COST ESTIMATE GUIDE FOR SCOPING

(These cost figures were last updated on 06-01-2023)

***These cost per mile factors contained within this document should in no case be considered to contain sufficient detail to allow their inclusion in the STIP, used to determine a Program Amount or used for the Asset Management Plan. ***

	Cost-per-mile	Assumptions
New 2 Lane (Major)		
Grading & Drainage	$2,050,000	44 ft. Roadbed
Base & Surface	$1,475,000	Medium Duty Pavement
New 2 Lane (Minor)		
Grading & Drainage	$1,500,000	32 ft. Roadbed
Base & Surface	$1,100,000	32 ft. Light Duty Pavement (2 – 4' Shoulders)
Add Lanes for Dual Lanes		
Grading & Drainage	$1,775,000	38 ft. Roadbed
Base & Surface	$1,275,000	Medium Duty Pavement
	$1,575,000	Heavy Duty Pavement
New 4 Lane		
Grading & Drainage	$3,500,000	2 - 38 ft. Roadbed & Median
Base & Surface	$2,550,000	Medium Duty Pavement
	$3,150,000	Heavy Duty Pavement

Interchanges-Ramps Only, Excludes bridges and crossroad

	Lump sum each
Grading & Drainage	$2,025,000
Base & Surface	$1,215,000

Note: Grading cost includes 30% Rock and assumes Medium Grading.

Grading Adjustment Factors

Flat: 0.7; Rolling: 1.0; Mountainous: 3.0

Use these grading factors, unless justified with district information and proper documentation.

Miscellaneous and Utility Costs may be assumed to total **20 percent** of the sum of grading & drainage, and surface & base, unless additional analysis is warranted.

Maintenance Treatment Cost can be found on Page 5

Bridge Structures	**Cost per Sq. foot**
Typical Girder	$185
Temporary Bridge (State furnished)	$100
Temporary Bridge (Contractor furnished)	$250
Major River or Lake Crossing	$350 - $750

- **Percentage Cost Factors:**

Bridge costs per square foot should be increased for the following:

Item	% Increase
Staged Construction	10

Horizontal Curve Alignment	5
Skews 20 to 30 degrees	10
Skews 30 to 50 degrees	25
Seismic Category B*	10
Seismic Category C*	15
Seismic Category D*	25
Tight Site/Limited Access	10

* Only applies to Major Routes or First and Second Priority Earthquake response routes. See Sheets 3 and 4 of this figure for details of seismic categories.

- **For Stream Crossings:**

  Bridge Replacement Length = 1.10 X Existing Bridge Length, unless otherwise documented. The existing bridge length can be obtained from TMS.

  Bridge replacement length may be longer than 1.10 X Existing Bridge Length for bridges crossing FEMA regulatory floodways. Bridges on new alignments are required to span the entire floodway. For bridges on existing alignment, use 1.10 X Existing Bridge Length when the 100-year flood does not overtop the existing roadway. When the 100-year flood does overtop the existing roadway, the new bridge will be required to span the entire floodway.

- **For Companion Grade Separation Structures:**

  Bridge Replacement Length = Existing Bridge Length. The existing bridge length can be obtained from TMS.

  Bridge Width should equal traveled way, shoulders and barrier rail width.

- **Bridge Approaches:**

  The cost of bridge approaches should be added to the total cost derived from the approach slab area. Bridge approach slab cost:

  Minor Routes:($25/ft^2) (roadway width, ft) (20 ft.) (2)
  Major Routes:($42/ ft^2) (roadway width, ft) (20 ft.) (2)

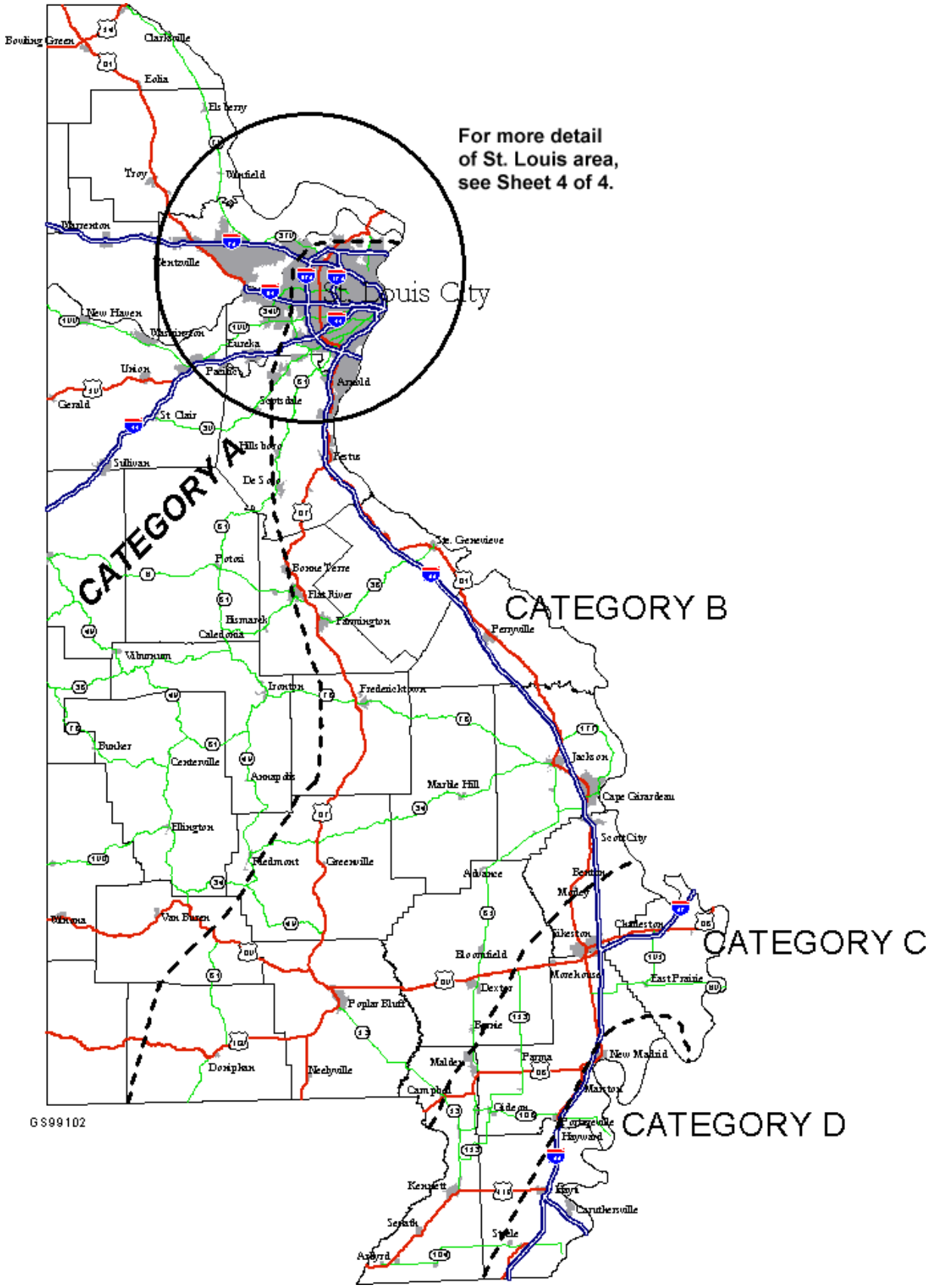
Bridge Removals	**Cost per Sq. foot**
Simple Structures	$12
Steel Structures over Roads	$15
Concrete Structures over Interstates (quick opening of lanes to traffic required)	$25

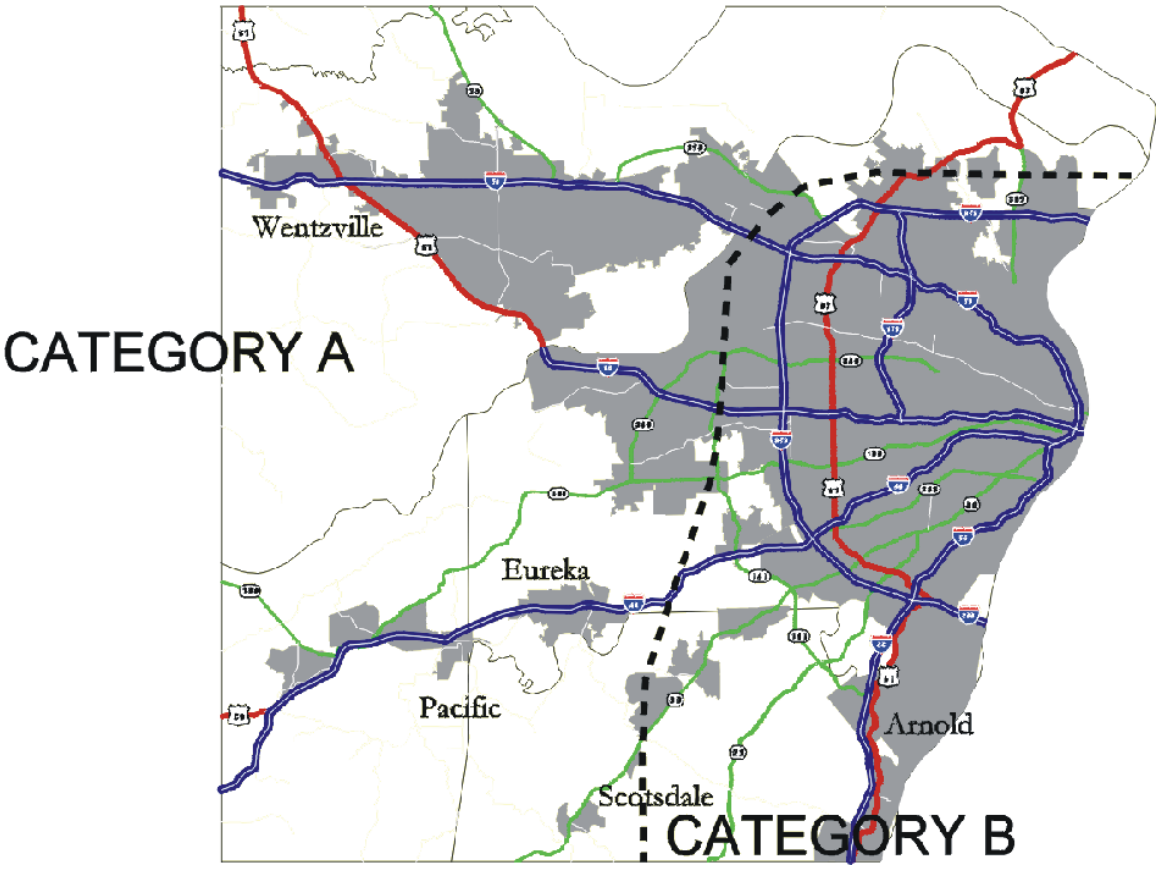
- **Bridge Rehabilitations:** Fill out a Structural Rehabilitation Checklist and contact Bridge Division for assistance.

Specialized Projects

Projects having unusual features and special scopes of work should be compared to similar types of district projects using historic data. Generic cost information listed in this guide should not be applied for projects such as traffic signal improvements, geometric improvements, and other types of small projects. Check with GHQ Design Bidding and Contract Services for assistance.

Additional costs should be included in the project estimate for retaining walls, extensive sound walls, temporary bypasses, and traffic signals.


For more detail
of St. Louis area,
see Sheet 4 of 4.
St. Louis City
CATEGORY A
CATEGORY B
CATEGORY C
CATEGORY D
Bowling Green
Clarksville
Troy
Wentzville
New Haven
Union
Gerald
St Clair
Sullivan
Potosi
Bismarck
Caledonia
Viburnum
Bunker
Centerville
Ellington
Van Buren
Doniphan
Poplar Bluff
Piedmont
Greenville
Fredericktown
Ironton
Farmington
Flat River
Bonne Terre
Festus
St. Genevieve
Perryville
Jackson
Cape Girardeau
Scott City
Marble Hill
Advance
Bernie
Malden
Campbell
Cardwell
Kennett
Senath
Steele
Hayward
Caruthersville
New Madrid
Marston
Morehouse
Bloomfield
Dexter
East Prairie
Charleston
Sikeston
Farmington
GS99102


CATEGORY A
Wentzville
Eureka
Pacific
Arnold
Scotsdale
CATEGORY B

Maintenance Treatment (2023)	Cost per 12' Lane Mile	
Treatment Description:	**Statewide**	**Remarks:**
Minor Seal Coat (Chip Seal)	$11,700	For Grade A, B & C seal coat use $2.60/gal (0.33 gal/sy) for binder and $0.80/sy for aggregate.
MInor Cold Mix Overlay	no history	No history available. Consult with Maintenance Division for price.
Minor Cold Mix Patch	no history	No history available. Consult with Maintenance Division for price.
Minor Concrete Pavement Repair	$31,700	Based on 2% pavement replacement. Used history for class a full depth pavement repair. $225.00/sy
Minor Fog Seal (Fly Coat)	$5,400	Used history for fog seal (0.2 gal/sy). $3.80/gal
Minor Micro-Surfacing (Type II)	$26,400	Used history for type II microsurfacing (Single lift). $3.75/sy
Minor Roto-Milling (Coldmilling 3" or less)	$15,800	Used history for coldmilling (3" or less). $2.25/sy
Minor Scrub and Broom Seal	$15,800	Used history for scrub seal. $2.25/sy
Ultrathin Bonded Wearing Surface, Type C	$33,400	Used $4.75/sy.
Major Concrete Replacement	$900,000	Removal, Grading, Base & Concrete Paving work only.
Major Concrete Unbonded Overlay 8"	$500,000	Bond Breaker, Surface Prep. & Concrete Paving work only.
Major Contract Hot-Mix Overlay 1" (Surface Leveling)	$50,800	Used $105.00/ton. Includes 25% for irregularities.
Major Contract Hot-Mix Overlay 1.75" (Superpave) PG64-22	$67,800	Used $100.00 per ton for SP125
Major Diamond Grinding	$33,400	Used $4.75/sy
Major Light-Duty Overlay (1.25" Superpave) PG64-22	$55,200	Used $95.00 per ton for SP095. 581 Tons. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Light-Duty Overlay (1.75" Superpave) PG64-22	$73,600	Used $95.00 per ton for SP125. 775 Tons. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Light-Duty Overlay (Type C UBAWS & 2" SP190 PG64-22)	$121,300	Used $4.75/sy for UBAWS and $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Light-Duty Overlay (3.75" Superpave) PG64-22	$152,300	Used $95.00 per ton for SP125 and $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Light-Duty Overlay (3" Superpave) PG64-22	$107,500	Used $95.00 per ton for SP125 and $110.00 per ton for SP048. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Medium-Duty Overlay (1.25" Superpave) PG70-22	$66,800	Used $115.00 per ton for SP095. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Medium-Duty Overlay (1.75" Superpave) PG70-22	$81,400	Used $105.00 per ton for SP125. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Medium-Duty Overlay (Type C UBAWS & 2" SP190 PG70-22)	$121,300	Used $4.75 per sy for UBAWS and $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Medium-Duty Overlay (3.75" Superpave) PG70-22	$154,300	Used $98.00 per ton for SP125 and Used $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Medium-Duty Overlay (3" Superpave) PG70-22	$111,500	Used $98.00 per ton for SP125 and $115.00 per ton for SP048. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (1.75" Superpave) PG76-22 SMA/LP	$96,900	Used $125.00 per ton for SP125 (SMA/LP). Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (3.75" Superpave) PG76-22 SMA/LP	$172,700	Used $125.00 per ton for SP125 (SMA/LP) and $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (3" Superpave) PG76-22 SMA/LP	$133,200	Used $130.00 per ton for SP125 (SMA/LP) and $115.00 per ton for SP048. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (1.75" Superpave) PG76-22 SMAR	$100,800	Rural - Used $130 per ton for SP125 (SMAR). Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (3.75" Superpave) PG76-22 SMAR	$176,000	Rural - Used $130 per ton for SP125 (SMAR) and $100.00 per ton for SP190. Assumes 1/2" scratch course on 50% of overlays (concrete).
Major Heavy-Duty Overlay (3" Superpave) PG76-22 SMAR	$133,200	Rural - Used $130.00 per ton for SP125 (SMAR) and $115.00 per ton for SP048. Assumes 1/2" scratch course on 50% of overlays (concrete).

Note: The above prices are for the specific pavement treatments only and do not include incidental items such as: mobilization, traffic control, striping, etc.

Misc. Costs	Cost per 12' Lane Mile	Remarks
Striping (High Build)	$1,500.00	Used $0.25 per foot for paint (1.125 stripes per lane mile).
Striping (Paint)	$1,200.00	Used $0.20 per foot for paint (1.125 stripes per lane mile).
Traffic Control	$650.00	
Rumble Strips	$1,000.00	Used $18.00 per station.
Mobilization	5.5%	