



# CITY OF HELENA

— Multimodal Traffic Study —

*FIVE POINT INTERSECTIONS & CORRIDOR CONNECTIONS*

## APPENDIX D

---

## COST ESTIMATES

**APPENDIX D**  
*Planning Level Cost Estimates*

Planning-level cost estimates were developed for each improvement option. The cost estimates include construction, engineering, and a general contingency to account for unknown factors and anticipated project development risk level. Estimates do not include costs for right-of-way as additional design details may be needed. Cost ranges are provided in some cases, indicating a range of options or other variables. The estimates are presented in 2020 dollars and can be expected to increase with inflation depending on the anticipated future year of expenditure.

**LAST CHANCE GULCH**

**LCG-1. Last Chance Gulch Street Design - South of Neill Avenue**

Low Range Estimate					\$ 50,000 TOT
TYPE	UNITS	QUANTITY	UNIT PRICE	COST	
CURB AND GUTTER-CONC	LNFT	225.0	\$ 50.00	\$	11,250
LANDSCAPING	SQYD	200.0	\$ 25.00	\$	5,000
DETEC WARNING DEVICES-TYPE 1	SQYD	7.5	\$ 348.00	\$	2,610
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.04	\$ 20,000.00	\$	758
SIGNS - URBAN	MILE	0.04	\$ 52,000.00	\$	1,970
MISCELLANEOUS ITEMS			25%	\$	5,397
	Subtotal 1			\$	26,984
TRAFFIC CONTROL			5%	\$	1,349
	Subtotal 2			\$	28,333
MOBILIZATION			10%	\$	2,833
	Subtotal 3			\$	31,167
CONTINGENCY (LOW RISK)			25%	\$	7,792
	Subtotal 4			\$	38,958
CONSTRUCTION ENGINEERING (CE)			10%	\$	3,896
PRELIMINARY ENGINEERING (PE)			10%	\$	3,896
	<b>TOTAL</b>			<b>\$</b>	<b>46,750</b>

High Range Estimate					\$ 150,000 TOT
TYPE	UNITS	QUANTITY	UNIT PRICE	COST	
CURB AND GUTTER-CONC	LNFT	400.0	\$ 50.00	\$	20,000
LANDSCAPING	SQYD	355.6	\$ 25.00	\$	8,889
DETEC WARNING DEVICES-TYPE 1	SQYD	7.5	\$ 348.00	\$	2,610
INTERSECTION BULBOUT	EACH	2.0	\$ 10,000.00	\$	20,000
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.08	\$ 20,000.00	\$	1,515
SIGNS - URBAN	MILE	0.08	\$ 52,000.00	\$	3,939
MISCELLANEOUS ITEMS			25%	\$	14,238
	Subtotal 1			\$	71,192
TRAFFIC CONTROL			5%	\$	3,560
	Subtotal 2			\$	74,751
MOBILIZATION			10%	\$	7,475
	Subtotal 3			\$	82,227
CONTINGENCY (MEDIUM RISK)			50%	\$	41,113
	Subtotal 4			\$	123,340
CONSTRUCTION ENGINEERING (CE)			10%	\$	12,334
PRELIMINARY ENGINEERING (PE)			10%	\$	12,334
	<b>TOTAL</b>			<b>\$</b>	<b>148,008</b>

**LCG-2. Last Chance Gulch Street Design - North of Neill Avenue**

Low Range Estimate					\$ 350,000 TOT
TYPE	UNITS	QUANTITY	UNIT PRICE	COST	
CURB AND GUTTER-CONC	LNFT	2000.0	\$ 50.00	\$	100,000
LANDSCAPING	SQYD	800.0	\$ 25.00	\$	20,000
SIGNS - URBAN	MILE	0.2	\$ 52,000.00	\$	9,848
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.2	\$ 20,000.00	\$	3,788
MISCELLANEOUS ITEMS			25%	\$	33,409
	Subtotal 1			\$	167,045
TRAFFIC CONTROL			5%	\$	8,352
	Subtotal 2			\$	175,398
MOBILIZATION			10%	\$	17,540

	Subtotal 3		\$	192,938
CONTINGENCY (MEDIUM RISK)		50%	\$	96,469
	Subtotal 4		\$	289,406
CONSTRUCTION ENGINEERING (CE)		10%	\$	28,941
PRELIMINARY ENGINEERING (PE)		10%	\$	28,941
	<b>TOTAL</b>		<b>\$</b>	<b>347,288</b>

**High Range Estimate** **\$ 1,200,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
CURB AND GUTTER-CONC	LNFT	3000.0	\$ 50.00	\$ 150,000
LANDSCAPING	SQYD	1250.0	\$ 25.00	\$ 31,250
SIGNS - URBAN	MILE	0.4	\$ 52,000.00	\$ 19,697
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.4	\$ 20,000.00	\$ 7,576
LIGHTS - URBAN	MILE	0.4	\$ 175,000.00	\$ 66,288
INTERSECTION BULBOUT	EACH	18.0	\$ 10,000.00	\$ 180,000
MISCELLANEOUS ITEMS			25%	\$ 113,703
	Subtotal 1			\$ 568,513
TRAFFIC CONTROL			5%	\$ 28,426
	Subtotal 2			\$ 596,939
MOBILIZATION			10%	\$ 59,694
	Subtotal 3			\$ 656,633
CONTINGENCY (MEDIUM RISK)			50%	\$ 328,316
	Subtotal 4			\$ 984,949
CONSTRUCTION ENGINEERING (CE)			10%	\$ 98,495
PRELIMINARY ENGINEERING (PE)			10%	\$ 98,495
	<b>TOTAL</b>		<b>\$</b>	<b>1,181,939</b>

**LCG-3. Last Chance Gulch Sidewalk Improvements**

**Low Range Estimate** **\$ 230 / LNFT**

LENGTH (FT)	1
WIDTH (FT)	10
SURFACING (IN)	4
BASE (IN)	3

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	0.22	\$ 12.00	\$ 3
CRUSHED AGGREGATE COURSE	CUYD	0.09	\$ 45.00	\$ 4
SIDEWALK-CONCRETE 4"	SQYD	1.00	\$ 90.00	\$ 90
SIDEWALK-CONCRETE 6"	SQYD	0.11	\$ 100.00	\$ 11
MISCELLANEOUS ITEMS			25%	\$ 27
	Subtotal 1			\$ 135
TRAFFIC CONTROL			5%	\$ 7
	Subtotal 2			\$ 142
MOBILIZATION			10%	\$ 14
	Subtotal 3			\$ 156
CONTINGENCY (LOW RISK)			25%	\$ 39
	Subtotal 4			\$ 195
CONSTRUCTION ENGINEERING (CE)			10%	\$ 19
PRELIMINARY ENGINEERING (PE)			10%	\$ 19
	<b>TOTAL</b>		<b>\$</b>	<b>234</b>

**High Range Estimate** **\$ 340 / LNFT**

LENGTH (FT)	1
WIDTH (FT)	10
SURFACING (IN)	6
BASE (IN)	4

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	0.31	\$ 12.00	\$ 4
CRUSHED AGGREGATE COURSE	CUYD	0.12	\$ 45.00	\$ 6
SIDEWALK-CONCRETE 4"	SQYD	0.83	\$ 90.00	\$ 75
SIDEWALK-CONCRETE 6"	SQYD	0.28	\$ 100.00	\$ 28
MISCELLANEOUS ITEMS			25%	\$ 28
	Subtotal 1			\$ 140
TRAFFIC CONTROL			5%	\$ 7

	Subtotal 2		\$	147
MOBILIZATION		10%	\$	15
	Subtotal 3		\$	162
CONTINGENCY (HIGH RISK)		75%	\$	121
	Subtotal 4		\$	283
CONSTRUCTION ENGINEERING (CE)		10%	\$	28
PRELIMINARY ENGINEERING (PE)		10%	\$	28
	<b>TOTAL</b>		<b>\$</b>	<b>340</b>

**LCG-4. Last Chance Gulch Signal Modifications - 6th Avenue and Lawrence Street Intersections \$ 3,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
MODIFY SIGNAL TIMING FOR LPI*	EACH	2.00	\$ 1,500.00	\$ 3,000

\*Anticipated to be completed with existing controllers and infrastructure

**LCG-5. Last Chance Gulch Pedestrian Improvements - Placer Avenue Intersection \$ 110,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	51.39	\$ 12.00	\$ 617
CRUSHED AGGREGATE COURSE	CUYD	17.13	\$ 45.00	\$ 771
SIDEWALK-CONCRETE 4"	SQYD	100.0	\$ 90.00	\$ 9,000
PORT CEM CONC PAVE 9 IN COLORED	SQYD	105.6	\$ 152.47	\$ 16,094
CURB AND GUTTER-CONC	LNFT	130.0	\$ 50.00	\$ 6,500
DETEC WARNING DEVICES-TYPE 1	SQYD	5.0	\$ 348.00	\$ 1,740
INTERSECTION BULBOUT	EACH	2.0	\$ 10,000.00	\$ 20,000
MISCELLANEOUS ITEMS			25%	\$ 8,680
	Subtotal 1		\$	\$ 63,402
TRAFFIC CONTROL			5%	\$ 3,170
	Subtotal 2		\$	\$ 66,572
MOBILIZATION			10%	\$ 6,657
	Subtotal 3		\$	\$ 73,229
CONTINGENCY (LOW RISK)			25%	\$ 18,307
	Subtotal 4		\$	\$ 91,537
CONSTRUCTION ENGINEERING (CE)			10%	\$ 9,154
PRELIMINARY ENGINEERING (PE)			10%	\$ 9,154
	<b>TOTAL</b>		<b>\$</b>	<b>109,844</b>

**LCG-6. Last Chance Gulch Five-Point Intersection Improvements**

**Short-Term Improvements \$ 90,000 TOT**

LENGTH (FT)	175
WIDTH (FT)	8
SURFACING (IN)	6
BASE (IN)	4

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	43.21	\$ 12.00	\$ 519
CRUSHED AGGREGATE COURSE	CUYD	17.28	\$ 45.00	\$ 778
SIDEWALK-CONCRETE 4"	SQYD	140.00	\$ 90.00	\$ 12,600
SIDEWALK-CONCRETE 6"	SQYD	15.56	\$ 100.00	\$ 1,556
CURB AND GUTTER-CONC	LNFT	175.0	\$ 50.00	\$ 8,750
FOUNDATION-CONCRETE	CUYD	2.0	\$ 1,200.00	\$ 2,400
SIG-PEDESTRIAN TYPE 2	EACH	1.0	\$ 1,125.00	\$ 1,125
SIGNS - URBAN	MILE	0.03	\$ 52,000.00	\$ 1,477
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.03	\$ 20,000.00	\$ 568
DRAINAGE PIPE - URBAN	MILE	0.03	\$ 240,000.00	\$ 6,818
MISCELLANEOUS ITEMS			35%	\$ 12,807
	Subtotal 1		\$	\$ 49,397
TRAFFIC CONTROL			5%	\$ 2,470
	Subtotal 2		\$	\$ 51,867
MOBILIZATION			10%	\$ 5,187
	Subtotal 3		\$	\$ 57,054
CONTINGENCY (LOW RISK)			25%	\$ 14,263
	Subtotal 4		\$	\$ 71,317
CONSTRUCTION ENGINEERING (CE)			10%	\$ 7,132
PRELIMINARY ENGINEERING (PE)			10%	\$ 7,132
	<b>TOTAL</b>		<b>\$</b>	<b>85,581</b>

**Long-Term Reconstruction - Roundabout (Mid Range) \$ 2,500,000 TOT**

LENGTH (FT)	1125
WIDTH (FT)	40
SURFACING (IN)	4
BASE (IN)	12

TYPE	UNITS	QUANTITY	UNIT PRICE	COST (MEDIUM)
CRUSHED AGGREGATE COURSE	CUYD	1708.3	\$ 45.00	\$ 76,875
COVER - TYPE 1	SQYD	4625.0	\$ 0.62	\$ 2,868
PLANT MIX BIT SURF GR S-3/4 IN	TON	990.5	\$ 31.96	\$ 31,657
ASPHALT CEMENT PG 64-28	TON	53.5	\$ 275.00	\$ 14,709
EMULS ASPHALT CRS-2P	TON	8.3	\$ 447.71	\$ 3,716
SIDEWALK-CONCRETE 4"	SQYD	1000.0	\$ 90.00	\$ 90,000
SIDEWALK-CONCRETE 6"	SQYD	250.0	\$ 100.00	\$ 25,000
CURB AND GUTTER-CONC	LNFT	2250.0	\$ 50.00	\$ 112,500
SIGNS - URBAN	MILE	0.2	\$ 52,000.00	\$ 11,080
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.2	\$ 20,000.00	\$ 4,261
DRAINAGE PIPE - URBAN	MILE	0.2	\$ 240,000.00	\$ 51,136
LIGHTS - URBAN	MILE	0.2	\$ 175,000.00	\$ 37,287
CONCRETE ROUNDABOUTS - ONE LANE	LS	1.0	\$ 500,000.00	\$ 500,000
MISCELLANEOUS ITEMS			25%	\$ 240,272
	Subtotal 1			\$ 1,201,361
TRAFFIC CONTROL			5%	\$ 60,068
	Subtotal 2			\$ 1,261,429
MOBILIZATION			10%	\$ 126,143
	Subtotal 3			\$ 1,387,572
CONTINGENCY (MEDIUM RISK)			50%	\$ 693,786
	Subtotal 4			\$ 2,081,358
CONSTRUCTION ENGINEERING (CE)			10%	\$ 208,136
PRELIMINARY ENGINEERING (PE)			10%	\$ 208,136
	<b>TOTAL</b>			<b>\$ 2,497,630</b>

**Long-Term Reconstruction - Roundabout (High Range) \$ 3,200,000 TOT**

LENGTH (FT)	1475
WIDTH (FT)	48
SURFACING (IN)	5
BASE (IN)	18

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
CRUSHED AGGREGATE COURSE	CUYD	4015.3	\$ 45.00	\$ 180,688
COVER - TYPE 1	SQYD	7375.0	\$ 0.62	\$ 4,573
PLANT MIX BIT SURF GR S-3/4 IN	TON	1974.3	\$ 31.96	\$ 63,100
ASPHALT CEMENT PG 64-28	TON	106.6	\$ 275.00	\$ 29,319
EMULS ASPHALT CRS-2P	TON	13.2	\$ 447.71	\$ 5,910
SIDEWALK-CONCRETE 4"	SQYD	1311.1	\$ 90.00	\$ 118,000
SIDEWALK-CONCRETE 6"	SQYD	327.8	\$ 100.00	\$ 32,778
CURB AND GUTTER-CONC	LNFT	2950.0	\$ 50.00	\$ 147,500
SIGNS - URBAN	MILE	0.3	\$ 52,000.00	\$ 14,527
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.3	\$ 20,000.00	\$ 5,587
DRAINAGE PIPE - URBAN	MILE	0.3	\$ 240,000.00	\$ 67,045
LIGHTS - URBAN	MILE	0.3	\$ 175,000.00	\$ 48,887
CONCRETE ROUNDABOUTS - ONE LANE	LS	1.0	\$ 500,000.00	\$ 500,000
MISCELLANEOUS ITEMS			25%	\$ 304,478
	Subtotal 1			\$ 1,522,392
TRAFFIC CONTROL			5%	\$ 76,120
	Subtotal 2			\$ 1,598,511
MOBILIZATION			10%	\$ 159,851
	Subtotal 3			\$ 1,758,362
CONTINGENCY (MEDIUM RISK)			50%	\$ 879,181
	Subtotal 4			\$ 2,637,543
CONSTRUCTION ENGINEERING (CE)			10%	\$ 263,754
PRELIMINARY ENGINEERING (PE)			10%	\$ 263,754
	<b>TOTAL</b>			<b>\$ 3,165,052</b>

**LYNDALE AVENUE**

**LYN-1. Lyndale Avenue Pedestrian Crossing - Ewing/Rodney Streets \$ 520,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
CRUSHED AGGREGATE COURSE	CUYD	590.5	\$ 45.00	\$ 26,574
COVER - TYPE 1	SQYD	695.0	\$ 0.62	\$ 431
PLANT MIX BIT SURF GR S-3/4 IN	TON	82.9	\$ 31.96	\$ 2,648
ASPHALT CEMENT PG 64-28	TON	4.5	\$ 275.00	\$ 1,230
EMULS ASPHALT CRS-2P	TON	1.3	\$ 447.71	\$ 582
SIDEWALK-CONCRETE 4"	SQYD	462.5	\$ 90.00	\$ 41,625
SIDEWALK-CONCRETE 6"	SQYD	51.4	\$ 100.00	\$ 5,139
SIGNS - URBAN	MILE	0.3	\$ 52,000.00	\$ 15,265
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.3	\$ 20,000.00	\$ 5,871
DRAINAGE PIPE - URBAN	MILE	0.1	\$ 240,000.00	\$ 28,409
LIGHTS - URBAN	MILE	0.1	\$ 175,000.00	\$ 20,715
PEDESTRIAN BEACON	EACH	1.0	\$ 30,000.00	\$ 30,000
INTERSECTION BULBOUT	EACH	2.0	\$ 10,000.00	\$ 20,000
MISCELLANEOUS ITEMS			25%	\$ 49,622
	Subtotal 1			\$ 248,112
TRAFFIC CONTROL			5%	\$ 12,406
	Subtotal 2			\$ 260,518
MOBILIZATION			10%	\$ 26,052
	Subtotal 3			\$ 286,569
CONTINGENCY (MEDIUM RISK)			50%	\$ 143,285
	Subtotal 4			\$ 429,854
CONSTRUCTION ENGINEERING (CE)			10%	\$ 42,985
PRELIMINARY ENGINEERING (PE)			10%	\$ 42,985
<b>TOTAL</b>				<b>\$ 515,825</b>

**LYN-2. Lyndale Avenue Intersection Improvements - National Avenue \$ 350,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
SIGNALS	LS	1.0	\$ 200,000.00	\$ 200,000
	Subtotal 1			\$ 200,000
TRAFFIC CONTROL			5%	\$ 10,000
	Subtotal 2			\$ 210,000
MOBILIZATION			10%	\$ 21,000
	Subtotal 3			\$ 231,000
CONTINGENCY (LOW RISK)			25%	\$ 57,750
	Subtotal 4			\$ 288,750
CONSTRUCTION ENGINEERING (CE)			10%	\$ 28,875
PRELIMINARY ENGINEERING (PE)			10%	\$ 28,875
<b>TOTAL</b>				<b>\$ 346,500</b>

**HELENA AVENUE**

**HLN-1. Helena Avenue Bike Lanes \$ 3,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
			LENGTH (FT)	1750
STRIPING WHITE EPOXY	GAL	19.4	\$ 63.38	\$ 1,232
SIGNS - ALUM SHEET INVR IV	SQFT	12.5	\$ 25.11	\$ 314
POLES TREATED WOOD 4 IN	LNFT	24.0	\$ 11.16	\$ 268
	Subtotal 1			\$ 1,814
CONTINGENCY (LOW RISK)			25%	\$ 454
<b>TOTAL</b>				<b>\$ 2,268</b>

**HLN-2. Helena Avenue Pedestrian Improvements \$ 190,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
			LENGTH (FT)	950
			WIDTH (FT)	5
			SURFACING (IN)	4
			BASE (IN)	3
EXCAVATION-UNCLASSIFIED	CUYD	102.62	\$ 12.00	\$ 1,231
CRUSHED AGGREGATE COURSE	CUYD	43.98	\$ 45.00	\$ 1,979
SIDEWALK-CONCRETE 4"	SQYD	475.00	\$ 90.00	\$ 42,750
SIDEWALK-CONCRETE 6"	SQYD	52.78	\$ 100.00	\$ 5,278

DETEC WARNING DEVICES-TYPE 1	SQYD	65.0	\$	348.00	\$	22,620
MISCELLANEOUS ITEMS				25%	\$	12,810
	Subtotal 1				\$	86,668
TRAFFIC CONTROL				5%	\$	4,333
	Subtotal 2				\$	91,001
MOBILIZATION				10%	\$	9,100
	Subtotal 3				\$	100,102
CONTINGENCY (MEDIUM RISK)				50%	\$	50,051
	Subtotal 4				\$	150,152
CONSTRUCTION ENGINEERING (CE)				10%	\$	15,015
PRELIMINARY ENGINEERING (PE)				10%	\$	15,015
	<b>TOTAL</b>				<b>\$</b>	<b>180,183</b>

**HLN-3. Helena Avenue Triangle Intersection Improvements - 13th Street to 15th Street**

**Reconstruction with Parking Area \$ 150,000 EACH**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	83.33	\$ 12.00	\$ 1,000
CRUSHED AGGREGATE COURSE	CUYD	13.89	\$ 45.00	\$ 625
SIDEWALK-CONCRETE 4"	SQYD	66.7	\$ 90.00	\$ 6,000
SIDEWALK-CONCRETE 6"	SQYD	16.7	\$ 100.00	\$ 1,667
SIGNS - URBAN	MILE	0.05	\$ 52,000.00	\$ 2,462
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.05	\$ 20,000.00	\$ 947
INTERSECTION BULBOUT	EACH	4.0	\$ 10,000.00	\$ 40,000
LANDSCAPING	SQYD	150.0	\$ 25.00	\$ 3,750
MISCELLANEOUS ITEMS			25%	\$ 14,113
	Subtotal 1			\$ 70,563
TRAFFIC CONTROL			5%	\$ 3,528
	Subtotal 2			\$ 74,092
MOBILIZATION			10%	\$ 7,409
	Subtotal 3			\$ 81,501
CONTINGENCY (MEDIUM RISK)			50%	\$ 40,750
	Subtotal 4			\$ 122,251
CONSTRUCTION ENGINEERING (CE)			10%	\$ 12,225
PRELIMINARY ENGINEERING (PE)			10%	\$ 12,225
	<b>TOTAL</b>			<b>\$ 146,701</b>

**Reconstruction with Parklet \$ 190,000 EACH**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	200.00	\$ 12.00	\$ 2,400
CRUSHED AGGREGATE COURSE	CUYD	13.89	\$ 45.00	\$ 625
SIDEWALK-CONCRETE 4"	SQYD	66.7	\$ 90.00	\$ 6,000
SIDEWALK-CONCRETE 6"	SQYD	16.7	\$ 100.00	\$ 1,667
SIGNS - URBAN	MILE	0.05	\$ 52,000.00	\$ 2,462
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.05	\$ 20,000.00	\$ 947
INTERSECTION BULBOUT	EACH	4.0	\$ 10,000.00	\$ 40,000
LANDSCAPING	SQYD	750.0	\$ 25.00	\$ 18,750
MISCELLANEOUS ITEMS			25%	\$ 18,213
	Subtotal 1			\$ 91,063
TRAFFIC CONTROL			5%	\$ 4,553
	Subtotal 2			\$ 95,617
MOBILIZATION			10%	\$ 9,562
	Subtotal 3			\$ 105,178
CONTINGENCY (MEDIUM RISK)			50%	\$ 52,589
	Subtotal 4			\$ 157,767
CONSTRUCTION ENGINEERING (CE)			10%	\$ 15,777
PRELIMINARY ENGINEERING (PE)			10%	\$ 15,777
	<b>TOTAL</b>			<b>\$ 189,321</b>

**HLN-4. Helena Avenue Intersection Improvements - 16th/Ewing Streets \$ 120,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	100.00	\$ 12.00	\$ 1,200
CRUSHED AGGREGATE COURSE	CUYD	18.52	\$ 45.00	\$ 833
SIDEWALK-CONCRETE 4"	SQYD	88.9	\$ 90.00	\$ 8,000
SIDEWALK-CONCRETE 6"	SQYD	22.2	\$ 100.00	\$ 2,222

SIGNS - URBAN	MILE	0.06	\$	52,000.00	\$	2,955
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.06	\$	20,000.00	\$	1,136
INTERSECTION BULBOUT	EACH	2.0	\$	10,000.00	\$	20,000
LANDSCAPING	SQYD	250.0	\$	25.00	\$	6,250
MISCELLANEOUS ITEMS				25%	\$	10,649
	Subtotal 1				\$	53,246
TRAFFIC CONTROL				5%	\$	2,662
	Subtotal 2				\$	55,908
MOBILIZATION				10%	\$	5,591
	Subtotal 3				\$	61,499
CONTINGENCY (MEDIUM RISK)				50%	\$	30,749
	Subtotal 4				\$	92,248
CONSTRUCTION ENGINEERING (CE)				10%	\$	9,225
PRELIMINARY ENGINEERING (PE)				10%	\$	9,225
	<b>TOTAL</b>				<b>\$</b>	<b>110,698</b>

**HLN-5. Helena Avenue Intersection Improvements - National/Dakota/Boulder Avenues \$ 190,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	333.23	\$ 12.00	\$ 3,999
CRUSHED AGGREGATE COURSE	CUYD	162.04	\$ 45.00	\$ 7,292
PLANT MIX BIT SURF GR S-3/4 IN	TON	131.2	\$ 31.96	\$ 4,193
ASPHALT CEMENT PG 64-28	TON	7.1	\$ 275.00	\$ 1,947
EMULS ASPHALT CRS-2P	TON	1.5	\$ 447.71	\$ 672
SIDEWALK-CONCRETE 4"	SQYD	50.0	\$ 90.00	\$ 4,500
SIDEWALK-CONCRETE 6"	SQYD	5.6	\$ 100.00	\$ 556
CURB AND GUTTER-CONC	LNFT	250.0	\$ 50.00	\$ 12,500
SIGNS - URBAN	MILE	0.09	\$ 52,000.00	\$ 4,924
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.09	\$ 20,000.00	\$ 1,894
INTERSECTION BULBOUT	EACH	2.0	\$ 10,000.00	\$ 20,000
MISCELLANEOUS ITEMS			25%	\$ 15,619
	Subtotal 1			\$ 78,094
TRAFFIC CONTROL			5%	\$ 3,905
	Subtotal 2			\$ 81,999
MOBILIZATION			10%	\$ 8,200
	Subtotal 3			\$ 90,199
CONTINGENCY (HIGH RISK)			75%	\$ 67,649
	Subtotal 4			\$ 157,848
CONSTRUCTION ENGINEERING (CE)			10%	\$ 15,785
PRELIMINARY ENGINEERING (PE)			10%	\$ 15,785
	<b>TOTAL</b>			<b>\$ 189,418</b>

**MONTANA AVENUE**

**MT-1. Montana Avenue Rail Crossing \$ 34,400,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
UNDERPASS (2015 ESTIMATE)	EACH	1.0	\$ 29,600,000.00	\$ 29,600,000
	Subtotal 1			\$ 29,600,000
INFLATION	% PER YEAR	5.0	3%	\$ 4,714,513
	<b>TOTAL</b>			<b>\$ 34,314,513</b>

**MT-2. Montana Avenue Five-Point Intersection Improvements**

**Roundabout (Mid Range) \$ 4,900,000 TOT**

LENGTH (FT)	1750
WIDTH (FT)	56
SURFACING (IN)	5
BASE (IN)	12

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	2472.9	\$ 12.00	\$ 29,675
CRUSHED AGGREGATE COURSE	CUYD	3694.4	\$ 45.00	\$ 166,250
COVER - TYPE 1	SQYD	10306.0	\$ 0.62	\$ 6,390
PLANT MIX BIT SURF GR S-3/4 IN	TON	2758.9	\$ 31.96	\$ 88,174
ASPHALT CEMENT PG 64-28	TON	149.0	\$ 275.00	\$ 40,970
EMULS ASPHALT CRS-2P	TON	18.4	\$ 447.71	\$ 8,238
SIDEWALK-CONCRETE 4"	SQYD	1555.6	\$ 90.00	\$ 140,000



SIDEWALK-CONCRETE 6"	SQYD	388.9	\$	100.00	\$	38,889
CURB AND GUTTER-CONC	LNFT	3500.0	\$	50.00	\$	175,000
SIGNS - URBAN	MILE	0.3	\$	52,000.00	\$	17,235
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.3	\$	20,000.00	\$	6,629
DRAINAGE PIPE - URBAN	MILE	0.3	\$	240,000.00	\$	79,545
LIGHTS - URBAN	MILE	0.3	\$	175,000.00	\$	58,002
CONCRETE ROUNDABOUTS - TWO LANES	LS	1.0	\$	1,000,000.00	\$	1,000,000
MISCELLANEOUS ITEMS				25%	\$	463,749
	Subtotal 1				\$	2,318,745
TRAFFIC CONTROL				5%	\$	115,937
	Subtotal 2				\$	2,434,682
MOBILIZATION				10%	\$	243,468
	Subtotal 3				\$	2,678,150
CONTINGENCY (MEDIUM RISK)				50%	\$	1,339,075
	Subtotal 4				\$	4,017,225
CONSTRUCTION ENGINEERING (CE)				10%	\$	401,722
PRELIMINARY ENGINEERING (PE)				10%	\$	401,722
	<b>TOTAL</b>				<b>\$</b>	<b>4,820,670</b>

**Roundabout (High Range) \$ 5,900,000 TOT**

LENGTH (FT)	2250
WIDTH (FT)	56
SURFACING (IN)	5
BASE (IN)	18

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	5630.8	\$ 12.00	\$ 67,569
CRUSHED AGGREGATE COURSE	CUYD	7124.0	\$ 45.00	\$ 320,580
COVER - TYPE 1	SQYD	13250.0	\$ 0.62	\$ 8,215
PLANT MIX BIT SURF GR S-3/4 IN	TON	3547.1	\$ 31.96	\$ 113,367
ASPHALT CEMENT PG 64-28	TON	191.6	\$ 275.00	\$ 52,676
EMULS ASPHALT CRS-2P	TON	23.7	\$ 447.71	\$ 10,611
SIDEWALK-CONCRETE 4"	SQYD	2000.0	\$ 90.00	\$ 180,000
SIDEWALK-CONCRETE 6"	SQYD	500.0	\$ 100.00	\$ 50,000
CURB AND GUTTER-CONC	LNFT	4500.0	\$ 50.00	\$ 225,000
SIGNS - URBAN	MILE	0.4	\$ 52,000.00	\$ 22,159
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.4	\$ 20,000.00	\$ 8,523
DRAINAGE PIPE - URBAN	MILE	0.4	\$ 240,000.00	\$ 102,273
LIGHTS - URBAN	MILE	0.4	\$ 175,000.00	\$ 74,574
CONCRETE ROUNDABOUTS - TWO LANES	LS	1.0	\$ 1,000,000.00	\$ 1,000,000
MISCELLANEOUS ITEMS			25%	\$ 558,887
	Subtotal 1			\$ 2,794,433
TRAFFIC CONTROL			5%	\$ 139,722
	Subtotal 2			\$ 2,934,155
MOBILIZATION			10%	\$ 293,415
	Subtotal 3			\$ 3,227,570
CONTINGENCY (MEDIUM RISK)			50%	\$ 1,613,785
	Subtotal 4			\$ 4,841,355
CONSTRUCTION ENGINEERING (CE)			10%	\$ 484,136
PRELIMINARY ENGINEERING (PE)			10%	\$ 484,136
	<b>TOTAL</b>			<b>\$ 5,809,626</b>

**MT-3. Montana Avenue Centennial Trail Crossing and Extension**

**Extension with Option A: Overhead Hybrid Beacon \$ 420,000 TOT**

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	944.9	\$ 12.00	\$ 11,338
CRUSHED AGGREGATE COURSE	CUYD	407.4	\$ 45.00	\$ 18,333
COVER - TYPE 1	SQYD	1556.0	\$ 0.62	\$ 965
PLANT MIX BIT SURF GR S-3/4 IN	TON	166.6	\$ 31.96	\$ 5,324
ASPHALT CEMENT PG 64-28	TON	9.0	\$ 275.00	\$ 2,475
EMULS ASPHALT CRS-2P	TON	2.8	\$ 447.71	\$ 1,254
SIGNS - URBAN	MILE	0.18	\$ 52,000.00	\$ 9,100
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.18	\$ 20,000.00	\$ 3,500
LIGHTS - URBAN	MILE	0.10	\$ 175,000.00	\$ 17,500
INTERSECTION BULBOUT	EACH	2.0	\$ 10,000.00	\$ 20,000
PEDESTRIAN BEACON	EACH	2.0	\$ 30,000.00	\$ 60,000

MISCELLANEOUS ITEMS				25%	\$	37,447
	Subtotal 1				\$	187,236
TRAFFIC CONTROL				5%	\$	9,362
	Subtotal 2				\$	196,598
MOBILIZATION				10%	\$	19,660
	Subtotal 3				\$	216,257
CONTINGENCY (MEDIUM RISK)				50%	\$	108,129
	Subtotal 4				\$	324,386
CONSTRUCTION ENGINEERING (CE)				10%	\$	32,439
PRELIMINARY ENGINEERING (PE)				10%	\$	32,439
UPDATE CENTENNIAL TRAIL MASTER PLAN	EACH	1.0	\$	30,000.00	\$	30,000
	<b>TOTAL</b>				<b>\$</b>	<b>419,263</b>

<b>Extension with Option B: Two-Stage Crossing with RRFB</b>	<b>\$</b>	<b>530,000 TOT</b>
--	-----------	--------------------

TYPE	UNITS	QUANTITY	UNIT PRICE	COST
EXCAVATION-UNCLASSIFIED	CUYD	1692.2	\$ 12.00	\$ 20,306
CRUSHED AGGREGATE COURSE	CUYD	648.2	\$ 45.00	\$ 29,167
COVER - TYPE 1	SQYD	2056.0	\$ 0.62	\$ 1,275
PLANT MIX BIT SURF GR S-3/4 IN	TON	273.7	\$ 31.96	\$ 8,746
ASPHALT CEMENT PG 64-28	TON	14.8	\$ 275.00	\$ 4,065
EMULS ASPHALT CRS-2P	TON	3.7	\$ 447.71	\$ 1,657
SIGNS - URBAN	MILE	0.35	\$ 52,000.00	\$ 18,200
STRIPING & PAVEMENT MARKINGS - URBAN	MILE	0.35	\$ 20,000.00	\$ 7,000
LIGHTS - URBAN	MILE	0.20	\$ 175,000.00	\$ 35,000
INTERSECTION BULBOUT	LNFT	2.0	\$ 10,000.00	\$ 20,000
RECTANGULAR RAPID FLASHING BEACON	EACH	2.0	\$ 15,000.00	\$ 30,000
PORT CEM CONC PAVE 9 IN COLORED	SQYD	111.1	\$ 152.47	\$ 16,941
MISCELLANEOUS ITEMS			25%	\$ 48,089
	Subtotal 1			\$ 240,445
TRAFFIC CONTROL			5%	\$ 12,022
	Subtotal 2			\$ 252,467
MOBILIZATION			10%	\$ 25,247
	Subtotal 3			\$ 277,714
CONTINGENCY (MEDIUM RISK)			50%	\$ 138,857
	Subtotal 4			\$ 416,570
CONSTRUCTION ENGINEERING (CE)			10%	\$ 41,657
PRELIMINARY ENGINEERING (PE)			10%	\$ 41,657
UPDATE CENTENNIAL TRAIL MASTER PLAN	EACH	1.0	\$ 30,000.00	\$ 30,000
	<b>TOTAL</b>			<b>\$ 529,884</b>