

Appendix C

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 | |
|--|---|------------|---------------|-------------|------------------|
| PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL PAVING AND GRADING COSTS: | | | | | \$95,150 |
| MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL MISC. PERCENTAGE COSTS: | | | | | \$50,000 |
| SIGNAL AND LIGHTING COSTS | | | | | |
| SUBTOTAL LIGHTING COSTS: | | | | | |
| SIGNING COSTS | | | | | |
| 1 | Mainline Signing | mile | \$30,000 | 0.3 | \$9,600 |
| SUBTOTAL SIGNING & STRIPING COSTS: | | | | | \$9,600 |
| SUBTOTAL CONSTRUCTION COSTS: | | | | | \$154,750 |
| MISCELLANEOUS COSTS | | | | | |
| 1 | Mobilization and Contract Bond | 5% | | | \$8,000 |
| 2 | Contingencies & Minor Items | 10% | | | \$15,000 |
| 3 | Engineering - Design & Administration | 25% | | | \$39,000 |
| SUBTOTAL MISCELLANEOUS COSTS: | | | | | \$62,000 |
| ESTIMATED TOTAL CONSTRUCTION & MISCELLANEOUS COSTS (for 15" aggregate): | | | | | \$216,750 |
| ESTIMATED TOTAL CONSTRUCTION & MISCELLANEOUS COSTS (for 24" aggregate): | | | | | \$262,650 |

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 |
|--|--|----------|------------|---------------|------------------|
| PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL PAVING AND GRADING COSTS: | | | | | \$319,450 |
| MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL MISC. PERCENTAGE COSTS: | | | | | \$80,000 |
| SIGNAL AND LIGHTING COSTS | | | | | |
| 1 | Traffic Signals - Upgrade at 42nd Street | each | \$25,000 | 1 | \$25,000 |
| SUBTOTAL LIGHTING COSTS: | | | | | \$25,000 |
| SIGNING COSTS | | | | | |
| 1 | Mainline Signing & Striping | mile | \$50,000 | 0.3 | \$16,000 |
| SUBTOTAL SIGNING & STRIPING COSTS: | | | | | \$16,000 |
| SUBTOTAL CONSTRUCTION COSTS: | | | | | \$440,450 |
| MISCELLANEOUS COSTS | | | | | |
| 1 | Mobilization and Contract Bond | 5% | | | \$22,000 |
| 2 | Contingencies & Minor Items | 10% | | | \$44,000 |
| 3 | Engineering - Design & Administration | 25% | | | \$110,000 |
| SUBTOTAL MISCELLANEOUS COSTS: | | | | | \$176,000 |
| ESTIMATED TOTAL CONSTRUCTION & MISCELLANEOUS COSTS: | | | | | \$616,450 |
| | | | | | |
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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 |
|--|--|----------|------------|---------------|------------------|
| PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL PAVING AND GRADING COSTS: | | | | | \$72,902 |
| MISC. UNIT or PERCENTAGE OF PAVING AND GRADING COSTS | | | | | |
| 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 |
| SUBTOTAL MISC. PERCENTAGE COSTS: | | | | | \$39,241 |
| SIGNAL AND LIGHTING COSTS | | | | | |
| 1 | Traffic Signals - Upgrade at 32nd Avenue | each | \$15,000 | 1 | \$15,000 |
| SUBTOTAL LIGHTING COSTS: | | | | | \$15,000 |
| SIGNING COSTS | | | | | |
| 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 |
| SUBTOTAL SIGNING & STRIPING COSTS: | | | | | \$21,095 |
| SUBTOTAL CONSTRUCTION COSTS: | | | | | \$148,238 |
| MISCELLANEOUS COSTS | | | | | |
| 1 | Mobilization and Contract Bond | 5% | | | \$7,000 |
| 2 | Contingencies & Minor Items | 10% | | | \$15,000 |
| 3 | Engineering - Design & Administration | 25% | | | \$37,000 |
| SUBTOTAL MISCELLANEOUS COSTS: | | | | | \$59,000 |
| ESTIMATED TOTAL CONSTRUCTION & MISCELLANEOUS COSTS: | | | | | \$207,238 |
| | | | | | |
| | | | | | |

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

Table 2**Estimated Cost per Event ⁽¹⁾**

| 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 ⁽²⁾ | 8 | \$300/sign/day | \$ 2,400.00 | Variable Message Signs ⁽²⁾ | 8 | \$300/sign/day | \$ 2,400.00 |
| Barricades ⁽³⁾ | 33 | \$4.50/day/barricade | \$ 148.50 | Barricades ⁽³⁾ | 30 | \$4.50/day/barricade | \$ 135.00 |
| Cones ⁽⁴⁾ | 201 | \$0.30/day/cone | \$ 60.30 | Cones ⁽⁴⁾ | 201 | \$0.30/day/cone | \$ 60.30 |
| Traffic Control Setup Staff ⁽⁵⁾ | 10 | \$20/hour for 2 hours | \$ 400.00 | Traffic Control Setup Staff ⁽⁵⁾ | 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 |
| Total | | | \$ 9,293.00 | Total | | | \$ 26,805.00 |

⁽¹⁾ 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.

⁽²⁾ 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.

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

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

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