
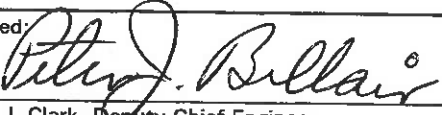


To: <p style="text-align: center;">SUPERSEDED BY EI 10-014 EFFECTIVE 1/6/11</p>		<p style="text-align: center;"><i>New York State</i> <i>Department of</i> <i>Transportation</i></p> <p style="text-align: center;">ENGINEERING INSTRUCTION</p>	<p style="font-size: 2em;">EI</p> <p style="font-size: 1.5em;">95-045</p>
Title: ITEM 17304.101194 - SUBBASE COURSE, TYPE 1011-1 ITEM 17304.101194M - SUBBASE COURSE, TYPE 1011-1M			
Distribution: <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input type="checkbox"/> Local Govt. (31) <input type="checkbox"/> Contractors/AGC (39) <input type="checkbox"/> Regions (32) <input checked="" type="checkbox"/> Regions 10 & 11 Only	Approved:  1/23/95 P. J. Clark, Deputy Chief Engineer Date Design Division <i>FOR</i>		

This EI Supersedes: EI 88-040.

Attached are metric and non-metric versions of a special specification for a subbase course item. These specifications will be effective with the letting of February 1, 1996 on all Departmental projects in Regions 10 and 11.

Special Specifications Item 17304.101194 - Subbase Course, Type 1011-1 (non-metric) and Item 17304.101194M - Subbase Course, Type 1011-1M (metric) will replace special specification 17304.1011 - Subbase Course, Type 1011 which was established by E.I. 88-40.

The new special specifications include two major changes:

1. Provisions for the use of recycled concrete aggregate were taken out because these provisions are now included in Soil Control Procedure SCP-13, February 1994, "Procedure for the Control of Granular Materials." Such provisions were not included in previous SCPs.
2. DEC requirements on using recycled concrete, and blast furnace slag were incorporated.

Questions relating to this E.I. should be directed to Maurice McGrath in the Geotechnical Engineering Bureau at (518) 457-4716.

ITEM 17304.101194 - SUBBASE COURSE, TYPE 1011-1

DESCRIPTION

Under this item, the Contractor shall furnish, place and compact Subbase Course, Type 1011-1. The thicknesses and locations of the Subbase Course will be as shown on the plans, or as determined by field conditions and ordered in writing by the Engineer.

Unless modified by this specification, the work shall be performed in accordance with Section 304 of the Standard Specification. The Contractor shall, at his option, furnish and place material conforming to any of the follow: Material A, Material B, Material C or Material D. Only one type of material may be used for this item on any roadway segment.

MATERIALS

General

All material acceptable for this item shall be stockpiled and shall be sound, hard, durable, and well graded from coarse to fine. Material tests and quality control methods pertaining to the work of this section will be performed in conformance with the procedures contained in the appropriate Departmental publication in effect on the advertising date of the project. These publications are available upon request to the Regional Director or the Director, Geotechnical Engineering Bureau.

If Recycled Portland Cement Concrete Aggregate (RPCCA) is to be used, and it comes from other than a Department of Transportation project, the Contractor shall provide documentation showing that the material obtained is from either a NYSDEC registered or permitted construction and demolition (C&D) debris processing facility as specified in Section 360-16.1 of 6NYCRR Part 360, "Solid Waste Management Facilities, Title 6 of the Official Compilation of Codes, Rules and Regulations."

If blast furnace slag is to be used, the Contractor shall provide documentation showing that it has undergone a NYSDEC beneficial use determination (BUD) prior to its use as specified in Section 360-1.15 of 6NYCRR Part 360, "Solid Waste Management Facilities, Title 6 of the Official Compilation of Codes, Rules and Regulations."

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Options

MATERIAL A

Material furnished for Material A shall be well graded from coarse to fine and free from organic or other deleterious material. At least 95 percent of the material, by weight, shall consist of:

1. Recycled Portland Cement Concrete Aggregate (RPCCA).

or

2. Recycled Portland Cement Concrete Aggregate mixed with material meeting the requirements of Subsection 304-2.02 except as hereby modified.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
2 inch	100
1/4 inch	30-65
No. 40	5-40
No. 200	0-10

The plasticity Index of the material passing the 40 mesh sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness loss after 4 cycles shall be 20 percent or less.

MATERIAL B

All of this material shall be sound, hard, durable and consist solely of Stone which is the product of crushing ledge rock.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
1/2"	100
1/4"	70-100
No. 10	40-75

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No. 40	15-40
No. 200	5-15

The Plasticity Index of material passing the 40 mesh sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL C

Material C shall be acquired from natural sources located in Richmond, Kings, Queens, Nassau or Suffolk Counties. This material shall meet the requirements of Subsection 304-2.02 except as hereby modified.

The material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
2"	100
1"	80-100
1/4"	50-85
No. 10	30-70
No. 40	15-40
No. 200	6-12

The Plasticity Index of the Material passing the 40 mesh sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL D

Material D shall be acquired from sources not located in Richmond, Kings, Queens, Nassau or Suffolk Counties and shall meet all of the requirements of Subsection 304-2.

CONSTRUCTION DETAILS

ITEM 17304.101194 - SUBBASE COURSE, TYPE 1011-1

All of the requirements of Subsection 304-3 shall apply. After compaction, the top surface shall not extend more than 1/4 inch above nor more than 1/4 inch below true grade for the course at any location.

METHOD OF MEASUREMENT

The quantity shall be the number of cubic yards of material, computed from payment lines shown on the plans or, where changes have been ordered, from payment lines established by the Engineer.

BASIS OF PAYMENT

The unit price bid for this work shall include the cost of furnishing all labor, material and equipment necessary to complete the work. The cost of adding water shall be included in the price bid unless the items for furnishing and applying water are included in the contract. No direct payment will be made for losses of material resulting from compaction, foundation settlement, erosion or any other cause. The cost of such losses shall be included in the price bid for this item. No deductions shall be made for the volumes occupied by manholes, catch basins and other such objects.

Progress payments will be made after the subbase course has been properly placed and compacted. Payment will be made at the unit price bid for seventy-five (75%) percent of the quantity. The balance of the quantity will be paid for after the final finishing to the required tolerance and just prior to the placing of the next course.

ITEM 17304.101194M - SUBBASE COURSE, TYPE 1011-1M

DESCRIPTION

Under this item, the Contractor shall furnish, place and compact Subbase Course, Type 1011-1. The thicknesses and locations of the Subbase Course will be as shown on the plans, or as determined by field conditions and ordered in writing by the Engineer.

Unless modified by this specification, the work shall be performed in accordance with Section 304 of the Standard Specification. The Contractor shall, at his option, furnish and place material conforming to any of the follow: Material A, Material B, Material C or Material D. Only one type of material may be used for this item on any roadway segment.

MATERIALS

General

All material acceptable for this item shall be stockpiled and shall be sound, hard, durable, and well graded from coarse to fine. Material tests and quality control methods pertaining to the work of this section will be performed in conformance with the procedures contained in the appropriate Departmental publication in effect on the advertising date of the project. These publications are available upon request to the Regional Director or the Director, Geotechnical Engineering Bureau.

If Recycled Portland Cement Concrete Aggregate (RPCCA) is to be used, and it comes from other than a Department of Transportation project, the Contractor shall provide documentation showing that the material obtained is from either a NYSDEC registered or permitted construction and demolition (C&D) debris processing facility as specified in Section 360-16.1 of 6NYCRR Part 360, "Solid Waste Management Facilities, Title 6 of the Official Compilation of Codes, Rules and Regulations."

If blast furnace slag is to be used, the Contractor shall provide documentation showing that it has undergone a NYSDEC beneficial use determination (BUD) prior to its use as specified in Section 360-1.15 of 6NYCRR Part 360, "Solid Waste Management Facilities, Title 6 of the Official Compilation of Codes, Rules and Regulations."

Options

MATERIAL A

Material furnished for Material A shall be well graded from coarse to fine and free from organic or other deleterious material. At least 95 percent of the material, by weight, shall consist of:

1. Recycled Portland Cement Concrete Aggregate (RPCCA).

or

2. Recycled Portland Cement Concrete Aggregate mixed with material meeting the requirements of Subsection 304-2.02 except as hereby modified.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
50 mm	100
6.3 mm	30-65
No. 40 425 mm	5-40
No. 200 75 mm	0-10

The plasticity Index of the material passing the 425 mm sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness loss after 4 cycles shall be 20 percent or less.

MATERIAL B

All of this material shall be sound, hard, durable and consist solely of Stone which is the product of crushing ledge rock.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
12.5	100
6.3	70-100
No. 10 2.00 mm	40-75

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No. 40 425 mm	15-40
No. 200 75 mm	5-15

The Plasticity Index of material passing the 425 mm sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL C

Material C shall be acquired from natural sources located in Richmond, Kings, Queens, Nassau or Suffolk Counties. This material shall meet the requirements of Subsection 304-2.02 except as hereby modified.

The material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
50 mm	100
25.0 mm	80-100
6.3 mm	50-85
No. 10 2.00 mm	30-70
No. 40 425 mm	15-40
No. 200 75 mm	6-12

The Plasticity Index of the Material passing the 425 mm sieve shall not exceed 5.0.

The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL D

Material D shall be acquired from sources not located in Richmond, Kings, Queens, Nassau or Suffolk Counties and shall meet all of the requirements of Subsection 304-2.

CONSTRUCTION DETAILS

ITEM 17304.101194M - SUBBASE COURSE, TYPE 1011-1M

All of the requirements of Subsection 304-3 shall apply. After compaction, the top surface shall not extend more than 6.3 mm above nor more than 6.3 mm below true grade for the course at any location.

METHOD OF MEASUREMENT

The quantity shall be the number of cubic meters of material, computed from payment lines shown on the plans or, where changes have been ordered, from payment lines established by the Engineer.

BASIS OF PAYMENT

The unit price bid for this work shall include the cost of furnishing all labor, material and equipment necessary to complete the work. The cost of adding water shall be included in the price bid unless the items for furnishing and applying water are included in the contract. No direct payment will be made for losses of material resulting from compaction, foundation settlement, erosion or any other cause. The cost of such losses shall be included in the price bid for this item. No deductions shall be made for the volumes occupied by manholes, catch basins and other such objects.

Progress payments will be made after the subbase course has been properly placed and compacted. Payment will be made at the unit price bid for seventy-five (75%) percent of the quantity. The balance of the quantity will be paid for after the final finishing to the required tolerance and just prior to the placing of the next course.