## SPSRW-XX: Timber Mat Temporary Access & Stream Crossing

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### Description

The work covered by this special provision consists of all items related to installing timber mat temporary access & stream crossing or timber mats for construction access. Construct and maintain construction access at locations shown on the Contract Documents or as directed by the Engineer for the duration of the project work. The locations shall be field adjusted based on-site conditions, emphasizing preservation of existing vegetation and minimizing impacts to wet areas.

The quantity of structures to be constructed will be affected by actual conditions that occur during the construction of the project. The type and quantity of this structure may be increased or decreased at the direction of the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

### Materials

Timber mats shall be made of sawn, non-treated, hard wood (typically oak) timbers, which run the entire length of the mat. Timber mats are identified as either “Standard” or “Heavy”. Standard timber mats are approximately 18 to 20 feet in length, four feet wide, and 8 inches thick, with steel connection rods typically every four feet. Heavy timber mats are approximately 30 feet in length, four to five feet wide, and 12 inches thick, with steel connections rods typically every seven feet. Timber mats may have attached cables to assist with transport.

Timber mats shall be clean (free of soil, debris, chemicals, and vegetation), solid (hard) and visibly free from decay, breakage, or other damage. A representative of the city may reject any timber mat. Timber mats rejected by the City may be marked with “temporary” marking paint and shall be removed from the site.

In the case of a fuel and/or fluid spill/leak, the Contractor and the Engineer shall inspect the adjacent timber mats for petroleum contamination. Any timber mats contaminated by the spill/leak shall be marked with temporary marking paint and removed immediately to the project staging area(s), the soil and vegetation below the timber mat(s) shall be inspected for contamination. If the ground beneath the removed timber mats is “clean” the timber mats will be replaced with “new” mats. If the ground is contaminated, remove the contaminated soil from the project site and dispose of it properly at no additional cost to the city.

Contaminated timber mats shall be removed from the project site and thoroughly cleaned before returning to the site. Upon request, provide a copy of the cleaning procedures and/or products.

Type II fabric for timber mat access shall meet the material requirements specified in the “Filter Fabric” section.

Riprap to be well-graded mix of class B rip-rap to meet NCDOT section 1042 Rip-Rap Materials.

Support logs must be relatively straight with a minimum 12” diameter. All limbs and branches shall be removed from the log. Sources for logs shall include trees removed due to construction activities as well as off-site timber. All logs shall be relatively solid (hard) and free of visible rot and/or animal damage.

### Methods

Timber mats shall be placed and used in any area where access is required beyond the limits of an existing road.

Maintain all access roads, including replacing timber mats as needed for the duration of the project.

Tree and vegetation removal by the Contractor and/or sub-Contractors shall be minimal and limited, as indicated in the Contract Documents. Prior to the installing the Timber Mat Access Road, identify (flag) all trees and/or shrubs to be removed. Flagged vegetation shall be reviewed and approved by the City. If during the execution of the project work additional trees and/or shrubs must be removed, flag the vegetation for review and approval by the City.

Access Roads

Once an access road alignment has been accepted by the city, hand cut field identified trees and/or shrubs to within six feet of the surface of the ground, for the width of the access area. All cut brush and/or tree branches and trunks shall be left on the surface of the ground.

Place timber mats directly on top of the cut vegetation, stumps, and ground cover. Do not disturb the surface of the ground and/or the existing root mat during installation of the timber mats.

At the location(s) shown on the plans and/or as field determined by the Engineer, begin placing timber mats width-to-width. Once the length of the road is beyond the reach of the Contractor’s equipment, any extension of the timber mat road shall be completed by equipment sitting on previously installed mats. All equipment access is limited to the installed timber mats. Additional timber mats may be placed adjacent to the access road, for vehicle staging, passing, and other construction activities.

Concentrated Flow Areas

In areas of concentrated flow (swales, draws, ditches, etc.) install timber mats width up to and immediately beyond the area of concentrated flow. Install additional timber mats lengthwise to span the flow. Do not disturb the banks or vegetation within the concentrated flow area.

Determine if the installed timber mats are capable of providing safe access based on span length, height, weight and size of equipment, and type of equipment (i.e., on-road trucks, off-road trucks, tracked vehicles, etc.). Heavy timber mats may be needed based on the site conditions and equipment. If the Contractor is unable to span the concentrated flow area with a single timber mat length, then notify the city and develop an alternative plan for access.

Retire all access roads and remove all timber mats, timbers, bolts, cables, etc., upon completion of the project work and re-establish vegetation in accordance with the Contract Documents.

The Contractor shall submit for approval prior to installation for the following: Timber Mat Temporary Access & Stream Crossing.

### Measurement

The quantity of timber mat access to be paid for shall be the actual number of square feet of “Timber Mat Temporary Access & Stream Crossing” installed. All measurement for timber mat access shall be made horizontally along the surface of the installed mats.

There shall be no separate measurement for the rip-rap approach(es).

There shall be no separate measurement for the timber mat concentrated flow access.

There shall be no separate measurement for “Standard” or “Heavy” timber mat access.

There shall be no separate measurement for timber mats that are installed for equipment staging, passing, removed and/or re-installed.

### Payment

The work covered by this section shall be paid for at the contract per square foot price for “Timber Mat Temporary Access & Stream Crossing”. Such price shall be full payment for all work covered by this specification including all materials, labor, equipment, incidentals, and other associated work required for acceptance.

There will be no payment for the removal of timber mat materials from the job site or the disposal of unsuitable/ worn-out timber mats.

Payment will be made under:

TIMBER MAT SF