

# **ROADS REVEGETATION COST ESTIMATING GUIDE**

**Prepared for:**

**National Park Service  
12795 W. Alameda Parkway  
Denver, CO 80225-0287**

**Prepared by:**

**Shepherd Miller, Inc.  
3801 Automation Way, Suite 100  
Fort Collins, CO 80525**

**January 2000**



**SHEPHERD MILLER**  
INCORPORATED

## **ROADS REVEGETATION COST ESTIMATING WORKSHEET (ENGLISH SYSTEM VERSION)**

Prepared for:

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Road revegetation costs vary widely depending upon site terrain, location, size, landscape design and specifications. The following worksheets have been developed to assist with a Class "C" and Class "B" estimates. Class "C" estimate is a conceptual cost estimate based on unit cost of similar construction. These estimates may be prepared without a full-defined scope of work. These estimates are similar to a schematic design. Class "B" estimate is based on an approved preliminary design. The cost estimate is derived from partial lump sum and unit cost.

Cost factors in this document are based on specific National Park Service, Forest Service and Department of Transportation projects and average bid tabulations. These estimated costs also reflect adjusted cost figures obtained from contractors and state estimating guides. Comparative bid tabulations of State Department of Transportation and Federal Lands Highways Program project can be accessed on the Internet. Attachment 1 lists the web site address to access individual state project bid tabulations. Attachment 1 also shows the web site addresses for the three Federal Lands Highway Program regional offices.

It is very important that you are familiar with the project specifications before making cost comparisons. Extreme differences may exist when comparing cost figures from different revegetation projects. Therefore, it is necessary to have specific information about the job specifications and site conditions before making comparisons. Available contractors, season of the year and soil type will also impact bid cost.

Location Factors are construction costs associated with different parts of the U.S. and can be used to adjust the total project costs on a location by location basis.

The following worksheets (1 and 2) have been constructed to provide cost estimations (class C and B, respectively) with minimal amount of background information. Additional information can improve estimates and should be used when it is available.

ROADS REVEGETATION CLASS "C" ESTIMATING  
FOR THE  
NATIONAL PARK SERVICE

Worksheet 1 (attached) is a class "C" estimating worksheet. Class "C" is a conceptual cost estimate based on average costs, terrain (slope), size of area to be revegetated and number of larger size transplants. The unit is ACRES. Estimated cost reflect cost associated with Sections 625, 626, 627, 628, 629 and 713 of the Standard Specifications for Construction of Roads and Bridges on Federal Highways Projects, FP-96 handbook.

Item I is the BASE revegetation cost with moderate site conditions and includes seedbed preparation, labor, seeding and materials on gentle slopes and large acreage. Item II is a selection of different site conditions reflecting small acreage and/or steep slopes. Item III MISCELLANEOUS COST is added if there is a large number (average over 30 per acre) of larger size (6 inch to 1 gal. container) transplants. Supporting information such as extreme remoteness, large number of transplants or difficult season of construction may be added to Item III shown on the worksheet.

Location Factors are construction costs associated with different parts of the U.S. and can be used to adjust the total project revegetation costs on a location by location basis. After preparing the cost estimate sub-total, multiply the sub-total by the Location Factor to adjust the cost estimate for the specific project location. The Location Factor is obtained from "Site Work Landscaping Cost Data 1999 (or most current)" RSMeans Means Catalog No. 60019. Use the instructions that are given at the top of the first page (Attachment 2).

## Worksheet 1

ROADS REVEGETATION CLASS "C" ESTIMATING WORKSHEET  
NATIONAL PARK SERVICE

Item I **AVERAGE BASE COST** per acre gentle slopes and larger area with minimal plant and seed specifications. Includes harrowing seedbed, commercial native species, fertilizer and minimum number of transplants \$ 5,000

## Item II (select one)

1. Add \$4,500 if revegetation slopes are **STEEPER THAN 3:1** and the total area is **GREATER than 4 acres**. (\$4,500)
2. Add \$17,000 if revegetation slopes are **STEEPER THAN 3:1** but the total area is **LESS than 4 acres**. (\$17,000)
3. Add \$13,000 if revegetation slopes are 3:1 or **FLATTER** and the total area is **LESS than 4 acres**. (\$13,000)
4. Add \$ 0 if none of the above are applicable. (\$ 0 )

\$ \_\_\_\_\_

## Item III MISCELLANEOUS COST,

Add \$2,000 if **large number transplants** (30 + per acre) and larger size (6" to 1 gal. size) will be used or if the site is **remote**. (\$2,000)

\$ \_\_\_\_\_

Add Item I + II + III = ESTIMATED COST/ACRE \$ \_\_\_\_\_

COST/ACRE x Total Estimated Acres =  
Sub-Total PROJECT REVEGETATION COST \$ \_\_\_\_\_

Location Factors - multiply the sub-total by the Location Factor  
to adjust the cost estimate for location differential. X \_\_\_\_\_

GRAND TOTAL \$ \_\_\_\_\_

**ROADS REVEGETATION CLASS "B" ESTIMATING  
FOR THE  
NATIONAL PARK SERVICE**

Worksheet 2 (attached) is a class "B" estimating document. Class "B" cost estimates are based on average costs from past bid results. Estimated cost reflect the costs associated with Sections 625, 626, 627, 628, 629 and 713 of the Standard Specifications for Construction of Roads and Bridges on Federal Highways Projects, FP-96 handbook. These sections include the most common pay items associated with landscaping and plant establishment on roadside revegetation.

This Class "B" worksheet does not include TOP SOILING cost, irrigation systems or maintenance cost after planting. Topsoil costs have an extreme range of variance and usually account for about 15 percent (%) of revegetation costs. However, topsoiling may be as high as 60 percent (%) of the project revegetation costs. Source of topsoil and haul distance increases costs. Steep slopes, shallow rocky soils and need for specialized equipment increase costs. The table below is a general guideline that can be applied if more specific information is not available.

Kind of Topsoil	Cost Estimated Range \$ per cubic yard
Manufactured and placed	\$ 9.00 – 20.00
Furnished and placed	\$ 5.00 – 17.00
Conserved and replaced	\$ 0.50 – 7.00

Other Items can be used to list additional important cost elements that may be needed on a specific project.

Supporting information such as extreme remoteness, or difficult season of construction can add to cost items. Average site conditions were used in developing the following Class "B" estimates. However, adjustments can be included for small acreages, long steep slopes, and Location Factor (see below).

The Unit Price for the item is multiplied times the number of units for the project to obtain total item cost. All item totals are then added together for the estimated sub-total.

Location Factors or construction costs associated with different parts of the U.S. and can be used to adjust costs on a location by location basis. After preparing COST ESTIMATE for the project, multiply the COST ESTIMATE by the Location Factor to adjust the cost estimate for the specific project location. The Location Factor is obtained from "Site Work Landscaping Cost Data (1999)" RSMeans Catalog No. 60019. Use the instructions that are given at the top of the first page (Attachment 2).

## Worksheet 2

ROADS REVEGETATION CLASS "B" ESTIMATING  
NATIONAL PARK SERVICE

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
1. Ripping surface 8" min. depth, 16" centers	Acre	300		
2. Disking to a min. depth of 4"	Acre	210		
3. Harrow to loosen/smooth and/or cover seed	Acre	140		
4. Cultipack to firm but friable seedbed	Acre	180		
5. Rototill (usually small areas) friable seedbed	Acre	400		
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
1. Broadcast seeding, scatter seed uniformly over surface	Acre	160		
2. Drill seeder	Acre	180		
3. Brillion seeder	Acre	180		
4. Mulch spread/tucked - straw 2 tons /ac. Tucked	Acre	1800		
5. Hand spread mulch - straw 2 tons /ac. Tucked	Acre	2800		
6. Hydraulic method - tackifier 150 lbs./ac. ( to hold mulch)	Acre	1500		
7. Wood chips - mechanically applied	Cub yd	48		
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
1. Brillion seeder	Acre	180		
2. Broadcast seeding, scatter seed uniformly over surface	Acre	160		
3. Hydraulic method 2,000 lbs./ac. Applied	Acre	2100		
4. Hydraulic method tackifier 150 lbs./ac. Applied	Acre	1500		
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
1. Tublings, installed on site	Each	2.50		
2. Bareroot, installed on site	Each	4.00		
3. 6" pots installed on site	Each	16.00		
4. 1 gal. pots installed on site	Each	20.00		
5. Salvage 1 to 3 ft. plants and installed on site	Each	30.00		
6. Salvage 4 to 6 ft. plants and install on site	Each	200.00		
<b>E. Matting - Material/labor/installed</b>				
1. Erosion control blanket installed	Sq.yd	3.20		
2. Erosion control Bonded Fiber Matrix System applied	Sq.yd	2.50		
<b>F. Materials only – on site</b>				
1. Fertilizer @ 80 lbs/ac.	Acre	120		
2. Commercial seed source \$/lb.	Lb.	20		
3. Native commercial seed source \$/lb.	Lb.	60		
4. Native custom produced/collected seed source \$/lb.	Lb.	160		
5. Hay/straw mulch, \$/ton	Ton	160		
6. Native grass hay mulch, \$/ ton	Ton	240		
7. Mulch, hydraulic tachifier, \$/lbs	lbs.	2		
8. Mulch, hydraulic 45 l b. bage	Bag	16		
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub Total</b>				

H. Mobilization Cost, if the area is 4 acres or less - Multiply the sub-total by 0.8 \$ \_\_\_\_\_

I. Factor for long cut slopes (over 60 ft.) steep (greater than 3:1) slopes if applicable.  
Multiply the sub-total by 0.5. \$ \_\_\_\_\_

Add all sub totals (A, B, C, D, E, F, G) H and I = Sub-total \$ \_\_\_\_\_

Location Factor multiply the result (Sub-total) by the Location Factor listed in  
"Site Work Landscaping Cost Data (current year)" to adjust for location cost. X \_\_\_\_\_

Grand Total

\$ \_\_\_\_\_

Example 1 CLASS "B" ESTIMATING – Turf Establishment 625.06 (a), Dry Method.

10-acre roadside seeding, dry mulch method, on gentle slopes. The project is near Denver, Colorado.

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
2. Disking to a min. depth of 4"	Acre	210	10	2100
3. Harrow to loosen/smooth and/or cover seed	Acre	140	10	1400
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
2. Drill seeder	Acre	180	10	1800
5. Mulch spread/tucked – straw 2 tons /ac. Tucked	Acre	1800	10	18000
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
3. 6" pots installed on site	Each	16.00	1000	16000
4. 1 gal. pots installed on site	Each	20.00	500	10000
<b>E. Matting - Material/labor/installed</b>				
1. Erosion control blanket installed	Sq.yd	3.20	3,000	9600
<b>F. Materials only – on site</b>				
3. Native commercial seed source	Lb.	60	200	12,000
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub Total</b>				<b>79000</b>

H. Mobilization Cost, if the area is 4 acres or less - Multiply the sub-total by 0.8

\$ 0

I. Factor for long cut slopes (over 60 ft.) steep (greater than 3:1) slopes if applicable.

\$ 0

Multiply the sub-total by 0.5.

Add sub-totals (A, B, C, D, E, F, G) H and I, = Sub-total

\$ 79,000

Location Factor multiply the result (Sub-total) by the Location Factor listed in "Site Work Landscaping Cost Data (1999)" to adjust for location cost.

X 0.936

Grand Total

\$ 73,944

Example 2 CLASS "B" ESTIMATE, - Turf Establishment 625. 07 (b), Hydraulic method.  
2 acre roadside seeding, on steep slopes. The project is near Denver Colorado.

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
3. Harrow to loosen/smooth and/or cover seed	Acre	140	2	280
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
1. Brillion seeder				
2. Broadcast seeding, scatter seed uniformly over surface	Acre	160	2	320
3. Hydraulic method 2,000 lbs./ac. Applied	Acre	2100	2	4200
4. Hydraulic method tackifier 150 lbs./ac. Applied	Acre	1500	2	3000
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
3. 6" pots installed on site	Each	16.00	300	4800
4. 1 gal. pots installed on site	Each	20.00	200	4000
<b>E. Matting - Material/labor</b>				
1. Erosion control blanket installed	Sq.yd	3.20	1000	3200
<b>F. Materials only - on site</b>				
3. Native commercial seed source \$/lb.	Lb.	60	40	2400
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub-total</b>				\$ 22,200

H. Mobilization Cost, if the area is 4 acres or less - Multiply the sub-total by 0.8

\$ 17,760

I. Factor for long cut slopes (over 60 ft.) steep (greater than 3:1) slopes if applicable.	\$ 11,100
Multiply the sub-total by 0.5.	
Add sub-total (A, B, C, D, E, F G), H and I = sub-total	\$ 51,060
<u>Location Factor</u> multiply the result (Sub-total) by the Location Factor listed in "Site Work Landscaping Cost Data (1999)" to adjust for location cost.	X 0.936
Grand Total	\$ 47,792

## Attachment 1

### INTERNET BID RESULTS FROM STATE AND REGIONAL BID TABULATIONS

Bid tabulations can be accessed on the Internet and used to compare current bid item cost of similar projects. The Department of Transportation (DOT) projects are maintained on a state by state basis. Other Federal Lands Highway Program (FLHP) projects are maintained in three regional offices. Extreme differences may exist when comparing cost figures from different revegetation projects. Therefore, it is necessary to have specific knowledge about the job specifications and site conditions before making comparisons. The available contractors at that specific time, season of the year and soil type will greatly impact bid cost.

All state web sites can be accessed through:

<http://www.nasire.org/stateSearch/displayCategory.cfm?Category=transportation>. Then select the desired state. You will be looking for project BID TABULATIONS. The path within each state maybe slightly different but generally you can USE THE FOLLOWING STEPS. 1) look in TRANSPORTATION DEPARTMENTS or CONSTRUCTION BUSINESS, 2) go to CONTRACT BIDDING 3) then to RESULTS AND BIB TABULATIONS.

Regional Federal Highways projects can be accessed through the following web site addresses.

Denver, Colorado - Central Region  
Vancouver, Washington - Western Region  
Sterling, Virginia - Eastern Region

[www.cflhd.gov/edi/pna/index.htm](http://www.cflhd.gov/edi/pna/index.htm)  
[www.wfl.fha.dot.gov/edi/bidtab.htm](http://www.wfl.fha.dot.gov/edi/bidtab.htm)  
[www.evl.fha.dot.gov/](http://www.evl.fha.dot.gov/)

**ROADS REVEGETATION COST ESTIMATING WORKSHEET  
(METRIC SYSTEM VERSION)**

Prepared for:

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Cost factors in this document are based on specific National Park Service, Forest Service and Department of Transportation projects and average bid tabulations. These estimated costs also reflect adjusted cost figures obtained from contractors and state estimating guides. Comparative bid tabulations of State Department of Transportation and Federal Lands Highways Program project can be accessed on the Internet. Attachment 1 lists the web site address to access individual state project bid tabulations. Attachment 1 also shows the web site addresses for the three Federal Lands Highway Program regional offices.

It is very important that you are familiar with the project specifications before making cost comparisons. Extreme differences may exist when comparing cost figures from different revegetation projects. Therefore, it is necessary to have specific information about the job specifications and site conditions before making comparisons. Available contractors, season of the year and soil type will also impact bid cost.

Location Factors are construction costs associated with different parts of the U.S. and can be used to adjust the total project costs on a location by location basis.

The following worksheets (1 and 2) have been constructed to provide cost estimations (class C and B, respectively) with minimal amount of background information. Additional information can improve estimates and should be used when it is available.

ROADS REVEGETATION CLASS "C" ESTIMATING  
FOR THE  
NATIONAL PARK SERVICE

Worksheet 1 (attached) is a class "C" estimating worksheet. Class "C" is a conceptual cost estimate based on average costs, terrain (slope), size of area to be revegetated and number of larger size transplants. The unit is HECTARES. Estimated cost reflect cost associated with Sections 625, 626, 627, 628, 629 and 713 of the Standard Specifications for Construction of Roads and Bridges on Federal Highways Projects, FP-96 handbook.

Item I is the BASE revegetation cost with moderate site conditions and includes seedbed preparation, labor, seeding and materials on gentle slopes and large areas. Item II is a selection of different site conditions reflecting small areas and/or steep slopes. Item III MISCELLANEOUS COST is added if there is a large number (average over 60 per Hectare) of larger size (15 cm to 4 liter container) transplants. Supporting information such as extreme remoteness, large number of transplants or difficult season of construction may be added to Item III shown on the worksheet.

Location Factors are construction costs associated with different parts of the U.S. and can be used to adjust the total project revegetation costs on a location by location basis. After preparing the cost estimate sub-total, multiply the sub-total by the Location Factor to adjust the cost estimate for the specific project location. The Location Factor is obtained from "Site Work Landscaping Cost Data 1999 (or most current)" RSMeans Means Catalog No. 60019. Use the instructions that are given at the top of the first page (Attachment 2).

## Worksheet 1

ROADS REVEGETATION CLASS "C" ESTIMATING WORKSHEET  
NATIONAL PARK SERVICE

Item I **AVERAGE BASE COST** per Hectare gentle slopes and larger area with minimal plant and seed specifications. Includes harrowing seedbed, Commercial native species, fertilizer and minimum number of transplants \$ 12,300

## Item II (select one)

1. Add \$11,000 if revegetation slopes are **STEEPER THAN 3:1** and The total area is **GREATER than 2 Hectares**. (\$11,000)
2. Add \$41,500 if revegetation slopes are **STEEPER THAN 3:1** and The total area is **LESS than 2 Hectares**. (\$41,500)
3. Add \$32,000 if revegetation slopes are 3:1 or **FLATTER** and The total area is **LESS than 2 Hectares**. (\$32,000)
4. Add \$ 0 if none of the above are applicable. (\$ 0 )

\$ \_\_\_\_\_

Item III **MISCELLANEOUS COST**,  
Add \$4,900 if **large number transplants** (60 + per Hectare) and larger size (15 cm to 4 liter size) will be used or if the site is **remote**. (\$4,900)

\$ \_\_\_\_\_

Add Item I + II + III = ESTIMATED COST/HECTARE \$ \_\_\_\_\_

COST/HECTARE x Total Estimated Hectares =  
Sub-Total PROJECT REVEGETATION COST \$ \_\_\_\_\_

Location Factors - multiply the sub-total by the Location Factor  
to adjust the cost estimate for location differential. X \_\_\_\_\_

GRAND TOTAL \$ \_\_\_\_\_

## ROADS REVEGETATION CLASS "B" ESTIMATING FOR THE NATIONAL PARK SERVICE

Worksheet 2 (attached) is a class "B" estimating document. Class "B" cost estimates are based on average costs from past bid results. Estimated cost reflect the costs associated with Sections 625, 626, 627, 628, 629 and 713 of the Standard Specifications for Construction of Roads and Bridges on Federal Highways Projects, FP-96 handbook. These sections include the most common pay items associated with landscaping and plant establishment on roadside revegetation.

This Class "B" worksheet does not include TOP SOILING cost, irrigation systems or maintenance cost after planting. Topsoil costs have an extreme range of variance and usually account for about 15 percent (%) of revegetation costs. However, topsoiling may be as high as 60 percent (%) of the project revegetation costs. Source of topsoil and haul distance increases costs. Steep slopes, shallow rocky soils and need for specialized equipment increase costs. The table below is a general guideline that can be applied if more specific information is not available.

Kind of Topsoil	Cost Estimated Range \$ per cubic meter
Manufactured and placed	\$ 11.00 – 26.00
Furnished and placed	\$ 6.50 – 22.00
Conserved and replaced	\$ 0.65 – 9.00

Other Items can be used to list additional important cost elements that may be needed on a specific project.

Supporting information such as extreme remoteness, or difficult season of construction can add to cost items. Average site conditions were used in developing the following Class "B" estimates. However, adjustments can be included for small areas, long steep slopes, and Location Factor (see below).

The Unit Price for the item is multiplied times the number of units for the project to obtain total item cost. All item totals are then added together for the estimated sub-total.

Location Factors or construction costs associated with different parts of the U.S. and can be used to adjust costs on a location by location basis. After preparing COST ESTIMATE for the project, multiply the COST ESTIMATE by the Location Factor to adjust the cost estimate for the specific project location. The Location Factor is obtained from "Site Work Landscaping Cost Data (1999)" RSMeans Catalog No. 60019. Use the instructions that are given at the top of the first page (Attachment 2).

## Worksheet 2

ROADS REVEGETATION CLASS "B" ESTIMATING  
NATIONAL PARK SERVICE

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
1. Ripping surface 20 cm min. depth, 40 cm centers	Hectare	740		
2. Disking to a min. depth of 10 cm	Hectare	520		
3. Harrow to loosen/smooth and/or cover seed	Hectare	340		
4. Cultipack to firm but friable seedbed	Hectare	440		
5. Rototill (usually small areas) friable seedbed	Hectare	990		
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
1. Broadcast seeding, scatter seed uniformly over surface	Hectare	400		
2. Drill seeder	Hectare	440		
3. Brillion seeder	Hectare	440		
4. Mulch spread/tucked – straw 4,000 kg/ha. Tucked	Hectare	4450		
5. Hand spread mulch - straw 4,000 kg/ha. Tucked	Hectare	6900		
6. Hydraulic method tackifier 160 kg/ha. (to hold mulch)	Hectare	3700		
7. Wood chips - mechanically applied	Cub. m	60		
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
1. Brillion seeder	Hectare	440		
2. Broadcast seeding, scatter seed uniformly over surface	Hectare	400		
3. Hydraulic method 2,000 kg/ha. Applied	Hectare	5200		
4. Hydraulic method tackifier 160 kg/ha. Applied	Hectare	3700		
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
1. Tublings, installed on site	Each	2.50		
2. Bareroot, installed on site	Each	4.00		
3. 15 cm pots installed on site	Each	16.00		
4. 4 liter pots installed on site	Each	20.00		
5. Salvage 30 cm to 100 cm plants and installed on site	Each	30.00		
6. Salvage 120 cm to 180 cm. plants and install on site	Each	200.00		
<b>E. Matting - Material/labor/installed</b>				
1. Erosion control blanket installed	Sq. m	3.80		
2. Erosion control Bonded Fiber Matrix System applied	Sq. m	3.00		
<b>F. Materials only – on site</b>				
1. Fertilizer @ 80 kg/ha.	Hectare	300		
2. Commercial seed source \$/kg	Kg	44		
3. Native commercial seed source \$/kg	Kg	132		
4. Native custom produced/collected seed source \$/kg	Kg	350		
5. Hay/straw mulch, \$/ton	t	170		
6. Native grass hay mulch, \$/ ton	t	260		
7. Mulch, hydraulic tachifier, \$/Kg	Kg	4.40		
8. Mulch, hydraulic 20 kg bag	Bag	16		
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub Total</b>				

H. Mobilization Cost, if the area is 2 Hectares or less - Multiply the sub-total by 0.8 \$ \_\_\_\_\_

I. Factor for long cut slopes (over 20 m) steep (greater than 3:1) slopes if applicable. \$ \_\_\_\_\_  
Multiply the sub-total by 0.5.

Add all sub totals (A, B, C, D, E, F, G) H and I = Sub-total \$ \_\_\_\_\_

Location Factor multiply the result (Sub-total) by the Location Factor listed in X \_\_\_\_\_  
"Site Work Landscaping Cost Data (current year)" to adjust for location cost.

Grand Total \$ \_\_\_\_\_

Example 1 CLASS "B" ESTIMATING – Turf Establishment 625.06 (a), Dry Method.

5 Hectare roadside seeding, dry mulch method, on gentle slopes. The project is near Denver, Colorado.

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
2. Disking to a min. depth of 4"	Hectare	520	5	2600
3. Harrow to loosen/smooth and/or cover seed	Hectare	340	5	1700
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
2. Drill seeder	Hectare	440	5	2200
5. Mulch spread/tucked – straw 2 tons /ac. Tucked	Hectare	6900	5	34500
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
3. 6" pots installed on site	Each	16.00	1000	16000
4. 4 liter pots installed on site	Each	20.00	500	10000
<b>E. Matting - Material/labor/installed</b>				
1. Erosion control blanket installed	Sq. m	3.80	3,000	11400
<b>F. Materials only – on site</b>				
3. Native commercial seed source	Kg	132	92	12,100
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub Total</b>				90,500

H. Mobilization Cost, if the area is 2 Hectares or less - Multiply the sub-total by 0.8 \$ 0I. Factor for long cut slopes (over 20 m ) steep (greater than 3:1) slopes if applicable. \$ 0

Multiply the sub-total by 0.5.

Add sub-totals (A, B, C, D, E, F, G) H and I, = Sub-total

\$ 90,500

Location Factor multiply the result (Sub-total) by the Location Factor listed in "Site Work Landscaping Cost Data (1999)" to adjust for location cost.

\$ 0.936

Grand Total

\$ 84,708

Example 2 CLASS "B" ESTIMATE, - Turf Establishment 625. 07 (b), Hydraulic method.

1 Hectare roadside seeding, on steep slopes. The project is near Denver Colorado.

Item and description	Unit	Price	No. Units	Total
<b>A. Soil Preparation – Equipment/labor</b>		\$		\$
3. Harrow to loosen/smooth and/or cover seed	Hectare	340	1	340
<b>B. Seeding/ Mulching, Dry method – Material/equipment/labor (seed not included)</b>				
<b>C. Seeding/Mulching, Hydraulic – material/equipment/labor (seed not included)</b>				
1. Brillion seeder				
2. Broadcast seeding, scatter seed uniformly over surface	Hectare	400	1	400
3. Hydraulic method 2,000 lbs./ac. Applied	Hectare	5200	1	5200
4. Hydraulic method tackifier 150 lbs./ac. Applied	Hectare	3700	1	3700
<b>D. Transplanting – Plant material/equipment/labor (storage not included)</b>				
3. 6" pots installed on site	Each	16.00	300	4800
4. 4 liter pots installed on site	Each	20.00	200	4000
<b>E. Matting - Material/labor</b>				
1. Erosion control blanket installed	Sq. m	3.80	1000	3800
<b>F. Materials only – on site</b>				
3. Native commercial seed source \$/kg	Kg	132	20	2640
<b>G. Other Items</b>				
<b>A, B, C, D, E, F and G Sub-total</b>				\$ 24,880

H. Mobilization Cost, if the area is <u>2 Hectares or less</u> - Multiply the sub-total by 0.8	\$ <u>19,904</u>
I. Factor for long cut slopes (over 20 m) steep (greater than 3:1) slopes if applicable. Multiply the sub-total by 0.5.	\$ <u>12,440</u>
Add sub-total (A, B, C, D, E, F G), H and I = sub-total	\$ <u>57,224</u>
<u>Location Factor</u> multiply the result (Sub-total) by the Location Factor listed in "Site Work Landscaping Cost Data (1999)" to adjust for location cost.	\$ <u>0.936</u>
Grand Total	\$ <u>53,562</u>

## Attachment 1

### INTERNET BID RESULTS FROM STATE AND REGIONAL BID TABULATIONS

Bid tabulations can be accessed on the Internet and used to compare current bid item cost of similar projects. The Department of Transportation (DOT) projects are maintained on a state by state basis. Other Federal Lands Highway Program (FLHP) projects are maintained in three regional offices. Extreme differences may exist when comparing cost figures from different revegetation projects. Therefore, it is necessary to have specific knowledge about the job specifications and site conditions before making comparisons. The available contractors at that specific time, season of the year and soil type will greatly impact bid cost.

All state web sites can be accessed through:

<http://www.nasire.org/stateSearch/displayCategory.cfm?Category=transportation>. Then select the desired state. You will be looking for project BID TABULATIONS. The path within each state maybe slightly different but generally you can USE THE FOLLOWING STEPS. 1) look in TRANSPORTATION DEPARTMENTS or CONSTRUCTION BUSINESS, 2) go to CONTRACT BIDDING 3) then to RESULTS AND BIB TABULATIONS.

Regional Federal Highways projects can be accessed through the following web site addresses.

Denver, Colorado - Central Region  
Vancouver, Washington - Western Region  
Sterling, Virginia - Eastern Region

[www.cflhd.gov/edi/pna/index.htm](http://www.cflhd.gov/edi/pna/index.htm)  
[www.wfl.fha.dot.gov/edi/bidtab.htm](http://www.wfl.fha.dot.gov/edi/bidtab.htm)  
[www.evl.fha.dot.gov/](http://www.evl.fha.dot.gov/)

