

INLET PROTECTION - FABRIC DROP AND DROP IN FILTER

PHYSICAL DESCRIPTION - A woven fabric barrier braced around an area inlet or drop in type filter designed to prevent sediment from entering the storm sewer. Shallow temporary ponding during and after rainfall should be expected. Use an alternate method if flooding of driving lanes, adjacent property, etc. is possible.

WHERE BMP IS TO BE INSTALLED - At inlets designed to drain a small gently sloping area with maximum grade of 5%. Overflow capacity is limited on standard area inlets.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow: Shallow sheet flow.
Contributing Area: Maximum of 2 c.f.s. flowing to inlet.

WHEN BMP IS TO BE INSTALLED - Immediately after placement of inlet and before construction starts on existing inlets.

INSTALLATION / CONSTRUCTION PROCEDURES

- Backfill, compact and uniformly grade area around inlet.
- Construct downstream berm, if required. Rock bags or sand bags may be used to construct berm.
- Drive posts or wood frame close to inlet sill so overflow will fall directly on the structure and not on unprotected soil.
- Dig trench around inlet for fabric to be buried.
- Cut required length of fabric from one roll to eliminate joints. Fasten fabric tightly around posts / frame to enhance stability.
- Backfill and compact trench.
- Install drop in type filter per manufacturer specifications.

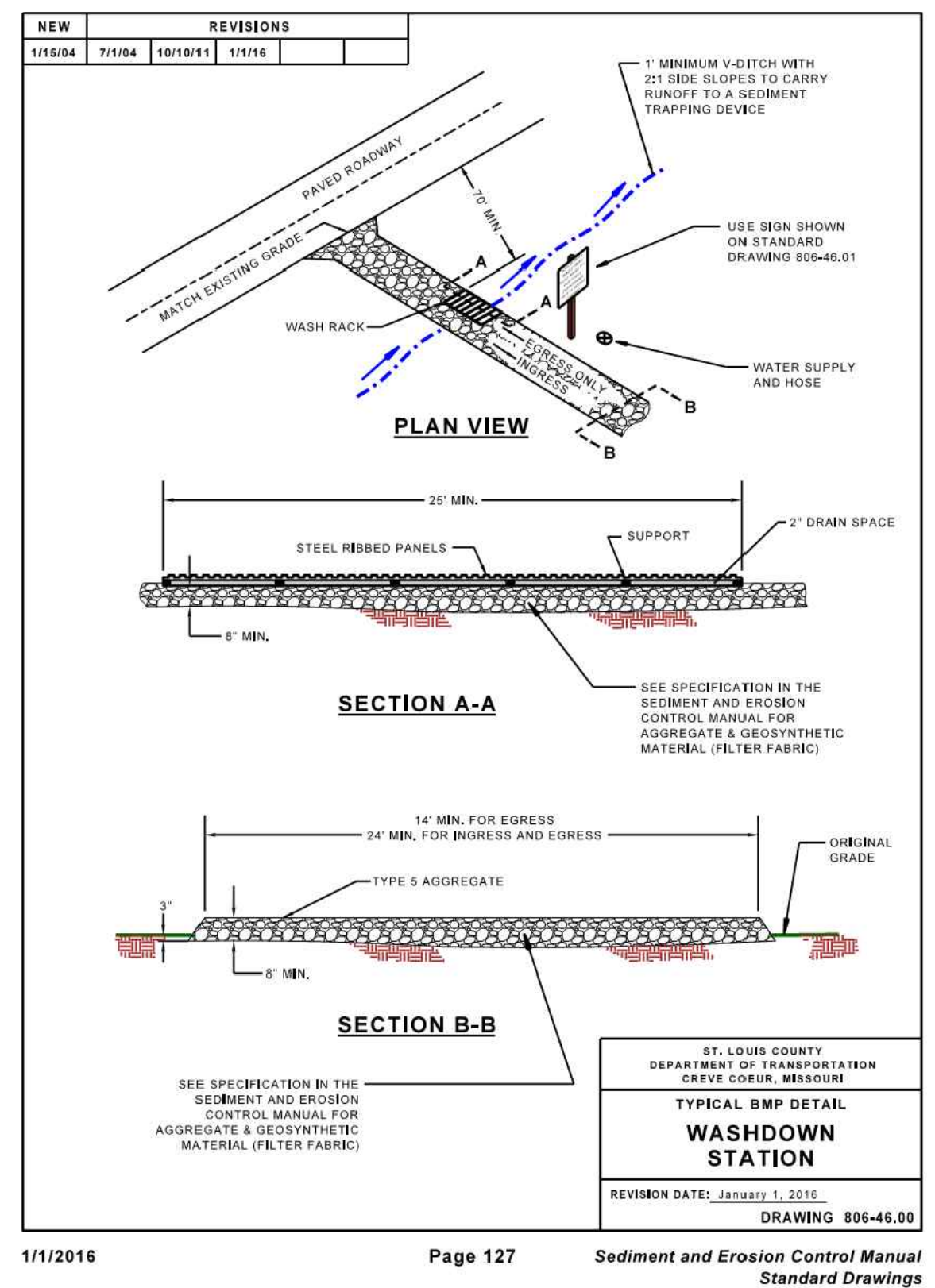
O&M PROCEDURES

- Inspect every week and after every storm.
- Remove trash accumulation and sediment once it reaches depth of 6" at inlet.
- Replace loose, torn or clogged fabric.
- Repair any erosion or settlement of temporary berm downstream of inlet.
- Maintain drop in type filter per manufacturer specifications.

SITE CONDITIONS FOR REMOVAL - Remove after contributing drainage areas have been adequately stabilized. Restore area to grade and vegetate.

TYPICAL DETAIL - 806-45.12 (Single Unit)
806-45.13 (Double Unit)

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WASHDOWN STATION

PHYSICAL DESCRIPTION - An area located at construction entrances designed to wash sediment from the tires and undercarriage of exiting vehicles and prevent sediment from being tracked onto existing roadways.

WHERE BMP IS TO BE INSTALLED - Across or immediately adjacent to exit paths from unpaved construction sites.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Drainage: Downstream BMPs used to treat dirty runoff from washdown station

WHEN BMP IS TO BE INSTALLED - First order of work, along with construction entrance, prior to vehicles or equipment accessing unpaved areas.

INSTALLATION/CONSTRUCTION PROCEDURES

- Grade and compact area for drainage under washdown pad.
- Install steel-ribbed plate on frame or other support to allow a 2" drain space.
- Grade and vegetate downstream BMPs (V-ditch shown on detail).
- Install water supply and hose.
- Post sign in advance of station indicating that all exiting vehicles and equipment must use station prior to exiting site.

O&M PROCEDURES:

- Remove sediment daily.
- Repair settled areas.
- Replace rock if necessary to maintain clean surface.

SITE CONDITIONS FOR REMOVAL - Remove when vehicles and equipment will no longer access unpaved areas.

TYPICAL DETAIL - 806-46.00

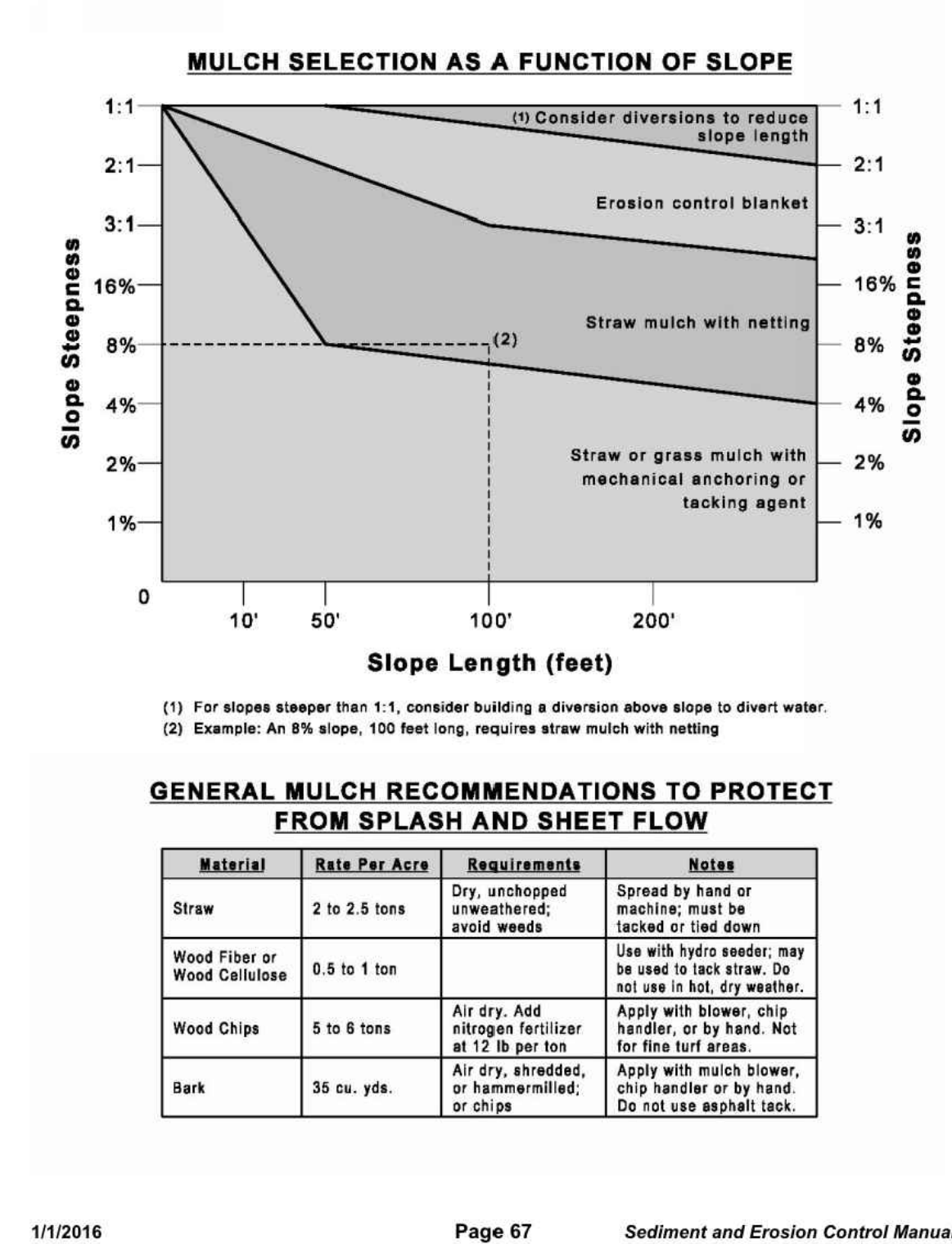
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H1 INLET PROTECTION DETAIL

NTS SN:

H8 WASHDOWN STATION DETAIL

NTS SN:



MULCH

PHYSICAL DESCRIPTION - A layer of organic material designed to protect exposed soil or freshly seeded areas from erosion by eliminating direct impact of precipitation and slowing overland flow rates. Mulch materials may include, but are not limited to, such things as grass, hay, straw, wood chips, wood fibers, hydro mulch and shredded bark. Type 1 mulch is prohibited in the flood plain.

- Type I Mulch-Vegetative (includes grass, hay, and straw).
- Type II Mulch-Vegetative with asphalt emulsion (includes grass, hay, and straw).
- Type III Mulch-Vegetative with overspray (includes grass, hay, and straw).
- Type V Mulch-Hydro mulch (includes wood fiber, wood cellulose).
- Shredded Hardwood Bark Mulch.
- Wood Chips, (not recycled lumber).

WHERE BMP IS TO BE INSTALLED - Typically installed on seeded areas for temporary use, and in landscaped areas for permanent use.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow: Sheet flow only
Slopes: See attached chart for types of mulch acceptable as a function of slope length and steepness
Mulching Rates: See attached table

WHEN BMP IS TO BE INSTALLED - Immediately after grading landscaped areas or seeding other areas.

INSTALLATION / CONSTRUCTION PROCEDURES

- Install upstream BMPs to protect area to be mulched
- Rough grade area and remove all debris larger than 1 inch if area is to be vegetated and mowed in the future, larger than 2 inches if area is to be permanently mulched
- If area is to be seeded, follow requirements of Seeding BMP
- Spread mulch and anchor by punching it into the ground, using netting, peg and twine, or tacking with liquid binder
- For additional information see Section 802 of St. Louis County's Standard Specifications for Road and Bridge Construction.

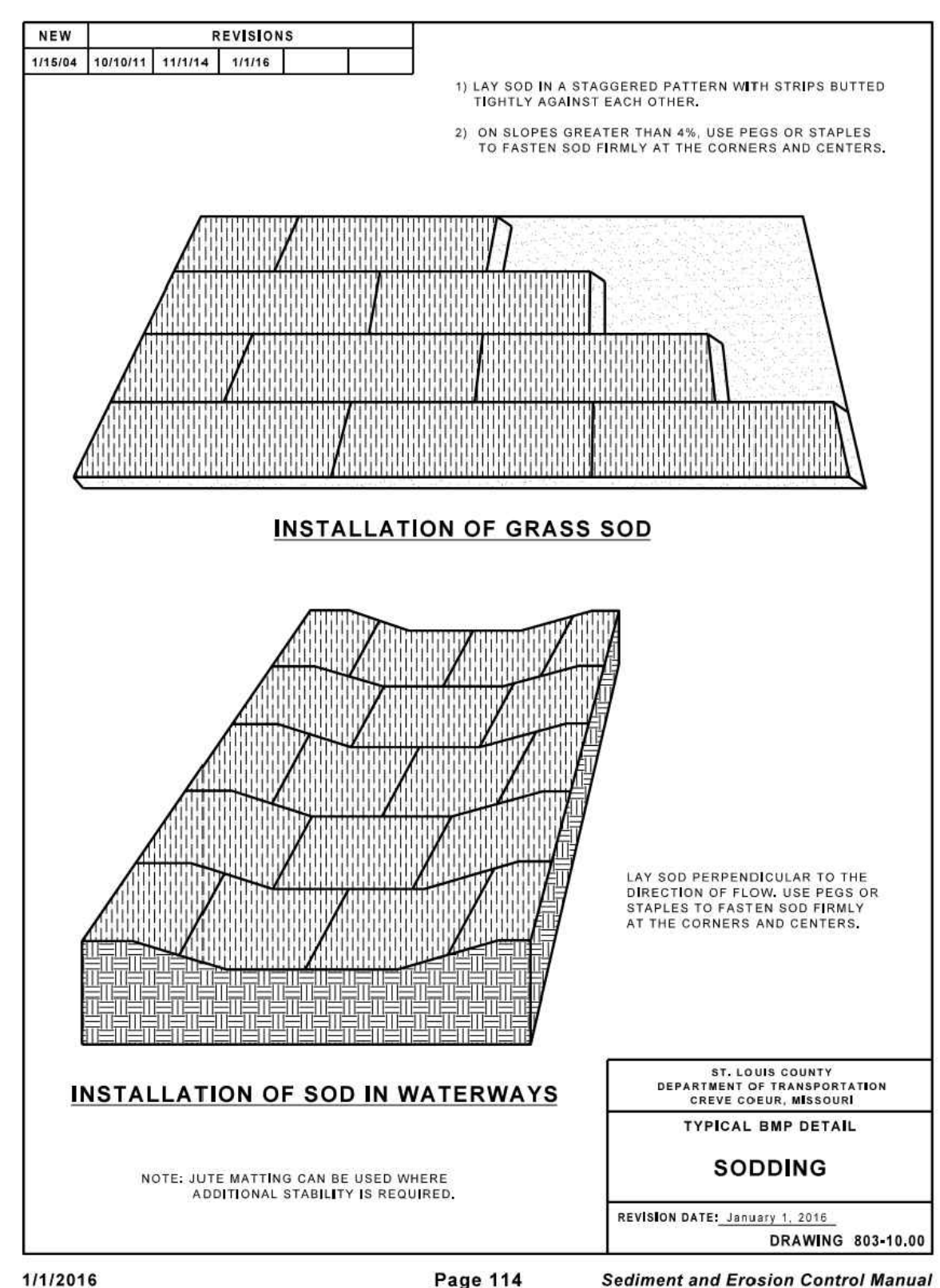
O&M PROCEDURES

- Inspect every week and after every storm until adequate vegetation is established; annually for permanent mulch.
- Protect from vehicular and foot traffic.
- Repair damaged, degraded or eroded areas - reseed as needed and replace mulch.

SITE CONDITIONS FOR REMOVAL - Temporary mulch should be removed when adequate vegetation is established.

TYPICAL DETAILS - Type of mulch required for various slopes and application rates attached.

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SODDING

PHYSICAL DESCRIPTION - A 3/4 inch to 1-inch thick mat of vigorous turf, free of disease, insects and weeds. Sod prevents raindrops from disrupting the soil structure and causing erosion. Sod slows water runoff and acts as a filter when sediment-laden runoff crosses over the sodded area.

WHERE BMP IS TO BE INSTALLED - Typically installed in areas requiring immediate erosion protection, such as swales or detention ponds and as filter strips, around inlets, and adjacent to curbs. Also installed in areas requiring immediate aesthetic appearance or function such as entrances to new subdivision and off site construction areas.

CONDITIONS FOR EFFECTIVE USE OF BMPs - Type of Flow: Sheet flow and low concentrated flows with velocities less than 5 fps.

WHEN BMP IS TO BE INSTALLED - Immediately after finish grading, installation of area inlets, and installation of underground services and foundations of new homes.

INSTALLATION / CONSTRUCTION PROCEDURES

- Finish grade area and remove all debris larger than 1/2 inch in diameter and concentrated areas of smaller debris.
- Soil preparation of area to be sodded shall be determined by tests to determine lime and fertilizer requirements. Soil amendments shall be mixed into top 3 to 6 inches of soil by disking or other means.
- Level and roll soil lightly to provide an even grade and firm the surface. Soil should not be excessively wet or dry.
- Lay first row of sod perpendicular to the slope or direction of flow. Butt subsequent rows tight against previous rows with strips staggered in brick-like pattern. Fill minor gaps with good soil and roll entire surface to ensure contact.
- Stake, staple and / or net corners and centers of sod strips as required.
- Water immediately after installation enough to soak 4 inches into soil without causing runoff.
- For additional information see Section 803 of St. Louis County's Standard Specification for Road and Bridge Construction.
- Type of sod shall be as specified in the contract or on the approved plans.

O&M PROCEDURES:

- Water sod daily for 3 weeks - enough to soak 4-inches into soil without causing runoff.
- Reposition areas of sod that has moved along the slope.
- Remove sediment accumulations - replace sod if necessary.
- Repair any eroded areas, replace sod, and stabilize as needed.
- Do not mow until 3-inches of new growth occur. During the first 4 months, mow no more than 1/2 the grass height.

SITE CONDITIONS FOR REMOVAL - Not applicable.

TYPICAL DETAIL - 803-10.00

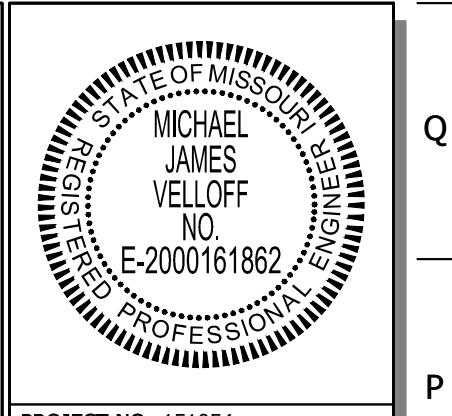
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A1 MULCH RATES

NTS SN:

A8 SODDING REQUIREMENTS

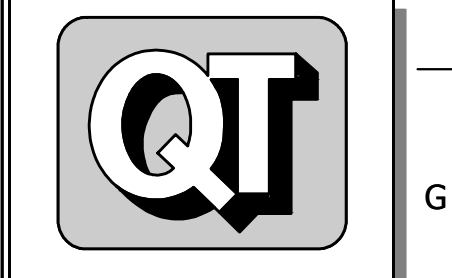
NTS SN:



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