

Example Given: Recommended rate - 2.34 lb/sf

Given: Recommended rate = 2.34 lb/sf
Road width = 34.12 ft
L = "Pull Length"
Truckload Weight = 45,000 lb.

Solution: Rate x area = load weight
Determine amount for unit length (1 foot)

(rate) (area) (weight)

$$2.34 \text{ lb/sf} \times (34.12 \text{ ft} \times 1 \text{ ft}) = 79.84 \text{ lb per foot}$$

$$\text{"pull length"} (L) = \frac{\text{Truckload weight}}{\text{weight/ foot}} = \frac{45,000 \text{ lb.}}{79.84 \text{ lb. / ft.}} = 563.63 \text{ ft.}$$

When using lime in slurry form, it is necessary to convert the weight of quicklime to weight of hydrated lime. This conversion is based on the slaking chemistry using the relative molecular weights.

This information is contained on the lime slaking batch report which is furnished by the supplier and should accompany the shipping ticket.

** conversion factor from quicklime to lime slurry

	(shipping weight)	(% purity)	(conversion factor)	
A. quicklime delivered =	23.12 tons	X 97.72%	X 1.32	= 29.82 lbs.
B. quicklime delivered =	23.12 tons	X 2.28%		= 0.53 lbs.
	Total hydrated lime produces			⇒ 30.35 lbs.

* use this amount for pay quantity and to calculate the length of pull

Given: Truckload weight = 30.35 tons (lime slurry)
Road width = 34 ft. (1 ft. outside pavement structure)
Recommended rate = 21 lbs/sy (3 1/2% for 8" depth)

Solution: Rate x area = load weight
Determine amount for unit length (1 ft.)

$$21 \text{ lb/sy} \times \frac{(34 \text{ ft.} \times 1 \text{ ft.})}{9 \text{ ft}^2/\text{sy}} = 79.33 \text{ lbs. per linear ft. of roadway}$$

$$\text{Truckload weight} = 30.35 \text{ tons or } 30.35 \times 2000 \text{ lbs/ton} = 60,700 \text{ lbs.}$$

$$\text{"Pull length"} (L) = \frac{(\text{Truckload weight}) 60,700}{(\text{weight/linear ft.}) 79.33} = 765 \text{ ft.}$$