

**STATE**

**OF**

**TENNESSEE**

(Rev. 3/24/2010 VB)

January 1, 2015

**SPECIAL PROVISION**

**REGARDING**

**SCALING AND TRIMMING**

The work covered by this special provision consists of scaling and trimming the existing slopes to a safe, stable condition by removing all loose spalls and rocks not firmly keyed into the slopes. Some rock in the slope may appear resistant to removal by some mechanical means. The Contractor will be required to scale and trim the existing slopes within the limits shown on the plans and as determined by the Engineer and dispose of all material removed resulting from the scaling and trimming operation.

Scaling is the removal of loose and unstable rock and debris from an existing cut slope by using manual devices such as pry-bars, removal by hand, as well as the use of hydraulic, pneumatic or other jacks, expansive grout or materials, hydraulic hammers and mechanical means using metal bars, “slushers” and “dozer tracks” which are drug across the face of a cut slope. For certain projects, some scaling techniques (i.e. dozer scaling track) may not be acceptable. Methods which are specifically disallowed for a project will be shown on the plans. If a particular scaling technique is ineffective, other scaling techniques must be employed at no additional cost to the state. Trimming is the process of removing overhangs of loose and unstable rock from a cut slope by mechanical percussion and/or blasting methods. This includes “blast scaling” and air cushion blasting. Where air cushion blasting is used, blast holes must be 2 inches or less in diameter.

The rock slopes shall be thoroughly scaled and trimmed by manual and/or mechanical means. If mechanical means prove insufficient and if directed by the engineer the slopes shall be traversed by laborers using hand tools to ensure that all potentially hazardous protrusions have been successfully removed to the satisfaction of the Engineer.

In the event the Contractor is directed to perform scaling and trimming on a slope previously approved as complete by the Engineer, the additional scaling and trimming will be measured and paid for at the contract unit price for “Scaling and Trimming”. Scaling and trimming operations may require multiple scaling efforts across the slope during a project. For example, this may be required to safe up areas for other work, or where blasting will be conducted scaling may be required after blasting is complete. No additional payment shall be made for these multiple scaling efforts across the same surface

area unless the scaling operations were approved by the Engineer as complete for the project. No additional payment shall be made if the Engineer approves the scaling operations as complete for a particular step in the sequence of work if additional work may subsequently require scaling operations after future steps in the sequence of work.

The contractor is advised that since scaling and trimming operations will entail considerable hazards due to falling rock and debris, the traveling public shall be adequately protected from falling rocks and debris by installing, before scaling and trimming operations are started, temporary rockfall barriers or other devices as approved by the Engineer. The height of the temporary measures shall be a minimum of 8'-0". Traffic, personnel, equipment, and structures shall be protected from falling or blasted rock, falling debris, or other falling material caused by the work completed for this project. Temporary measures may not be required in the case of a roadway that is completely closed where there is no other equipment, personnel, traffic or structures that will be impacted by the falling rock and debris. The existing roadway outside the working area shall be protected from falling or blasted rock. These temporary measures are to be paid by the contractor and considered part of the item Scaling and Trimming. Contractor shall not be entitled to additional reimbursement for temporary measures used to protect the roadway, traffic or other structures during scaling and trimming operations. Any area (Roadway, shoulders and side slopes) that is disturbed outside of the construction area during the project shall be repaired by the contractor at his own expense in kind and quantity.

The quantity of scaling and trimming existing slopes to be paid for will be the actual area in square yards of existing slopes which have satisfactorily been scaled and trimmed, with the scaled and trimmed material being moved to the roadway level. Additional payment will also be made under Road and Drainage Excavation unclassified for the volume of material that is hauled off as a result of the scaling and trimming operations. Road and Drainage Excavation unclassified shall be paid for by the actual cubic yard of material hauled, measured by the cubic yard placed in the waste area.

The quantity of scaling and trimming existing slopes, measured as provided for above, will be paid for at the contract unit price per square yard for "Scaling and Trimming" and for Road and Drainage Excavation (Unclassified) by the cubic yard. Such price and payment will be full compensation of furnishing all labor, tools, equipment, and all incidentals necessary to complete the work, including any drilling and blasting required to scale and trim rock from the slopes and/or to break down large blocks of scaled rock to facilitate disposal of material. It shall also include the cost of protecting the traveling public, personnel, equipment and structures from falling rock and debris. This protection may include, but is not limited to temporary barriers, temporary rockfall fences, providing a cushioning layer of rock at the roadway level for energy reduction, blasting mats, draped mesh used to direct falling material, or other means to provide a barrier, energy reduction, redirection or direction of falling material so that it does not impact traffic.

Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
203-11	Scaling and Trimming	Square yard
203-01	Road and Drainage Excavation(Unclassified)	Cubic Yard