

REDWOOD COUNTY HIGHWAY DEPARTMENT

Summary of Road Program Maintenance Costs

2020 CSAH 2 Maintenance Costs

Date: 3/24/2022

Time: 01:12 pm

Fringe Benefits Included Total Class

From: 1-1-2020

Through: 13-9999-2020

Account	Description	Account Code	Reg Program 10 Through 10	Cost/Mile	Man Program 20 Through 20	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>11-0000</b>	<b>ROUTINE MAINTENANCE</b>							
<b>11-0100</b>	<b>SMOOTHING SURFACE</b>							
	EOY Unallocated Spreads		2,316.69	117.60	94.08	117.60		.00
<b>Total</b>			2,316.69	117.60	94.08	117.60		.00
<b>11-0200</b>	<b>MINOR SURFACE REPAIR</b>							
	PATCHING/CRACK FILLING BITUM.	MA2	57,008.55	2,893.84	66.86	83.58		.00
	CLEANING/SWEEPING ROAD SURFACE	MA2	6,222.75	315.88	.00	.00		.00
	EOY Unallocated Spreads		6,473.98	328.63	262.90	328.63		.00
<b>Total</b>			69,705.28	3,538.34	329.76	412.20		.00
<b>11-0300</b>	<b>CLEANING CULVERTS AND DITCHES</b>							
	CLEANING/THAWING CULVERTS	MA3	892.84	45.32	.00	.00		.00
	CLEANING DITCHES (MINOR)	MA3	654.70	33.23	.00	.00		.00
	CHECK DRIVEWAY/UTIL PERMITS	MA3	525.40	26.67	.00	.00		.00
	EOY Unallocated Spreads		290.23	14.73	11.78	14.73		.00
<b>Total</b>			2,363.17	119.96	11.78	14.73		.00
<b>11-0400</b>	<b>BRUSH AND WEED CONTROL</b>							
	MOWING GRASS AND WEEDS	MA4	5,242.73	266.13	.00	.00		.00
	SPRAYING WEEDS AND BRUSH	MA4	181.08	9.19	.00	.00		.00
	CLEARING AND GRUBBING (MINOR)	MA4	1,597.42	81.09	.00	.00		.00
	EOY Unallocated Spreads		1,780.71	90.39	72.32	90.40		.00
<b>Total</b>			8,801.94	446.80	72.32	90.40		.00
<b>11-0500</b>	<b>SNOW AND ICE REMOVAL</b>							
	SANDING AND SALTING ROADS	MA5	3,180.12	161.43	.00	.00		.00
	PLOWING AND SANDING	MA5	20,765.36	1,054.08	974.93	1,218.66		.00
	EOY Unallocated Spreads		11,524.04	584.98	467.98	584.98		.00
<b>Total</b>			35,469.52	1,800.48	1,442.91	1,803.64		.00
<b>11-0600</b>	<b>TRAFFIC SERVICES (INCL. SIGNS)</b>							
	MAINTAINING POSTED SIGNS	MA6	4,323.21	219.45	.00	.00		.00
	STRIPING PAVEMENT	MA6	7,607.08	386.15	.00	.00		.00
	INSPECTING ROADS	MA6	970.85	49.28	.00	.00		.00
	PLACING ROAD RESTR/BARRICADES	MA6	1,878.97	95.38	.00	.00		.00
	EOY Unallocated Spreads		6,223.72	315.92	252.74	315.93		.00
<b>Total</b>			21,003.83	1,066.18	252.74	315.93		.00
<b>Total</b>	<b>11-0000</b>		139,660.43	7,089.36	2,203.59	2,754.49		.00
<b>12-0000</b>	<b>REPAIRS AND REPLACEMENTS</b>							
<b>12-0100</b>	<b>RESHAPING</b>							
	RESHAPING SHOULDERS (MINOR)	MB1	3,657.60	185.66	.00	.00		.00
<b>Total</b>			3,657.60	185.66	.00	.00		.00
<b>12-0200</b>	<b>RESURFACING</b>							
	AGGREGATE SHOULDERING	MB2	129.50	6.57	.00	.00		.00
<b>Total</b>			129.50	6.57	.00	.00		.00
<b>12-0300</b>	<b>CULVERTS, BRIDGES, GUARD RAILS</b>							

Date: 3/24/2022

Time: 01:12 pm

Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

2020 CSAH 2 Maintenance Costs

From: 1-1-2020

Through: 13-9999-2020

Account	Description	Account Code	Program 10 Through 10	Cost/Mile	Program 20 Through 20	Cost/Mile	Program 30 Through 30	Cost/Mile
	REPAIRING GUARD RAILS	MB3	31,880.90	1,618.32	.00	.00	.00	
<b>Total</b>			31,880.90	1,618.32	.00	.00	.00	
<b>Total</b>	<b>12-0000</b>		35,668.00	1,810.56	.00	.00	.00	
<b>13-0000</b>	<b>BETTERMENTS</b>							
<b>13-0100</b>	<b>NEW CULVERTS, RAILS, OR TILING</b>							
	INSTALLING NEW GUARD RAIL	MC1	370.13	18.79	.00	.00	.00	
<b>Total</b>			370.13	18.79	.00	.00	.00	
<b>13-0400</b>	<b>BITUMINOUS TREATMENT</b>							
	SEAL COATING BITUMINOUS	MC4	120,789.98	6,131.47	.00	.00	.00	
<b>Total</b>			120,789.98	6,131.47	.00	.00	.00	
<b>Total</b>	<b>13-0000</b>		121,160.11	6,150.26	.00	.00	.00	
<b>Total Expense</b>			296,488.54	15,050.18	2,203.59	2,754.49	.00	
<b>Total Miles</b>			19.7000		.8000		.0000	

Date: 3/24/2022

Time: 01:11 pm

Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

2021 CSAH 2 Maintenance Costs

From: 1-1-2021

Through: 13-9999-2021

Account	Description	Account Code	Reg Program 10 Through 10	Cost/Mile	Meen Program 20 Through 20	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>11-0000</b>	<b>ROUTINE MAINTENANCE</b>							
<b>11-0200</b>	<b>MINOR SURFACE REPAIR</b>							
	PATCHING/CRACK FILLING BITUM.	MA2	49,300.13	2,502.54	.00	.00	.00	
	REPAIRING/CRACK FILLING CONC.	MA2	221.24	11.23	.00	.00	.00	
	CLEANING/SWEEPING ROAD SURFACE	MA2	1,160.29	58.90	.00	.00	.00	
<b>Total</b>			50,681.66	2,572.67	.00	.00	.00	
<b>11-0300</b>	<b>CLEANING CULVERTS AND DITCHES</b>							
	CLEANING/THAWING CULVERTS	MA3	259.00	13.15	.00	.00	.00	
	CLEANING DITCHES (MINOR)	MA3	59.19	3.00	.00	.00	.00	
	ROADKILL REMOVAL	MA3	94.34	4.79	.00	.00	.00	
	CHECK DRIVEWAY/UTIL PERMITS	MA3	172.20	8.74	.00	.00	.00	
<b>Total</b>			584.73	29.68	.00	.00	.00	
<b>11-0400</b>	<b>BRUSH AND WEED CONTROL</b>							
	MOWING GRASS AND WEEDS	MA4	3,727.78	189.23	.00	.00	.00	
	SPRAYING WEEDS AND BRUSH	MA4	282.44	14.34	.00	.00	.00	
	CLEARING AND GRUBBING (MINOR)	MA4	7,387.08	374.98	.00	.00	.00	
<b>Total</b>			11,397.30	578.54	.00	.00	.00	
<b>11-0500</b>	<b>SNOW AND ICE REMOVAL</b>							
	PLOWING AND WINGING SNOW	MA5	225.72	11.46	32.24	40.30	.00	
	SANDING AND SALTING ROADS	MA5	12,622.46	640.73	1,588.96	1,986.20	.00	
	PLOWING AND SANDING	MA5	23,975.78	1,217.04	1,272.31	1,590.39	.00	
	REPAIRING MAILBOXES	MA5	58.70	2.98	.00	.00	.00	
<b>Total</b>			36,882.66	1,872.22	2,893.51	3,616.89	.00	
<b>11-0600</b>	<b>TRAFFIC SERVICES (INCL. SIGNS)</b>							
	MAINTAINING POSTED SIGNS	MA6	3,115.16	158.13	178.79	223.49	.00	
	STRIPING PAVEMENT	MA6	5,670.02	287.82	.00	.00	.00	
	INSPECTING ROADS	MA6	2,802.91	142.28	27.82	34.78	.00	
	PLACING ROAD RESTR/BARRICADES	MA6	1,072.75	54.45	.00	.00	.00	
<b>Total</b>			12,660.84	642.68	206.61	258.26	.00	
<b>11-0700</b>	<b>MISCELLANEOUS MAINT. COSTS</b>							
	MISCELLANEOUS MAINT. EXPENSES		28.98	1.47	.00	.00	.00	
<b>Total</b>			28.98	1.47	.00	.00	.00	
<b>Total 11-0000</b>			112,236.17	5,697.27	3,100.12	3,875.15	.00	
<b>12-0000</b>	<b>REPAIRS AND REPLACEMENTS</b>							
<b>12-0100</b>	<b>RESHAPING</b>							
	RESHAPING SHOULDERS (MINOR)	MB1	2,876.13	146.00	.00	.00	.00	
	RESHAPING ROADBED (MINOR)	MB1	339.60	17.24	.00	.00	.00	
<b>Total</b>			3,215.73	163.24	.00	.00	.00	
<b>12-0200</b>	<b>RESURFACING</b>							
	SPOT GRAVELLING OF ROAD	MB2	135.15	6.86	.00	.00	.00	
	CONTINUOUS GRAVELLING OF ROAD	MB2	190.05	9.65	.00	.00	.00	
	AGGREGATE SHOULDERING	MB2	3,950.23	200.52	.00	.00	.00	
<b>Total</b>			4,275.43	217.03	.00	.00	.00	

Date: 3/24/2022

Time: 01:11 pm

Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

2021 CSAH 2 Maintenance Costs

From: 1-1-2021

Through: 13-9999-2021

Account	Description	Account Code	Program 10 Through 10	Cost/Mile	Program 20 Through 20	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>12-0300</b>	<b>CULVERTS, BRIDGES, GUARD RAILS</b>							
	REPLACING CULVERT (LIKE SIZE)	MB3	126.70	6.43	.00	.00	.00	
	REPAIRING GUARD RAILS	MB3	949.02	48.17	.00	.00	.00	
<b>Total</b>			1,075.72	54.61	.00	.00	.00	
<b>12-0400</b>	<b>WASHOUTS</b>							
	REPAIRING ROADBED WASHOUT	MB4	175.75	8.92	.00	.00	.00	
	REPAIRING SHOULDER WASHOUT	MB4	284.59	14.45	.00	.00	.00	
	REPAIRING DITCH WASHOUT	MB4	515.92	26.19	.00	.00	.00	
<b>Total</b>			976.26	49.56	.00	.00	.00	
<b>Total</b>	<b>12-0000</b>		9,543.14	484.42	.00	.00	.00	
<b>13-0000</b>	<b>BETTERMENTS</b>							
<b>13-0100</b>	<b>NEW CULVERTS, RAILS, OR TILING</b>							
	INSTALLING CULVERT NEW/LARGER	MC1	158.38	8.04	.00	.00	.00	
	INSTALLING APPROACHES/DRIVES	MC1	380.10	19.29	.00	.00	.00	
<b>Total</b>			538.48	27.33	.00	.00	.00	
<b>13-0200</b>	<b>CUTS AND FILLS</b>							
	RESHAPING ROADBED (MAJOR)	MC2	537.68	27.29	.00	.00	.00	
<b>Total</b>			537.68	27.29	.00	.00	.00	
<b>13-0400</b>	<b>BITUMINOUS TREATMENT</b>							
	TAKE BORING SAMPLES	MC4	1,371.58	69.62	146.10	182.63	.00	
<b>Total</b>			1,371.58	69.62	146.10	182.63	.00	
<b>Total</b>	<b>13-0000</b>		2,447.74	124.25	146.10	182.63	.00	
<b>Total Expense</b>			124,227.05	6,305.94	3,246.22	4,057.78	.00	
<b>Total Miles</b>			19.7000		.8000		.0000	

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

From: 1-0-2022

Through: 13-9999-2022

Account	Description	Account Code	Program 10 Through 19	Cost/Mile	Program 20 Through 29	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>11-0000</b>	<b>ROUTINE MAINTENANCE</b>							
<b>11-0100</b>	<b>SMOOTHING SURFACE</b>							
	BLADING GRAVEL ROADS	MA1	136.95	6.95	.00	.00	.00	
	EOY Unallocated Spreads		673.85	34.21	27.37	34.21	.00	
<b>Total</b>			810.80	41.16	27.37	34.21	.00	
<b>11-0200</b>	<b>MINOR SURFACE REPAIR</b>							
	PATCHING/CRACK FILLING BITUM.	MA2	8,807.32	447.07	665.05	831.31	.00	
	CLEANING/SWEEPING BRIDGE DECKS	MA2	289.71	14.71	.00	.00	.00	
	EOY Unallocated Spreads		3,037.72	154.20	123.35	154.19	.00	
<b>Total</b>			12,134.75	615.98	788.40	985.50	.00	
<b>11-0300</b>	<b>CLEANING CULVERTS AND DITCHES</b>							
	CHECK DRIVEWAY/UTIL PERMITS	MA3	202.97	10.30	.00	.00	.00	
	EOY Unallocated Spreads		76.09	3.86	3.09	3.86	.00	
<b>Total</b>			279.06	14.17	3.09	3.86	.00	
<b>11-0400</b>	<b>BRUSH AND WEED CONTROL</b>							
	MOWING GRASS AND WEEDS	MA4	2,739.56	139.06	.00	.00	.00	
	CLEARING AND GRUBBING (MINOR)	MA4	1,697.52	86.17	.00	.00	.00	
	CLEARING DEBRIS OFF ROADWAY	MA4	45.43	2.31	.00	.00	.00	
	EOY Unallocated Spreads		2,669.08	135.49	108.39	135.49	.00	
<b>Total</b>			7,151.59	363.02	108.39	135.49	.00	
<b>11-0500</b>	<b>SNOW AND ICE REMOVAL</b>							
	MAINTAINING SNOW FENCE	MA5	35.41	1.80	.00	.00	.00	
	PLOWING AND SANDING	MA5	33,765.21	1,713.97	2,701.68	3,377.10	.00	
	EOY Unallocated Spreads		6,769.71	343.64	274.92	343.65	.00	
<b>Total</b>			40,570.33	2,059.41	2,976.60	3,720.75	.00	
<b>11-0600</b>	<b>TRAFFIC SERVICES (INCL. SIGNS)</b>							
	MAINTAINING POSTED SIGNS	MA6	2,916.29	148.04	.00	.00	.00	
	STRIPING PAVEMENT	MA6	9,105.42	462.20	.00	.00	.00	
	INSPECTING ROADS	MA6	533.57	27.08	.00	.00	.00	
	BRIDGE INSPECTIONS	MA6	176.09	8.94	.00	.00	.00	
	EOY Unallocated Spreads		5,396.27	273.92	219.14	273.93	.00	
<b>Total</b>			18,127.64	920.18	219.14	273.93	.00	
<b>Total</b>	<b>11-0000</b>		79,074.17	4,013.92	4,122.99	5,153.74	.00	
<b>12-0000</b>	<b>REPAIRS AND REPLACEMENTS</b>							
<b>12-0200</b>	<b>RESURFACING</b>							
	SPOT GRAVELLING OF ROAD	MB2	724.27	36.76	.00	.00	.00	
	CONTINUOUS GRAVELLING OF ROAD	MB2	30,451.23	1,545.75	.00	.00	.00	
	AGGREGATE SHOULDERING	MB2	8,702.84	441.77	.00	.00	.00	
<b>Total</b>			39,878.34	2,024.28	.00	.00	.00	
<b>12-0300</b>	<b>CULVERTS, BRIDGES, GUARD RAILS</b>							
	REPAIRING GUARD RAILS	MB3	4,921.85	249.84	.00	.00	.00	
<b>Total</b>			4,921.85	249.84	.00	.00	.00	
<b>Total</b>	<b>12-0000</b>		44,800.19	2,274.12	.00	.00	.00	

Date: 12/18/2023

Time: 11:50 am

Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

From: 1-0-2022

Through: 13-9999-2022

Account	Description	Account Code	Program 10 Through 19	Cost/Mile	Program 20 Through 29	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>13-0000</b>	<b>BETTERMENTS</b>							
<b>13-0100</b>	<b>NEW CULVERTS, RAILS, OR TILING</b>							
	INSTALLING MAIL BOX	MC1	88.05	4.47	.00	.00	.00	
<b>Total</b>			88.05	4.47	.00	.00	.00	
<b>13-0400</b>	<b>BITUMINOUS TREATMENT</b>							
	SEAL COATING BITUMINOUS	MC4	195.49	9.92	.00	.00	.00	
<b>Total</b>			195.49	9.92	.00	.00	.00	
<b>Total</b>	<b>13-0000</b>		283.54	14.39	.00	.00	.00	
<b>Total Expense</b>			124,157.90	6,302.43	4,122.99	5,153.74	.00	
<b>Total Miles</b>			19.7000		.8000		.0000	

Date: 12/18/2023

Time: 11:51 am

Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

From: 1-0-2023

Through: 13-9999-2023

Account	Description	Account Code	Program 10 Through 19	Cost/Mile	Program 20 Through 29	Cost/Mile	Program 30 Through 30	Cost/Mile
<b>11-0000</b>	<b>ROUTINE MAINTENANCE</b>							
<b>11-0100</b>	<b>SMOOTHING SURFACE</b>							
	BLADING GRAVEL ROADS	MA1	652.62	33.13	421.41	526.76	.00	
<b>Total</b>			652.62	33.13	421.41	526.76	.00	
<b>11-0200</b>	<b>MINOR SURFACE REPAIR</b>							
	PATCHING/CRACK FILLING BITUM.	MA2	13,082.22	664.07	601.95	752.44	.00	
	CLEANING/SWEEPING BRIDGE DECKS	MA2	935.18	47.47	.00	.00	.00	
	CLEANING/SWEEPING ROAD SURFACE	MA2	.00	.00	196.43	245.54	.00	
<b>Total</b>			14,017.40	711.54	798.38	997.98	.00	
<b>11-0300</b>	<b>CLEANING CULVERTS AND DITCHES</b>							
	CLEANING/THAWING CULVERTS	MA3	79.98	4.06	.00	.00	.00	
	CLEANING DITCHES (MINOR)	MA3	61.22	3.11	.00	.00	.00	
	CHECK DRIVEWAY/UTIL PERMITS	MA3	148.79	7.55	.00	.00	.00	
<b>Total</b>			289.99	14.72	.00	.00	.00	
<b>11-0400</b>	<b>BRUSH AND WEED CONTROL</b>							
	MOWING GRASS AND WEEDS	MA4	888.66	45.11	.00	.00	.00	
	CLEARING AND GRUBBING (MINOR)	MA4	3,255.81	165.27	77.77	97.21	.00	
<b>Total</b>			4,144.47	210.38	77.77	97.21	.00	
<b>11-0500</b>	<b>SNOW AND ICE REMOVAL</b>							
	MAINTAINING SNOW FENCE	MA5	37.08	1.88	.00	.00	.00	
	PLOWING AND SANDING	MA5	32,270.15	1,638.08	4,507.40	5,634.25	.00	
	REMOVING ICE JAMS	MA5	292.45	14.85	.00	.00	.00	
<b>Total</b>			32,599.68	1,654.81	4,507.40	5,634.25	.00	
<b>11-0600</b>	<b>TRAFFIC SERVICES (INCL. SIGNS)</b>							
	MAINTAINING POSTED SIGNS	MA6	4,284.34	217.48	192.57	240.71	.00	
	INSPECTING ROADS	MA6	1,074.87	54.56	.00	.00	.00	
	PLACING ROAD RESTR/BARRICADES	MA6	192.57	9.78	.00	.00	.00	
<b>Total</b>			5,551.78	281.82	192.57	240.71	.00	
<b>11-0700</b>	<b>MISCELLANEOUS MAINT. COSTS</b>							
	MISCELLANEOUS MAINT. EXPENSES		339.99	17.26	196.43	245.54	.00	
<b>Total</b>			339.99	17.26	196.43	245.54	.00	
<b>Total</b>	<b>11-0000</b>		57,595.93	2,923.65	6,193.96	7,742.45	.00	
<b>12-0000</b>	<b>REPAIRS AND REPLACEMENTS</b>							
<b>12-0100</b>	<b>RESHAPING</b>							
	RESHAPING ROADBED (MINOR)	MB1	139.71	7.09	.00	.00	.00	
<b>Total</b>			139.71	7.09	.00	.00	.00	
<b>12-0200</b>	<b>RESURFACING</b>							
	SPOT GRAVELLING OF ROAD	MB2	16,949.05	860.36	.00	.00	.00	
	AGGREGATE SHOULDERING	MB2	81,104.24	4,116.97	716.82	896.03	.00	
<b>Total</b>			98,053.29	4,977.32	716.82	896.03	.00	
<b>12-0300</b>	<b>CULVERTS, BRIDGES, GUARD RAILS</b>							

Date: 12/18/2023  
 Time: 11:51 am  
 Fringe Benefits Included Total Class

# REDWOOD COUNTY HIGHWAY DEPARTMENT

## Summary of Road Program Maintenance Costs

From: 1-0-2023  
 Through: 13-9999-2023

Account	Description	Account Code	Program 10 Through 19	Cost/Mile	Program 20 Through 29	Cost/Mile	Program 30 Through 30	Cost/Mile
	REPAIRING GUARD RAILS	MB3	192.57	9.78	.00	.00	.00	
<b>Total</b>			192.57	9.78	.00	.00	.00	
<b>Total</b>	<b>12-0000</b>		98,385.57	4,994.19	716.82	896.03	.00	
<b>13-0000</b>	<b>BETTERMENTS</b>							
<b>13-0400</b>	<b>BITUMINOUS TREATMENT</b>							
	SEAL COATING BITUMINOUS	MC4	12,086.67	613.54	.00	.00	.00	
<b>Total</b>			12,086.67	613.54	.00	.00	.00	
<b>Total</b>	<b>13-0000</b>		12,086.67	613.54	.00	.00	.00	
<b>Total Expense</b>			168,068.17	8,531.38	6,910.78	8,638.47	.00	
<b>Total Miles</b>			19.7000		.8000		.0000	

2023 1.5" Mill and 1.5" Overlay of CSAH 2, from 305<sup>th</sup> Street to CSAH 11: \$396,445.51

Funding Category Name	Funding Category Number	Work Certified to Date	Less Amount Retained	Less Previous Payments	Amount Paid this Request	Total Amount Paid to Date
064-602-026 Participating		\$396,445.51	\$19,822.28	\$0.00	\$376,623.23	\$376,623.23

## MINNESOTA DEPARTMENT OF TRANSPORTATION

### COUNTY OF REDWOOD

CONSTRUCTION PLAN FOR BITUMINOUS MILL AND OVERLAY  
C.S.A.H. 2, C.S.A.H. 3, C.S.A.H. 4, C.S.A.H. 5, C.S.A.H. 7, C.S.A.H. 10, C.S.A.H. 12, C.S.A.H. 16, AND C.S.A.H. 45

**GOVERNING SPECIFICATIONS**  
THE 2002 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE "SUPPLEMENTAL SPECIFICATIONS" DATED SEPTEMBER 2002 SHALL GOVERN.  
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL FOR "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

**INDEX**

SHEET NO. 1 TITLE SHEET  
2 ESTIMATED QUANTITIES  
3 GENERAL NOTES  
4 TYPICAL SECTION  
5 TRAFFIC CONTROL

\*\*THIS PLAN CONTAINS 5 SHEETS\*\*

**DESIGN DESIGNATION**

C.S.A.H. NO.	ADT (2023)	PROJ. ADT (2023)	SOIL FACTOR	TON DESIGN
2	780	930	130	9
3	940	1290	130	10
4	360	396	130	10
5	670	770	130	10
7	470	517	130	10
10	150	165	130	10
12	280	370	130	10
16	610	1000	130	10
45	110	121	130	10

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Anthony J. Sellner*  
ANTHONY J. SELLNER  
TYPE OF PRINTED NAME

DATE: 8-30-2023 (E.C. NO. 5424)

**COUNTY OF REDWOOD**

*Todd Broadwell*  
Approved: County Engineer DATE: 8-30-2023

**Todd Broadwell** Digitally signed by Todd Broadwell  
Date: 2023.06.06 15:31:44 -05'00'

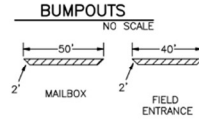
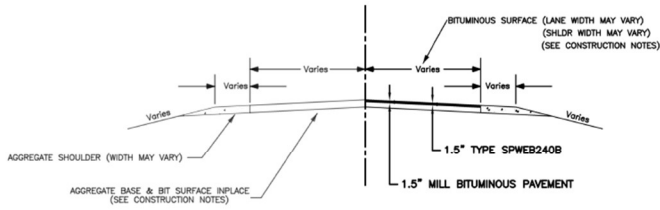
**Todd Broadwell** Digitally signed by Todd Broadwell  
Date: 2023.06.06 15:33:06 -05'00'

APPROVED FOR STATE-AD FUNDING FOR STATE-AD DEPARTMENT

STATE AD PROJECT NUMBERS: 064-602-026, 026, 094-603-008, 064-604-008, 064-605-026, 064-607-002, 064-610-035, 064-612-016, 064-616-016, 064-645-008.

SHEET NO. 1 OF 5 SHEETS

TYPICAL INPLACE SECTION



**TYPICAL INPLACE AND CONSTRUCTION NOTES:**

- CSAH 2 - 4.5" OF EXISTING PAVEMENT. 8" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 11' LANES.
- CSAH 3 - 7.5" OF EXISTING PAVEMENT. 10" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 12' LANES.
- CSAH 4 - 6" OF EXISTING PAVEMENT. 6" OF EXISTING GRAVEL BASE WEST OF CSAH 17. 8" OF EXISTING PAVEMENT 9" OF EXISTING GRAVEL BASE EAST OF CSAH 17. MILL AND PAVE 1.5" LIFT WITH 12' LANES.
- CSAH 5 - 6" OF EXISTING PAVEMENT. 9" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 12' LANES AND 8' SHOULDERS IN CURB AND GUTTER AREA.
- CSAH 7 - 5.75" OF EXISTING PAVEMENT. 9" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 12' LANES.
- CSAH 10 - 6" OF EXISTING PAVEMENT. 6.5" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 12' LANES. MILL AND PAVE INSIDE CURVE 1".
- CSAH 12 - 7" OF EXISTING PAVEMENT. 5" OF EXISTING GRAVEL BASE WEST OF CSAH 10. 5" OF EXISTING PAVEMENT 5" OF EXISTING GRAVEL BASE EAST OF CSAH 10. MILL AND PAVE 1.5" LIFT WITH 12' LANES.
- CSAH 16 - 6.5" OF EXISTING PAVEMENT. 9" OF EXISTING GRAVEL BASE WEST OF CSAH 13. 5" OF EXISTING PAVEMENT 5" OF EXISTING GRAVEL BASE EAST OF CSAH 13. MILL AND PAVE 1.5" LIFT WITH 13' LANES WEST OF CSAH 13 AND 12' LANES EAST OF CSAH 13.
- CSAH 45 - 6" OF EXISTING PAVEMENT. 6.5" OF EXISTING GRAVEL BASE. MILL AND PAVE 1.5" LIFT WITH 12' LANES.

**TYPICAL NOTES:**

- ① TYPICAL BITUMINOUS ROADWAY SLOPE IS 2.0%
- ② TYPICAL AGGREGATE SHOULDER SLOPE IS 4.0%
- ③ SLOPES VARY IN SUPERELEVATED SECTIONS. NEW SLOPES TO FOLLOW INPLACE CONDITIONS.

TYPICAL SECTIONS  
MISC. DETAILS

YEAR	PROJECT NO.	TOWNSHIP	ROADWAY	URBAN/RURAL	PROJECT TYPE	ROAD COSTS					ROAD INFO				Contractor	42 miles
						CONSTRUCTION (CONTRACTOR OR MATERIALS)	ENG.	LABOR IN HOUSE	EQUIP. IN HOUSE	TOTAL COST:	LENGTH (mi)	PAVEMENT WIDTH	COST / MILE	COST/SY		
2020	County Forces		Various			\$414,410.00		\$106,436.00	\$192,286.00	\$713,132.00	42		\$16,979.33	Redwood Co	\$713,132.00	
2021	SAP 064-030-016		Various			\$711,404.00		-	-	\$711,404.00	37		\$19,227.14	ASTECH	\$807,539.68	
2022	SAP 064-030-017		Various		County haul & stockpile chip	\$1,115,378.00		\$21,952.00	\$63,785.00	\$1,201,115.00	42		\$28,597.98	Morris	\$1,201,115.00	
2023	SAP 064-030-018		Various		County haul & stockpile chip	\$1,324,498.00	\$28,418.00			\$1,352,916.00	56		\$24,159.21	Morris	\$1,014,687.00	

CONTRACTED WORK		
Project Length:	42	miles
Project Width:	24	ft
Project SY:	591,360	sy
FA2 Rock:	18	pounds/SY
FA2 Rock:	10,644,480	pounds
FA2 Rock:	5,322	ton
FA2 Rock Cost:	\$45.00	\$/ton
<b>FA2 Rock Cost:</b>	<b>\$239,501</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	159,667	gall
CRS 2P Cost:	\$3.91	\$/gall
<b>CRS 2P Cost:</b>	<b>\$624,299</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	65049.6	gall
CSS 1H Cost:	\$2.21	\$/gall
<b>CSS 1H Cost:</b>	<b>\$143,760</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$1,007,559</b>	<b>\$</b>

IN HOUSE WORK		
Project Length:	42	miles
Project Width:	24	ft
Project SY:	591,360	sy
FA2 Rock:	18	pounds/SY
FA2 Rock:	10,644,480	pounds
FA2 Rock:	5,322	ton
FA2 Rock Cost:	\$25.00	\$/ton
<b>FA2 Rock Cost:</b>	<b>\$133,056</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	159,667	gall
CRS 2P Cost:	\$1.83	\$/gall
<b>CRS 2P Cost:</b>	<b>\$292,191</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	65049.6	gall
CSS 1H Cost:	\$1.11	\$/gall
<b>CSS 1H Cost:</b>	<b>\$72,205</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$497,452</b>	<b>\$</b>

2019 Project:		
Project size:	79974.4	SY
CRS 2P:	21305	gall
CRS 2P:	0.266398	gall/sy
CSS 1H:	8981	gall
CSS 1H:	0.112298	gall/sy
FA 2:	698	Ton
FA 2:	0.008728	ton/sy
FA 2:	17.45559	lb/sy

FA-2.5 would result in 0.38 gall/sy

2022 Project

\$1.704  
 \$23,989.50  
 \$0.24  
 \$1.06  
 \$810.00 PER SY

\$11,844.10  
 CSS 1H: Assume 8.5lbs/gallon  
 63.5 lb/cf  
 7.48 gall/cf  
 8.489304813 lb/gall  
 Water is 8.3 lb/gall  
 CSS 1H Purchased 2020:  
 \$261 \$/ton  
 \$0.131 \$/pound  
 \$1.11 \$/gallon (8.2 lb/gall)  
 CRS 2P: Assume 8.04lbs/gallon  
 60.2 lb/cf  
 7.48 gall/cf  
 8.048128342 lb/gall  
 Water is 8.3 lb/gall  
 CRS 2P Purchased 2020:  
 \$456 \$/ton  
 \$0.228 \$/pound  
 \$1.83 \$/gallon (8.2 lb/gall)

Paula Cost Compilation 01FEB2021

2020 SEAL COAT COSTS:		
	Price/Ton	Expense
Jebro, Inc. - Oil		
CRS2:	\$456.00	284,057.42
Css1H + Water:	\$261.00	59,541.93
Demurrage:		5,360.00

\$348,959.35

Chips

MN Paving & Materials	\$22.00	60,508.36
Red Rock Quarry	\$25.00	<u>525.64</u>
		61,034.00

Chip Spreader Rental

County of Lyon	\$ 45/hour	\$4,117.50
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Broom Rental

County of Lyon	\$ 30/hour	\$300.00
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SELLNER NOTE - MILES COMPLETED:

Actual Expenses for 2020 Seal Coating:

Includes labor & equip hrs for hauling pea rock, sweeping before and after, actual seal coating and fog sealing, chips purchased in 2020. Does not include all chips as we had stockpiles around the county on hand.

Materials include: oil, pearock, equipment rental, diesel to clean equipment, etc.

Labor:	106,436.56
Equipment:	192,286.50
Materials Purchased:	<u>414,601.71</u>
	\$713,324.77

CONTRACTED WORK - 2021 (Contractor Did All)		
Project Length:	37	miles
Project Width:	24 +/-	ft
Project SY:	583,076	sy
FA2 Rock:	18	pounds/SY
FA2 Rock:	10,495,368	pounds
FA2 Rock:	5,248	ton
FA2 Rock Cost:		\$/ton
<b>FA2 Rock Cost:</b>		<b>\$</b>
Provide & Apply FA2:	\$0.57	\$/sq yd
<b>Provide &amp; Apply FA2:</b>	<b>\$332,353</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	157,430	gall
CRS 2P Cost:	\$1.50	\$/gall
<b>CRS 2P Cost:</b>	<b>\$236,145</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	64,137	gall
CSS 1H Cost:	\$1.47	\$/gall
<b>CSS 1H Cost:</b>	<b>\$94,281</b>	<b>\$</b>
Striping:	525767	lf
Striping:	0.06	\$/lf
<b>Striping:</b>	<b>\$31,546</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$694,326</b>	<b>\$</b>
<b>COST / MILE:</b>	<b>\$18,766</b>	<b>\$</b>

Plus did parking lots for Redwood Shop, Gov Center, Public Health  
 ASTECH did not finish in time. Chip sealed in Sept.  
 ASTECH claimed they could not get the chip material made  
 until mid-August. Until we started calling the provider  
 and found out it was done late July already.

CONTRACTED WORK - 2022 (County Hauled Chip)		
Project Length:	42	miles
Project Width:	24 +/-	ft
Project SY:	659,596	sy

This year we hauled chip so that contractor could  
 not claim material shortage on chip or that  
 product was not available.

FA2 Rock:	18	pounds/SY
FA2 Rock:	11,872,728	pounds
FA2 Rock:	5,936	ton
FA2 Rock Cost:	\$20.15	\$/ton
<b>FA2 Rock Cost:</b>	<b>\$119,618</b>	<b>\$</b>
<b>Apply FA2:</b>	<b>\$0.41</b>	<b>\$/sq yd</b>
<b>Apply FA2:</b>	<b>\$270,434</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	178,091	gall
CRS 2P Cost:	\$2.69	\$/gall
<b>CRS 2P Cost:</b>	<b>\$479,065</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	72,556	gall
CSS 1H Cost:	\$2.77	\$/gall
<b>CSS 1H Cost:</b>	<b>\$200,980</b>	<b>\$</b>
Striping:	621845	lf
Striping:	0.06	\$/lf
<b>Striping:</b>	<b>\$37,311</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$1,107,408</b>	<b>\$</b>
<b>COST / MILE:</b>	<b>\$26,367</b>	<b>\$</b>

- \$105,535

CONTRACTED WORK - 2023 (County Hauled Chip)		
Project Length:	56	miles
Project Width:	24 +/-	ft
Project SY:	830,044	sy
FA2 Rock:	18	pounds/SY
FA2 Rock:	14,940,792	pounds
FA2 Rock:	7,470	ton
FA2 Rock Cost:	\$20.15	\$/ton
<b>FA2 Rock Cost:</b>	<b>\$150,528</b>	<b>\$</b>
<b>Apply FA2:</b>	<b>\$0.42</b>	<b>\$/sq yd</b>
<b>Apply FA2:</b>	<b>\$348,618</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	224,112	gall
CRS 2P Cost:	\$2.80	\$/gall
<b>CRS 2P Cost:</b>	<b>\$627,513</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	91,305	gall
CSS 1H Cost:	\$2.76	\$/gall
<b>CSS 1H Cost:</b>	<b>\$252,001</b>	<b>\$</b>
Striping:	590,017	lf
Striping:	0.07	\$/lf
<b>Striping:</b>	<b>\$41,301</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$1,419,963</b>	<b>\$</b>
<b>COST / MILE:</b>	<b>\$25,356.48</b>	<b>\$</b>

Updated: 6/7/2023

Nobody knows where winter fuel price is for A/C. Wait a little bit if I were you. Wait until FEB/MAR.

Nobody tries hard until a few bids go.

Usually high early, someone gets weak and rest of them fall.

Unknown; Dale talked to guys out in Montana and Wyoming; have not started winter fueling yet and thought numbers too high. No body is cutting price yet b/c still oil going out.

October winter fuel numbers have stayed up. When winter hits, work slows down and tanks start filling up. Need to get rid of it.

Refineries: Two in twin cities that sell A/C; Marathan, one up in Superior still shut down for fifth year; now in western Canada - Loydmister and loostjohn; some out in Montana and Wyoming; A/C.

Wage and fuel was nuts; truck driver to come work for them, raised wages \$10/hour. Started at \$38/hr, some make mid-\$60's; driving ASTECH trucks.

Used to have a job to have health care paid for.

CONTRACTED WORK - 2024 (County Hauled Chip)		
Project Length:	50	miles
Project Width:	24 +/-	ft
Project SY:	704,000	sy
FA2 Rock:	18	pounds/SY
FA2 Rock:	12,672,000	pounds
FA2 Rock:	6,336	ton
FA2 Rock Cost:	\$20.15	\$/ton
<b>FA2 Rock Cost:</b>	<b>\$127,670</b>	<b>\$</b>
<b>Apply FA2:</b>	<b>\$0.42</b>	<b>\$/sq yd</b>
<b>Apply FA2:</b>	<b>\$295,680</b>	<b>\$</b>
CRS 2P:	0.27	gall/sy
CRS 2P:	190,080	gall

CRS 2P Cost:	\$2.80	\$/gall
<b>CRS 2P Cost:</b>	<b>\$532,224</b>	<b>\$</b>
CSS 1H:	0.11	gall/sy
CSS 1H:	77,440	gall
CSS 1H Cost:	\$2.76	\$/gall
<b>CSS 1H Cost:</b>	<b>\$213,734</b>	<b>\$</b>
Striping:	590,017	lf
Striping:	0.07	\$/lf
<b>Striping:</b>	<b>\$41,301</b>	<b>\$</b>
<b>TOTAL COST:</b>	<b>\$1,210,610</b>	<b>\$</b>
<b>COST / MILE:</b>	<b>\$24,212.20</b>	<b>\$</b>