

RESTORED STREAM PLANTING DETAIL
NOT TO SCALE

LIVE STAKE PLANTING NOTES

1. A TOOL CALLED A PLANTING BAR MAY BE USED TO PUNCH A HOLE FOR THE CUTTING. IN SOFTER SOILS, LIVE STAKES CAN SOMETIMES BE DIRECTLY PUSHED OR HAMMERED IN.
2. ROOTS SHALL BE TREATED WITH ROOT HORMONE PRIOR TO PLANTING.
3. LIVE STAKES SHOULD BE 18" TO 24" IN LENGTH AND 3/8" TO 1/2" IN DIAMETER.
4. INSTALL THE LIVE STAKE WITH THE CORRECT SIDE UP (SEE DETAIL THIS SHEET). LIVE STAKES SHOULD BE CUT ON AN ANGLE ON THE BOTTOM AND FLAT ON THE TOP. WHEN HELD WITH THE CORRECT END UP, THE BUDS MUST POINT UPWARD.
5. TWO-THIRDS (2/3) OF THE LIVE STAKE LENGTH MUST BE PLANTED BELOW GRADE. DEEPER IS FINE, AS LONG AS A FEW BUDS ARE EXPOSED AT THE TOP.
6. TAMP IN AROUND THE CUTTING TO ENSURE THAT THERE ARE NO AIR POCKETS ALONG THE STEM. YOU CAN PUSH THE PLANTING BAR INTO THE SOIL IMMEDIATELY AROUND THE STEM AND PUSH IN THE SOIL TOWARD THE PLANT.
7. REFER TO LIVESTAKE/TUBELING PLACEMENT DETAIL FOR SPECIFIC DETAILS OF PLANT PLACEMENT ALONG STREAM BANK.

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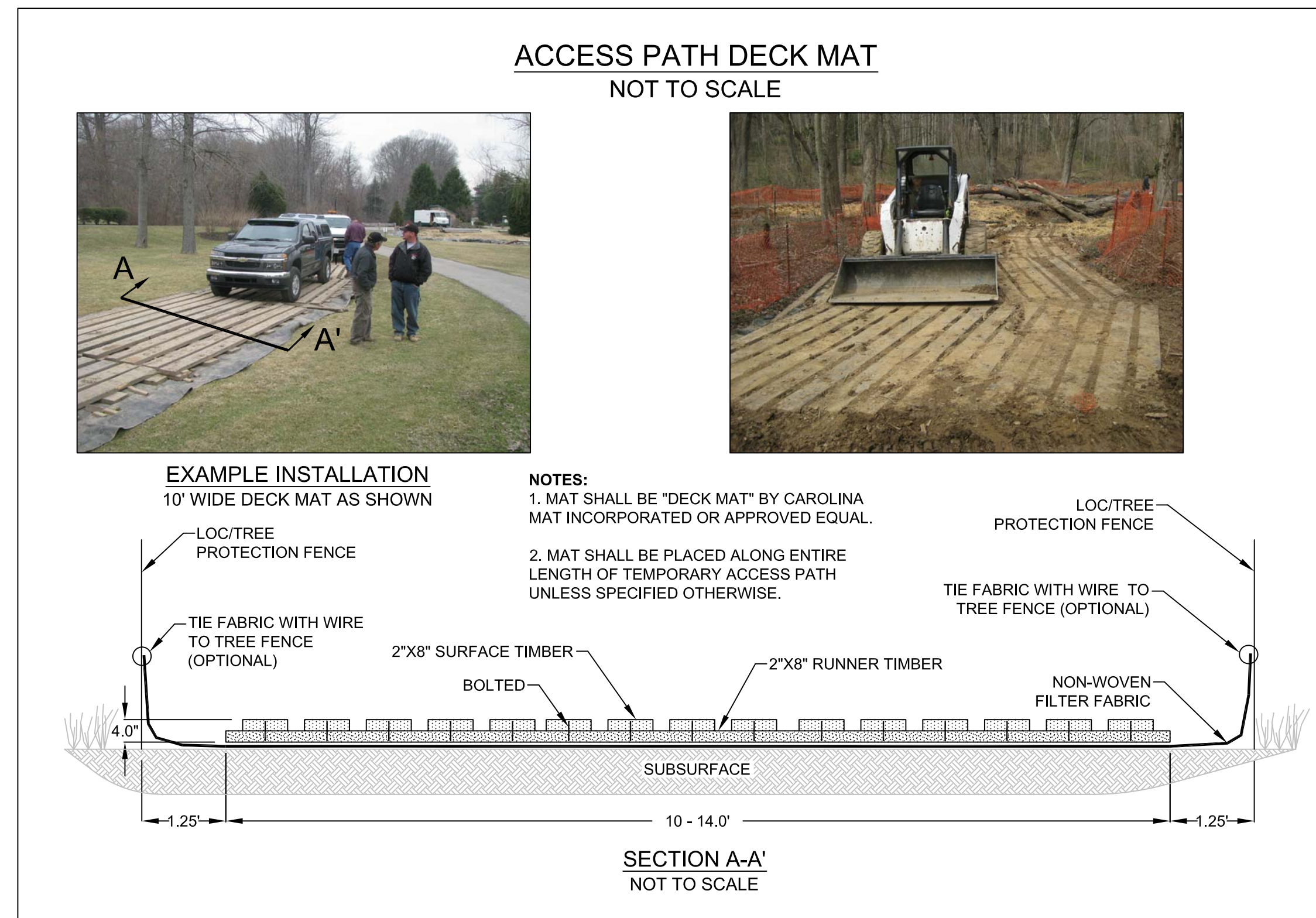


| PLANTING SCHEDULE | | | | | |
|---|------------------------------|---|------------------|---|---|
| CONTAINER PLANTING ZONE | SPECIES GROUP ^{1,2} | SPECIES ² | INDICATOR STATUS | PLANT SPACING ³ | CONTAINER SIZE, RATE, AND QUANTITY ⁴ |
| RIPARIAN FOREST | 1 | QUERCUS ALBA (WHITE OAK) | FACU- | SEE NOTE #3 | 300 |
| | | QUERCUS BICOLOR (SWAMP WHITE OAK) | FACW+ | | ONE-GALLON TUBELINGS |
| | | QUERCUS PALustris (PIN OAK) | FACW | | 600 |
| | | QUERCUS PHELLOS (WILLOW OAK) | FAC+ | | TUBELINGS |
| | | QUERCUS RUBRA (NORTHERN RED OAK) | FACU- | | MIX AT 1:2 RATIO (SEE NOTE #4) |
| | 2 | ACER NEGUNDO (BOX ELDER) | FAC- | SEE NOTE #3 | 150 |
| | | ACER RUBRUM (RED MAPLE) | FAC | | ONE-GALLON |
| | | BETULA NIGRA (RIVER BIRCH) | FACW | | 300 |
| | | LIGULIDAMBAR SYRACIFULA (SWEET GUM) | FAC | | TUBELINGS |
| | | NYSSA SYLVATICA (BLACK GUM) | FACW+ | | MIX AT 1:2 RATIO (SEE NOTE #4) |
| 3 | ILEX OPACA (AMERICAN HOLLY) | FACU+ | SEE NOTE #3 | 100 | |
| | | | | ONE-GALLON | |
| | | | | 200 | |
| | | | | TUBELINGS | |
| | | | | MIX AT 1:2 RATIO (SEE NOTE #4) | |
| SHRUB LAYER | 4 | AMELANCHIER CANADENSIS (CANADIAN SERVICE BERRY) | FAC | SEE NOTE #3 | 150 |
| | | CERCIS CANADENSIS (EASTERN REDBUD) | FACU- | | ONE-GALLON |
| | | CORNUS FLORIDA (FLOWERING DOGWOOD) | FACU- | | 300 |
| | | CORYLUS AMERICANA (AMERICAN HAZELNUT) | FACU- | | TUBELINGS |
| | | LINDERA BENZOIN (NORTHERN SPICEBUSH) | FACW- | | MIX AT 1:2 RATIO (SEE NOTE #4) |
| | | VIBURNUM DENTATUM (SOUTHERN ARROWWOOD) | FAC | | |
| RIPARIAN FOREST QUANTITY SUBTOTALS | | | | | 700 |
| STREAM BANK | 5 | ILEX VERTICILLATA (COMMON WINTER BERRY) | FACW+ | SEE NOTE #3 (AVERAGES 3' O.C. FOR ONE-GALLON) | APPROX. 600 |
| | | LINDERA BENZOIN (NORTHERN SPICEBUSH) | FACW- | | ONE-GALLON |
| | | SAMBUCUS CANADENSIS (ELDERBERRY) | FACW- | | 970 |
| | | VIBURNUM DENTATUM (SOUTHERN ARROWWOOD) | FAC | | TUBELING |
| | | VIBURNUM PRUNIFOLIUM (BLACK-HAW) | FACU | | |
| STREAM BANK QUANTITY SUBTOTALS | | | | | --- |
| STREAM EDGE | 6 | ALNUS SERRULATA (BROOKSIDE ALDER) | OBL | | N/A |
| | | CORNUS AMOMUM (SILKY DOGWOOD) | FACW | 1' O.C. (SEE NOTES #5, #6) | |
| | | SALIX NIGRA (BLACK WILLOW) | FACW+ | | |
| | | VIBURNUM DENTATUM (SOUTHERN ARROWWOOD) | FAC | | |
| STREAM EDGE QUANTITY SUBTOTALS | | | | | --- |

| SEEDING SCHEDULE | | | | |
|-------------------------------------|--|--|------------------|------------------------------------|
| SEED PLANTING ZONE | SPECIES GROUP ^{1,2} | SPECIES ² | INDICATOR STATUS | SEEDING RATE ¹ (LBS/AC) |
| RIPARIAN BUFFER SEED MIX | 7 | LOLIUM MULTIFLORUM (ANNUAL RYEGRASS) | NI | 45.00 |
| | | SETARIA ITALICA (FOXTAIL MILLET) | UPL | 45.00 |
| | 8 | CAREX SCODPARIA (BLUNT BROOD SEDGE) | FACW | 0.20 |
| | | CAREX SQUARROSA (SQUARROSE SEDGE) | NI | 0.20 |
| | | CAREX VULPINOIDEA (FOX SEDGE) | OBL | 0.20 |
| | | CYPERUS ESCULENTUS (CHUFA) | FACW | 0.20 |
| | | JUNCUS EFFLUSUS (SOFT RUSH) | FACW+ | 0.20 |
| | 9 | JUNCUS TENUIIS (PATH RUSH) | FAC- | 0.20 |
| | | ELYMUS RIPARIUS (RIVERBANK WILD RYE) | FACW | 10.00 |
| | | ELYMUS VIRGINICUS (VIRGINIA WILD RYE) | FACW- | 10.00 |
| | | PANICUM CLANDESTINUM (DEER TONGUE GRASS) | FAC+ | 10.00 |
| | | PANICUM DICHOTOMIFLORUM (SMOOTH PANIC GRASS) | FACW- | 10.00 |
| | 10 | ANEMONE VIRGINIANA (THIMBLEWEED) | NI | 0.10 |
| | | ASTER NOVAE-ANGLIAE (NEW ENGLAND ASTER) | FACW- | 0.10 |
| | | ASTER PILLOSUS (HEATH ASTER) | UPL | 0.10 |
| ASTER PRENANTHOIDES (ZIG ZAG ASTER) | | FAC | 0.10 | |
| LILIUM SUPERBUM (TURKSCAP LILY) | | FACW+ | 0.10 | |
| 11 | SOLIDAGO JUNCEA (EARLY GOLDENROD) | UPL | 0.10 | |
| | EUPATORIUM FISTULOSUS (DOE EYE WEEED) | FACW | 0.10 | |
| | EUPATORIUM PERFLIATUM (BONESET) | FACW+ | 0.10 | |
| | EUTHAMIA GRAMINIFOLIA (GRASS LEAVED GOLDENROD) | FAC | 0.10 | |
| | SOLIDAGO CANADENSIS (CANADIAN GOLDENROD) | FACU | 0.10 | |
| 12 | SOLIDAGO SPECIOSA (SHOWY GOLDENROD) | UPL | 0.10 | |
| | VERNONIA NOVEBORACENSIS (NEW YORK IRONWEED) | FACW+ | 0.10 | |
| | ZIZIA AUREA (GOLDEN ALEXANDERS) | FAC | 0.10 | |
| | ASCLEPIAS SYRIACA (COMMON MILKWEED) | UPL | 0.20 | |
| | BIDENS FRONDOSA (BEEGAR TICKS) | FACW | 0.20 | |
| 13 | HELENIUM AUTUMNALE (COMMON SNEEZE WEEED) | FACW+ | 0.20 | |
| | HELIANTHUS ANGUSTIFOLIUS (NARROW-LEAF SUNFLOWER) | FACW | 0.20 | |
| | ONOCLEA SENSIBILIS (SENSITIVE FERN) | FACW | 0.20 | |
| | PENSTEMON DIGITALIS (PENSTEMON) | FAC | 0.20 | |
| | VERBENA HASTATA (BLUE VERVAIN) | FACW+ | 0.20 | |
| 14 | VERBESINA ALTERNIFOLIA (WINGSTEM) | FAC | 0.20 | |
| | COREOPSIS LANCEOLATA (LANCE LEAVED COREOPSIS) | FACU | 0.20 | |
| | HELIOPSIS HELIANTHOIDES (DIXIE SUNFLOWER) | UPL | 0.20 | |
| | POLYGONUM PENNSYLVANICUM (PA SMARTWEEED) | FACW | 0.20 | |
| | RUDBECKIA HIRTA (BLACK EYED SUSAN) | FACU- | 0.20 | |
| 15 | SENNA HEBECAPPA (WILD SENNA) | FAC | 0.20 | |
| | AMELANCHIER CANADENSIS (CANADIAN SERVICE BERRY) | FAC | 0.20 | |
| | ARONIA MELANOCARPA (BLACK CHOKEBERRY) | UPL | 0.20 | |
| | HAMAMELIS VIRGINIANA (WITCH HAZEL) | FAC- | 0.20 | |
| | ILEX VERTICILLATA (WINTER BERRY) | FACW+ | 0.20 | |
| SEEDING TOTALS | | | | 137.90 |

PLANTING AND SEEDING NOTES:

1. IT IS EXPECTED AND PREFERRED THAT ALL SPECIES IN EACH OF THE SPECIES GROUPS ARE PLANTED. THE TOLERANCES LISTED IN THIS NOTE ARE INTENDED TO INCORPORATE FLEXIBILITY ACCORDING TO SPECIES AVAILABILITY. AT A MINIMUM, CONTRACTOR TO PROVIDE AT LEAST:
 - A) 3 OF THE 5 SPECIES IN GROUP 1,
 - B) 4 OF THE 6 SPECIES IN GROUP 2,
 - C) ALL OF GROUP 3,
 - D) 5 OF THE 7 SPECIES IN GROUP 4,
 - E) 3 OF THE 5 SPECIES IN GROUP 5,
 - F) 3 OF THE 4 SPECIES IN GROUP 6 (WITH SALIX NIGRA A REQUIRED SPECIES),
 - G) ALL OF GROUP 7,
 - H) 4 OF THE 6 SPECIES IN GROUP 8,
 - I) 3 OF THE 4 SPECIES IN GROUP 9,
 - J) 5 OF 6 SPECIES IN GROUP 10,
 - K) 5 OF 7 IN GROUP 11,
 - L) 6 OF 8 IN GROUP 12,
 - M) 4 OF 5 IN GROUP 13,
 - N) 5 OF 8 IN GROUP 14, AND
 - O) 5 OF 6 IN GROUP 15.
2. SUBSTITUTIONS FOR SELECTED SPECIES BASED UPON AVAILABILITY SHALL BE REQUESTED IN WRITING TO ENGINEER DOCUMENTING THE LACK OF AVAILABILITY IF THE FLEXIBILITY INHERENT IN THE ABOVE SCHEDULE IS STILL NOT SUFFICIENT. ENGINEER IS UNDER NO OBLIGATION TO APPROVE SUBSTITUTIONS.
3. THE PLANTED TREES AND SHRUBS SHALL BE RANDOMLY SPACED AND SPECIES MIXED THROUGHOUT THE PLANTING AREAS.
4. CONTAINER RATES AND QUANTITIES SHOWN FOR ONE GALLON SIZE. FOR PURPOSES OF SUBSTITUTION, TWO TUBELINGS ARE THE EQUIVALENT OF ONE 1-GALLON CONTAINER PLANT IN THIS SCHEDULE. CONTRACTOR MAY PROVIDE A MIX OF CONTAINER AND TUBELING SIZES FOR EACH SPECIES REQUIREMENT, PROVIDED THE RATIO OF TUBELINGS TO CONTAINERS IS NOT LESS THAN 2:1. EXCEPTION - GROUP 6 (STREAM EDGE) SHALL BE PLANTED IN ACCORDANCE WITH NOTE #5.
5. GROUP 6 (STREAM EDGE) ZONE SHALL BE PLANTED WITH TUBELINGS, OR AS LIVESTAKES (SALIX NIGRA ONLY, AND ONLY BETWEEN FEBRUARY 1 AND MARCH 31). NO ONE GALLONS ARE TO BE USED FOR ANY OF THIS GROUP'S SPECIES.
6. STREAM BANK AND STREAM EDGE ZONES SHALL BE PLANTED SUCH THAT THE COMBINED MIX OF SPECIES IS SPACED APPROX. 3' O.C. AND 1' O.C., RESPECTIVELY. THESE ZONES SHALL NOT BE PLANTED SUCH THAT EACH INDIVIDUAL SPECIES IN THESE ZONES IS PLANTED AT THESE RATES, RESULTING IN TIGHTER SPACING.
7. ALL SEEDING RATES ARE EXPRESSED IN POUNDS OF PURE LIVE SEED (PLS).



ACCESS PATH DECK MAT
NOT TO SCALE

EXAMPLE INSTALLATION
10' WIDE DECK MAT AS SHOWN

NOTES:

1. MAT SHALL BE "DECK MAT" BY CAROLINA MAT INCORPORATED OR APPROVED EQUAL.
2. MAT SHALL BE PLACED ALONG ENTIRE LENGTH OF TEMPORARY ACCESS PATH UNLESS SPECIFIED OTHERWISE.

Labels in diagram: LOC/TREE PROTECTION FENCE, TIE FABRIC WITH WIRE TO TREE FENCE (OPTIONAL), 2"X8" SURFACE TIMBER, BOLTED, 2"X8" RUNNER TIMBER, NON-WOVEN FILTER FABRIC, SUBSURFACE.

DRAFT

Northern Virginia Stream Restoration Bank
Colvin Run - Buttermilk Creek
Fairfax County, Virginia

Preliminary Plan

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H. D.: VCS NAD 83 V. D.: NGVD 29

| REVISIONS | | | | | | Boundary and Topo Source: WSSI and Fairfax Digital Data | |
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| No. | Date | Description | Rev. By | App. By | No. | Date | Description |
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Design Draft Approved
SRP SRP FRG

Sheet #
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DATE: FEBRUARY 11, 2012 SCALE: N/A C.I. = 0.5'