Figure 13.24-6 Three Wheeled Roller

13.24.9 Pneumatic Tire Roller

Pneumatic tire rollers may be used to compact QC/QA HMA or HMA mixtures, but are not frequently used for that purpose. They may also aid in achieving density requirements in situations where steel-drum rollers may not suffice due to underlying pavement conditions. Pneumatic tire rollers are required to be used to seat the cover aggregate into the asphalt material in seal coats.

Requirements related to pneumatic tire rollers are included in 409.03. Figure 13.24-7 shows a pneumatic tire roller in use.

Figure 13.24-7 Pneumatic Tire Roller

Figure 13.24-8 illustrates how the tires on a pneumatic tire roller are offset to facilitate complete coverage of an asphalt mixture or complete seating of seal coat cover aggregate with each pass.

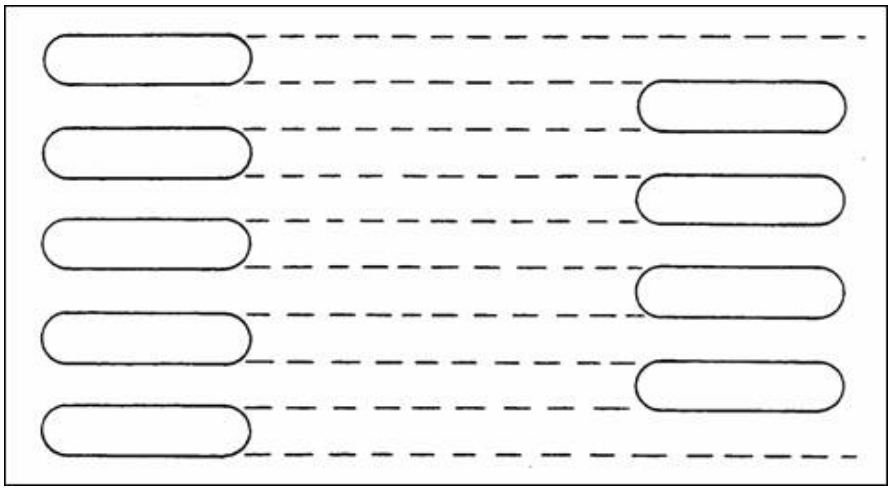

Figure 13.24-8 Pneumatic Tire Roller Tire Offset

13.24.10 Vibratory Roller

The rollers discussed previously use only the weight of the roller to achieve compaction while operating in static mode. Vibratory rollers are capable of imparting an impact loading on the mixture as they vibrate during operation. It is possible to control the frequency and the amplitude of the vibratory effort imparted by the roller. Figure 13.24-9 shows a vibratory roller in use.

Figure 13.24-9 Vibratory Roller

13.24.11 Trench Roller

Trench rollers can be utilized to compact asphalt mixtures in situations where the width of course to be rolled is too narrow for traditional type rollers. Figure 13.24-10 shows a trench roller.