2. **Typical factors influencing equipment include**:

    a. capacity,

    b. application rate and speed,

    c. uniformity,

    d. spread pattern,

    e. manual verses automatic speed/spread controls and

    f. permanent or removable equipment.

B. <u>Liquid Chemical Application Equipment</u>

1. **Liquid chemicals are applied using a spray bar system.**

2. **Applicator Types**

    a. There are several different types of liquid applicators.

i. Applicators permanently mounted on the vehicle

ii. Applicators placed in the truck bed or temporarily attached

a) Many slip-in units can be removed in approximately 30 minutes when additional dry chemical capacity is required or at the end of the season.

iii. Applicators towed behind the truck

iv. Large tankers

3. Application Methods

a. The spray bar doesn't actually "spray" liquid chemicals. Instead, a stream of liquid is pumped through nozzles within the horizontal spray bar.

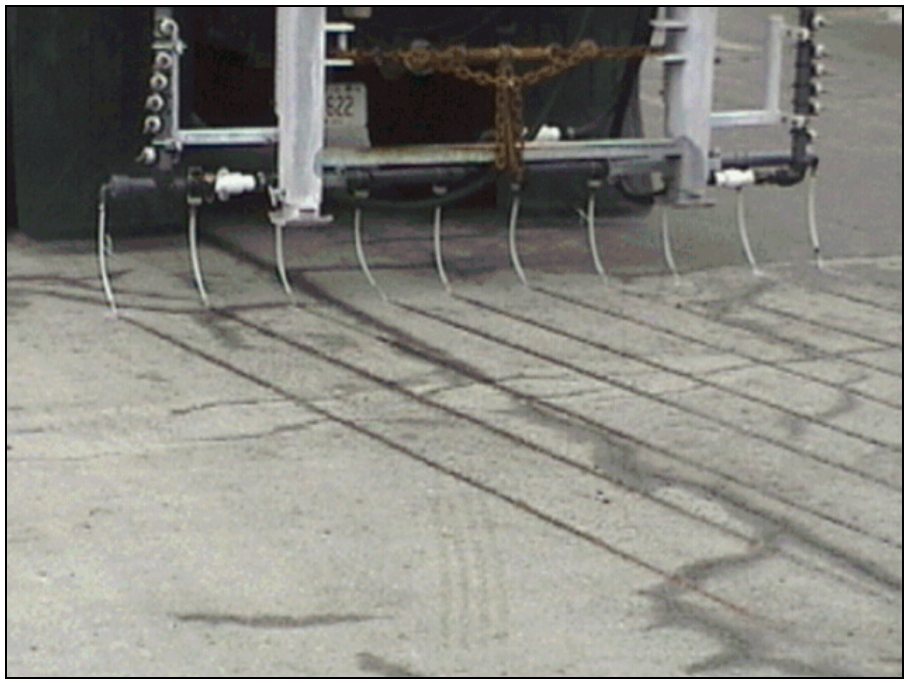
   i. This minimizes air turbulence that might otherwise cause the liquid to disperse in the air before hitting the pavement.

b. Installation of rubber flaps or inexpensive tubing directs liquid close to the pavement.

c. With the typical spray bar, pumps push the liquid through nozzles in the spray bar.

   i. When equipped with an automatic control unit, the rate of flow automatically adjusts for traveling speed.

   ii. An additional bank of nozzles can be added to extend the spray width to cover two or more lanes at one time.



C. Pre-wetting Solids

1. **The effectiveness and efficiency of solid chemicals** can increase when the material is pre-wetted.

    a. The chemical then sticks to the road better and becomes activated by the moisture.

2. **Solid chemicals can be pre-wet three ways:**

    a. Pre-wetting the stockpile

        i. Pre-wet a load of solids just before placing the load in the truck by spraying and mixing the stockpile.

    b. Pre-wetting of a single load

        i. Pre-wet a load of solids by wetting the load as it is being loaded by:

            a) spraying a bucket load of dry material as it is being loaded,

            b) parking the load beneath a sprayer mechanism, and

            c) some other similar means.