCHORS SPACED 2.5' +/- OC.

SAND DRIFT FENCE

COIR ENVELOPE 4' WIDE X 3' HEIGHT

SAND NOURISHMENT AS NECESSARY

SAND DRIFT FENCE

EXISTING GRADE

1. COIR ENVELOPE SECTION TYP.  
DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION  
Scale: 1/4" = 1'

2. COIR ENVELOPE DETAIL  
DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION  
Scale: 3/4" = 1'
COMPATIBLE SAND FILL

2 LAYERS OF COIR (1000GRAM)

20 OZ BIODEGRADABLE JUTE-BURLAP FABRIC LAYER

HARDWOOD STAKES @ 3' O.C. TO HOLD COIR IN PLACE

SOIL LIFTS CONSISTING OF 20 OZ BIODEGRADABLE JUTE-BURLAP FABRIC LAYER WITH 2 OUTER LAYERS OF COIR (1000GRAM)

FIBER ROLL ARRAY

SAND NOURISHMENT

SOIL LIFTS SECTION, TYPICAL

SOIL LIFTS DETAIL, TYPICAL
NATIVE MARITIME GRASSES

(REFER TO PLANT SPECIFICATIONS)

4"-5" THICK, 3'-4' WIDE SALT MARSH PILLOWS MADE OF 700 GRAM COIR BLANKET ENVELOPE FILLED WITH MIXED LOOSE COIR FIBER AND COMPOST

1"x1"x 30" REINFORCING UNTREATED HARDWOOD STAKES

1/4" BIODEGRADABLE ROPE

PAIRED DB88 DUCKBILL ANCHORS EMBEDDED 42" INTO SEDIMENT. PILLOWS FASTENED TO STEEL AIRCRAFT CABLES WITH FOUR ANCHORS PER PILLOW

COIR MARSH PILLOW DETAIL, TYPICAL

DETAIL PROVIDED BY WILKINSON ECOLOGICAL DESIGN, SPECIALISTS IN COASTAL STABILIZATION CONSTRUCTION

Scale: 3/4" = 1'

COASTAL STABILIZATION CS360