

SECTION 02316

SELECT GRANULAR MATERIALS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work Specified
Select granular materials shall be used in bedding, pipe encasement, or backfill and as specified or as directed by the ENGINEER.
- B. Related Work Specified Elsewhere
 - 1. Section 02317 - Rock Excavation
 - 2. Section 02351 - Excavation, Backfill and Trenching
 - 3. Section 02900 - Restoration
 - 4. Section 15051 - Buried Piping Installation

1.02 QUALITY ASSURANCE

- A. Reference Standards
 - 1. NYSDOT Standards, latest revision

1.03 SUBMITTALS

- A. The CONTRACTOR shall furnish representative samples, sieve analysis and certification of specification compliance for the select granular materials to the ENGINEER and advise on the location of the source.
- B. The CONTRACTOR shall submit copies of proposed materials, methods and operations of backfilling and compaction to the ENGINEER for review prior to the start of work. A list of equipment to be used in CONTRACTOR'S Methods and Operations must be included.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Bedding and Pipe Encasement
 - 1. NYSDOT No. 1 Crushed Stone or Crushed Gravel – bedding for PVC, DIP, and PCCP watermain.
Thoroughly washed, clean, sound, tough, hard, crushed limestone conforming to the requirements of NYSDOT Item No. 703.0201 or crushed gravel conforming to the requirements of NYSDOT Item No. 703.0202, having the following gradation by weight:

<u>% Passing</u>	<u>Sieve</u>
100	1-inch
90 - 100	1/2-inch
0 - 15	1/4-inch

2. NYSDOT No. 2A Crushed Stone or Crushed Gravel – bedding for DIP and PCCP watermain.
 Shall be a No. 1 and No. 2 blend, thoroughly washed, clean, sound, tough, hard, crushed limestone conforming to the requirements of NYSDOT Item No. 703.0201 or crushed gravel conforming to the requirements of NYSDOT Item No. 703.0202, having the following gradation by weight:

<u>% Passing</u>	<u>Sieve</u>
100	1-1/2-inch
93-100	1-inch
27-58	1/2-inch
0-8	1/4-inch

3. NYSDOT Concrete Sand – bedding for copper and polyethylene tubing.
 Washed, fine aggregate sand shall conform to the requirements of NYSDOT Item No. 703.07, having the following gradation by weight:

<u>% Passing</u>	<u>Sieve</u>
100	3/8-inch
90 - 100	No. 4
75 - 100	No. 8
50 - 85	No. 16
25 - 60	No. 30
10 - 30	No. 50
1 - 10	No. 100
0 - 3	No. 200

B. Select Backfill

1. NYSDOT Subbase Type 2 Crusher Run Stone or Crusher Run Gravel.
 Material shall conform to the requirements of NYSDOT Item No. 304.12, having the following gradation by weight:

<u>% Passing</u>	<u>Sieve</u>
100	2-inch
25 - 60	1/4-inch
5 - 40	No. 40
0 - 10	No. 200

- C. Peagravel
 - 1. NYSDOT Type 1A Screened Gravel for the annular space between the carrier pipe and the casing pipe.
Screened gravel shall conform to the requirements of NYSDOT Item No. 703.0203 and have the following gradation by weight:

<u>% Passing</u>	<u>Sieve</u>
100	$\frac{1}{2}$ -inch
90 - 100	$\frac{1}{4}$ -inch
0 - 15	$\frac{1}{8}$ -inch
- D. Follow NYSDOT Standard Specifications if gradation data varies from those listed above.
- E. Recycled concrete or asphalt pavement shall not be allowed.
- F. Slag of any type shall not be allowed.
- G. Flowable fill shall not be allowed.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General
 - 1. Select granular material as specified or directed for watermain bedding or encasement shall be placed in accordance with Section 02351 - Excavation, Backfill and Trenching and Section 15051 - Buried Piping Installation.
 - 2. Select backfill where specified or directed shall be placed in accordance with the backfilling provisions of Section 02351 - Excavation, Backfill & Trenching.

3.02 DISPOSAL OF DISPLACED MATERIALS

- A. Materials displaced through the use of the above materials shall be wasted or disposed of by the CONTRACTOR and the cost of such disposal shall be included in the appropriate bid item.

END OF SECTION