

J9P3751 Mainline

Cost per lane Mile

\$110.031.39

Total Area of Paving	77,725.8	SY
Area of Traveled Way	60,687.8	SY
Area of Shoulders	0.0	SY

SP125BSM Weight Factor 1.927 Tons/CY

Estimated Unit Price for SP125C	\$83.02 /Ton
Estimated Unit Price for BP-1 - Shoulders	\$0.00 /Ton
Estimated Unit Price for Cold Milling	\$1.68 /SY
Estimated Unit Price for Diamond Grinding	\$2.99 /SY
Estimated Unit Price for Pavement Repair**	\$288.00 /SY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

Total LCCA Adjustment Factor	\$948,517
For Job Special Provision	\$948,500

This Documentation should be filed with all other Final Engineer's Estimate Documentation. Also include a copy along with the pavement estimation worksheet in the Alternate Pavements Notebook.

	5-Year	10-Year	20-Year	25-Year*	30-Year +
**Includes all related Pavement Repair Items	0.200%	0.540%	0.940%	0.9800%	1.020%
	*Straight Line Interpolation From Published Rates				

MoDOT AC Projection

		% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
20 Year Maintenance								
Discount Rate:		0.940%						
Mill Surface Lift Traveled Way	1	20	60,688 SY			\$1.68	\$101,956	\$84,556
AC Resurfacing Traveled Way	2	20	6,497 TON			\$83.02	\$539,378	\$447,329
Miscellaneous	11.7%	20	1 Price			\$75,036.04	\$75,036	\$62,231
Mobilization	4.6%	20	1 Price			\$32,953.00	\$32,953	\$27,329
Construction added costs	10.1%	20	1 Price			\$75,681.59	\$75,682	\$62,766
33 Year Maintenance								
Discount Rate:		1.020%						
Mill Surface Lift - all	1	33	77,726 SY			\$1.68	\$130,579	\$93,418
AC Resurfacing - all	2	33	8,321 TON			\$83.02	\$690,808	\$494,213
Resurfacing Shoulders	2	33	0 TON			\$0.00	\$0	\$0
Miscellaneous	11.7%	33	1 Price			\$96,102.28	\$96,102	\$68,753
Mobilization	4.6%	33	1 Price			\$42,204.51	\$42,205	\$30,194
Construction added costs	10.1%	33	1 Price			\$96,929.07	\$96,929	\$69,344
Years in analysis:				Total Cost:				
45						\$1,881,627		\$1,440,133
Discount Rate:		1.020%						
Equivalent Uniform Annual Cost:								\$40,068

MoDOT PCC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	910 SY		\$288.00	\$262,171	\$205,448
Diamond Grinding of Traveled Way		25	60,688 SY		\$2.99	\$181,457	\$142,196
Miscellaneous	23.0%	25	1 Price		\$102,034.40	\$102,034	\$79,958
Mobilization	4.9%	25	1 Price		\$26,737.45	\$26,737	\$20,952
Construction added costs	9.6%	25	1 Price		\$54,950.37	\$54,950	\$43,061
Years in analysis:			Total Cost:			\$627,350	\$491,616
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$13,678

Life-Cycle Cost Adjustment Worksheet

J9P3751 Mainline A2 Shoulder

last revised March 2023

Shoulder

Total Area of Paving	0.0	SY
Area of Traveled Way	0.0	SY
Area of Shoulders	20,954.4	SY

BP-1 Weight Factor 1.948 Tons/CY

Estimated Unit Price for SP125BSM	\$0.00 /Ton
Estimated Unit Price for BP-1 - Shoulders	\$74.47 /Ton
Estimated Unit Price for Cold Milling	\$1.68 /SY
Estimated Unit Price for Diamond Grinding	\$2.99 /SY
Estimated Unit Price for Pavement Repair**	\$288.00 /SY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

Total LCCA Adjustment Factor	\$155,418
For Job Special Provision	\$155,400

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	5-Year	10-Year	20-Year	25-Year*	30-Year +
**Includes all related Pavement Repair Items	0.200%	0.540%	0.940%	0.9800%	1.020%
	*Straight Line Interpolation From Published Rates				

MoDOT AC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
20 Year Maintenance							
Discount Rate:	0.940%						
Mill Surface Lift Traveled Way	1	20	0 SY		\$1.68	\$0	\$0
AC Resurfacing Traveled Way	2	20	0 TON		\$0.00	\$0	\$0
Miscellaneous	11.7%	20	1 Price		\$0.00	\$0	\$0
Mobilization	4.6%	20	1 Price		\$0.00	\$0	\$0
Construction added costs	10.1%	20	1 Price		\$0.00	\$0	\$0
33 Year Maintenance							
Discount Rate:	1.020%						
Mill Surface Lift - all	1	33	0 SY		\$1.68	\$0	\$0
AC Resurfacing - all	2	33	-2,268 TON		\$0.00	\$0	\$0
Resurfacing Shoulders	2	33	2,268 TON		\$74.47	\$168,878	\$120,818
Miscellaneous	11.7%	33	1 Price		\$19,758.72	\$19,759	\$14,136
Mobilization	4.6%	33	1 Price		\$8,677.29	\$8,677	\$6,208
Construction added costs	10.1%	33	1 Price		\$19,928.71	\$19,929	\$14,257
Years in analysis:	45	Total Cost:				\$217,243	\$155,418
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$4,324

MoDOT PCC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	0 SY		\$288.00	\$0	\$0
Diamond Grinding of Traveled Way		25	0 SY		\$2.99	\$0	\$0
Miscellaneous	23.0%	25	1 Price		\$0.00	\$0	\$0
Mobilization	4.9%	25	1 Price		\$0.00	\$0	\$0
Construction added costs	9.6%	25	1 Price		\$0.00	\$0	\$0
Years in analysis:			Total Cost:			\$0	\$0
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$0

J9P3751 Outer Rd.

Cost per lane Mile

Total Area of Paving	1,915.9	SY
Area of Traveled Way	1,324.1	SY
Area of Shoulders	591.8	SY

BP-1 Weight Factor 1.948 Tons/CY

Estimated Unit Price for BP-1	\$74.47 /Ton
Estimated Unit Price for BP-1 - Shoulders	\$74.47 /Ton
Estimated Unit Price for Cold Milling	\$1.68 /SY
Estimated Unit Price for Diamond Grinding	\$2.99 /SY
Estimated Unit Price for Pavement Repair**	\$288.00 /SY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

Total LCCA Adjustment Factor	\$20,204
For Job Special Provision	\$20,200

5-Year	10-Year	20-Year	25-Year*	30-Year +
0.200%	0.540%	0.940%	0.9800%	1.020%

*Straight Line Interpolation From Published Rates

MoDOT AC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
20 Year Maintenance							
Discount Rate:	0.940%						
Mill Surface Lift Traveled Way	1	20	1,324	SY	\$1.68	\$2,224	\$1,845
AC Resurfacing Traveled Way	2	20	143	TON	\$74.47	\$10,671	\$8,850
Miscellaneous	11.7%	20	1	Price	\$1,508.81	\$1,509	\$1,251
Mobilization	4.6%	20	1	Price	\$662.61	\$663	\$550
Construction added costs	10.1%	20	1	Price	\$1,521.79	\$1,522	\$1,262
33 Year Maintenance							
Discount Rate:	1.020%						
Mill Surface Lift - all	1	33	1,916	SY	\$1.68	\$3,219	\$2,303
AC Resurfacing - all	2	33	143	TON	\$74.47	\$10,671	\$7,634
Resurfacing Shoulders	2	33	64	TON	\$74.47	\$4,769	\$3,412
Miscellaneous	11.7%	33	1	Price	\$2,183.17	\$2,183	\$1,562
Mobilization	4.6%	33	1	Price	\$958.76	\$959	\$686
Construction added costs	10.1%	33	1	Price	\$2,201.95	\$2,202	\$1,575
Years in analysis:	45	Total Cost:				\$40,592	\$30,930
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$861

MoDOT PCC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	20 SY		\$288.00	\$5,720	\$4,483
Diamond Grinding of Traveled Way		25	1,324 SY		\$2.99	\$3,959	\$3,102
Miscellaneous	23.0%	25	1 Price		\$2,226.21	\$2,226	\$1,745
Mobilization	4.9%	25	1 Price		\$583.36	\$583	\$457
Construction added costs	9.6%	25	1 Price		\$1,198.92	\$1,199	\$940
Years in analysis:			Total Cost:			\$13,688	\$10,726
Discount Rate:	45						
	1.020%						
Equivalent Uniform Annual Cost:							\$298

J9P3764 Mainline

Cost per lane Mile

\$109.059.05

Total Area of Paving	55,832.2	SY
Area of Traveled Way	44,650.2	SY
Area of Shoulders	0.0	SY

SP125C Weight Factor 1.927 Tons/CY

Estimated Unit Price for SP125C	\$83.68	/Ton
Estimated Unit Price for BP-1 - Shoulders	\$0.00	/Ton
Estimated Unit Price for Cold Milling	\$1.68	/SY
Estimated Unit Price for Diamond Grinding	\$2.99	/SY
Estimated Unit Price for Pavement Repair**	\$288.00	/SY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

Total LCCA Adjustment Factor	\$691,692
For Job Special Provision	\$691,700

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	5-Year	10-Year	20-Year	25-Year*	30-Year +
**Includes all related Pavement Repair Items	0.200%	0.540%	0.940%	0.9800%	1.020%
	*Straight Line Interpolation From Published Rates				

MoDOT AC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
20 Year Maintenance							
Discount Rate:	0.940%						
Mill Surface Lift Traveled Way	1	20	44,650 SY		\$1.68	\$75,012	\$62,211
AC Resurfacing Traveled Way	2	20	4,780 TON		\$83.68	\$399,995	\$331,733
Miscellaneous	11.7%	20	1 Price		\$55,575.83	\$55,576	\$46,091
Mobilization	4.6%	20	1 Price		\$24,406.81	\$24,407	\$20,242
Construction added costs	10.1%	20	1 Price		\$56,053.96	\$56,054	\$46,488
33 Year Maintenance							
Discount Rate:	1.020%						
Mill Surface Lift - all	1	33	55,832 SY		\$1.68	\$93,798	\$67,104
AC Resurfacing - all	2	33	5,977 TON		\$83.68	\$500,168	\$357,827
Resurfacing Shoulders	2	33	0 TON		\$0.00	\$0	\$0
Miscellaneous	11.7%	33	1 Price		\$69,494.00	\$69,494	\$49,717
Mobilization	4.6%	33	1 Price		\$30,519.15	\$30,519	\$21,834
Construction added costs	10.1%	33	1 Price		\$70,091.87	\$70,092	\$50,145
Years in analysis:	45	Total Cost:				\$1,375,114	\$1,053,391
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$29,308

MoDOT PCC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	670 SY		\$288.00	\$192,889	\$151,155
Diamond Grinding of Traveled Way		25	44,650 SY		\$2.99	\$133,504	\$104,619
Miscellaneous	23.0%	25	1 Price		\$75,070.38	\$75,070	\$58,828
Mobilization	4.9%	25	1 Price		\$19,671.70	\$19,672	\$15,416
Construction added costs	9.6%	25	1 Price		\$40,428.96	\$40,429	\$31,682
Years in analysis:			Total Cost:			\$461,564	\$361,699
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$10,063

Life-Cycle Cost Adjustment Worksheet
J9P3764 Mainline A2 Shoulder

last revised March 2023
Shoulder

Total Area of Paving	0.0	SY
Area of Traveled Way	0.0	SY
Area of Shoulders	15,066.9	SY

BP-1 Weight Factor 1.948 Tons/CY

Estimated Unit Price for SP125BSM	\$0.00	/Ton
Estimated Unit Price for BP-1 - Shoulders	\$84.76	/Ton
Estimated Unit Price for Cold Milling	\$1.68	/SY
Estimated Unit Price for Diamond Grinding	\$2.99	/SY
Estimated Unit Price for Pavement Repair**	\$288.00	/SY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

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	5-Year	10-Year	20-Year	25-Year*	30-Year +
	0.200%	0.540%	0.940%	0.9800%	1.020%
**Includes all related Pavement Repair Items					
*Straight Line Interpolation From Published Rates					

Total LCCA Adjustment Factor \$127,192
For Job Special Provision **\$127,200 A2 Shoulder**

MoDOT AC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
20 Year Maintenance							
Discount Rate:	0.940%						
Mill Surface Lift Traveled Way	1	20	0 SY		\$1.68	\$0	\$0
AC Resurfacing Traveled Way	2	20	0 TON		\$0.00	\$0	\$0
Miscellaneous	11.7%	20	1 Price		\$0.00	\$0	\$0
Mobilization	4.6%	20	1 Price		\$0.00	\$0	\$0
Construction added costs	10.1%	20	1 Price		\$0.00	\$0	\$0
33 Year Maintenance							
Discount Rate:	1.020%						
Mill Surface Lift - all	1	33	0 SY		\$1.68	\$0	\$0
AC Resurfacing - all	2	33	-1,631 TON		\$0.00	\$0	\$0
Resurfacing Shoulders	2	33	1,631 TON		\$84.76	\$138,207	\$98,875
Miscellaneous	11.7%	33	1 Price		\$16,170.27	\$16,170	\$11,568
Mobilization	4.6%	33	1 Price		\$7,101.37	\$7,101	\$5,080
Construction added costs	10.1%	33	1 Price		\$16,309.38	\$16,309	\$11,668
Years in analysis:	45					\$177,788	\$127,192
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$3,539

MoDOT PCC Projection

	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	0 SY		\$288.00	\$0	\$0
Diamond Grinding of Traveled Way		25	0 SY		\$2.99	\$0	\$0
Miscellaneous	23.0%	25	1 Price		\$0.00	\$0	\$0
Mobilization	4.9%	25	1 Price		\$0.00	\$0	\$0
Construction added costs	9.6%	25	1 Price		\$0.00	\$0	\$0
Years in analysis:	45					\$0	\$0
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$0

J9P3764 Outer Rd.

Cost per lane Mile

\$106,448.44

BP-1 Weight Factor 1.948 Tons/CY

Estimated Unit Prices Based off of a 5 mile Project for Future Operations

For Job Special Provision	\$417,800
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	5-Year	10-Year	20-Year	25-Year*	30-Year +
**Includes all related Pavement Repair Items	0.200%	0.540%	0.940%	0.9800%	1.020%
	*Straight Line Interpolation From Published Rates				

MoDOT AC Projection							
	% or Thick. (in.)	Year	Quantity	Unit	Price	Cost	Present Worth
20 Year Maintenance							
Discount Rate:	0.940%						
Mill Surface Lift Traveled Way	1	20	27,633	SY	\$1.68	\$46,423	\$38,500
AC Resurfacing Traveled Way	2	20	2,990	TON	\$84.76	\$253,472	\$210,215
Miscellaneous	11.7%	20	1	Price	\$35,087.63	\$35,088	\$29,100
Mobilization	4.6%	20	1	Price	\$15,409.17	\$15,409	\$12,779
Construction added costs	10.1%	20	1	Price	\$35,389.50	\$35,389	\$29,350
33 Year Maintenance							
Discount Rate:	1.020%						
Mill Surface Lift - all	1	33	32,211	SY	\$1.68	\$54,114	\$38,714
AC Resurfacing - all	2	33	2,990	TON	\$84.76	\$253,472	\$181,337
Resurfacing Shoulders	2	33	495	TON	\$84.76	\$41,995	\$30,044
Miscellaneous	11.7%	33	1	Price	\$40,900.99	\$40,901	\$29,261
Mobilization	4.6%	33	1	Price	\$17,962.18	\$17,962	\$12,850
Construction added costs	10.1%	33	1	Price	\$41,252.87	\$41,253	\$29,513
Years in analysis:	45	Total Cost:				\$835,478	\$641,664
Discount Rate:	1.020%						
Equivalent Uniform Annual Cost:							\$17,852

MoDOT PCC Projection							
	% or Thick. (in.)	Year	Quantity	Unit	Unit Price	Cost	Present Worth
25 Year Maintenance							
Discount Rate:	0.980%						
Traveled Way Slab Replacements	1.5%	25	414 SY		\$288.00	\$119,373	\$93,545
Diamond Grinding of Traveled Way		25	27,633 SY		\$2.99	\$82,621	\$64,745
Miscellaneous	23.0%	25	1 Price		\$46,458.69	\$46,459	\$36,407
Mobilization	4.9%	25	1 Price		\$12,174.20	\$12,174	\$9,540
Construction added costs	9.6%	25	1 Price		\$25,020.21	\$25,020	\$19,607
Years in analysis:		Total Cost:				\$285,647	\$223,844
Discount Rate:	45 1.020%						
Equivalent Uniform Annual Cost:							\$6,228