

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
TECHNICAL STANDARD
TRACKOUT CONTROL PRACTICES
1057

DEFINITION

A practice or combination of practices used to prevent, reduce, or mitigate *trackout*¹ of sediment.

PURPOSE

Land-disturbing construction activity generally creates conditions where a vehicle comes in contact with exposed soil, which is then transported off *site* and/or deposited onto streets and roadways. This sediment can then become a road hazard and be carried from streets into drainage infrastructure and discharged into waters of the state. The purpose of this standard is to identify common methods which may be used to prevent, reduce, and/or mitigate the tracking of sediment.

CONDITIONS WHERE PRACTICE APPLIES

This standard applies where land-disturbing activity is likely to result in trackout.

CRITERIA

General Criteria

Be aware of applicable federal, state, and local laws, rules, regulations, or permit requirements governing the practice. This standard does not contain the text of federal, state, or local laws.

Install one of the following practices, or a combination of practices, to prevent, reduce, or mitigate tracking of sediment off *site*.

Trackout is best managed by implementing controls in the order below. These controls may be implemented in series where conditions warrant.

- (1) Prevent trackout with stabilized work surfaces and reduced vehicle contact with soil,
- (2) Reduce trackout with stone tracking pad, manufactured trackout control devices, or tire washing,
- (3) Mitigate trackout with street cleaning.

Select a device capable of supporting the vehicle load. Provide an alternate stabilized egress for oversized or overweight loads if needed.

Provide stable approaches to and from the practice.

Provide a stable driving surface from the practice to the off-site street or road.

Limit water use to minimize the discharge of sediment into drainage infrastructure.

Apply dust control measures when necessary to minimize generation of airborne dust while implementing trackout control practices.

Criteria Applicable to Stabilized Work Surfaces

Install aggregate, concrete, asphalt, manufactured mats, or other material in work areas and haul roads to minimize contact of vehicles with exposed soils and standing water (Figure 1).

¹ Words in the standard that are shown in italics are described in the Definitions section. The words are italicized the first time they are used in the text.

Install signage or fencing as needed to support intended use.

This practice is applicable, but not limited, to the following areas:

- (1) Contractor staging areas and lay-down areas where major grading has been completed and soil stockpiles are not being constructed or removed,
- (2) Site trailer and construction employee parking areas,
- (3) Private property access routes,
- (4) Proposed parking areas,
- (5) Redevelopment sites, or
- (6) Short-term/low traffic access locations such as directional drilling pits.

Stabilized work surfaces may be used as a stand-alone practice if vehicles leaving the site are restricted to the stabilized surface and the surface is properly maintained.

If an administering authority determines that control is not being maintained, additional measures may be required.

Criteria Applicable to Stone Tracking Pads

Install the stone tracking pad to ensure vehicles that drive over exposed soil exit along the full length of the pad (Figure 2).

Use hard, durable, angular stone or recycled concrete meeting the gradation in Table 1. Where this gradation is not available, meet the gradation in Wisconsin Department of Transportation (DOT) 2018 Standard Specification, Section 312, Select Crushed Material. Use material substantially free from dirt, debris, steel, vegetable matter, and other deleterious material.

Table 1. Gradation for stone tracking pads

Sieve Size	Percent by weight passing
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

Install the tracking pad across the full width of the access point, or restrict exiting traffic to a dedicated egress lane with a driving surface at least 12 feet wide.

Ensure the tracking pad is at least 50 feet long. If a 50-foot pad length is not possible due to site constraints, install the maximum length practicable and supplement with additional practices as needed to prevent or reduce trackout.

Where warranted due to soil type or high groundwater, underlay the stone tracking pad with geotextile fabric to minimize migration of underlying soil into the stone. Select fabric type based on soil conditions and vehicle loading.

Place the aggregate in a layer at least 12 inches thick.

Divert surface flows away from tracking pads or convey flow under and/or around using culverts and

swales. Direct runoff from tracking pads to sediment control practices.

Do not compact aggregate prior to use. Compaction, grouting, or other means of creating a smooth surface compromise the effectiveness of the tracking pad.

Remove stones lodged between the tires of dual wheel vehicles prior to leaving the construction site.

Criteria Applicable to Manufactured Trackout Control Devices

Install the manufactured trackout control device on a surface capable of supporting anticipated loads per manufacturer recommendations (Figure 3).

Situate the device to ensure vehicles that drive over exposed soil exit across the full length of the device. Provide a minimum device length of 32 feet for stand-alone installations. Add length if needed to reduce trackout in adverse conditions.

Criteria Applicable to Tire Washing

Select the type of washing station based on project conditions and water availability. If a wash rack is used, select a rack capable of supporting the vehicle loading.

Install the washing station on site in a stabilized area. If the device discharges untreated water, direct wash water to a sediment basin designed per the current Technical Standard 1064, Sediment Basin, or an equivalent device. Follow the current Technical Standard 1051, Water Application of Additives for Sediment Control, for flocculants used at the tire washing station. Return sediment collected in the sediment basin to the site or dispose of appropriately.

Direct vehicles that drive over exposed soil to exit through the station.

This practice may be applicable, but not limited, to the following areas:

- (1) Areas with prolonged periods or significant quantity of hauling on or off site, or
- (2) Sites which drain to a sensitive resource such as an Outstanding Resource Water or Exceptional Resource Water.

Perform tire washing per manufacturer's directions until the majority of sediment is removed from the tires.

Criteria Applicable to Street/Pavement Cleaning

Scrape and/or sweep pavements and gutters until a shovel-clean or broom-clean condition is obtained. Repeat as needed to maintain public safety and reduce sediment delivery to drainage infrastructure or water resources, and at the end of each work day.

Use available equipment or select equipment per the recommendations in Table 2.

Return sediment to the site or dispose of appropriately.

CONSIDERATIONS

- (1) An extended stabilized work surface such as a 150-foot long aggregate driveway within the site may be used as trackout control if sediment control is provided along the portions of driveways subject to sediment accumulation.
- (2) Other methods of trackout control may be utilized if they do not generate dust or result in discharge of untreated water to drainage infrastructure or water resources.

- (3) Manual removal of sediment from vehicles may be needed when working in heavy mud cannot be avoided.
- (4) Implement traffic guidance (e.g., signs, barriers, fences, flags) to restrict exiting traffic to the trackout device and prevent the circumvention of unfamiliar devices.
- (5) Inform drivers of device weight limits and the location of alternate stabilized egress for oversized and/or overweight loads.
- (6) Document in the erosion control plan whether stabilized impervious surfaces, such as staging areas, are temporary or permanent. Post-construction performance standards may apply in accordance with s. NR 151.121-128 or s. NR 151-421-249 Wis. Adm. Code.
- (7) Vehicles traveling across trackout control practices should maintain a slow constant speed.
- (8) Extend the tracking control length and/or implement additional trackout control practices to supplement primary control measures during major hauling operations, in heavy clay soils, or when conditions render the practice insufficient.
- (9) All trackout control practices, especially stone tracking pads, generally need more maintenance during and immediately after completion of major hauling operations.
- (10) If known soil and/or groundwater contamination is present on site as documented on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) or has been identified through activities on site, then the potential for contamination transport should be assessed. If contamination is identified, impacted soil or water should be characterized and stored, treated or disposed of in compliance with applicable standards and rules. If this is a new contaminant release, consult Wisconsin Department of Natural Resources (DNR) staff in the regional Remediation and Redevelopment Program.
- (11) Methods of street cleaning vary based on project size, conditions, and availability of equipment. These methods require the contractor to follow OSHA standards for silica dust control and may require additional safeguards to meet current standards.

Table 2. Street cleaning methods

Method	Effective for:						Notes
	Larger clumps	Wet	Dry	Sand	Clay/Silt	Minimizing dust	
Shovel and broom by hand	Yes	Yes	Yes	Yes	Yes	Yes	Good for incidental tracking from low traffic sites or minor accumulations.
Power angle broom	Yes	Yes	Yes, with dust control	Yes	Yes	Less effective, but better with dust control	Harder to control collection of debris.
Power pick up broom	Yes	Yes	Yes, with dust control	Yes	Yes	Yes, with dust control	Generally will not get close to edges without a gutter broom, which is less effective. Use in reverse to maximum effects. Better dust control than angle broom.
Traditional street sweeper	Yes	Yes	Yes, with dust control	Yes	Yes	Yes, with dust control	May not be cost effective for low traffic sites. Better dust control than an angle broom.
High efficiency sweeper (vacuum or regenerative air)	No	No	Yes	Yes	Dry – Yes Wet – No	Yes	May not be cost effective for low traffic sites. Presents difficulties with larger material. Best option for dust control.

PLANS AND SPECIFICATIONS

Address the following in plans and specification:

- (1) Location, materials, and dimensions of all stabilized work surfaces,
- (2) Location of all points of egress with all trackout control practices shown,
- (3) Material specifications conforming to this standard,
- (4) Sequence or schedule for installation and removal of practices through different phases of construction; clearly indicate if stabilized work surfaces are temporary or permanent,
- (5) Standard drawings and installation, and
- (6) Stabilization after removal.

Include the responsible party by name, or by title if not known (e.g., general contractor, land owner).

Include the frequency of inspection and maintenance in plans, standard detail drawings, or specifications.

Amend onsite erosion control plans to reflect modifications during the life of the project, including relocation or addition of site entrances and exits.

OPERATION AND MAINTENANCE

Monitor all trackout control practices and nearby streets and roads at least daily during construction and more frequently during heavy use.

Clean and maintain all practices as needed to minimize trackout.

Accumulation of sediment on off-site pavement near a site exit is an indication that street cleaning is needed and on-site prevention and control measures need maintenance or are not adequate. Relocate or add practices when construction egress locations are changed or when current control measures are not reducing trackout.

Clean streets and roads as needed to maintain traction, minimize further spread of sediment, and reduce discharge to drainage infrastructure.

Clean trackout control devices, mats, and other reusable materials prior to transport to a new site to reduce the potential for spread of invasive species and minimize further spread of sediment.

Add signage, fencing, steel posts, and/or traffic barriers as needed to improve use of practices.

Stabilized Work Surface

Monitor stabilized work surface areas for soil deposits, standing water, and damage. Remove soil deposits daily through scraping and/or pavement cleaning, and repair damage as needed. Top dress gravel surfaces as needed. Replace or repair torn or damaged mats.

Stone Tracking Pad

Monitor tracking pads for compaction, soil deposits, and mixing of underlying soils and stone layers.

Maintain a loosened, rough surface by scraping, loosening, or top-dressing with additional aggregate.

Replace geotextile and stone if less-intensive maintenance efforts fail to reestablish effectiveness.

Add stone as needed to maintain the minimum pad thickness.

Replace damaged or crushed culverts under tracking pad.

Manufactured Trackout Control Device

Monitor and maintain devices to minimize shifting, rutting of adjacent surfaces, and structural failure.

Remove accumulated sediment as required to maintain the function of the device.

Replace missing or damaged elements such as bars or anchors, and remove and reset devices if they shift during use.

Fill ruts in adjacent surfaces with aggregate or paving materials. Maintain a stable surface between the device and street or road.

Tire Washing

Monitor tire washing station for sediment accumulation, clogged hoses, appropriate water levels, and effectiveness.

Remove accumulated sediment.

Replenish flocculant as needed, and replace or replenish water as needed.

Maintain hoses to minimize clogging or freezing.

For manufactured tire washing stations, maintain per manufacturer's recommendations.

Modify operations as needed during cold weather to minimize formation of ice-hazards on roadways.

DEFINITIONS

Aggregate: A composite mixture of hard, durable, mineral materials that have been mechanically processed.

Broom-clean: A pavement condition where no measurable material is collected when a push broom is pushed lightly across the surface. This is generally applicable in dry conditions.

Drainage infrastructure: Features present above or below grade for the purpose of collecting and transmitting storm water. These features include, but are not limited to, ditches, storm sewers, drainage inlets, flumes, and manholes.

Manufactured trackout control device: A device installed and maintained at an egress location for reducing trackout of sediments through flexing and vibrating tires.

Trackout: The relocation of material from its intended location to offsite surfaces by vehicles.

Shovel-clean: A pavement condition where no measurable material is collected when a flat-edged shovel is pushed across the surface. This is generally applicable in wet conditions.

Site: The area within the construction limits. Construction limits may change over the course of a project.

Vehicle: Cars, trucks, and other equipment capable of moving persons or property using tires or tracks.

REFERENCES

Wisconsin Council on Forestry, Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way, <https://councilonforestry.wi.gov/Documents/InvasiveSpecies/ROW-Manual.pdf>

Wisconsin DNR, Outstanding and Exceptional Resource Waters, <http://dnr.wi.gov/topic/SurfaceWater/orwerw.html>

Wisconsin DNR, Storm Water Construction Technical Standards, http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

Wisconsin DNR, Storm Water Post-Construction Technical Standards, http://dnr.wi.gov/topic/stormwater/standards/postconst_standards.html

Wisconsin Department of Transportation, *Select Crushed Material*, 2018 Standard Specification, Section 312, <http://wisconsindot.gov/rdwy/stndspec/ss-03-12.pdf>

Figure 1:
Example of a common setup that can be used to implement a stabilized surface area.

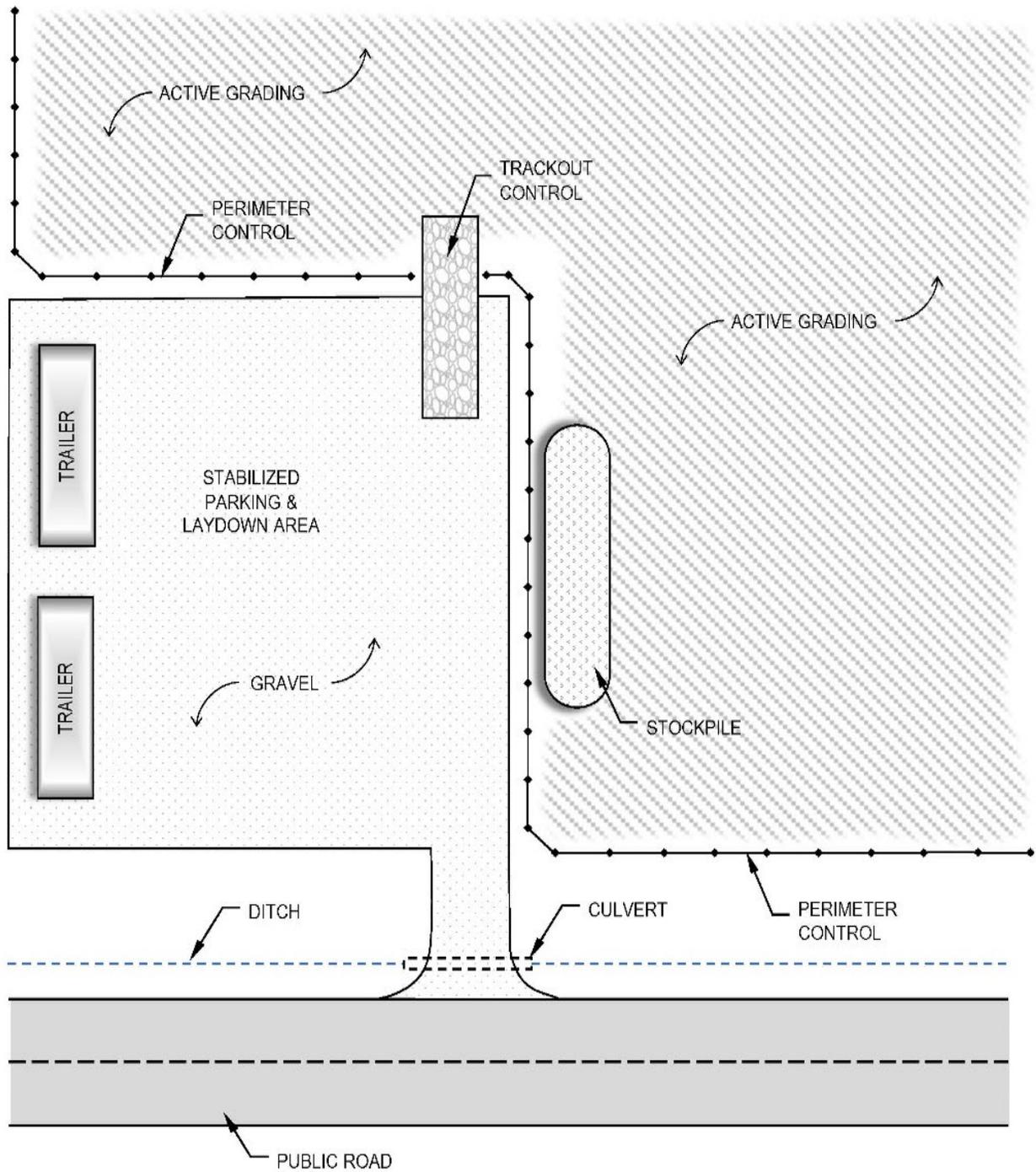
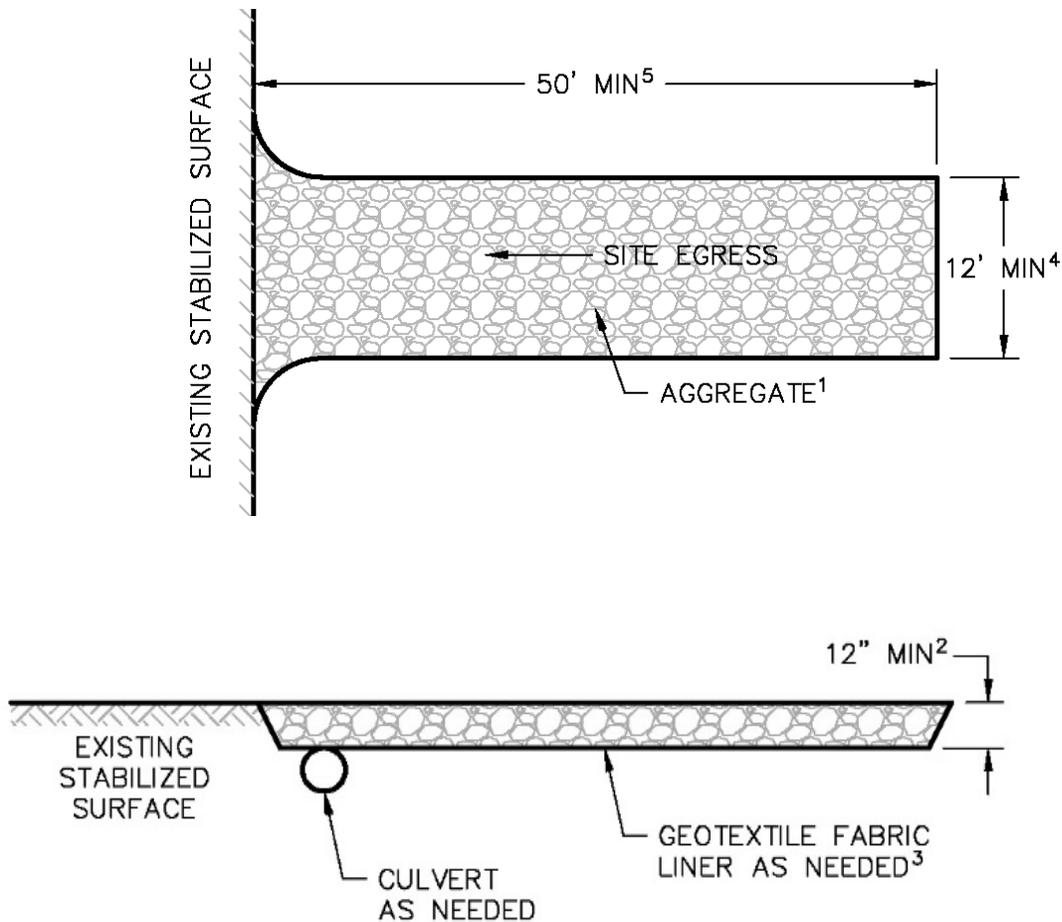


Figure 2:
Stone tracking pad detail



Note 1 Use hard, durable, angular stone or recycled concrete meeting the gradation in Table 1. Where this gradation is not available, meet the gradation in Wisconsin Department of Transportation (DOT) 2018 Standard Specification, Section 312, Select Crushed Material.

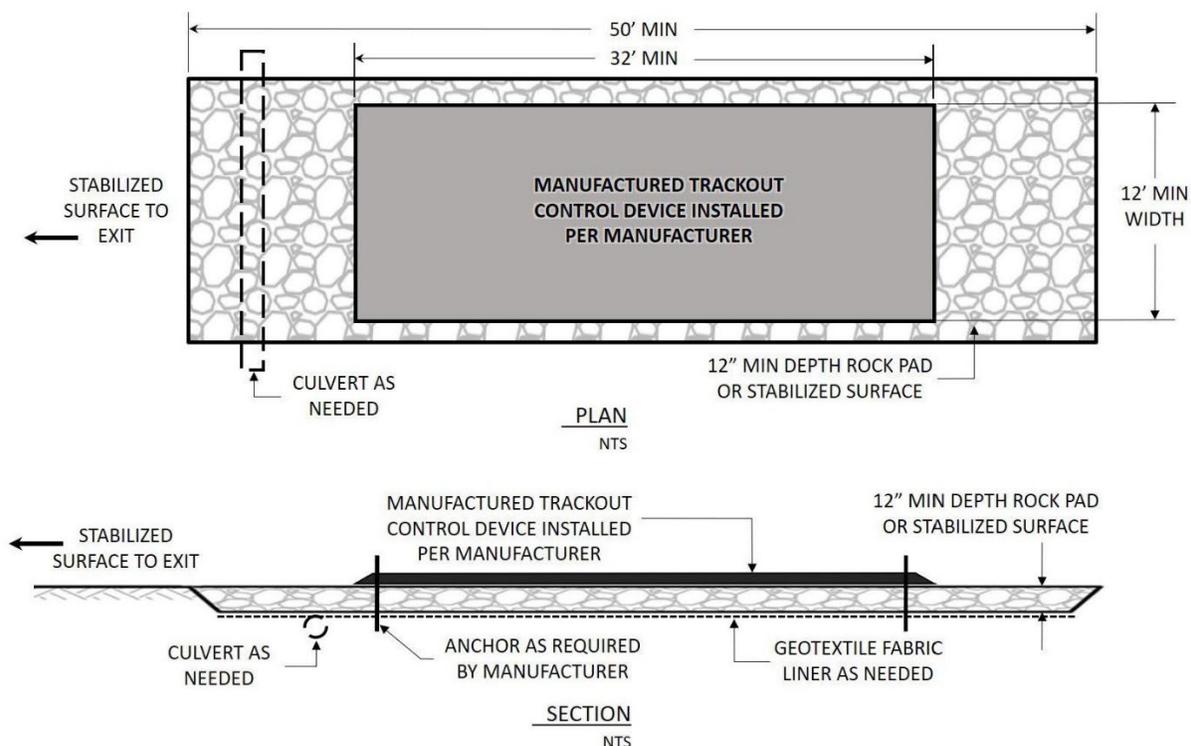
Note 2 Slope the stone tracking pad in a manner to direct runoff to an approved treatment practice.

Note 3 Select fabric type based on soil conditions and vehicles loading.

Note 4 Install tracking pad across full width of the access point, or restrict existing traffic to a dedicated egress lane at least 12 feet wide across the top of the pad.

Note 5 If a 50' pad length is not possible due to site geometry, install the maximum length practicable and supplement with additional practices as needed.

Figure 3:
Example manufactured trackout control device detail.



Note 1 This detail is provided as an example. Comply with manufacturer's specifications while also meeting the minimum manufactured tracking pad length and width described in this technical standard.

Note 2 Install such that runoff flows to an approved treatment practice.

Note 4 A thinner stone layer or other stable surface may be acceptable such that rutting is minimized as vehicles mount or dismount from the manufactured trackout control device.

Note 5 Select fabric type based on soil conditions and vehicles loading.

Note 6 Direct all exiting vehicles over manufactured trackout control device. Stone tracking pad installation across remaining access width is recommended. A 12' minimum can be used when exiting traffic is restricted to a dedicated egress lane.

Note 7 If minimum installation length is not possible due to site geometry, install the maximum length practicable and supplement with additional practices as needed.

Note 7 Accommodate exiting vehicles in excess of manufactured trackout control device weight capacity with other treatment practices.