SECTION 466163 - BAG FILTERS

Note that this section has only been edited for NYSOGS standardization and has not been technically edited. The designer shall make all technical edits specific to the project for this section.

This Section specifies bag filters and accessories for water or wastewater filtration.

Bag filters may be premounted on a skid to facilitate installation. Modify this Section accordingly if skid-mounted bag filters and accessories are desired.

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes: Bag filters and accessories.
				2. Related Requirements:

List other Sections directly related to or affecting Work of this Section. Include Sections specifying information expected to be found in this Section as well as Sections required to describe complete system or assembly requirements.

Section 402323 - Potable Water Process Piping: Piping materials and installation as required for this Section.

* + - 1. DEFINITIONS

Limit list of definitions to terms unique to this Section and not provided elsewhere.

* + - * 1. EPDM: Ethylene-propylene-diene monomer.
				2. FRP: Fiberglass-reinforced plastic.
			1. REFERENCE STANDARDS

List reference standards included within text of this Section, with designations, numbers, and complete document titles.

* + - * 1. NSF International:

NSF 61 - Drinking Water System Components - Health Effects.

NSF 372 - Drinking Water System Components - Lead Content.

* + - 1. SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

* + - * 1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: Submit manufacturer information for system materials and component equipment, including electrical characteristics.
				5. Shop Drawings:

Indicate system materials and component equipment.

Submit installation and anchoring requirements, fasteners, and other details.

* + - * 1. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

Include separate Paragraphs for additional certifications.

* + - * 1. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
				2. Source Quality-Control Submittals: Indicate results of [**shop**] [**factory**] tests and inspections.
				3. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
				4. Manufacturer Reports: Certify that equipment has been installed according to manufacturer instructions.
				5. Qualifications Statements:

Coordinate following Subparagraphs with requirements specified in QUALIFICATIONS Article.

Submit qualifications for manufacturer and installer.

Submit manufacturer's approval of installer.

* + - 1. CLOSEOUT SUBMITTALS
				1. Project Record Documents: Record actual locations of installed bag filters.
			2. QUALITY ASSURANCE

Include this Article to specify compliance with overall reference standards affecting products and installation included in this Section.

* + - * 1. Materials in Contact with Potable Water: Certified to NSF Standard 61 and NSF Standard 372.

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Perform Work according to <**\_\_\_\_\_\_\_\_**> standards.

Include following Paragraph only when cost of acquiring specified standards is justified.

* + - * 1. Maintain <**\_\_\_\_\_\_\_\_**> [**copy**] [**copies**] of each standard affecting Work of this Section on Site.
			1. QUALIFICATIONS

Coordinate following Paragraphs with requirements specified in SUBMITTALS Article.

* + - * 1. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum [**three**] <**\_\_\_\_\_\_\_\_**> years' [**documented**] experience.
				2. Installer: Company specializing in performing Work of this Section with minimum [**three**] <**\_\_\_\_\_\_\_\_**> years' [**documented**] experience [**and approved by manufacturer**].
			1. DELIVERY, STORAGE, AND HANDLING
				1. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
				2. Store materials according to manufacturer instructions.
				3. Protection:

Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.

Provide additional protection according to manufacturer instructions.

* + - 1. EXISTING CONDITIONS
				1. Field Measurements:

Verify field measurements prior to fabrication.

Indicate field measurements on Shop Drawings.

* + - 1. WARRANTY

This Article extends warranty period beyond one year. Extended warranties may increase construction costs and Owner enforcement responsibilities. Specify warranties with caution.

* + - * 1. Furnish [**five**] <**\_\_\_\_\_\_\_\_**>-year manufacturer's warranty for bag filter housings [**and**] <**\_\_\_\_\_\_\_\_**>.
1. PRODUCTS
	* + 1. BAG FILTERS
				1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=11722&mf=04&src=wd):

DESIGNER TO PROVIDE TWO MANUFACTURERS AND APPROVED EQUIVALENT FOR ALL LISTED PRODUCTS.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Subparagraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

Furnish materials according to <**\_\_\_\_\_\_\_\_**> standards.

Insert descriptive specifications below to identify Project requirements and to eliminate conflicts with products specified above. Coordinate rake dimensions and features with bar rack to be raked.

* + - * 1. Description:

Bag Type: [**Sewn**] [**Welded**].

Housing:

Diameter: <**\_\_\_\_\_\_\_\_**> inches

Overall Height: <**\_\_\_\_\_\_\_\_**> inches

Inlet and Outlet Connections: [**Threaded**] [**Flanged**] [**Threaded flanges**] <**\_\_\_\_\_\_\_\_**>.

Vent Connection: [**Threaded**] [**Flanged**] <**\_\_\_\_\_\_\_\_**>.

Gage Connection: [**Threaded**] [**Flanged**] <**\_\_\_\_\_\_\_\_**>.

Nominal Rating: [**0.1**] [**0.2**] [**1**] [**5**] [**10**] [**50**] [**100**] [**200**] <**\_\_\_\_\_\_\_\_**> microns.

Bag Surface Area: <**\_\_\_\_\_\_\_\_**> sq. ft

Sample Ports:

Minimum Two Per Unit: Influent sample and effluent sample.

Design and Placement: According to manufacturer's standard.

* + - * 1. Performance and Design Criteria:

Flow Capacity:

Design: <**\_\_\_\_\_\_\_\_**> gpm

Maximum: <**\_\_\_\_\_\_\_\_**> gpm

Size each online and standby unit to treat entire waste stream.

Flow Conditions: [**Continuous**] [**Intermittent**] [**Batch**].

Process Fluid:

Temperature Range: <**\_\_\_\_\_\_\_\_**> to <**\_\_\_\_\_\_\_\_**> deg. F

Design Temperature: <**\_\_\_\_\_\_\_\_**> deg. F

Product Viscosity: <**\_\_\_\_\_\_\_\_**> lbf-s/sq. ft

Differential Pressure at Design Temperature: <**\_\_\_\_\_\_\_\_**> psi

pH:

Maximum: <**\_\_\_\_\_\_\_\_**>.

Minimum: <**\_\_\_\_\_\_\_\_**>.

Design Inlet:

Maximum Pressure: <**\_\_\_\_\_\_\_\_**> psig

Suspended Solids: <**\_\_\_\_\_\_\_\_**> mg/L.

Particle Size: <**\_\_\_\_\_\_\_\_**> microns.

Design Effluent:

Suspended Solids: <**\_\_\_\_\_\_\_\_**> mg/L.

Particle Size: <**\_\_\_\_\_\_\_\_**> microns.

* + - * 1. Materials:

Filter: [**Nylon**] [**Polypropylene**] [**Cotton**] [**Polyester**] [**PTFE**] <**\_\_\_\_\_\_\_\_**>.

Gasket: [**Buna-N**] [**EPDM**] [**PTFE**] <**\_\_\_\_\_\_\_\_**>.

Bag Support: [**Polypropylene**] [**Type 304 stainless steel**] [**Type 316 stainless steel**] <**\_\_\_\_\_\_\_\_**>.

Housing: [**Type 304 stainless steel**] [**Type 316 stainless steel**] [**Carbon steel**] [**PTFE**] [**Polypropylene**] [**FRP**] <**\_\_\_\_\_\_\_\_**>.

Shell O-Ring: [**Buna-N**] [**Neoprene**] <**\_\_\_\_\_\_\_\_**>.

* + - 1. SOURCE QUALITY CONTROL
				1. Provide shop inspection and testing of completed assembly.

Include one or both of following Paragraphs to require Director's inspection or witnessing of test at factory.

* + - * 1. Director’s Inspection:

Make completed bag filter assemblies available for inspection at manufacturer's factory prior to packaging for shipment.

Notify Director’s Representative at least [**seven**] <**\_\_\_\_\_\_\_\_**> days before inspection is allowed.

* + - * 1. Director’s Witnessing:

Allow witnessing of factory inspections and test at manufacturer's test facility.

Notify Director’s Representative at least [**seven**] <**\_\_\_\_\_\_\_\_**> days before inspections and tests are scheduled.

Include following Paragraph if reliance on manufacturer's approved quality-control program is sufficient for Project requirements.

* + - * 1. Certificate of Compliance:

If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.

Specified shop tests are not required for Work performed by approved manufacturer.

1. EXECUTION
	* + 1. EXAMINATION
				1. Verify that piping connections are ready to receive bag filters.
			2. INSTALLATION
				1. According to manufacturer instructions.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Installation Standards: Install Work according to <**\_\_\_\_\_\_\_\_**> standards.
			1. FIELD QUALITY CONTROL
				1. After installation, inspect and test for proper operation.
				2. Manufacturer Services: Furnish services of manufacturer's representative experienced in installation of products furnished under this Section for not less than <**\_\_\_\_\_\_\_\_**> days on Site for installation, inspection, field testing, and instructing Director’s Representative in maintenance of equipment.
				3. Equipment Acceptance:

Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.

Make final adjustments to equipment under direction of manufacturer's representative.

* + - * 1. Furnish installation certificate from equipment manufacturer's representative attesting that equipment has been properly installed and is ready for startup and testing.
			1. DEMONSTRATION
				1. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative
			2. ATTACHMENTS

When relying on separate schedules, tables, illustrations, or forms to specify product requirements, include list of each attachment. Include identical list of attachments in Project Manual table of contents.

Consider including schedule if Project includes more than one bag filter or more than one type of filter.

Insert attachments following END OF SECTION. Consider following example when developing Project schedule.

* + - * 1. Bag Filter Schedule:

BF-1:

[**Manufacturer: <\_\_\_\_\_\_\_\_>.**]

[**Model: <\_\_\_\_\_\_\_\_>.**]

Type: <**\_\_\_\_\_\_\_\_**>.

Location: <**\_\_\_\_\_\_\_\_**>.

Process Fluid: <**\_\_\_\_\_\_\_\_**>.

Material: <**\_\_\_\_\_\_\_\_**>.

Flow Capacity: <**\_\_\_\_\_\_\_\_**>.

BF-2:

[**Manufacturer: <\_\_\_\_\_\_\_\_>.**]

[**Model: <\_\_\_\_\_\_\_\_>.**]

Type: <**\_\_\_\_\_\_\_\_**>.

Location: <**\_\_\_\_\_\_\_\_**>.

Process Fluid: <**\_\_\_\_\_\_\_\_**>.

Material: <**\_\_\_\_\_\_\_\_**>.

Flow Capacity: <**\_\_\_\_\_\_\_\_**>.

END OF SECTION 466163