**2010 New Rochelle, NY Type I LA-EDI**

**G. Feedwell and Energy Dissipating Inlet**

1. The clarifier shall be equipped with an inner Energy Dissipating Inlet well (EDI)

located inside the rotating Feedwell. The EDI shall be designed to dissipate the

energy of the incoming flow thereby inducing flocculation of the feed solids.

The EDI shall include a cylindrical well enclosing the center column and return

sludge box, with a bottom plate common with the return sludge well. The EDI

side water depth shall be no greater than 5.5 feet. The total EDI depth shall

include 1” freeboard, with four baffled scum ports with openings approximately

6” high by 18” wide to allow floating material to pass. The net EDI volume, not

including the return sludge well, shall provide a detention time of at least 0.5

minutes at the Design Max Month Flow with a 30% Return Sludge Rate. Wing-type

opposing-jet outlets shall be attached vertically to the bottom of the well, equally spaced

around the periphery of the EDI well. Each outlet shall be sized to provide an

average velocity not greater than 1.5 feet per second, and shall have four round

horizontal directional ports to gently introduce the flow horizontally into the

clarifier. The horizontal port velocity shall not be greater than 1.0 feet per

second at Design Max Month Flow with 30% Return sludge Rate. The

horizontal ports shall be arranged in an opposing jet configuration to create flow

impingement and to dissipate energy and promote flocculation with lower and

side baffling to encourage particle contact and velocity reduction into the

Feedwell, while preventing downward currents. The top of the last half of each

horizontal port shall be removed for even distribution. The EDI shall be

supported by structural members attached to the rotating center cage and EDI.

The entire EDI shall be constructed of 3/16 inch plate. A minimum of four (4)

scum ports, 6 inches high x 18 inches long, shall be provided equally spaced

around the EDI periphery to allow scum to exit from the EDI at water level.

Scum ports shall be free to allow scum to escape with an adjustable, angled

baffle plate to impart a tangential direction of the flow exiting the scum port.

2. The Feedwell shall be supported by structural members attached to the rotating

center cage and EDI. The Feedwell shall be fabricated from 3/16 inch minimum

steel plate with upper and lower reinforcing rim angles and stiffeners as required.

A minimum of four (4) scum ports, 6 inches high x 18 inches long, shall be

provided equally spaced around the Feedwell periphery to allow scum to exit

from the Feedwell at water level. Scum ports shall be free to allow scum to

escape with an adjustable, angled baffle plate to impart a tangential direction of

the flow exiting the scum port. The Feedwell side water depth, not including

freeboard, shall not exceed 6.0 feet. The Feedwell shall be sized to provide a

detention time of at least 2.5 minutes after the EDI, with a maximum diameter of

26 feet.