

Practice: 466 - Land Smoothing

Scenario: #1 - Minor Shaping

Scenario Description:

Removing irregularities on the land surface of cropland by use of heavy equipment.

Before Situation:

Field damaged by flooding (resulting in gullies), past agricultural practices, or other topographic issues causing drainage or field workability issues.

After Situation:

Land levelling by backhoe, dozer, scraper or other heavy equipment to correct irregularities and address drainage or workability issues. Typically consists of moving less than 100 cy/acre of material.

Scenario Feature Measure: Acres of land treated

Scenario Unit: Acre

Scenario Typical Size: 2

Scenario Cost: \$748.58

Scenario Cost/Unit: \$374.29

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Scraper, pull, 7 CY	1206	Pull type earthmoving scraper with 7 CY capacity. Does not include pulling equipment or labor. Add Tractor or Dozer, 160 HP typically required for single scraper.	Hour	\$16.14	1	\$16.14
Tractor, agricultural, 160 HP	1203	Agricultural tractor with horsepower range of 140 to 190. Equipment and power unit costs. Labor not included.	Hour	\$78.47	1	\$78.47
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$129.42	2	\$258.84
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$25.79	5	\$128.95
Mobilization						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$266.18	1	\$266.18

Practice: 466 - Land Smoothing

Scenario: #2 - Field Shaping

Scenario Description:

Removing irregularities on the land surface of cropland by use of heavy equipment.

Before Situation:

Depressions, mounds, old terraces, turn rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices, such as new terraces.

After Situation:

Motor grader or other heavy equipment used to correct irregularities and address drainage or workability issues. Typically less than 100 cy/acre material moved, or about 150 cy per 1000 LF of terrace.

Scenario Feature Measure: Feet of land leveled

Scenario Unit: Foot

Scenario Typical Size: 10,000

Scenario Cost: \$4,362.20

Scenario Cost/Unit: \$0.44

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Motor Grader, 200 HP	1782	Motor Grader or Maintainer, 200 hp. Typical of equipment with HP in range of 170-240. Equipment cost, does not include labor.	Hour	\$164.33	20	\$3,286.60
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$25.79	22	\$567.38
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$508.22	1	\$508.22