Construction-Exit Pad (CEP)

Practice Description

A construction-exit pad is a stone-base pad designed to provide a buffer area where mud- and caked-soil can be removed from the tires of construction vehicles to avoid transporting it onto public roads. This practice applies anywhere traffic will be leaving a construction site and moving directly onto a public road or street.

Planning Considerations

Roads and streets adjacent to construction sites should be kept clean for the general safety and welfare of the public. A construction-exit pad (Figure CEP-1) should be provided where mud can be removed from construction vehicle tires before they enter a public road.

If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, or if the site is in a particularly sensitive area, a washing facility should be included with the pad (Figure CEP-2). When a washing facility is required, all wash water shall be diverted into a sediment trap or basin.

If the construction-exit pad is located in an area with soils that will not support traffic when wet, a geotextile liner located beneath the aggregate will be required to provide stability to the pad.

Construction of stabilized roads throughout the development site should be considered to lessen the amount of mud transported by vehicular traffic. The construction-exit pad

should be located to provide for maximum use by construction vehicles. Consideration should be given to limiting construction vehicles to only one ingress and egress point. Measures may be necessary to make existing traffic use the construction-exit pad.

Design Criteria and Construction

Site Preparation

Remove all vegetation and other unsuitable material from the foundation area.

Grading

Grade and crown the area for positive drainage. Utilize a diversion to direct any surface flow away from the construction-exit pad. Any runoff from the pad should be diverted into a sediment trap or basin. Install a pipe under the pad, if needed, to maintain drainage ditches along public roads.

Aggregate Size

Aggregate should be Mississippi Department of Transportation Size 1 Stabilizer. Aggregate surface shall be left smooth and sloped for drainage.

Pad Dimensions

The exit pad shall have a minimum aggregate thickness of 6″. The exit pad must be a minimum of 50 feet long and shall provide for entering and parking the longest construction vehicles anticipated. MDOT Drawing ECD-15 provides an example of a stabilized construction entrance. The exit pad shall have a typical width of 20 feet, but may be narrower or wider to equal the full width of the vehicular egress.

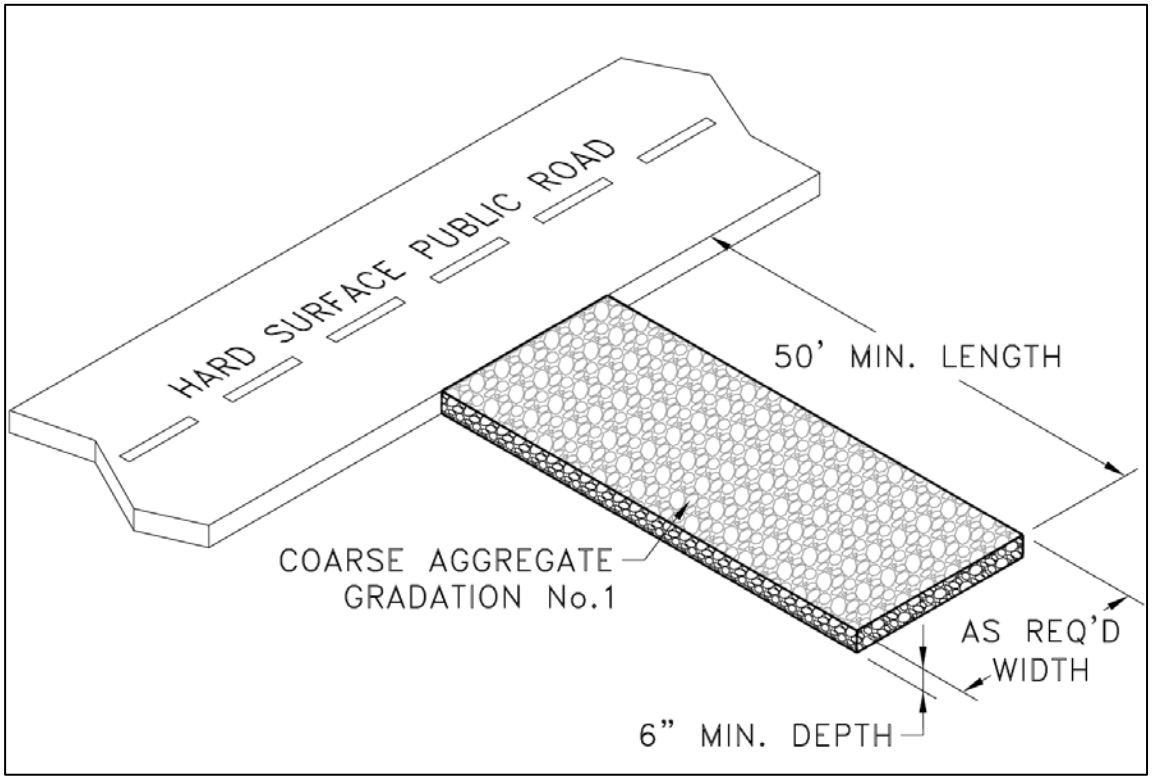


Figure CEP-1 Gravel Construction Exit

Geotextiles

A non-woven geotextile meeting the requirements shown in the table below for Class IV geotextiles should be used under the rock when the subgrade is soft or the blow count is less than 10.

Table CEP-1 Requirements for Nonwoven Geotextile

Property	Test method	Class I	Class II	Class III	Class IV [1]
Tensile strength (lb) [2]	ASTM D 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%) [2]	ASTM D 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTM D 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTM D 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTM D 4751	As specified max. #40 [3]	As specified max. #40 [3]	As specified max. #40 [3]	As specified max. #40 [3]
Permittivity sec^{-1}	ASTM D 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

Table copied from NRCS Material Specification 592.

1 Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextile required for all other classes.

2 Minimum average roll value (weakest principal direction).

3 U.S. standard sieve size.

Washing

A washing facility shall be provided, if necessary, to prevent mud- and caked-soil from being transported to public streets and highways. It shall be constructed of concrete, stone, and/or other durable materials. Provisions shall be provided for the mud and other material to be carried away from the washing facility into a sediment trap or basin to allow for settlement of the sediment from the runoff before it is released from the site.

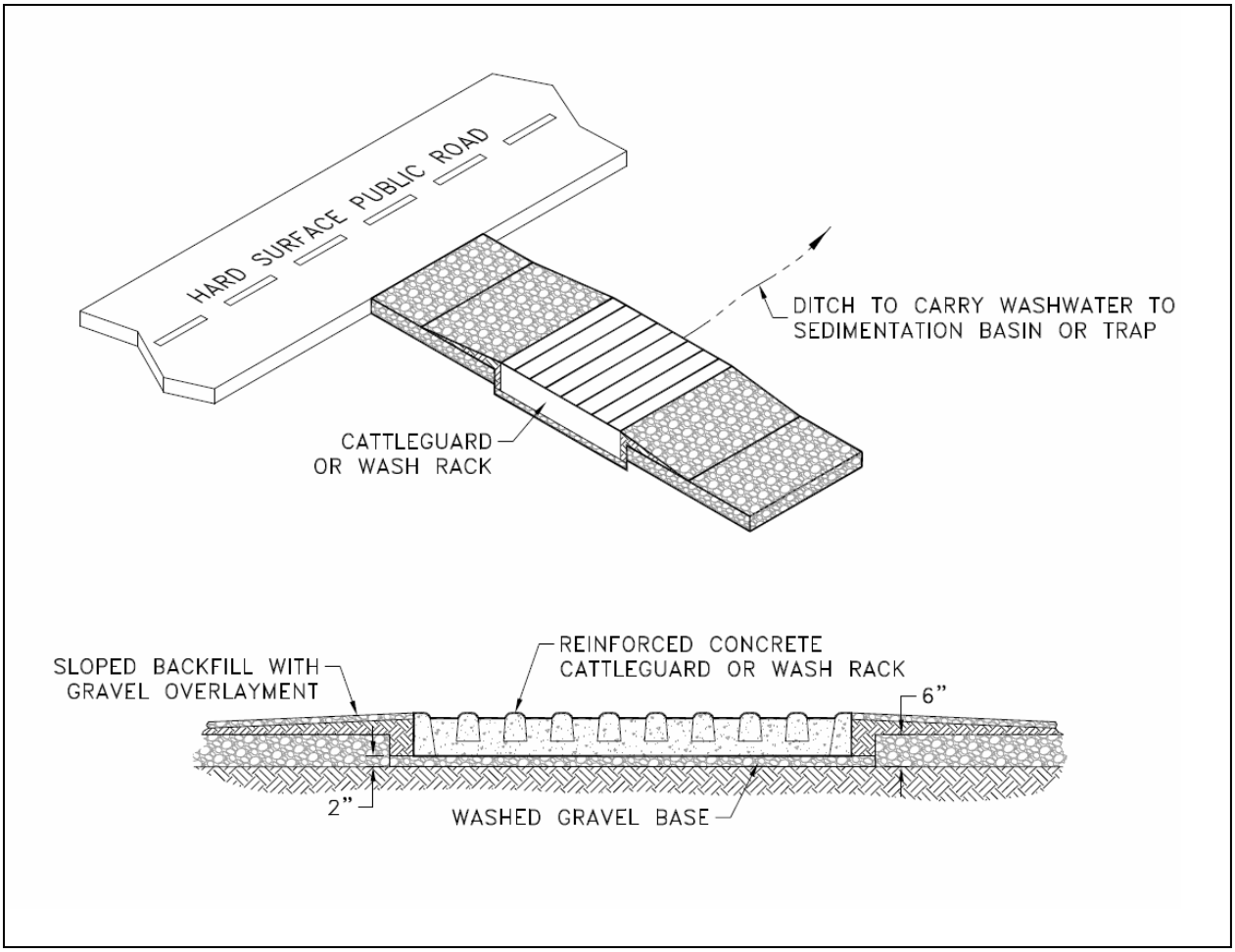


Figure CEP-2 Construction Exit with Wash Rack

Common Problems

Consult with a qualified design professional if any of the following occur:

Inadequate runoff control and sediment washes onto public road: install diversions or other runoff-control measures.

Ruts and muddy conditions develop as stone are pressed into soil: increase stone size or pad thickness, or add geotextile fabric.

Pad too short for heavy-construction traffic: consult design professional about extending pad to the necessary length

Maintenance

Remove large chunks of mud- or caked-soil from construction-exit pad daily to minimize sediment buildup.

Inspect stone pad and sediment-disposal area weekly and after storm events or heavy use.

Reshape pad as needed for drainage and runoff control.

Top-dress with clean-specified stone as needed to maintain effectiveness of the practice.

Immediately remove mud or sediment tracked or washed onto public road.

Repair any broken-road pavement immediately.

Remove unneeded exit-pad materials from areas where permanent vegetation will be established.

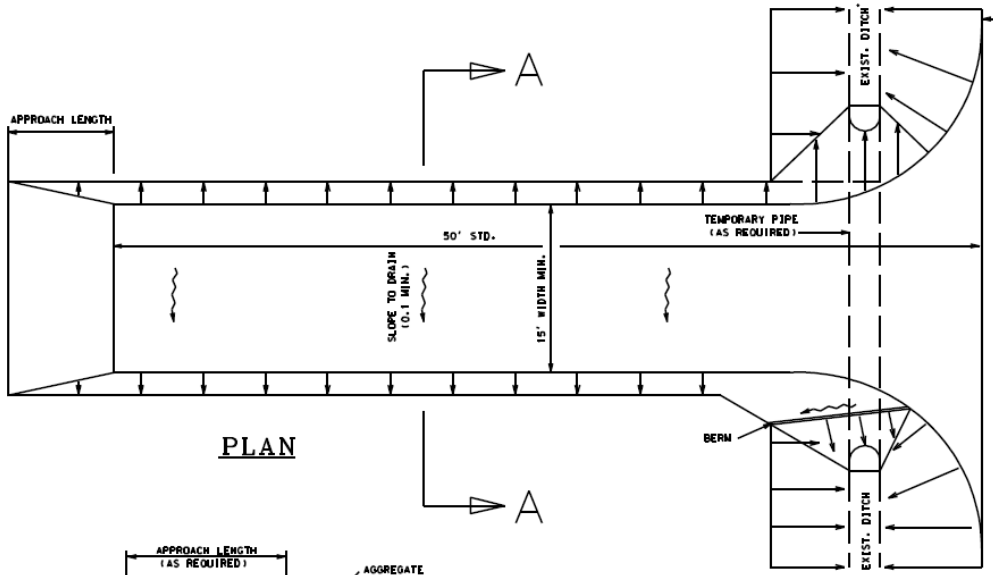
References

BMPs from Volume 1

Chapter 4

MDOT Drawings Referenced

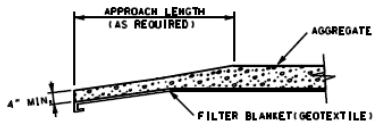
STATE	PROJECT NO.
MISS.	



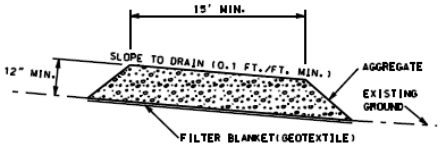
PLAN

NOTES:

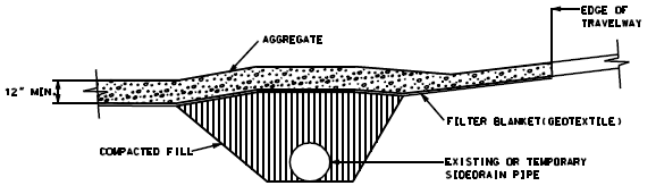
1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF MUD COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE PROJECT SHALL BE DIRECTED THRU THE STABILIZED ENTRANCE. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STABILIZED ENTRANCE.
2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO IT'S USE.
3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STABILIZED CONSTRUCTION ENTRANCE AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE ENGINEER.
4. SIZE 1 STABILIZER AGGREGATE SHALL BE USED
5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM IT'S FUNCTION TO PREVENT OFFSITE TRACKING. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE RINSED WHEN NECESSARY TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STABILIZED ENTRANCE MAY BE REQUIRED TO LIMIT THE MUD TRACKED.
6. THE NOMINAL SIZE OF A STANDARD STABILIZED CONSTRUCTION ENTRANCE IS 15' x 50' UNLESS OTHERWISE SHOWN IN THE EROSION CONTROL PLAN



TRANSITION DETAIL



SECTION A-A



RURAL CONNECTION DETAIL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

STABILIZED CONSTRUCTION ENTRANCE

WORKING NUMBER
ECD-15

SHEET NUMBER

FILENAME: EROSION CONTROL\ECD-15.DGN

DESIGN ITEM _____ CHECKED _____ DATE _____