

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Environmental Engineering
Practice Code/Name	558 - Roof Runoff Structure
Scenario ID	2
Scenario Name	Gutters and downspouts
Scenario Description	<p>A roof runoff structure, consisting of gutter(s) and downspout(s) only. Used to keep roof clean water runoff uncontaminated and provide a stable outlet to ground surface. Facilitates waste management and protects environment by minimizing clean water additions to waste systems and addresses water quality concerns.</p> <p>Associated practices include Waste Storage Facility (313), Composting Facility (317), Heavy Use Area Protection (561), Watering Facility (614), Underground Outlet (620), Diversion (362), and any relevant irrigation practices.</p>
Before Practice Situation	Applicable where: (1) a roof runoff management facility is included in an overall plan for an overall plan for a waste management system; (2) roof runoff needs to be diverted away from structures or contaminated areas; (3) there is a need to collect, control, and transport runoff from roofs to a stable outlet.
After Practice Situation	A gutter and downspout servicing the portion of the building roof that would otherwise drain into a waste management system or create erosion. Roof line of 180 In.ft. serviced with gutter, downspouts, and appurtenances.
Scenario Feature Measure	Linear Length of Roof to be Guttered
Scenario Unit	Linear Foot
Scenario Typical Size	180

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$617.40	\$3.43
Equipment/Installation	\$0.00	\$0.00
Labor	\$74.68	\$0.41
Mobilization	\$0.00	\$0.00
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$692.08	\$3.84

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1689	Gutter, Aluminum, Small	Aluminum gutter (4" to 6") in width with hangers. Materials only.	Foot	\$2.55	180	\$459.00
Materials	1700	Downspout, Aluminum, Small	Aluminum downspout (3" to 5") in width with hangers. Materials only.	Foot	\$2.64	60	\$158.40
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.67	4	\$74.68

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Discipline Group	Environmental Engineering
Practice Code/Name	558 - Roof Runoff Structure
Scenario ID	5
Scenario Name	Drip Pad
Scenario Description	A roof runoff structure, consisting of a pad filled with rock located at the drip line of a building. Used to provide a stable outlet to ground surface. Environmental/design considerations, for example – snow loads, or a building without proper structural support needed for gutters dictate the use of a trench drain. Facilitates waste management and protects the environment by minimizing clean water additions to waste systems and addresses water quality concerns. Associated practices include Waste Storage Facility (313), Composting Facility (317), Heavy Use Area Protection (561), Underground Outlet (620), and Diversion (362).
Before Practice Situation	Applicable where: (1) a roof runoff management facility is included in an overall plan for a waste management system; (2) roof runoff needs to be diverted away from structures or contaminated areas; (3) there is a need to collect, control, and transport runoff from roofs to a stable outlet.
After Practice Situation	A 6" deep by 2' wide by 200 long deep rock filled splash pad, servicing the portion of the building roof that creates erosion.
Scenario Feature Measure	Linear Length of Roof to be Drained
Scenario Unit	Linear Foot
Scenario Typical Size	200

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$177.67	\$0.89
Equipment/Installation	\$12.65	\$0.06
Labor	\$37.34	\$0.19
Mobilization	\$63.20	\$0.32
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$290.87	\$1.45

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	46	Aggregate, Gravel, Graded	Gravel, includes materials, equipment and labor to transport and place. Includes washed and unwashed gravel.	Cubic yard	\$24.01	7.4	\$177.67
Equipment/Installation	48	Excavation, Common Earth, side cast, small equipment	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$1.71	7.4	\$12.65
Labor	231	General Labor	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.67	2	\$37.34
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$63.20	1	\$63.20