

# SECTION 15161 - PARSHALL FLUMES

## City of San Diego, CWP Guidelines

### PART 1 -- GENERAL

#### 1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing Parshall Flumes.

#### 1.2 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.
  - 1. Section 06610 Glass Fiber and Resin Fabrications
  - 2. Section 15150 Meters, General

#### 1.3 SHOP DRAWINGS AND SAMPLES

- A. In addition to the requirements of Section 15150, the following shall be submitted in compliance with Section 01300:
  - 1. Certified flow data at 0.1 - foot intervals.

### PART 2 -- PRODUCTS

#### 2.1 GENERAL

- A. **General:** Fiberglass reinforced plastic liner shall comply with Section 06610.
- B. **Basic Design:** Full-length, molded, fiberglass-reinforced polyester Parshall Flume liners shall be installed in the flume channels for measurement of [raw sewage plant influent] [and/or] [plant effluent] flow. Flumes shall be provided with [integral, molded side cavity and bubbler system] [Type 304 stainless steel mounting bracket and ultrasonic level sensing system] designed to measure the flow] [and] [a factory installed gauge calibrated in tenths of feet mounted on the sidewall].
- C. **Schedule:** Parshall flumes shall comply with the following:

<u>I.D. No.</u>	<u>Service</u>	<u>Flow Range, MGD</u>		<u>Throat Width (in.)</u>	<u>Channel Width (in.)</u>
		<u>Initial</u>	<u>Ultimate</u>		
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

## 2.2 BASIC MATERIALS

- A. **Flume:** The flume insert shall be a full-length, molded, fiberglass-reinforced polyester liner fabricated in one piece from polyester resin and reinforced with glass mat. Not less than 30 percent (by weight) of the flume insert shall be reinforcement. The thickness of the walls shall not be less than 1/4-in. There shall be a sufficient number of locking clips or flanges integral with the liner to ensure secure anchorage and proper alignment. Integral stiffeners shall be designed to withstand shipping and installation. Temporary spreaders may be placed across the top of the flume to prevent damage. The flume shall be designed for trouble-free operation to produce metering heads to within 2 percent of its published rating curve.
- B. **Instrumentation:** The flume shall include integrally molded stilling wells and stainless steel brackets for mounting of the indicated instruments. Level sensors, flow rate indicators, transmitters, and receivers shall comply with Section 13300.

## 2.3 MANUFACTURERS

- A. Parshall flumes shall be manufactured by the following (or equal):
  - Badger Meter, Inc.
  - B. I. F. (A unit of General Signal)
  - Fischer and Porter

## PART 3 -- EXECUTION

### 3.1 INSTALLATION

- A. Flumes shall be installed true and level in accordance with the manufacturer's installation instructions and Section 15150.
- B. Interfaces of the flume and the adjacent concrete shall be flush and ensure a smooth, continuous surface.

\*\* END OF SECTION \*\*