PROCEDURE FOR CONTROL OF STONE FILLING & RIP RAP ITEMS
GEOTECHNICAL CONTROL PROCEDURE:
PROCEDURE FOR CONTROL OF STONE FILLING & RIP RAP ITEMS

GCP-14
Revision #4

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU

AUGUST 2015
TABLE OF CONTENTS

1. INTRODUCTION .......................................................................................................................... 3
   1.1 General ................................................................................................................................... 3
   1.2 Item Type ................................................................................................................................. 3
       1.2.1 Definition of Item Type ................................................................................................. 3
       1.2.2 Assignment of Item Type ............................................................................................... 3

2. STOCKPILE CONSTRUCTION ........................................................................................................... 4
   2.1 Construction of Stockpiles ...................................................................................................... 4

3. MATERIAL EVALUATION AND TESTING ...................................................................................... 5
   3.1 Course of Action .................................................................................................................... 5
       3.1.1 Gradation ....................................................................................................................... 5
           3.1.1.1 Gradation Evaluation .............................................................................................. 5
       3.1.2 Soundness ....................................................................................................................... 5
           3.1.2.1 Item Type A ................................................................................................................ 5
           3.1.2.2 Item Type B ............................................................................................................... 5
           3.1.2.3 Soundness Evaluation .............................................................................................. 6

4. DISTRIBUTION OF STOCKPILE EVALUATION ........................................................................... 7

5. USE AND DISPOSAL OF STOCKPILES ......................................................................................... 8
   5.1 Use of Stockpiles ................................................................................................................... 8
   5.2 Transfer of Approved Stockpiles ........................................................................................... 8
   5.3 Temporary Use of Stone Filling and Rip-Rap Items ................................................................. 9
   5.4 Disposal of Unacceptable Stockpiles ..................................................................................... 9

APPENDIX ......................................................................................................................................... 10

A. Stone Fill Inspection Request and Evaluation Form ................................................................. A-1
   Instructions for Stone Fill Inspection Request and Evaluation Form .......................................... A-2
1. INTRODUCTION

1.1 General
This manual describes the procedure to be followed for the control of the gradation and soundness requirements of stone items in Section 620 Bank and Channel Protection, of the NYSDOT Standard Specifications, Construction and Materials, and associated special specifications. These include, but are not limited to, the following items:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Material Code</th>
<th>Item/Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>620.02</td>
<td>733-2101</td>
<td>Stone Filling (Fine)</td>
</tr>
<tr>
<td>620.03</td>
<td>733-2102</td>
<td>Stone Filling (Light)</td>
</tr>
<tr>
<td>620.04</td>
<td>733-2103</td>
<td>Stone Filling (Medium)</td>
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<tr>
<td>620.05</td>
<td>733-2104</td>
<td>Stone Filling (Heavy)</td>
</tr>
<tr>
<td>620.06</td>
<td>733-2201</td>
<td>Dry Rip-Rap</td>
</tr>
<tr>
<td>620.07</td>
<td>733-2202</td>
<td>Grouted Rip-Rap</td>
</tr>
<tr>
<td>620.10</td>
<td>712-1500</td>
<td>Galvanized Gabions (Stone)</td>
</tr>
<tr>
<td>620.11</td>
<td>712-1500</td>
<td>PVC Coated Galvanized Gabions (Stone)</td>
</tr>
</tbody>
</table>

Only material from stockpiles accepted by the procedure contained in this manual may be used on Departmental projects.

1.2 Item Type

1.2.1 Definition of Item Type
An item will be designated Type A or Type B based on the source from which it is obtained.

1.2.1.1 Item Type A - Obtained from a source that historically produces material of acceptable soundness for that item. No geologic evaluation field inspection required for project soundness approval.

1.2.1.2 Item Type B - Obtained from a source necessitating a geologic evaluation field inspection for project soundness approval.

1.2.2 Assignment of Item Type
The Departmental Geotechnical Engineer will submit to the Geotechnical Engineering Bureau, at the beginning of each calendar year, a list of anticipated sources for those items listed in 1.1 General. New sources may be submitted at any time during the calendar year. A Departmental Engineering Geologist will review records of the sources, make site inspections, if deemed necessary, and recommend to the Director of the Geotechnical Engineering Bureau the Item Type that should be assigned for that calendar year, for each item listed in 1.1 General for each source. Items not listed in 1.1 General will be designated Type B, regardless of source.
2. STOCKPILE CONSTRUCTION

These provisions apply to all stockpiled stone filling and rip-rap items.

2.1 Construction of Stockpiles

A. Stockpiles shall be constructed so that all sides of the stockpile are accessible for inspection. Adjacent stockpiles shall not merge and shall have a space (minimum 5 ft. (1.5 m)) separating the toe of each pile.

B. Where the contract estimated quantity is 1,000 yd$^3$ (800 m$^3$) or less for an item, the stockpile construction for that item shall contain a maximum of 1,000 yd$^3$ (800 m$^3$). On contracts where the estimated quantity for an item is over 1,000 yd$^3$ (800 m$^3$), the maximum size of the stockpile for that item shall be the contract quantity plus ten (10) percent. More material in a stockpile than allowed will result in rejection of that stockpile.

Stockpiles shall be identified with a durable, legible sign placed in a readily visible location. The sign shall specify the following:
1. Project contract number,
2. Item number, and
3. Stockpile number. Subsequent stockpile(s) from the same source shall be numbered consecutively.

The Contractor shall notify the Engineer when a stockpile is completed and ready for evaluation. The Engineer will then proceed with the evaluation process.

For projects paid under SiteManager, the stockpile/sample will be entered into SiteManager with the appropriate assigned tests in accordance with the Quick Reference Guide for Stonefill Evaluation Samples. The Quick Reference Guide is available on the Department's Website at [https://www.dot.ny.gov/main/business-center/trns-port/repository/QRG-Stonefill_Evaluation.pdf](https://www.dot.ny.gov/main/business-center/trns-port/repository/QRG-Stonefill_Evaluation.pdf)

The Contractor will be notified by the Engineer of the scheduled time(s) for the evaluation. The Contractor or his agent (supplier) shall provide the manpower and equipment necessary to sample or inspect the stockpile under the direction of the Engineer and/or a Departmental Engineering Geologist or his/her designated representative.
3. MATERIAL EVALUATION AND TESTING

3.1 Course of Action

3.1.1 Gradation
Gradation evaluation will not apply to Item Type.

3.1.1.1 Gradation Evaluation
The gradation evaluation will be made on the basis of a visual inspection by the Engineer or his/her designated representative.

For projects paid under SiteManager, the Engineer or his/her designated representative will enter the gradation approval and an estimated quantity of material into SiteManager in accordance with the Quick Reference Guide for Stonefill Evaluation Samples.

For projects not paid under SiteManager, the Engineer or his/her designated representative will furnish, in writing, to the Departmental Geotechnical Engineer, gradation approval and an estimated quantity of material in the stockpile (See Appendix A Stone Fill Request Worksheet). A fillable/savable/linkable copy of the Stone Fill Request Worksheet is available on the Department's website at https://www.dot.ny.gov/divisions/engineering/technical-services/geotechnical-engineering-bureau

3.1.2 Soundness

3.1.2.1 Item Type A
After receipt of the memorandum from the Director of the Geotechnical Engineering Bureau assigning Item Type A to an item, the Departmental Geotechnical Engineer will utilize that memorandum as verification for Departmental soundness acceptance for any project request for that particular item from that source for that calendar year.

3.1.2.2 Item Type B
After notification in SiteManager that the material has been stockpiled and that the gradation has been approved, by the Engineer or his/her designated representative, a Departmental Engineering Geologist, or designated representative, will evaluate the material for soundness and will enter the acceptance or rejection of the material in SiteManager in accordance with the Quick Reference Guide for Stonefill Evaluation Samples.

For projects not paid under SiteManager, the Departmental Geotechnical Engineer will request, in writing, a geologic evaluation of the stockpiled material by a Departmental Engineering Geologist and will indicate that the material has been stockpiled and that the gradation of the stockpiled material has been approved. An estimate of the quantity of material inspected and approved for gradation will be included. The Departmental Geotechnical Engineer may request that a designated representative be allowed to
perform the soundness evaluation.

The following criteria must be met before an Engineering Geologist's designated representative can perform a soundness evaluation:

1. Material is obtained from an established source,
2. Stockpile contains less than 500 yd$^3$ (400 m$^3$), and
3. Approval to do the soundness evaluation is given by a Departmental Engineering Geologist of the Geotechnical Engineering Bureau

3.1.2.3 Soundness Evaluation

Item Type A
See 3.1.2.1

Item Type B
The soundness evaluation will be made on the basis of a visual inspection by a Departmental Engineering Geologist or his/her designated representative.

For projects paid under SiteManager, the results of the soundness evaluation will be entered in SiteManager by the Departmental Engineering Geologist or designated representative in accordance with the Quick Reference Guide for Stonefill Evaluation Samples.

For projects not paid under SiteManager, if the evaluation is performed by a member of the Geotechnical Engineering Bureau, the Director of that Bureau will transmit to the Departmental Geotechnical Engineer the approval or rejection for soundness.

If the Contractor disagrees with the results of the visual inspection for soundness, he/she shall, within one work day of the inspection, express in writing his/her disagreement, including reasons, to the Engineer, who will refer the letter to the Director of the Geotechnical Engineering Bureau for resolution. The State may elect to conduct laboratory tests for soundness. If the State elects to perform these tests for soundness, they will be as specified in the Standard Specifications. These test results will then be the basis for acceptance or rejection.
4. DISTRIBUTION OF STOCKPILE EVALUATION

For projects paid under SiteManager, the Departmental Geotechnical Engineer will enter the final acceptance or rejection of the stockpile in SiteManager in accordance with the Quick Reference Guide for Stonefill Evaluation Samples.

For projects not paid under SiteManager, the Departmental Geotechnical Engineer will notify the Engineer in writing, as to whether the stockpile is approved or rejected. The following information will be attached:

A. Item Type A
   1. Assignment of Item Type A memorandum from the Geotechnical Engineering Bureau,
   2. Result of the Gradation Evaluation memorandum (if applicable).

B. Item Type B
   1. Soundness evaluation memorandum from the Director of Geotechnical Engineering Bureau or soundness evaluation memorandum from his/her designated representative,
   2. Result of the Gradation Evaluation memorandum (if applicable).

A copy of the notification will be submitted to the Geotechnical Engineering Bureau for:

1. Item Type A, or
2. Item Type B when Geologic Evaluation is performed by Departmental Engineering Geologist's designated representative.
5. USE AND DISPOSAL OF STOCKPILES

5.1 Use of Stockpiles
Stockpiles evaluated as being of acceptable gradation and soundness may be used as the specified item on the project for which the evaluation was made. No further testing of the material is required. Approval of a stockpile will not relieve, in any degree, the full responsibility of the Contractor to place, in its final position, a material conforming to all the specification requirements for that item.

Material shall not be added to an accepted stockpile. If material is added after a stockpile has been accepted, or the stockpile is otherwise tampered with, either the Engineer or the Departmental Geotechnical Engineer will declare the stockpile unacceptable and it shall be disposed of in accordance with Subsection 5.4.

The acceptance of a stockpile will expire two years from the date of acceptance or upon completion of the project for which it was built, whichever is later. After the expiration date, the stockpile may be disposed of in accordance with Subsection 5.4.

5.2 Transfer of Approved Stockpiles
It will be the practice of the Geotechnical Engineering Bureau to allow the transfer of material from an approved stockpile to another project subject to the following procedure:

A. The Contractor shall submit a written request to the Engineer containing the following information:
   1. The location and number of the stockpile.
   2. The project for which the stockpile was originally approved.
   3. The present owner of the material, including the owner's address and telephone number.
   4. The estimated quantity of material remaining in the stockpile.
   5. The quantity of material to be utilized from the stockpile on the applicant's project.
   6. The item for which the material will be used.

B. If the original contract under which approval was granted is still under construction, the Engineer of that project will be notified by the Engineer requesting transfer.

C. The requesting Engineer will inspect the stockpile to determine the feasibility of its use on his/her project and will then submit his/her recommendation to the Departmental Geotechnical Engineer who will make the final determination on the request.

D. The Departmental Geotechnical Engineer will review his/her records of the stockpile including evaluations and material quantity estimated. He/she will satisfy him/herself that the stockpile has not been enlarged or in any way tampered with since its initial approval. If he/she has any reservations concerning the condition of the stockpile, the request for transfer of approval will be denied. The recommendations of both Engineers will be fully considered.
For projects paid under SiteManager, follow steps A through D above then continue with step E below.

E. If the Departmental Geotechnical Engineer accepts the request for transfer, he/she will contact the Help Desk at 518-485-8111 or by e-mail at dot.sm.itd.helpdesk so a SiteManager Administrator can coordinate the transfer between contracts in the system.

For projects not paid under SiteManager, follow steps A through D above then continue with steps F and G below.

F. The Departmental Geotechnical Engineer will provide a written notification to the requesting Engineer stating final determination of the stockpile transfer request. If the request is approved, the transfer approval will include the location and number of the stockpile, a copy of the original approval (including evaluations), a list of the previous project(s) using the stockpile and all appropriate restrictions. A copy of the transfer approval will be included for transmittal to the Contractor by the requesting Engineer. A copy of the approval will also be sent to the Geotechnical Engineering Bureau and to the Engineer for which the stockpile was originally approved.

G. Upon completion of stone filling or rip-rap placement, the requesting Engineer will furnish the Departmental Geotechnical Engineer, in writing, his/her estimate of the quantity of material actually utilized from the stockpile and the quantity remaining.

5.3 Temporary Use of Stone Filling and Rip-Rap Items

Stone Filling or Rip-Rap Items placed for temporary use (less than one year duration) shall be stockpiled in accordance with this Manual. Approval or rejection of soundness and gradation may be made based on a visual inspection by the Engineer.

For projects paid under SiteManager, the Engineer will contact the HelpDesk at 518-485-8111 or by e-mail at dot.sm.itd.helpdesk, so a SiteManager Administrator can assign the quality evaluation to the Engineer. The Engineer can also request that a Departmental Engineering Geologist enter the soundness evaluation results in SiteManager, in accordance with the Quick Reference Guide for Stonefill Evaluation Samples, based on the Engineer's visual inspection.

If it is desired to incorporate temporary material into the final project as a Stone Filling or Rip-Rap Item, it must be accepted in accordance with the procedures contained in Sections 2, 3 and 4 of this Manual.

5.4 Disposal of Unacceptable Stockpiles

Material from a rejected stockpile or a stockpile whose approval has expired may be:

a) re-worked as required to correct deficiencies,
b) disposed of, or
c) re-evaluated in the case of an expired approval.
**LOCAL PROGRAM & NON-SITEMANAGER**

**STONEFILL INSPECTION REQUEST AND EVALUATION FORM**

**DEPARTMENT OF TRANSPORTATION/GEOTECHNICAL ENGINEERING BUREAU**

**GE-150**

(07/20/2015)

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### Project and Source Information

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**PROJECT DESCRIPTION**

**PROJECT MUNICIPALITY**

**PROJECT COUNTY**

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### Source Information

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### Item

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### Gradation Evaluation

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**REGIONAL GEOTECHNICAL ENGINEER’S SIGNATURE**

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### Quality Evaluation

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<table>
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<tr>
<th>COMMENTS</th>
<th>APPROVAL (Y/N)</th>
<th>HD&amp;C TECHNICIAN’s DATE STAMP</th>
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**THIS FORM MUST BE SIGNED BY THE RGE TO BE PROCESSED.**

A SEPERATE FORM MUST BE FILLED IN AND SUBMITTED FOR EACH ITEM AND/OR STOCKPILE THAT IS REQUESTED FOR EVALUATION.
INSTRUCTIONS FOR GE-150 (07/20/2015):
LOCAL PROGRAM & NON-SITEMANAGER
STONEFILL INSPECTION REQUEST AND EVALUATION FORM

Request Date:  EIC/Project Engineer puts date evaluation request is initiated. Format: MM/DD/YYYY
Phone Request:  DOT Main Office fills in this field if used. FORMAT: XXX-XXX-XXXX
Request Number:  DOT Main Office fills in this field.

PROJECT AND SOURCE INFORMATION

Contract:  EIC/Project Engineer fills in respective contract number.
PIN:  EIC/Project Engineer or RGE fills in PIN if applicable.
Project Engineer:  EIC/Project Engineer fills in respective contract number.
Phone:  EIC/Project Engineer fills in their field office or business phone number.
Project Description:  EIC/Project Engineer fills in general description of the project.
Project Municipality:  EIC/Project Engineer fills in municipality the project is in, indicating the type of municipality, ie: City, Town or Village
Project County:  EIC/Project Engineer fills in municipality the project is in, without the word county.

ITEM

Item Number:  EIC/Project Engineer fills in item number of material to be evaluated
Format:  620.XXXXXXXX. For a complete listing of 620 items, please refer to GEB Publication M0010.
Quantity:  EIC/Project Engineer fills in quantity of item to be inspected.
Units:  EIC/Project Engineer fills in units of measure of item to be inspected

SOURCE INFORMATION

Source Number:  RGE or DOT Main Office fills in this field.
USGS Quad Name:  DOT Main Office fills this field in (if necessary).
Source Name:  EIC/Project Engineer fills in name of quarry.
Source Location:  EIC/Project Engineer fills in location of quarry.

GRADATION EVALUATION

RGE or DOT Main Office fills in this section.

QUALITY EVALUATION

RGE or DOT Main Office fills in this section.

*** A SEPERATE GE 150 MUST BE FILLED IN FOR EACH ITEM AND / OR STOCKPILE THAT IS REQUESTED FOR INSPECTION.

*** WHEN SAVING A DIGITAL COPY OF THE GE 150, MAKE SURE IF YOU ARE USING A FILE PREVIOUSLY FILLED OUT. THAT YOU’RE SAVING IT WITH A DIFFERENT FILE NAME, OTHERWISE YOU MAY BE OVERWRITING THE DATA IN THE FILE YOU CURRENTLY HAVE OPEN