

# Appendix Three

## Cost Estimates

# Alerus Center - 43rd Street/17th Avenue Temporary Roadway Section Preliminary Cost Estimate

Prepared By: SRF Consulting Group, Inc., January 30, 2006

ITEM DESCRIPTION	UNIT	UNIT PRICE	EST. QUANTITY	EST. AMOUNT	
<b>PAVING AND GRADING COSTS</b>					
1	Excavation (for 15" aggregate)	cu. yd.	\$5.00	3,500	\$17,500
2	Subgrade Preparation - Type A 12 inch	sq. yd.	\$2.00	10,200	\$20,400
3	Aggregate Base Course (for 15" aggregate)	cu. yd.	\$20.00	2,200	\$44,000
4	Geotextile Fabric	sq. yd.	\$2.50	5,300	\$13,250
<b>SUBTOTAL PAVING AND GRADING COSTS:</b>					<b>\$95,150</b>
<b>MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS</b>					
1	Removal - Miscellaneous	l.s.	\$20,000	1	\$20,000
2	Drainage - rural storm sewer	l.s.	\$10,000	1	\$10,000
3	Turf Establishment & Erosion Control	l.s.	\$20,000	1	\$20,000
<b>SUBTOTAL MISC. PERCENTAGE COSTS:</b>					<b>\$50,000</b>
<b>SIGNAL AND LIGHTING COSTS</b>					
<b>SUBTOTAL LIGHTING COSTS:</b>					
<b>SIGNING COSTS</b>					
1	Mainline Signing	mile	\$30,000	0.3	\$9,600
<b>SUBTOTAL SIGNING &amp; STRIPING COSTS:</b>					<b>\$9,600</b>
<b>SUBTOTAL CONSTRUCTION COSTS:</b>					<b>\$154,750</b>
<b>MISCELLANEOUS COSTS</b>					
1	Mobilization and Contract Bond	5%			\$8,000
2	Contingencies & Minor Items	10%			\$15,000
3	Engineering - Design & Administration	25%			\$39,000
<b>SUBTOTAL MISCELLANEOUS COSTS:</b>					<b>\$62,000</b>
<b>ESTIMATED TOTAL CONSTRUCTION &amp; MISCELLANEOUS COSTS (for 15" aggregate):</b>					<b>\$216,750</b>
<b>ESTIMATED TOTAL CONSTRUCTION &amp; MISCELLANEOUS COSTS (for 24" aggregate):</b>					<b>\$262,650</b>

NOTE This estimate does not include potential costs for special treatment of existing contaminated soils.

# Alerus Center - 43rd Street/17th Avenue Full Urban Roadway Section Preliminary Cost Estimate

**Prepared By: SRF Consulting Group, Inc., November 14, 2005**

	ITEM DESCRIPTION	UNIT	UNIT PRICE	EST. QUANTITY	EST. AMOUNT
<b>PAVING AND GRADING COSTS</b>					
1	Excavation	cu. yd.	\$5.00	7,650	\$38,250
2	Subgrade Preparation - Type A 12 inch	sq. yd.	\$2.00	10,200	\$20,400
3	Aggregate Base Course CL-5	cu. yd.	\$20.00	3,400	\$68,000
4	Bituminous Pavement	sq. yd.	\$20.00	7,600	\$152,000
5	Curb and Gutter	lin. ft.	\$12.00	3,400	\$40,800
<b>SUBTOTAL PAVING AND GRADING COSTS:</b>					<b>\$319,450</b>
<b>MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS</b>					
1	Removal - Miscellaneous	l.s.	\$20,000	1	\$20,000
2	Drainage - urban storm sewer (1)	l.s.	\$40,000	1	\$40,000
3	Turf Establishment & Erosion Control	l.s.	\$20,000	1	\$20,000
<b>SUBTOTAL MISC. PERCENTAGE COSTS:</b>					<b>\$80,000</b>
<b>SIGNAL AND LIGHTING COSTS</b>					
1	Traffic Signals - Upgrade at 42nd Street	each	\$25,000	1	\$25,000
<b>SUBTOTAL LIGHTING COSTS:</b>					<b>\$25,000</b>
<b>SIGNING COSTS</b>					
1	Mainline Signing & Striping	mile	\$50,000	0.3	\$16,000
<b>SUBTOTAL SIGNING &amp; STRIPING COSTS:</b>					<b>\$16,000</b>
<b>SUBTOTAL CONSTRUCTION COSTS:</b>					<b>\$440,450</b>
<b>MISCELLANEOUS COSTS</b>					
1	Mobilization and Contract Bond	5%			\$22,000
2	Contingencies & Minor Items	10%			\$44,000
3	Engineering - Design & Administration	25%			\$110,000
<b>SUBTOTAL MISCELLANEOUS COSTS:</b>					<b>\$176,000</b>
<b>ESTIMATED TOTAL CONSTRUCTION &amp; MISCELLANEOUS COSTS:</b>					<b>\$616,450</b>

NOTE This estimate does not include potential costs for special treatment of existing contaminated soils.

# Alerus Center - 38th Street/32nd Avenue Intersection Improvements Preliminary Cost Estimate

Prepared By: SRF Consulting Group, Inc., January 13, 2006

	ITEM DESCRIPTION	UNIT	UNIT PRICE	EST. QUANTITY	EST. AMOUNT
<b>PAVING AND GRADING COSTS</b>					
1	Excavation	cu. yd.	\$5.00	1,216	\$6,080
2	Subgrade Preparation - Type A 12 inch	sq. yd.	\$2.00	1,621	\$3,242
3	Aggregate Base Course CL-5	cu. yd.	\$20.00	540	\$10,800
4	9-inch Non-Reinforced Concrete Pavement CL AE-Doweled	sq. yd.	\$40.00	870	\$34,800
5	Curb and Gutter	lin. ft.	\$12.00	870	\$10,440
6	Concrete Sidewalk	sq. yd.	\$28.00	145	\$4,060
7	Saw Cut	lin. ft.	\$4.00	870	\$3,480
<b>SUBTOTAL PAVING AND GRADING COSTS:</b>					<b>\$72,902</b>
<b>MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS</b>					
1	Removal - Curb & Gutter	lin. ft.	\$4.00	870	\$3,480
2	Removal - Sidewalk	sq. yd.	\$5.25	145	\$761
3	Drainage - urban storm sewer	l.s.	\$30,000	1	\$30,000
4	Turf Establishment & Erosion Control	l.s.	\$5,000	1	\$5,000
<b>SUBTOTAL MISC. PERCENTAGE COSTS:</b>					<b>\$39,241</b>
<b>SIGNAL AND LIGHTING COSTS</b>					
1	Traffic Signals - Upgrade at 32nd Avenue	each	\$15,000	1	\$15,000
<b>SUBTOTAL LIGHTING COSTS:</b>					<b>\$15,000</b>
<b>SIGNING COSTS</b>					
1	Obliteration of Pavement Marking	sq. ft.	\$1.15	900	\$1,035
2	Preformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	150	\$353
3	Preformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	4100	\$9,635
4	Preformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	570	\$1,340
5	Preformed Patterned Pavement Marking 8-in Line-Grooved,	lin. ft.	\$6.85	250	\$1,713
6	Preformed Patterned Pavement Marking 24-in Line-Grooved,	lin. ft.	\$18.53	40	\$741
7	Preformed Thermo Plastic Pavement Marking Message (1)	sq. ft.	\$23.00	273	\$6,279
<b>SUBTOTAL SIGNING &amp; STRIPING COSTS:</b>					<b>\$21,095</b>
<b>SUBTOTAL CONSTRUCTION COSTS:</b>					<b>\$148,238</b>
<b>MISCELLANEOUS COSTS</b>					
1	Mobilization and Contract Bond	5%			\$7,000
2	Contingencies & Minor Items	10%			\$15,000
3	Engineering - Design & Administration	25%			\$37,000
<b>SUBTOTAL MISCELLANEOUS COSTS:</b>					<b>\$59,000</b>
<b>ESTIMATED TOTAL CONSTRUCTION &amp; MISCELLANEOUS COSTS:</b>					<b>\$207,238</b>

NOTE This estimate does not include potential costs for special treatment of existing contaminated soils.

**Table 2****Estimated Cost per Event <sup>(1)</sup>**

Event with 8,400 people (e.g., Non-Football Event)				Event with 12,000 people (e.g., Football Event)			
	Quantity	Rate	Cost		Quantity	Rate	Cost
Overflow Parking Shuttle Buses				Overflow Parking Shuttle Buses			
Altru Shuttles	3	\$100/hour for 8 hours	\$ 2,400.00	Altru Shuttles	3	\$100/hour for 8 hours	\$ 2,400.00
Other Shuttles	0	\$100/hour for 8 hours	\$ -	UND Shuttles	22	\$100/hour for 8 hours	\$ 17,600.00
Stationary Signs	22	\$2/sign/day	\$ 44.00	Stationary Signs	25	\$2/sign/day	\$ 50.00
Variable Message Signs <sup>(2)</sup>	8	\$300/sign/day	\$ 2,400.00	Variable Message Signs <sup>(2)</sup>	8	\$300/sign/day	\$ 2,400.00
Barricades <sup>(3)</sup>	33	\$4.50/day/barricade	\$ 148.50	Barricades <sup>(3)</sup>	30	\$4.50/day/barricade	\$ 135.00
Cones <sup>(4)</sup>	201	\$0.30/day/cone	\$ 60.30	Cones <sup>(4)</sup>	201	\$0.30/day/cone	\$ 60.30
Traffic Control Setup Staff <sup>(5)</sup>	10	\$20/hour for 2 hours	\$ 400.00	Traffic Control Setup Staff <sup>(5)</sup>	10	\$20/hour for 2 hours	\$ 400.00
Traffic Control Staff - Police				Traffic Control Staff - Police			
During Event Arrival	4	\$70/hour for 2 hours	\$ 560.00	During Event Arrival	4	\$70/hour for 2 hours	\$ 560.00
During Event Departure	12	\$70/hour for 2 hours	\$ 1,680.00	During Event Departure	12	\$70/hour for 2 hours	\$ 1,680.00
Traffic Control Staff - Alerus				Traffic Control Staff - Alerus			
During Event Arrival	24	\$20/hour for 2 hours	\$ 960.00	During Event Arrival	22	\$20/hour for 2 hours	\$ 880.00
During Event Departure	16	\$20/hour for 2 hours	\$ 640.00	During Event Departure	16	\$20/hour for 2 hours	\$ 640.00
<b>Total</b>			<b>\$ 9,293.00</b>	<b>Total</b>			<b>\$ 26,805.00</b>

<sup>(1)</sup> Assumes all shuttle buses, signs (including variable message signs), barricades and cones must be rented at regular market rate. Does not account for Alerus Center's inventory.

<sup>(2)</sup> Includes permanent variable message sign near Demers Avenue and Columbia Road. The cost of this sign may be eliminated if no fee is charged for its use.

<sup>(3)</sup> General event: 33 barricades needed during arrival, 32 during departure. Football game: 30 barricades needed during arrival and departure.

<sup>(4)</sup> 201 cones needed during departure for each event, only 108 cones needed during arrival.

<sup>(5)</sup> Traffic control setup staff is responsible for setting up all signs, barricades and cones prior to event arrival and departure.