

Appendix B

Supporting Data

**NORTH LOGAN/HYDE PARK CORRIDOR
PRELIMINARY OPINION OF PROBABLE COST**

UDOT Project #STP-1232(1)

21-Mar-05

Alternative 3

Item	Description	Amount
1	Mobilization	\$300,000
2	Surveying	\$50,000
3	Utility Improvements (water, sewer, irrigation, gas, power, telephone)	\$100,000
4	Earthwork	\$282,287
5	Pavement and Base	\$1,619,493
6	Concrete Work	\$878,075
7	Signing and Striping	\$31,612
8	Traffic Control	\$25,000
9	Landscaping	\$235,490
10	Drainage and Minor Structures	\$2,186,150
	Construction Subtotal	\$5,708,107
11	Right-of-Way and Property Relocations	\$3,224,650
	Subtotal	\$8,932,757
	Contingency & CE (25%)	\$2,233,189
(not including Environmental & Preliminary Engineering)	Total	\$11,165,946

Preliminary Engineering & Environmental	\$	700,000.00
UDOT Admin (3%)	\$	355,978.39
Project Total Cost		\$12,221,925

**NORTH LOGAN/HYDE PARK CORRIDOR
PRELIMINARY OPINION OF PROBABLE COST**

UDOT Project #STP-1232(1)
21-Mar-05
Alternative 5

Item	Description	Amount
1	Mobilization	\$300,000
2	Surveying	\$50,000
3	Utility Improvements (water, sewer, irrigation, gas, power, telephone)	\$120,000
4	Earthwork	\$302,878
5	Pavement and Base	\$1,704,603
6	Concrete Work	\$1,039,736
7	Signing and Striping	\$45,307
8	Traffic Control	\$40,000
9	Landscaping	\$224,763
10	Drainage and Minor Structures	\$2,046,000
	Construction Subtotal	\$5,873,287
11	Right-of-Way and Property Relocations	\$1,908,850
	Subtotal	\$7,782,137
	Contingency & CE (25%)	\$1,945,534
(not including Environmental & Preliminary Engineering)	Total	\$9,727,672

Preliminary Engineering & Environmental	\$	700,000.00
UDOT Admin (3%)	\$	312,830.15
Project Total Cost		\$10,740,502

**NORTH LOGAN/HYDE PARK CORRIDOR
PRELIMINARY OPINION OF PROBABLE COST**

UDOT Project #STP-1232(1)
21-Mar-05
Alternative 6A

Item	Description	Amount
1	Mobilization	\$300,000
2	Surveying	\$50,000
3	Utility Improvements (water, sewer, irrigation, gas, power, telephone)	\$100,000
4	Earthwork	\$277,036
5	Pavement and Base	\$1,592,828
6	Concrete Work	\$922,702
7	Signing and Striping	\$31,337
8	Traffic Control	\$25,000
9	Landscaping	\$232,972
10	Drainage and Minor Structures	\$2,055,060
	Construction Subtotal	\$5,586,934
11	Right-of-Way and Property Relocations	\$9,368,900
	Subtotal	\$14,955,834
	Contingency & CE (25%)	\$3,738,959
(not including Environmental & Preliminary Engineering)	Total	\$18,694,793

Preliminary Engineering & Environmental	\$	700,000.00
UDOT Admin (3%)	\$	581,843.78
Project Total Cost		\$19,976,636

**NORTH LOGAN/HYDE PARK CORRIDOR
PRELIMINARY OPINION OF PROBABLE COST**

UDOT Project #STP-1232(1)

21-Mar-05

Alternative 6B

Item	Description	Amount
1	Mobilization	\$300,000
2	Surveying	\$50,000
3	Utility Improvements (water, sewer, irrigation, gas, power, telephone)	\$100,000
4	Earthwork	\$315,130
5	Pavement and Base	\$1,770,324
6	Concrete Work	\$956,996
7	Signing and Striping	\$39,564
8	Traffic Control	\$25,000
9	Landscaping	\$249,473
10	Drainage and Minor Structures	\$2,055,900
	Construction Subtotal	\$5,862,387
11	Right-of-Way and Property Relocations	\$3,113,500
	Subtotal	\$8,975,887
	Contingency & CE (25%)	\$2,243,972
	Total	\$11,219,858

(not including Environmental & Preliminary Engineering)

COST ESTIMATE								
Alternative	Total Cost (2005)	Multiplier ₁	Cost (2010)	3 Lane Section Cost ₂	Noise Wall Cost ₄	Wetland Mitigation Cost	Added Parking Cost ₃	TOTAL 2010 PROJECT COST
3	\$ 12,221,925	1.47	\$ 17,966,230	\$ (852,000)	\$ 97,920	\$ 122,850	-	\$ 17,335,000
3M	\$ 12,221,925	1.47	\$ 17,966,230	\$ (2,276,000)	\$ 139,920	\$ 83,125	-	\$ 15,913,275
5	\$ 10,740,502	1.47	\$ 15,788,538	\$ (2,276,000)	\$ 312,920	\$ 83,125	-	\$ 13,908,583
6A	\$ 19,976,636	1.47	\$ 29,365,655	\$ (2,276,000)	\$ 471,920	\$ 280,875	\$ 400,000	\$ 28,242,450
6B	\$ 11,219,858	1.47	\$ 16,493,191	\$ (2,276,000)	\$ 217,720	\$ 89,688	\$ 400,000	\$ 14,924,599

Estimated Labor Cost₅

6,067,250
5,569,646
4,868,004
9,884,857
5,223,610

Notes:

1. The 2005 costs were brought into 2010 costs, using a multiplier factor. See multiplier factor spreadsheet for calculation.
2. A 3-lane section of the project was constructed between 1800 North to 2200 North after the 2005 estimate. The cost of this section of road was subtracted out of each alternative.
3. Cost to construct a parking lot on the west side of the Eccles Ice Center, for impacted parking.
4. See Noise Study
5. Assume 35% of project cost

ALTERNATIVE 5							
ITEM	Big Ticket Items	Quantity	Unit	Previous Unit Cost	Previous Amount	2010 Unit Cost	2010 Amount
1	Mobilization	1	5.1%	\$ 300,000	\$ 300,000	5.0%	\$ 425,000
2	Traffic Control	1	0.7%	\$ 40,000	\$ 40,000	3.0%	\$ 255,000
3	Surveying	1	0.9%	\$ 50,000	\$ 50,000	1.0%	\$ 85,000
4	Utilities	1	2.0%	\$ 120,000	\$ 120,000	2.0%	\$ 170,000
5	Removals	1	1.0%	\$ 57,000	\$ 57,000	1.0%	\$ 85,000
6	Drainage	1	13.5%	\$ 793,000	\$ 793,000	13.5%	\$ 1,147,500
7	Bridge	1	Each	\$ 1,253,000	\$ 1,253,000	1	\$ 1,754,200
8	Roadway Excavation	30829	CY	\$ 6	\$ 184,974	\$ 10	\$ 308,290
9	Granular Borrow	56281	Ton	\$ 8	\$ 450,248	\$ 15	\$ 844,215
10	Untreated Base Course	30174	Ton	\$ 10	\$ 301,740	\$ 10	\$ 301,740
11	HMA	21503	Ton	\$ 40	\$ 860,120	\$ 80	\$ 1,720,240
12	Curb and Gutter Type B1	32800	LF	\$ 8	\$ 262,400	\$ 14	\$ 459,200
13	Concrete Curb B5	24050	LF	\$ 5	\$ 120,250	\$ 8	\$ 192,400
14	Concrete Sidewalk	200500	SF	\$ 2	\$ 451,125	\$ 3	\$ 601,500
				PREVIOUS CONSTRUCTION TOTAL	\$ 5,243,857		\$ 8,349,285
15	Undeveloped R/W	17.29	Acre	\$ 85,000	\$ 1,469,650	\$ 85,000	\$ 1,469,650
16	Commercial R/W	1.99	Acre	\$ 180,000	\$ 358,200	\$ 436,000	\$ 867,640
17	Residential R/W	0.45	Acre	\$ 180,000	\$ 81,000	\$ 225,000	\$ 101,250
				PREVIOUS R/W TOTAL	\$ 1,908,850		\$ 2,438,540
				PREVIOUS BIG TICKET ITEMS TOTAL	\$ 7,152,707	2010 TOTAL	\$ 10,787,825
				Multiplier Factor	1.51		
Notes: Big Ticket Items were defined by items over \$100,000. Multiplier Factor is determined from dividing 2010 cost by the previous cost. 2010 Unit costs were determined using UDOT 2010 statewide averages.							

ALTERNATIVE 6A							
ITEM	Big Ticket Items	Quantity	Unit	Previous Unit Cost	Previous Amount	2010 Unit Cost	2010 Amount
1	Mobilization	1	5.4%	\$ 300,000	\$ 300,000	5.0%	\$ 425,000
2	Traffic Control	1	0.4%	\$ 25,000	\$ 25,000	3.0%	\$ 255,000
3	Surveying	1	0.9%	\$ 50,000	\$ 50,000	1.0%	\$ 85,000
4	Utilities	1	1.8%	\$ 100,000	\$ 100,000	2.0%	\$ 170,000
5	Removals	1	0.9%	\$ 52,000	\$ 52,000	1.0%	\$ 85,000
6	Drainage	1	14.4%	\$ 802,000	\$ 802,000	14.4%	\$ 1,224,000
7	Bridge	1	Each	\$ 1,253,000	\$ 1,253,000	1	\$ 1,754,200
8	Roadway Excavation	28821	CY	\$ 6	\$ 172,926	\$ 10	\$ 288,210
9	Granular Borrow	52526	Ton	\$ 8	\$ 420,208	\$ 15	\$ 787,890
10	Untreated Base Course	28208	Ton	\$ 10	\$ 282,080	\$ 10	\$ 282,080
11	HMA	20102	Ton	\$ 40	\$ 804,080	\$ 80	\$ 1,608,160
12	Curb and Gutter Type B1	31304	LF	\$ 8	\$ 250,432	\$ 14	\$ 438,256
13	Concrete Curb B5	25144	LF	\$ 5	\$ 125,720	\$ 8	\$ 201,152
14	Concrete Sidewalk	211222	SF	\$ 2	\$ 475,250	\$ 3	\$ 633,666
				PREVIOUS CONSTRUCTION TOTAL	\$ 5,112,696		\$ 8,237,614
15	Undeveloped R/W	18.62	Acre	\$ 85,000	\$ 1,469,650	\$ 85,000	\$ 1,582,700
16	Commercial R/W	5.37	Acre	\$ 180,000	\$ 358,200	\$ 436,000	\$ 2,341,320
17	Residential R/W	0.22	Acre	\$ 180,000	\$ 81,000	\$ 225,000	\$ 49,500
18	Relocations General	1	Lump	\$ 25,000	\$ 25,000	\$ 27,500	\$ 27,500
19	Relocations Storage	1	Lump	\$ 3,640,000	\$ 3,640,000	\$ 4,004,000	\$ 4,004,000
20	Relocations Eccles Parking	1	Lump	\$ 10,000	\$ 10,000	\$ 11,000	\$ 11,000

21	Relocations Charter School	1	Lump	\$ 3,105,000	\$ 3,105,000	\$ 3,415,500	\$ 3,415,500
				PREVIOUS R/W TOTAL	\$ 8,688,850	\$ 9,557,735	\$ 11,431,520
				PREVIOUS BIG TICKET ITEMS TOTAL	\$ 13,801,546	2010 TOTAL	\$ 19,669,134
				Multiplier Factor	1.43		
Notes: Big Ticket Items were defined by items over \$100,000. Multiplier Factor is determined from dividing 2010 cost by the previous cost. 2010 Unit costs were determined using UDOT 2010 statewide averages.							

Average Multiplier Factor

1.47

Noise Walls

Barrier	Alternative	Noise Wall Cost
2	6a	\$ 212,000
3b	6b	\$ 77,800
4	5	\$ 173,000
5	6a	\$ 120,000
9	all	\$ 97,920
11	3m,5,6a,6b	\$ 42,000

Alternative	Wall Cost Total
3	\$ 97,920
3M	\$ 139,920
5	\$ 312,920
6a	\$ 471,920
6b	\$ 217,720

Wetlands

Alternative	Wetland (Acres)	Mitigation Multiplier	Unit Cost per Acre	Cost
3	0.54	1.75	\$ 130,000	\$ 122,850
3M	0.38	1.75	\$ 125,000	\$ 83,125
5	0.38	1.75	\$ 125,000	\$ 83,125
6a	1.07	1.75	\$ 150,000	\$ 280,875
6b	0.41	1.75	\$ 125,000	\$ 89,688