

Maple Bridge



ARCHITECTS ENGINEERS PLANNERS

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June 8, 2004

Town of Addison  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, Texas 75001-9010

Attn: Mr. Steve Z. Chutchian, P.E.

ARAPAHO ROAD - PHASE III BID

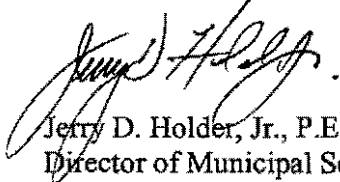
Dear Steve:

We have reviewed the bids for the referenced project. All three of the bidders attended the required pre-bid conference. The low bidder for the project is Archer Western Contractors, Ltd. Attached are three copies of the bid tab. Numbers highlighted in yellow indicate values that we determined to be incorrect on the bid documents due to mathematical errors. None of the errors were on Archer Western Contractors bid and none of the errors resulted in a change in the low bidder.

As a reminder, item 20 of the Special Provisions in the specifications requires a preconstruction conference to be held. Prior to the meeting the contractor has to deliver a schedule to you that we can discuss at the meeting. Let us know when you schedule this meeting and we will be glad to attend. Thank you for letting us work on this project with you and your staff.

Very truly yours,

HNTB CORPORATION



Jerry D. Holder, Jr., P.E.  
Director of Municipal Services

JDH/rmh

Enclosure

*The HNTB Companies*

OFFICES: ALEXANDRIA, VA; ANNAPOLIS, MD; ATLANTA, GA; AUSTIN, TX; BATON ROUGE, LA; BOSTON, MA; CHARLESTON, SC; CHARLESTON, WY; CHICAGO, IL; CLEVELAND, OH; COLUMBUS, OH; DALLAS, TX; DENVER, CO; DETROIT, MI; ELKINS, WV; FAIRFIELD, NJ; FT. WORTH, TX; GARTFORD, CT; HOUSTON, TX; INDIANAPOLIS, IN; IRVINE, CA; KANSAS CITY, MO; KNOXVILLE, TN; LANSING, MI; LOS ANGELES, CA; LOUISVILLE, KY; MADISON, WI; MIAMI, FL; MILWAUKEE, WI; MINNEAPOLIS, MN; NASHVILLE, TN; NEW YORK, NY; OAKLAND, CA; ORLANDO, FL; OVERLAND PARK, KS; PLYMOUTH MEETING, PA; PORTLAND, ME; PORTLAND, OR; RALEIGH, NC; ST. LOUIS, MO; SALT LAKE CITY, UT; SAN ANTONIO, TX; SAN BERNARDINO, CA; SAN FRANCISCO, CA; SAN JOSE, CA; SEATTLE, WA; TAMPA, FL; TOLEDO, OH; WASHINGTON, D.C.

**PAVING, UTILITIES, SIGNALIZATION, AND STREETScape**  
**BID SCHEDULE SUMMARY**  
**ARAPAHO ROAD - PHASE III**  
**MARSH LANE TO SURVEYOR BOULEVARD**

Bid Schedule & Description	ENGINEER'S ESTIMATE	
	Total Amount	Materials & Services
I. Roadway Improvements	\$	4,886,680.00
II. Utility Improvements	\$	3,688,007.00
III. Signalization and Lighting	\$	864,190.00
V. Bridge	\$	4,427,693.40
VI. Bridge Lighting	\$	646,678.25
VII. Streetscape	\$	1,662,676.30
(A) TOTAL BID FOR SCHEDULES I - VIII	\$	16,175,924.95
(B) TOTAL DAYS BID @ \$4000		
<b>TOTAL PROJECT A+B</b>		
VIII. (A) Alternate Bid 1	\$	340,280.00
(B) TOTAL DAYS BID @ \$4000		
<b>TOTAL PROJECT A+B</b>		
VIII. (A) Alternate Bid 2	\$	0.00
(B) TOTAL DAYS BID @ \$4000		
<b>TOTAL PROJECT A+B</b>		

Archer	Orval	Austin Bridge	Average Bid
\$ 4,947,345.22	\$ 7,105,503.70	\$ 5,951,268.42	\$ 6,000,842.45
\$ 3,741,303.93	\$ 4,036,269.55	\$ 4,335,466.93	\$ 4,037,680.14
\$ 614,220.75	\$ 637,020.75	\$ 677,946.97	\$ 643,062.82
\$ 5,255,580.09	\$ 5,825,147.44	\$ 5,229,213.90	\$ 5,436,647.14
\$ 709,871.75	\$ 714,371.75	\$ 755,648.19	\$ 726,630.56
\$ 1,129,910.66	\$ 1,254,216.60	\$ 1,374,099.16	\$ 1,252,742.14
\$ 16,398,232.40	\$ 19,572,529.79	\$ 18,323,643.57	\$ 18,097,605.25
425	550	480	485
\$ 1,700,000.00	\$ 2,200,000.00	\$ 1,920,000.00	\$ 1,940,000.00
\$ 18,098,232.40	\$ 21,772,529.79	\$ 20,243,643.57	\$ 20,038,135.25
\$ 339,446.02	\$ 356,518.60	\$ 428,866.08	\$ 374,943.5667
1	1	1	1
\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
\$ 343,446.02	\$ 360,518.60	\$ 432,866.08	\$ 378,943.57
\$ (35,100.00)	\$ (35,100.00)	\$ (25,152.00)	\$ (31,784.00)
1	1	1	1
\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
\$ (31,100.00)	\$ (31,100.00)	\$ (21,152.00)	\$ (27,784.00)
\$ 18,410,578.42	\$ 22,101,948.39	\$ 20,655,357.65	\$ 20,389,294.82

**BID SCHEDULE I  
ROADWAY IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDINSON ROAD**

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	ENGINEER'S ESTIMATE			Archer			Orval			Austin Bridge			Bid Average		
			UNIT PRICE	EST QTY	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID
101	Mobilization	L.S.	\$ 200,000.00	1	\$ 200,000.00	1	\$ 1,500,000.00	\$ 1,500,000.00	1	\$ 2,162,054.00	\$ 2,162,054.00	1	\$ 1,990,000.00	\$ 1,990,000.00	1	\$ 1,884,018.00	\$ 1,884,018.00
102	Prepare right-of-way	STA.	\$ 5,000.00	54.0	\$ 270,000.00	54.0	\$ 14,053.00	\$ 758,882.00	54.0	\$ 11,951.50	\$ 645,381.00	54.0	\$ 9,200.00	\$ 496,800.00	54.0	\$ 11,734.83	\$ 633,681.00
103	Full depth sawcut existing concrete	L.F.	\$ 4.00	1,564	\$ 6,256.00	1,564	\$ 2.40	\$ 3,753.60	1,564	\$ 3.00	\$ 4,692.00	1,564	\$ 3.00	\$ 4,692.00	1,564	\$ 2.80	\$ 4,379.20
104	Remove and dispose of existing concrete pavement, including curb	S.Y.	\$ 6.00	6,588	\$ 39,528.00	6,588	\$ 3.73	\$ 24,573.24	6,588	\$ 6.00	\$ 39,528.00	6,588	\$ 5.00	\$ 32,940.00	6,588	\$ 4.91	\$ 32,347.08
105	Remove and dispose of existing concrete sidewalk	S.Y.	\$ 10.00	67	\$ 670.00	67	\$ 3.43	\$ 229.81	67	\$ 6.00	\$ 402.00	67	\$ 10.00	\$ 670.00	67	\$ 6.48	\$ 433.94
106	Remove and dispose of existing driveway	S.Y.	\$ 11.00	86	\$ 946.00	86	\$ 3.40	\$ 292.40	86	\$ 6.00	\$ 516.00	86	\$ 10.00	\$ 860.00	86	\$ 6.47	\$ 556.13
107	Unclassified street excavation	C.Y.	\$ 9.00	16,000	\$ 144,000.00	16,000	\$ 6.01	\$ 96,160.00	16,000	\$ 5.00	\$ 80,000.00	16,000	\$ 3.00	\$ 48,000.00	16,000	\$ 4.67	\$ 74,720.00
108	Embankment	C.Y.	\$ 10.00	56,000	\$ 560,000.00	56,000	\$ 3.92	\$ 219,520.00	56,000	\$ 15.00	\$ 840,000.00	56,000	\$ 3.60	\$ 201,600.00	56,000	\$ 7.51	\$ 420,373.33
109	Furnish and place 10" thick reinforced concrete pavement, 4000 psi @ 28 days	S.Y.	\$ 40.00	29,400	\$ 1,176,000.00	29,400	\$ 31.94	\$ 939,036.00	29,400	\$ 36.00	\$ 1,058,400.00	29,400	\$ 40.00	\$ 1,176,000.00	29,400	\$ 35.98	\$ 1,057,812.00
110	Furnish and place 6" thick integral concrete curb, 4000 psi @ 28 days	L.F.	\$ 8.00	11,325	\$ 90,600.00	11,325	\$ 2.05	\$ 23,216.25	11,325	\$ 2.30	\$ 26,047.50	11,325	\$ 1.05	\$ 11,891.25	11,325	\$ 1.80	\$ 20,385.00
111	Furnish and place monolithic median nose, 4000 psi @ 28 days	EA.	\$ 825.00	8	\$ 6,600.00	8	\$ 546.94	\$ 4,375.52	8	\$ 500.00	\$ 4,000.00	8	\$ 2,600.00	\$ 20,800.00	8	\$ 1,215.65	\$ 9,725.17
112	Furnish and place 8" thick reinforced concrete driveway, 4000 psi @ 28 days	S.Y.	\$ 36.00	450	\$ 16,200.00	450	\$ 34.18	\$ 15,381.00	450	\$ 40.00	\$ 18,000.00	450	\$ 41.00	\$ 18,450.00	450	\$ 38.39	\$ 17,277.00
113	Furnish and place reinforced concrete island, 4000 psi @ 28 days	S.Y.	\$ 38.00	300	\$ 11,400.00	300	\$ 25.00	\$ 7,500.00	300	\$ 36.00	\$ 10,800.00	300	\$ 47.00	\$ 14,100.00	300	\$ 36.00	\$ 10,800.00
114	Furnish, install wheelchair ramp	EA.	\$ 750.00	0	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -	0	\$ -	\$ -
115	Remove and relocate roadside sign	EA.	\$ 350.00	1	\$ 350.00	1	\$ 150.00	\$ 150.00	1	\$ 150.00	\$ 150.00	1	\$ 180.87	\$ 180.87	1	\$ 160.29	\$ 160.29
116	Furnish and install Stop sign (R1-1)	EA.	\$ 470.00	2	\$ 940.00	2	\$ 150.00	\$ 300.00	2	\$ 150.00	\$ 300.00	2	\$ 330.74	\$ 661.48	2	\$ 210.25	\$ 420.49
117	Furnish and install Speed Limit sign (R2-1)	EA.	\$ 470.00	5	\$ 2,350.00	5	\$ 150.00	\$ 750.00	5	\$ 150.00	\$ 750.00	5	\$ 310.07	\$ 1,550.35	5	\$ 203.36	\$ 1,016.78
118	Furnish and install Left Lane Must Turn Left sign (R3-7L)	EA.	\$ 470.00	3	\$ 1,410.00	3	\$ 150.00	\$ 450.00	3	\$ 150.00	\$ 450.00	3	\$ 330.74	\$ 992.22	3	\$ 210.25	\$ 630.74
119	Furnish and install Right Lane Must Turn Right sign (R3-7R)	EA.	\$ 470.00	2	\$ 940.00	2	\$ 150.00	\$ 300.00	2	\$ 150.00	\$ 300.00	2	\$ 330.74	\$ 661.48	2	\$ 210.25	\$ 420.49
120	Furnish and install Merge Right sign (R4-7)	EA.	\$ 470.00	3	\$ 1,410.00	3	\$ 150.00	\$ 450.00	3	\$ 150.00	\$ 450.00	3	\$ 310.06	\$ 930.18	3	\$ 203.35	\$ 610.06
121	Furnish and install Signal Ahead sign (W3-3)	EA.	\$ 470.00	1	\$ 470.00	1	\$ 150.00	\$ 150.00	1	\$ 150.00	\$ 150.00	1	\$ 376.21	\$ 376.21	1	\$ 225.40	\$ 225.40
122	Furnish and install Wrong Way sign (R5-1A)	EA.	\$ 470.00	2	\$ 940.00	2	\$ 150.00	\$ 300.00	2	\$ 150.00	\$ 300.00	2	\$ 310.06	\$ 620.12	2	\$ 203.35	\$ 406.71
123	Furnish and install Keep Right sign (R4-7A)	EA.	\$ 470.00	2	\$ 940.00	2	\$ 150.00	\$ 300.00	2	\$ 150.00	\$ 300.00	2	\$ 310.06	\$ 620.12	2	\$ 203.35	\$ 406.71
124	Furnish and install No Parking sign (R8-3A)	EA.	\$ 470.00	3	\$ 1,410.00	3	\$ 150.00	\$ 450.00	3	\$ 150.00	\$ 450.00	3	\$ 310.07	\$ 930.21	3	\$ 203.36	\$ 610.07
125	Furnish and install Divided Highway sign (R6-3A)	EA.	\$ 470.00	2	\$ 940.00	2	\$ 150.00	\$ 300.00	2	\$ 150.00	\$ 300.00	2	\$ 276.99	\$ 553.98	2	\$ 192.33	\$ 384.66
126	Furnish and install Left Lane Ends sign (R9-2L)	EA.	\$ 470.00	1	\$ 470.00	1	\$ 150.00	\$ 150.00	1	\$ 150.00	\$ 150.00	1	\$ 310.06	\$ 310.06	1	\$ 203.35	\$ 203.35
127	Furnish and install RR XING (W10-1)	EA.	\$ 470.00	4	\$ 1,880.00	4	\$ 300.00	\$ 1,200.00	4	\$ 150.00	\$ 600.00	4	\$ 376.21	\$ 1,504.84	4	\$ 275.40	\$ 1,101.61
128	Furnish and install Do Not Stop on Tracks sign (B-8)	EA.	\$ 470.00	4	\$ 1,880.00	4	\$ 150.00	\$ 600.00	4	\$ 150.00	\$ 600.00	4	\$ 310.07	\$ 1,240.28	4	\$ 203.36	\$ 813.43
129	Furnish and install RR XING, cross bucks sign (R15-1)	EA.	\$ 470.00	4	\$ 1,880.00	4	\$ 150.00	\$ 600.00	4	\$ 150.00	\$ 600.00	4	\$ 372.08	\$ 1,488.32	4	\$ 224.03	\$ 896.11
130	Furnish and install 2 Tracks sign (R15-2)	EA.	\$ 470.00	4	\$ 1,880.00	4	\$ 150.00	\$ 600.00	4	\$ 150.00	\$ 600.00	4	\$ 310.07	\$ 1,240.28	4	\$ 203.36	\$ 813.43
131	Furnish and install One Way sign (R6-1R)	EA.	\$ 470.00	1	\$ 470.00	1	\$ 150.00	\$ 150.00	1	\$ 150.00	\$ 150.00	1	\$ 273.89	\$ 273.89	1	\$ 191.30	\$ 191.30
132	Furnish, place and maintain traffic control devices	L.S.	\$ 100,000.00	1	\$ 100,000.00	1	\$ 27,402.00	\$ 27,402.00	1	\$ 48,000.00	\$ 48,000.00	1	\$ 68,782.71	\$ 68,782.71	1	\$ 48,061.57	\$ 48,061.57
133	Furnish and place 4" white/red reflective square acrylic buttons	EA.	\$ 8.00	550	\$ 4,400.00	550	\$ 2.75	\$ 1,512.50	550	\$ 2.60	\$ 1,430.00	550	\$ 2.47	\$ 1,358.50	550	\$ 2.61	\$ 1,433.67
134	Furnish and place 4" white non-reflective raised ceramic buttons	EA.	\$ 6.00	550	\$ 3,300.00	550	\$ 3.50	\$ 1,925.00	550	\$ 2.10	\$ 1,155.00	550	\$ 1.76	\$ 968.00	550	\$ 2.45	\$ 1,349.33
135	Furnish and place 4" yellow double-reflective square acrylic buttons	EA.	\$ 8.00	497	\$ 3,976.00	497	\$ 3.50	\$ 1,739.50	497	\$ 2.60	\$ 1,292.20	497	\$ 2.47	\$ 1,227.59	497	\$ 2.86	\$ 1,419.76
136	Furnish and place 6" x 6" white jiggle bar tiles	EA.	\$ 18.00	122	\$ 2,196.00	122	\$ 14.00	\$ 1,708.00	122	\$ 10.50	\$ 1,281.00	122	\$ 14.10	\$ 1,720.20	122	\$ 12.87	\$ 1,569.73
137	Remove existing pavement markings and buttons	LS	\$ 2,500.00	1	\$ 2,500.00	1	\$ 200.00	\$ 200.00	1	\$ 900.00	\$ 900.00	1	\$ 704.84	\$ 704.84	1	\$ 601.61	\$ 601.61
138	Furnish and place pavement directional markers	EA.	\$ 175.00	22	\$ 3,850.00	22	\$ 85.00	\$ 1,870.00	22	\$ 75.00	\$ 1,650.00	22	\$ 77.53	\$ 1,705.66	22	\$ 79.18	\$ 1,741.69
139	White thermoplastic reflective pavement marking ("ONLY")	EA.	\$ 200.00	16	\$ 3,200.00	16	\$ 85.00	\$ 1,360.00	16	\$ 85.00	\$ 1,360.00	16	\$ 84.58	\$ 1,353.28	16	\$ 88.19	\$ 1,411.09



ROADWAY IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDINSON ROAD

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	ENGINEER'S ESTIMATE			Archer			Orval			Austin Bridge			Bid Average				
			UNIT PRICE	EST QTY	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID	EST QTY	UNIT PRICE	AMOUNT BID		
140	RR Xing Pavement Markings, as shown on plans	EA.	\$ 550.00	8	\$ 4,400.00	8	\$ 279.00	\$ 2,232.00	8	\$ 400.00	\$ 3,200.00	8	\$ 246.69	\$ 1,973.52	8	\$ 308.56	\$ 2,468.51		
141	Furnish and place 24" solid white thermoplastic stop bar	L.F.	\$ 15.00	128	\$ 1,920.00	128	\$ 3.99	\$ 510.72	128	\$ 4.00	\$ 512.00	128	\$ 4.23	\$ 541.44	128	\$ 4.07	\$ 521.39		
142	Furnish and place 4" solid yellow thermoplastic stripe	L.F.	\$ 2.00	100	\$ 200.00	100	\$ 0.95	\$ 95.00	100	\$ 1.00	\$ 100.00	100	\$ 0.70	\$ 70.00	100	\$ 0.88	\$ 88.33		
143	Furnish and place MSE retaining wall ITEM 423)	S.F.	\$ 15.00	15,000	\$ 225,000.00	15,000	\$ 27.00	\$ 405,000.00	15,000	\$ 26.80	\$ 402,000.00	15,000	\$ 33.50	\$ 502,500.00	15,000	\$ 29.10	\$ 436,500.00		
144	Furnish and place concrete retaining wall Class F Concrete (CIP Wall), F'c = 4000 psi	C.Y.	\$ 500.00	950	\$ 475,000.00	950	\$ 295.94	\$ 281,143.00	950	\$ 459.00	\$ 436,050.00	950	\$ 385.00	\$ 365,750.00	950	\$ 379.98	\$ 360,981.00		
145	Structural excavation	C.Y.	\$ 10.00	463	\$ 4,630.00	463	\$ 4.00	\$ 1,852.00	463	\$ 2.00	\$ 926.00	463	\$ 20.00	\$ 9,260.00	463	\$ 8.67	\$ 4,012.67		
146	Furnish and place Bollards	EA.	\$ 300.00	4	\$ 1,200.00	4	\$ 550.00	\$ 2,200.00	4	\$ 300.00	\$ 1,200.00	4	\$ 500.00	\$ 2,000.00	4	\$ 450.00	\$ 1,800.00		
147	Provide Underground Electrical Service	LS	\$ 15,000.00	1	\$ 15,000.00	1	\$ 25,000.00	\$ 25,000.00	1	\$ 100,000.00	\$ 100,000.00	1	\$ 134,000.00	\$ 134,000.00	1	\$ 86,333.33	\$ 86,333.33		
148	Furnish Place and maintain temporary construction fence (orange plastic)	EA.	\$ 1.00	8,100	\$ 8,100.00	8,100	\$ 0.82	\$ 6,642.00	8,100	\$ 2.50	\$ 20,250.00	8,100	\$ 1.25	\$ 10,125.00	8,100	\$ 1.52	\$ 12,339.00		
149	Furnish and install Pedestrian Rail (TXDOT Item 450)	LF	\$ 100.00	690	\$ 69,000.00	690	\$ 66.94	\$ 46,188.60	690	\$ 82.40	\$ 56,856.00	690	\$ 87.85	\$ 60,616.50	690	\$ 79.06	\$ 54,553.70		
150	Furnish and install Traffic Rail Type T4 (S) (MOD) (TXDOT Item 450)	LF	\$ 70.00	1,950	\$ 136,500.00	1,950	\$ 75.13	\$ 146,503.50	1,950	\$ 86.50	\$ 168,675.00	1,950	\$ 72.35	\$ 141,082.50	1,950	\$ 77.99	\$ 152,087.00		
151	Furnish and install Single Guardrail Terminal TxDOT item SGT (8)-03A	LF	\$ 500.00	150	\$ 75,000.00	150	\$ 32.83	\$ 4,924.50	150	\$ 1,500.00	\$ 225,000.00	150	\$ 47.20	\$ 7,080.00	150	\$ 528.68	\$ 79,001.50		
152	Furnish and install wheel stops	LF	\$ 100.00	116	\$ 11,600.00	116	\$ 47.13	\$ 5,467.08	116	\$ 300.00	\$ 34,800.00	116	\$ 25.84	\$ 2,997.44	116	\$ 124.32	\$ 14,421.51		
153	Engineers Field Office	monthly	\$ 20,000.00	1	\$ 20,000.00	14	\$ 1,675.00	\$ 23,450.00	18	\$ 2,470.00	\$ 44,460.00	16	\$ 2,000.00	\$ 32,000.00	16	\$ 2,048	\$ 32,773.33		
154	Install and Furnish 30-foot sentinel slide gate and operating system	LS	\$ 15,000.00		\$ -		\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
155	Install and Furnish Concrete Railroad Crossing	LF	\$ 450.00	380	\$ 171,000.00	380	\$ 371.00	\$ 140,980.00	380	\$ 371.00	\$ 140,980.00	380	\$ 750.00	\$ 285,000.00	380	\$ 497.33	\$ 188,986.67		
156	Install and Furnish 8x8 Steel bungalow, with constant warning and all other equipment required to control warning devices below	LS	\$ 298,000.00	1	\$ 298,000.00	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
157	Install and Furnish flasher & gate signals with 12" LED lights, all aluminum gate arms, LED gate lights, signs, bells, per state specifications	LS	\$ 157,000.00	1	\$ 157,000.00	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
158	Install and Furnish signal material as required for project: foundations, underground wire & cable, guard rails, multi-shunt boxes, track connector, etc.	LS	\$ 178,000.00	1	\$ 178,000.00	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
159	Install and Furnish project material, directional boring, electrical service, insulated joints	LS	\$ 18,000.00	1	\$ 18,000.00	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
160	Install and Furnish track material, electro-glide yard tract, switch machine, radio control DTMF interface	LS	\$ 46,000.00	1	\$ 46,000.00	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -	1	\$ -	\$ -		
161	Unclassified Brickyard excavation	C.Y.	\$ 10.00	30,000	\$ 300,000.00	30,000	\$ 7.08	\$ 212,400.00	30,000	\$ 17.10	\$ 513,000.00	30,000	\$ 9.40	\$ 282,000.00	30,000	\$ 11.19	\$ 335,800.00		
162	Furnish and Place 4" white stripe	L.F.	\$ 1.00	2,740	\$ 2,740.00	2,740	\$ 1.00	\$ 2,740.00	2,740	\$ 0.40	\$ 1,096.00	2,740	\$ 0.56	\$ 1,534.40	2,740	\$ 0.65	\$ 1,790.13		
163	Furnish and Place 10' chain link fence	L.F.	\$ 20.00	110	\$ 2,200.00	110	\$ 20.00	\$ 2,200.00	110	\$ 25.00	\$ 2,750.00	110	\$ 36.17	\$ 3,978.70	110	\$ 27.06	\$ 2,976.23		
M:\JOBS\25788Phase3\TECHPROD\Estimates\BidTab3 bidders list.xls\Sweetscape					\$	\$	4,886,672.00	\$	\$	4,947,345.22	\$	\$	7,105,503.70	\$	\$	5,951,268.42	\$	\$	6,000,842.45

**BID SCHEDULE II  
UTILITY IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD TO ADDISON ROAD**

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
200	Furnish and install 10" PVC SDR 35 sanitary sewer pipe, including embedment	LF	\$ 40.00	1,398	\$ 55,840.00
201	Furnish and install 12" PVC SDR 35 sanitary sewer pipe, including embedment	LF	\$ 45.00	1,177	\$ 52,965.00
202	Furnish and install 4' diameter sanitary sewer manhole, complete and in place	EA	\$ 3,250.00	6	\$ 19,500.00
203	Furnish and install 4' diameter sanitary sewer manhole with internal drop, complete and in place	EA	\$ 3,500.00	4	\$ 14,000.00
204	Install and connect various size sanitary sewer services, including clean-outs, per plans	EA	\$ 500.00	6	\$ 3,000.00
205	Furnish and install 24" steel encasement pipe for sanitary sewer lines as shown on the plans, including spacers and embedment	LF	\$ 250.00	300	\$ 75,000.00
206	RESERVED	CY	\$ 250.00		\$ -
207	Remove and dispose of existing manhole	EA	\$ 1,000.00	5	\$ 5,000.00
208	Furnish, install, maintain and remove erosion control devices	LS	\$ 30,000.00	1	\$ 30,000.00
209	Remove concrete channel lining	LS	\$ 50,000.00	1	\$ 50,000.00
210	Remove existing 66" RCP	LF	\$ 25.00	763	\$ 19,075.00
211	Remove 3-66" headwall	EA	\$ 25.00	2	\$ 50.00
212	Remove 54" headwall and RCP	LF	\$ 25.00	28	\$ 700.00
213	Remove 9'x5' box culvert	LF	\$ 30.00	30	\$ 900.00
214	Remove 24" RCP	LF	\$ 15.00	60	\$ 900.00
215	Remove 30" RCP	LF	\$ 15.00	16	\$ 240.00
216	Remove 30" headwall	EA	\$ 250.00	1	\$ 250.00
217	Remove CMP and headwall	LF	\$ 20.00	39	\$ 780.00
218	Remove 2-4'x2' headwall	EA	\$ 250.00	2	\$ 500.00
219	Salvage Fire hydrant and valve	EA	\$ 300.00	1	\$ 300.00
220	Construct concrete pilot channel	SY	\$ 150.00	85	\$ 12,750.00
221	8' standard curb inlet	EA	\$ 2,600.00	6	\$ 15,600.00
222	10' standard curb inlet	EA	\$ 2,800.00	3	\$ 8,400.00
223	12' standard curb inlet	EA	\$ 3,500.00	1	\$ 3,500.00
224	6' Recessed curb inlet	EA	\$ 2,750.00	7	\$ 19,250.00
225	10' Recessed curb inlet	EA	\$ 3,000.00	11	\$ 33,000.00
226	2-8' Recessed curb inlet	EA	\$ 4,500.00	1	\$ 4,500.00
227	10' modified curb inlet	EA	\$ 3,250.00	1	\$ 3,250.00
228	2-Grate Inlet	EA	\$ 3,300.00	4	\$ 13,200.00
229	"Y" inlet	EA	\$ 2,500.00	13	\$ 32,500.00
230	1'x1' grate inlet	EA	\$ 1,000.00	1	\$ 1,000.00
231	Double 10'x6' PW Wingwall for one end treatment	EA	\$ 10,000.00	1	\$ 10,000.00
232	1-6'x5' PW Wingwall for one end treatment	EA	\$ 5,000.00	1	\$ 5,000.00
233	30" Type "A" headwall	EA	\$ 2,500.00	1	\$ 2,500.00
234	36" Type "B" headwall	EA	\$ 2,750.00	1	\$ 2,750.00
235	Box Culvert Storm Manhole	EA	\$ 2,250.00	6	\$ 13,500.00
236	Type A storm sewer manhole	EA	\$ 3,500.00	1	\$ 3,500.00
237	18" RCP storm sewer pipe	LF	\$ 40.00	8	\$ 320.00
238	21" RCP storm sewer pipe	LF	\$ 50.00	914	\$ 45,700.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 27.08	\$ 37,603.68	\$ 38.00	\$ 53,048.00	\$ 58.69	\$ 81,931.24	\$ 41.26	\$ 57,594.31
\$ 47.25	\$ 55,613.25	\$ 55.00	\$ 64,735.00	\$ 64.98	\$ 78,481.48	\$ 55.74	\$ 85,609.90
\$ 1,706.41	\$ 10,236.48	\$ 2,400.00	\$ 14,400.00	\$ 3,039.26	\$ 18,235.56	\$ 2,381.89	\$ 14,291.34
\$ 3,585.96	\$ 14,343.84	\$ 4,200.00	\$ 16,800.00	\$ 3,982.48	\$ 15,929.92	\$ 3,922.81	\$ 15,691.25
\$ 755.08	\$ 4,530.48	\$ 500.00	\$ 3,000.00	\$ 1,152.82	\$ 6,916.92	\$ 602.63	\$ 4,815.80
\$ 75.89	\$ 22,767.00	\$ 91.00	\$ 27,300.00	\$ 100.61	\$ 30,183.00	\$ 89.17	\$ 28,750.00
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ 5,599.46	\$ 27,997.30	\$ 1,000.00	\$ 5,000.00	\$ 681.21	\$ 3,406.05	\$ 2,426.89	\$ 12,134.45
\$ 50,602.00	\$ 50,602.00	\$ 54,800.00	\$ 54,800.00	\$ 36,000.00	\$ 36,000.00	\$ 47,134.00	\$ 47,134.00
\$ 27,336.45	\$ 27,336.45	\$ 51,000.00	\$ 51,000.00	\$ 100,000.00	\$ 100,000.00	\$ 59,445.48	\$ 59,445.48
\$ 31.04	\$ 23,883.52	\$ 20.00	\$ 15,260.00	\$ 41.92	\$ 31,984.96	\$ 30.99	\$ 23,842.83
\$ 1,337.22	\$ 2,674.44	\$ 2,500.00	\$ 5,000.00	\$ 1,487.23	\$ 2,934.46	\$ 1,768.15	\$ 3,536.30
\$ 103.37	\$ 2,894.36	\$ 100.00	\$ 2,800.00	\$ 34.58	\$ 968.24	\$ 79.32	\$ 2,220.87
\$ 96.48	\$ 2,894.40	\$ 50.00	\$ 1,500.00	\$ 98.51	\$ 2,955.30	\$ 81.66	\$ 2,449.90
\$ 58.63	\$ 3,397.80	\$ 10.00	\$ 600.00	\$ 7.34	\$ 440.40	\$ 24.66	\$ 1,479.40
\$ 29.07	\$ 465.12	\$ 8.00	\$ 128.00	\$ 10.48	\$ 167.68	\$ 15.85	\$ 253.60
\$ 485.08	\$ 485.08	\$ 500.00	\$ 500.00	\$ 524.01	\$ 524.01	\$ 496.36	\$ 496.36
\$ 21.03	\$ 820.17	\$ 8.00	\$ 312.00	\$ 12.58	\$ 490.62	\$ 13.87	\$ 540.93
\$ 418.80	\$ 833.60	\$ 1,000.00	\$ 2,000.00	\$ 628.81	\$ 1,257.62	\$ 681.87	\$ 1,383.74
\$ 156.77	\$ 156.77	\$ 500.00	\$ 500.00	\$ 419.21	\$ 419.21	\$ 358.66	\$ 358.66
\$ 25.00	\$ 2,125.00	\$ 51.50	\$ 4,377.50	\$ 47.16	\$ 4,008.60	\$ 41.22	\$ 3,503.70
\$ 1,753.79	\$ 10,522.74	\$ 1,890.00	\$ 11,340.00	\$ 1,808.71	\$ 10,852.26	\$ 1,817.50	\$ 10,905.00
\$ 1,980.00	\$ 5,940.00	\$ 2,100.00	\$ 6,300.00	\$ 2,046.43	\$ 6,139.29	\$ 2,042.14	\$ 6,128.43
\$ 2,320.00	\$ 2,320.00	\$ 2,310.00	\$ 2,310.00	\$ 2,397.83	\$ 2,397.83	\$ 2,342.61	\$ 2,342.61
\$ 1,750.00	\$ 12,250.00	\$ 1,690.00	\$ 13,230.00	\$ 1,608.71	\$ 12,880.97	\$ 1,816.24	\$ 12,713.88
\$ 1,980.00	\$ 21,780.00	\$ 2,100.00	\$ 23,100.00	\$ 2,046.43	\$ 22,510.73	\$ 2,042.14	\$ 22,463.58
\$ 3,600.00	\$ 3,600.00	\$ 2,940.00	\$ 2,940.00	\$ 3,720.78	\$ 3,720.78	\$ 3,420.26	\$ 3,420.28
\$ 2,500.00	\$ 2,500.00	\$ 2,420.00	\$ 2,420.00	\$ 2,583.88	\$ 2,583.88	\$ 2,501.29	\$ 2,501.29
\$ 2,300.00	\$ 9,200.00	\$ 2,420.00	\$ 9,680.00	\$ 2,377.17	\$ 9,508.68	\$ 2,365.72	\$ 9,462.89
\$ 1,400.00	\$ 18,200.00	\$ 1,365.00	\$ 17,745.00	\$ 1,446.97	\$ 18,810.61	\$ 1,403.99	\$ 18,251.87
\$ 1,500.00	\$ 1,500.00	\$ 998.00	\$ 998.00	\$ 2,067.10	\$ 2,067.10	\$ 1,521.70	\$ 1,521.70
\$ 6,000.00	\$ 6,000.00	\$ 11,800.00	\$ 11,800.00	\$ 445.41	\$ 445.41	\$ 6,081.80	\$ 6,081.80
\$ 3,003.06	\$ 3,003.06	\$ 5,780.00	\$ 5,780.00	\$ 445.41	\$ 445.41	\$ 3,076.16	\$ 3,076.16
\$ 1,005.44	\$ 1,005.44	\$ 1,050.00	\$ 1,050.00	\$ 1,033.55	\$ 1,033.55	\$ 1,029.66	\$ 1,029.66
\$ 1,202.30	\$ 1,202.30	\$ 1,160.00	\$ 1,160.00	\$ 1,240.26	\$ 1,240.26	\$ 1,200.85	\$ 1,200.85
\$ 1,195.96	\$ 7,175.76	\$ 1,580.00	\$ 9,480.00	\$ 943.22	\$ 5,659.32	\$ 1,239.73	\$ 7,438.38
\$ 1,620.42	\$ 1,620.42	\$ 2,840.00	\$ 2,840.00	\$ 1,963.75	\$ 1,963.75	\$ 2,141.39	\$ 2,141.39
\$ 59.01	\$ 472.06	\$ 108.00	\$ 848.00	\$ 41.92	\$ 335.36	\$ 68.98	\$ 551.81
\$ 51.18	\$ 48,760.24	\$ 73.00	\$ 86,722.00	\$ 46.11	\$ 42,144.54	\$ 56.76	\$ 51,875.59

**UTILITY IMPROVEMENTS**  
**ARAPAHO ROAD - PHASE III**  
**SURVEYOR BLVD TO ADDISON ROAD**

ITEM NO	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST QTY	AMOUNT BID
239	24" RCP storm sewer pipe	LF	\$ 55.00	925	\$ 50,875.00
240	30" RCP storm sewer pipe	LF	\$ 60.00	583	\$ 34,980.00
241	36" RCP storm sewer pipe	LF	\$ 80.00	40	\$ 3,200.00
242	54" RCP storm sewer pipe	LF	\$ 150.00	19	\$ 2,850.00
243	60" RCP storm sewer pipe	LF	\$ 200.00	6	\$ 1,200.00
244	4'x2' box culvert	LF	\$ 150.00	24	\$ 3,600.00
245	6'x3' box culvert	LF	\$ 225.00	244	\$ 54,900.00
246	6'x5' box culvert	LF	\$ 275.00	112	\$ 30,800.00
247	7' x 5' box culvert	LF	\$ 315.00	260	\$ 81,900.00
248	8' x 5' box culvert	LF	\$ 325.00	590	\$ 191,750.00
249	9'x5' box culvert	LF	\$ 350.00	4,516	\$ 1,580,600.00
250	10' x 5' box culvert	LF	\$ 375.00	512	\$ 192,000.00
251	10' x 6' box culvert	LF	\$ 400.00	1,395	\$ 558,000.00
252	21" RCP w/ 36" steel encasement by bore and jack	LF	\$ 400.00	48	\$ 19,200.00
253	24" RCP w/ 36" steel encasement by bore and jack	LF	\$ 450.00	42	\$ 18,900.00
254	30" RCP w/ 42" steel encasement by bore and jack	LF	\$ 500.00	38	\$ 19,000.00
255	4" Schedule 40 PVC pipe	LF	\$ 12.00	1,572	\$ 18,864.00
256	8" Schedule 40 PVC pipe	LF	\$ 18.00	15	\$ 270.00
257	PVC Fittings for Schedule 40 PVC pipe	LS	\$ 5,000.00	1	\$ 5,000.00
258	12" HDPE storm sewer pipe	LF	\$ 25.00	124	\$ 3,100.00
259	10" Reinforced Concrete Pavement sawcut/removal / replacement at Surveyor Blvd. and Midway Road	SY	\$ 150.00	510	\$ 76,500.00
260	8" Reinforced Concrete Parking Lot sawcut/removal / replacement at Pump Station	SY	\$ 100.00	45	\$ 4,500.00
261	Fire Hydrant (including 6" water lead and valve)	EA	\$ 3,000.00	1	\$ 3,000.00
262	8" C909 PVC Class 150 water line	LF	\$ 120.00	85	\$ 10,200.00
263	60" RCCP water lowering including but not limited to all thrust blocking, fittings, and appurtenances (per DWJ)	LF	\$ 1,000.00	80	\$ 80,000.00
264	16" C900 PVC Class 150 Water lowering	LF	\$ 200.00	30	\$ 6,000.00
265	8" C909 PVC Class 150 Water lowering	LF	\$ 150.00	40	\$ 6,000.00
266	Trench Safety	LF	\$ 1.75	14,536	\$ 25,438.00
267	Sediment removal, inside 66" RCP	CY	\$ 150.00	250	\$ 37,500.00
268	Remove 9'x5' Headwall on West side of Midway Road	EA	\$ 1,500.00	1	\$ 1,500.00
269	Preparation and Implementation of SWPPP, per specifications and TCEQ requirements	LS	\$ 500.00	1	\$ 500.00
270	60" Butterfly Valve and Appurtenances, per plans,	LS	\$ 20,000.00	1	\$ 20,000.00
271	Grouted Riprap	SY	\$ 40.00	750	\$ 30,000.00
272	Temporary 8" thick Asphalt Pavement (2" HMAC Type D, 6" HMAC Type B), per Traffic Control Plan	SY	\$ 25.00	500	\$ 12,500.00
					\$ 3,688,007.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 57.05	\$ 52,771.25	\$ 72.35	\$ 66,823.75	\$ 50.30	\$ 46,527.50	\$ 59.90	\$ 55,407.50
\$ 69.19	\$ 40,337.77	\$ 86.40	\$ 50,371.20	\$ 62.88	\$ 36,859.04	\$ 72.82	\$ 42,456.00
\$ 106.12	\$ 4,244.80	\$ 111.00	\$ 4,440.00	\$ 85.94	\$ 3,437.60	\$ 101.02	\$ 4,040.80
\$ 219.93	\$ 4,178.67	\$ 196.00	\$ 3,724.00	\$ 155.11	\$ 2,947.09	\$ 190.35	\$ 3,616.59
\$ 452.96	\$ 2,717.76	\$ 315.00	\$ 1,890.00	\$ 178.16	\$ 1,068.96	\$ 315.37	\$ 1,892.24
\$ 145.44	\$ 3,490.56	\$ 291.00	\$ 6,984.00	\$ 138.24	\$ 3,269.76	\$ 190.89	\$ 4,581.44
\$ 185.62	\$ 45,291.28	\$ 220.00	\$ 53,680.00	\$ 215.89	\$ 52,877.16	\$ 207.17	\$ 50,549.48
\$ 221.10	\$ 24,763.20	\$ 167.00	\$ 18,704.00	\$ 269.34	\$ 30,166.08	\$ 219.15	\$ 24,544.43
\$ 288.91	\$ 75,116.60	\$ 294.00	\$ 78,440.00	\$ 315.45	\$ 82,017.00	\$ 299.45	\$ 77,857.67
\$ 301.38	\$ 177,814.20	\$ 313.00	\$ 184,670.00	\$ 338.51	\$ 199,720.90	\$ 317.63	\$ 167,401.70
\$ 381.13	\$ 1,721,183.08	\$ 375.00	\$ 1,693,500.00	\$ 385.67	\$ 1,741,885.72	\$ 390.60	\$ 1,718,789.60
\$ 416.24	\$ 213,114.88	\$ 436.00	\$ 223,232.00	\$ 459.03	\$ 235,023.36	\$ 437.09	\$ 223,790.08
\$ 439.31	\$ 812,837.45	\$ 469.00	\$ 654,255.00	\$ 508.29	\$ 709,064.55	\$ 472.20	\$ 658,719.00
\$ 313.23	\$ 15,035.04	\$ 387.00	\$ 18,576.00	\$ 431.78	\$ 20,725.44	\$ 377.34	\$ 18,112.16
\$ 313.70	\$ 13,175.40	\$ 406.00	\$ 17,136.00	\$ 437.02	\$ 18,354.84	\$ 388.24	\$ 16,222.08
\$ 338.94	\$ 12,879.72	\$ 532.00	\$ 20,216.00	\$ 539.73	\$ 20,509.74	\$ 470.22	\$ 17,668.49
\$ 9.03	\$ 14,195.16	\$ 13.90	\$ 21,850.80	\$ 36.68	\$ 57,660.96	\$ 19.87	\$ 31,235.64
\$ 28.06	\$ 420.90	\$ 20.00	\$ 300.00	\$ 41.92	\$ 826.80	\$ 29.99	\$ 449.90
\$ 10.00	\$ 10.00	\$ 500.00	\$ 500.00	\$ 3,144.06	\$ 3,144.06	\$ 1,218.02	\$ 1,218.02
\$ 38.48	\$ 4,771.52	\$ 32.20	\$ 3,992.80	\$ 46.11	\$ 5,717.64	\$ 38.93	\$ 4,827.32
\$ 81.16	\$ 41,391.60	\$ 89.70	\$ 45,747.00	\$ 76.60	\$ 40,086.00	\$ 83.15	\$ 42,408.20
\$ 73.67	\$ 3,315.15	\$ 66.10	\$ 2,974.50	\$ 47.16	\$ 2,122.20	\$ 62.31	\$ 2,803.95
\$ 2,591.65	\$ 2,591.65	\$ 3,000.00	\$ 3,000.00	\$ 4,192.08	\$ 4,192.08	\$ 3,261.24	\$ 3,261.24
\$ 55.18	\$ 4,690.30	\$ 65.00	\$ 5,525.00	\$ 47.16	\$ 4,008.60	\$ 55.78	\$ 4,741.30
\$ 1,413.99	\$ 113,119.20	\$ 1,990.00	\$ 159,200.00	\$ 1,907.40	\$ 152,592.00	\$ 1,770.46	\$ 141,637.07
\$ 143.17	\$ 4,295.10	\$ 300.00	\$ 9,000.00	\$ 235.80	\$ 7,074.00	\$ 226.32	\$ 6,789.70
\$ 145.67	\$ 5,826.80	\$ 220.00	\$ 8,800.00	\$ 131.00	\$ 5,240.00	\$ 165.56	\$ 6,622.27
\$ 1.00	\$ 14,536.00	\$ 0.25	\$ 3,634.00	\$ 1.05	\$ 15,262.80	\$ 0.77	\$ 11,144.27
\$ 30.74	\$ 7,685.00	\$ 150.00	\$ 37,500.00	\$ 68.12	\$ 17,030.00	\$ 82.95	\$ 20,738.33
\$ 1,256.75	\$ 1,256.75	\$ 1,500.00	\$ 1,500.00	\$ 1,467.23	\$ 1,467.23	\$ 1,407.99	\$ 1,407.99
\$ 500.00	\$ 500.00	\$ 1,500.00	\$ 1,500.00	\$ 115,904.17	\$ 115,904.17	\$ 39,301.39	\$ 39,301.39
\$ 18,309.88	\$ 18,309.88	\$ 52,600.00	\$ 52,600.00	\$ 89,081.67	\$ 89,081.67	\$ 53,330.52	\$ 53,330.52
\$ 36.29	\$ 27,217.50	\$ 63.60	\$ 47,700.00	\$ 41.92	\$ 31,440.00	\$ 47.27	\$ 35,452.50
\$ 23.05	\$ 11,525.00	\$ 46.60	\$ 23,400.00	\$ 36.41	\$ 19,205.00	\$ 36.09	\$ 18,043.33
\$ 3,741,303.93		\$ 4,036,269.55		\$ 4,335,466.93		\$ 4,037,680.14	

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**BID SCHEDULE III  
SIGNALIZATION AND LIGHTING IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD TO ADDISONROAD**

ENGINEER'S ESTIMATE					
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
301	Traffic Signals - Arapaho Road at Addison Road (see note 1)	L.S.	\$ 100,000.00	1	\$ 100,000.00
302	Traffic Signals - Arapaho Road at Surveyor Blvd. (see note 1)	L.S.	\$ 100,000.00	1	\$ 100,000.00
303	Conduit, 2" schedule 40 PVC	L.F.	\$ 6.50	11,003	\$ 71,519.50
304	Conduit, 2" schedule 40 PVC, Bored and Trenched	L.F.	\$ 14.00	108	\$ 1,512.00
305	Conduit, 4" schedule 40 PVC, Bored and Trenched	L.F.	\$ 17.00	195	\$ 3,315.00
306	Conduit (RM) 1 1/2"	L.F.	\$ 6.60	243	\$ 1,603.80
307	35' 3" street light pole	EA.	\$ 8,000.00	9	\$ 72,000.00
308	Pedestrian light pole	EA.	\$ 3,750.00	64	\$ 240,000.00
309	Combination, street light w/ pedestrian fixture	EA.	\$ 9,200.00	13	\$ 119,600.00
310	Retaining Wall Mounted Light Pole	EA.	\$ 10,000.00	4	\$ 40,000.00
311	70w Wall Mounted Luminaire Fixture	EA.	\$ 750.00	4	\$ 3,000.00
312	Cable, insulated, # 6 AWG	L.F.	\$ 0.90	22,706	\$ 20,435.40
313	Cable, insulated, # 8 AWG	L.F.	\$ 0.60	770	\$ 462.00
314	Bare ground, # 8 AWG	L.F.	\$ 0.55	385	\$ 211.75
315	Bare ground, # 6 AWG	L.F.	\$ 0.90	11,353	\$ 10,217.70
316	Cable, insulated, # 4 AWG	L.F.	\$ 0.95	780	\$ 741.00
317	Bare Ground, #4 AWG	L.F.	\$ 0.95	390	\$ 370.50
318	Foundation, 35' 3" street light pole	EA.	\$ 900.00	21	\$ 18,900.00
319	Foundation, pedestrian light pole	EA.	\$ 600.00	64	\$ 38,400.00
320	Ground mounted pullbox, type A	EA.	\$ 450.00	24	\$ 10,800.00
321	Ground mounted pullbox, type C	EA.	\$ 600.00	1	\$ 600.00
322	Lighting control cabinet (see note 2)	EA.	\$ 3,500.00	3	\$ 10,500.00
M:\JOBS\25768Phase3\TECHPROD\Estimates\BidTabph3 bidders list.xls\Streetscape					\$ 864,186.65

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 23,000.00	\$ 23,000.00	\$ 23,000.00	\$ 23,000.00	\$ 24,484.80	\$ 24,484.80	\$ 23,494.93	\$ 23,494.93
\$ 10,500.00	\$ 10,500.00	\$ 10,500.00	\$ 10,500.00	\$ 11,177.84	\$ 11,177.84	\$ 10,725.95	\$ 10,725.95
\$ 5.00	\$ 55,015.00	\$ 5.00	\$ 55,015.00	\$ 5.32	\$ 58,535.96	\$ 5.11	\$ 56,188.65
\$ 20.00	\$ 2,160.00	\$ 20.00	\$ 2,160.00	\$ 21.29	\$ 2,299.32	\$ 20.43	\$ 2,206.44
\$ 25.00	\$ 4,875.00	\$ 25.00	\$ 4,875.00	\$ 26.61	\$ 5,188.95	\$ 25.54	\$ 4,979.65
\$ 20.00	\$ 4,860.00	\$ 20.00	\$ 4,860.00	\$ 21.29	\$ 5,173.47	\$ 20.43	\$ 4,964.48
\$ 2,000.00	\$ 18,000.00	\$ 2,000.00	\$ 18,000.00	\$ 2,129.11	\$ 19,161.99	\$ 2,043.04	\$ 18,387.33
\$ 3,400.00	\$ 217,600.00	\$ 3,400.00	\$ 217,600.00	\$ 3,619.49	\$ 231,647.36	\$ 3,473.16	\$ 222,282.45
\$ 8,500.00	\$ 110,500.00	\$ 8,500.00	\$ 110,500.00	\$ 9,048.73	\$ 117,633.49	\$ 8,682.91	\$ 112,877.83
\$ 1,500.00	\$ 6,000.00	\$ 7,200.00	\$ 28,800.00	\$ 7,664.81	\$ 30,659.24	\$ 5,454.94	\$ 21,819.75
\$ 6,750.00	\$ 27,000.00	\$ 6,750.00	\$ 27,000.00	\$ 7,185.76	\$ 28,743.04	\$ 6,895.25	\$ 27,581.01
\$ 1.00	\$ 22,706.00	\$ 1.00	\$ 22,706.00	\$ 1.06	\$ 24,068.36	\$ 1.02	\$ 23,160.12
\$ 0.85	\$ 654.50	\$ 0.85	\$ 654.50	\$ 0.90	\$ 693.00	\$ 0.87	\$ 667.33
\$ 0.85	\$ 327.25	\$ 0.85	\$ 327.25	\$ 0.90	\$ 346.50	\$ 0.87	\$ 333.67
\$ 1.00	\$ 11,353.00	\$ 1.00	\$ 11,353.00	\$ 1.06	\$ 12,034.18	\$ 1.02	\$ 11,580.06
\$ 1.00	\$ 780.00	\$ 1.00	\$ 780.00	\$ 1.06	\$ 826.80	\$ 1.02	\$ 795.60
\$ 1.00	\$ 390.00	\$ 1.00	\$ 390.00	\$ 1.06	\$ 413.40	\$ 1.02	\$ 397.80
\$ 800.00	\$ 16,800.00	\$ 800.00	\$ 16,800.00	\$ 851.65	\$ 17,884.65	\$ 817.22	\$ 17,161.55
\$ 800.00	\$ 51,200.00	\$ 800.00	\$ 51,200.00	\$ 851.65	\$ 54,505.60	\$ 817.22	\$ 52,301.67
\$ 500.00	\$ 12,000.00	\$ 500.00	\$ 12,000.00	\$ 532.28	\$ 12,774.72	\$ 510.76	\$ 12,258.24
\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00	\$ 532.26	\$ 532.26	\$ 510.76	\$ 510.76
\$ 6,000.00	\$ 18,000.00	\$ 6,000.00	\$ 18,000.00	\$ 6,387.34	\$ 19,162.02	\$ 6,129.11	\$ 18,387.34
\$ 614,220.75		\$ 637,020.75		\$ 677,946.97		\$ 643,062.82	

**BID SCHEDULE IV  
STREETSCAPE & PARK IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDISON ROAD**

ENGINEER'S ESTIMATE				
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	AMOUNT BID
401	Furnish and install Shumard Oak (4" cal.)	EA.	\$ 800.00	\$ 28,800.00
402	Furnish and install Shantung Maple (3" cal.)	EA.	\$ 450.00	\$ 16,650.00
403	Furnish and install Savannah Holly (30 gal. specimen)	EA.	\$ 300.00	\$ 31,500.00
404	Furnish and install Vitex/Chaste Tree (30 gal. specimen)	EA.	\$ 275.00	\$ 2,200.00
405	Furnish and install Crape Myrtle (30 gal.)	EA.	\$ 250.00	\$ 10,750.00
406	Furnish and install Dwarf Burford Holly (5 gal.)	EA.	\$ 22.00	\$ 4,950.00
407	Furnish and install Fringe Flower (5 gal.)	EA.	\$ 25.00	\$ 2,700.00
408	Furnish and install Harbor Dwarf Nandina (3 gal.)	EA.	\$ 15.00	\$ 3,945.00
409	Furnish and install Mary Nell Holly (5 gal.)	EA.	\$ 25.00	\$ 4,450.00
410	Furnish and install purple wintercreeper (1 gal.)	EA.	\$ 2.50	\$ 4,317.50
411	Furnish and install Asian Jasmine (1 gal)	EA.	\$ 2.50	\$ 36,765.00
412	Furnish and install Indian Grass (5 gal)	EA.	\$ 22.00	\$ 1,452.00
413	Furnish and install Bushy Bluestem Grass (5 gal)	EA.	\$ 22.00	\$ 2,860.00
414	Furnish and install Little Bluestem Grass (3 gal)	EA.	\$ 12.00	\$ 7,380.00
415	Furnish and install Lindheimer's Muhly (3 gal)	EA.	\$ 16.00	\$ 1,664.00
416	Furnish and place solid sod (Bermuda)	S.Y.	\$ 2.85	\$ 36,480.00
417	Furnish and place Hydromulch (Bermuda)	S.F.	\$ 0.15	\$ 15,762.30
418	Furnish and install tree protection	L.F.	\$ 5.00	\$ 20,000.00
419	Furnish and place compost in turf areas (sod only)	C.Y.	\$ 30.00	\$ 10,890.00
420	Furnish and install finely shredded hardwood bark mulch	C.Y.	\$ 30.00	\$ 10,380.00
421	Furnish and install bed preparation with compost	C.Y.	\$ 30.00	\$ 10,380.00
422	Furnish and install irrigation system, turnkey	L.S.	\$ 528,000.00	\$ 528,000.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 701.68	\$ 25,260.48	\$ 750.00	\$ 27,000.00	\$ 718.83	\$ 25,877.88	\$ 723.50	\$ 26,046.12
\$ 377.83	\$ 13,979.71	\$ 495.00	\$ 18,315.00	\$ 387.06	\$ 14,321.22	\$ 419.96	\$ 15,538.64
\$ 205.11	\$ 21,536.55	\$ 225.00	\$ 23,625.00	\$ 210.12	\$ 22,062.60	\$ 213.41	\$ 22,408.05
\$ 248.29	\$ 1,986.32	\$ 325.00	\$ 2,600.00	\$ 254.36	\$ 2,034.88	\$ 275.88	\$ 2,207.07
\$ 183.52	\$ 7,891.36	\$ 200.00	\$ 8,600.00	\$ 188.00	\$ 8,084.00	\$ 190.51	\$ 8,191.79
\$ 17.27	\$ 3,885.75	\$ 22.00	\$ 4,950.00	\$ 17.69	\$ 3,980.25	\$ 18.99	\$ 4,272.00
\$ 19.43	\$ 2,098.44	\$ 35.00	\$ 3,780.00	\$ 19.91	\$ 2,150.28	\$ 24.78	\$ 2,676.24
\$ 16.19	\$ 4,257.97	\$ 22.00	\$ 5,786.00	\$ 16.59	\$ 4,363.17	\$ 18.26	\$ 4,802.38
\$ 19.43	\$ 3,458.54	\$ 29.00	\$ 5,162.00	\$ 19.91	\$ 3,543.98	\$ 22.78	\$ 4,054.84
\$ 3.24	\$ 5,595.48	\$ 6.30	\$ 10,880.10	\$ 6.19	\$ 10,690.13	\$ 5.24	\$ 9,055.24
\$ 2.27	\$ 33,382.62	\$ 2.80	\$ 41,176.80	\$ 2.32	\$ 34,117.92	\$ 2.46	\$ 36,225.78
\$ 21.59	\$ 1,424.94	\$ 25.00	\$ 1,650.00	\$ 22.12	\$ 1,459.92	\$ 22.90	\$ 1,511.62
\$ 21.59	\$ 2,806.70	\$ 25.00	\$ 3,250.00	\$ 22.12	\$ 2,875.60	\$ 22.90	\$ 2,977.43
\$ 17.27	\$ 10,621.05	\$ 25.00	\$ 15,375.00	\$ 17.69	\$ 10,879.35	\$ 19.99	\$ 12,291.80
\$ 17.27	\$ 1,796.08	\$ 25.00	\$ 2,600.00	\$ 17.69	\$ 1,839.76	\$ 19.99	\$ 2,078.61
\$ 2.43	\$ 31,104.00	\$ 2.40	\$ 30,720.00	\$ 2.49	\$ 31,872.00	\$ 2.44	\$ 31,232.00
\$ 0.05	\$ 5,254.10	\$ 0.05	\$ 5,254.10	\$ 0.06	\$ 6,304.92	\$ 0.05	\$ 5,604.37
\$ 1.62	\$ 6,480.00	\$ 4.00	\$ 16,000.00	\$ 1.66	\$ 6,640.00	\$ 2.43	\$ 9,706.67
\$ 32.39	\$ 11,757.57	\$ 38.00	\$ 13,794.00	\$ 33.18	\$ 12,044.34	\$ 34.52	\$ 12,531.97
\$ 32.39	\$ 11,206.94	\$ 38.00	\$ 13,148.00	\$ 33.18	\$ 11,480.28	\$ 34.52	\$ 11,945.07
\$ 34.54	\$ 11,950.84	\$ 55.00	\$ 19,030.00	\$ 35.39	\$ 12,244.94	\$ 41.84	\$ 14,408.59
\$ 123,798.62	\$ 123,798.62	\$ 242,100.00	\$ 242,100.00	\$ 147,725.92	\$ 147,725.92	\$ 171,208.18	\$ 171,208.18

**STREETSCAPE & PARK IMPROVEMENTS**  
**ARAPAHO ROAD - PHASE III**  
**SURVEYOR BLVD. TO ADDISON ROAD**

ENGINEER'S ESTIMATE				
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY. AMOUNT BID
423	Furnish and install crosswalk brick pavers (see specs)	S.F.	\$ 11.00	2,016 \$ 22,176.00
424	Furnish and install median pavers (see specs)	S.F.	\$ 6.50	3,724 \$ 24,206.00
425	Furnish and install walkway pavers (see specs)	S.F.	\$ 11.00	4,472 \$ 49,192.00
426	Furnish and place 5" reinforced concrete paving	S.F.	\$ 4.00	43,207 \$ 172,828.00
427	Furnish and place 5" reinforced concrete path	S.F.	\$ 3.50	28,845 \$ 100,957.50
428	Furnish and place 12" concrete bands	L.F.	\$ 9.00	2,396 \$ 21,564.00
429	Embankment	C.Y.	\$ 10.00	248 \$ 2,480.00
430	Furnish and install flush concrete strips (2'x10')	S.F.	\$ 4.50	20 \$ 90.00
431	Furnish and place decomposed granite paving	S.F.	\$ 4.00	32,488 \$ 129,952.00
432	Furnish and place river cobbles with drain pipe, if shown	C.Y.	\$ 75.00	59 \$ 4,425.00
433	Furnish and install flagstone paving	S.F.	\$ 24.00	6,100 \$ 146,400.00
434	Furnish and install ADA ramp	EA.	\$ 750.00	7 \$ 5,250.00
435	Furnish and install tree grate	EA.	\$ 950.00	22 \$ 20,900.00
436	Furnish and place concrete benches (18" ht.)	EA.	\$ 400.00	3 \$ 1,200.00
437	Furnish and install CMU wall (includes footing)	L.F.	\$ 52.00	144 \$ 7,488.00
438	Furnish and install brick veneer (see specs)	S.F.	\$ 17.00	608 \$ 10,336.00
439	Furnish and install cast stone cap	L.F.	\$ 15.00	144 \$ 2,160.00
440	Furnish and install modular retaining wall system (Mesa)	S.F.	\$ 20.00	1,708 \$ 34,160.00
441	Furnish and install security fence on retaining wall	L.F.	\$ 75.00	477 \$ 35,775.00
442	Furnish and install decorative metal fence	L.F.	\$ 65.00	895 \$ 58,175.00
443	Furnish and install decorative metal gate	EA.	\$ 2,250.00	1 \$ 2,250.00
444	Furnish and place brick columns	EA.	\$ 1,500.00	6 \$ 9,000.00
445	Furnish and install pedestal voice communication unit (includes footing)	EA.	\$ 2,500.00	3 \$ 7,500.00
446	Furnish and install steel edging	L.F.	\$ 4.00	484 \$ 1,936.00
			\$	\$ 1,662,676.30

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 14.25	\$ 28,728.00	\$ 11.80	\$ 23,788.80	\$ 13.87	\$ 27,961.92	\$ 13.31	\$ 26,826.24
\$ 17.31	\$ 64,462.44	\$ 11.90	\$ 44,315.60	\$ 18.33	\$ 68,260.92	\$ 15.85	\$ 59,012.99
\$ 10.75	\$ 48,074.00	\$ 7.60	\$ 33,987.20	\$ 14.16	\$ 63,323.52	\$ 10.84	\$ 48,461.57
\$ 3.11	\$ 134,373.77	\$ 3.50	\$ 151,224.50	\$ 3.69	\$ 159,433.83	\$ 3.43	\$ 148,344.03
\$ 3.70	\$ 106,726.50	\$ 3.50	\$ 100,957.50	\$ 3.69	\$ 106,438.05	\$ 3.63	\$ 104,707.35
\$ 12.57	\$ 30,117.72	\$ 8.30	\$ 19,886.80	\$ 9.64	\$ 23,097.44	\$ 10.17	\$ 24,367.32
\$ 13.81	\$ 3,424.88	\$ 13.00	\$ 3,224.00	\$ 18.51	\$ 4,590.48	\$ 15.11	\$ 3,746.45
\$ 14.12	\$ 282.40	\$ 3.60	\$ 72.00	\$ 10.28	\$ 205.60	\$ 9.33	\$ 186.67
\$ 1.78	\$ 57,828.64	\$ 0.95	\$ 30,863.60	\$ 2.76	\$ 89,666.88	\$ 1.83	\$ 59,453.04
\$ 375.31	\$ 22,143.29	\$ 350.00	\$ 20,650.00	\$ 414.71	\$ 24,467.89	\$ 380.01	\$ 22,420.39
\$ 15.69	\$ 95,709.00	\$ 13.50	\$ 82,350.00	\$ 20.53	\$ 125,233.00	\$ 16.57	\$ 101,097.33
\$ 1,150.00	\$ 8,050.00	\$ 1,000.00	\$ 7,000.00	\$ 1,001.51	\$ 7,010.57	\$ 1,050.50	\$ 7,353.52
\$ 293.92	\$ 6,466.24	\$ 1,000.00	\$ 22,000.00	\$ 1,658.85	\$ 36,494.70	\$ 984.28	\$ 21,653.65
\$ 562.21	\$ 1,686.63	\$ 385.00	\$ 1,155.00	\$ 629.47	\$ 1,888.41	\$ 525.58	\$ 1,576.68
\$ 78.11	\$ 11,247.84	\$ 46.50	\$ 6,696.00	\$ 51.47	\$ 7,411.68	\$ 58.69	\$ 8,451.84
\$ 4.26	\$ 2,590.08	\$ 4.30	\$ 2,614.40	\$ 4.71	\$ 2,863.68	\$ 4.42	\$ 2,689.39
\$ 20.39	\$ 2,936.16	\$ 20.30	\$ 2,923.20	\$ 22.39	\$ 3,224.16	\$ 21.03	\$ 3,027.84
\$ 17.35	\$ 29,633.60	\$ 18.00	\$ 30,744.00	\$ 19.91	\$ 34,006.26	\$ 18.42	\$ 31,461.36
\$ 86.75	\$ 41,379.75	\$ 114.00	\$ 54,378.00	\$ 121.53	\$ 57,969.81	\$ 107.43	\$ 51,242.52
\$ 66.98	\$ 59,947.10	\$ 85.60	\$ 76,612.00	\$ 119.54	\$ 106,986.30	\$ 90.71	\$ 81,182.47
\$ 12,000.00	\$ 12,000.00	\$ 10,400.00	\$ 10,400.00	\$ 8,785.18	\$ 8,785.18	\$ 10,395.06	\$ 10,395.06
\$ 732.04	\$ 4,392.24	\$ 900.00	\$ 5,400.00	\$ 995.31	\$ 5,971.86	\$ 675.78	\$ 5,254.70
\$ 5,000.00	\$ 15,000.00	\$ 2,000.00	\$ 6,000.00	\$ 10,335.50	\$ 31,006.50	\$ 5,778.50	\$ 17,335.50
\$ 2.43	\$ 1,176.12	\$ 4.50	\$ 2,178.00	\$ 2.49	\$ 1,205.16	\$ 3.14	\$ 1,519.76
\$	\$ 1,129,910.66	\$	\$ 1,254,216.60	\$	\$ 1,374,099.16	\$	\$ 1,252,742.14



**BID SCHEDULE IV  
BRIDGE IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDISON ROAD**

ENGINEER'S ESTIMATE					
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
501	48" Dia. Concrete Drilled Shaft (TXDOT Item 416)	LF	\$ 200.00	147.0	\$ 29,400.00
502	60" Dia. Concrete Drilled Shaft (TXDOT Item 416)	LF	\$ 250.00	312.0	\$ 78,000.00
503	96" Dia. Concrete Drilled Shaft (TXDOT Item 416)	LF	\$ 660.00	365.0	\$ 240,900.00
504	Cast-In-Place Concrete Abutment (TXDOT Item 420) (Class F Concrete - 5000psf)	CY	\$ 550.00	79.3	\$ 43,615.00
505	Cast-In-Place Concrete Bents 2-8 & 11-14 (TXDOT Item 420) (Class F Concrete - 5000psf)	CY	\$ 600.00	1,037.5	\$ 622,500.00
506	Cast-In-Place Concrete Bents 9 & 10 (TXDOT Item 420) (Class F Concrete - 5000psf)	CY	\$ 750.00	505.2	\$ 378,900.00
507	Cast-In-Place Concrete Diaphragm (TXDOT Item 420) (Class F Concrete - 5000psf)	CY	\$ 700.00	99.4	\$ 69,580.00
508	Construct Reinforced Concrete Slab (TXDOT Item 422) (Class S Concrete)	SF	\$ 9.00	83,680.0	\$ 753,120.00
509	Precast Prestressed Concrete Members (TXDOT Item 425) (U54 Beams)	LF	\$ 150.00	6,089.0	\$ 913,350.00
510	Concrete Surface Treatment (TXDOT Item 428)	SY	\$ 1.50	9,298.0	\$ 13,947.00
511	Structural Steel for Steel Arch (TXDOT Item 442)	LB	\$ 3.60	175,000.0	\$ 630,000.00
512	Structural Steel for Steel Stinger (TXDOT Item 442)	LB	\$ 2.00	12,701.0	\$ 25,402.00
513	Furnish, Install & Tension Structural Strands, 2 1/2" Dia (Tech Spec SSH)	LS	\$ 210,000.00	1.0	\$ 210,000.00
514	Pedestrian Rail (TXDOT Item 450)	LF	\$ 100.00	1,604.0	\$ 160,400.00
515	Traffic Rail Type T4 (S) (MOD) "A" (TXDOT Item 450)	LF	\$ 70.00	1,577.0	\$ 110,390.00
516	Traffic Rail Type T4 (S) (MOD) "B" (TXDOT Item 450)	LF	\$ 60.00	1,576.0	\$ 94,560.00
517	Sealed Expansion Joint (4") (TXDOT Item 454)	LF	\$ 62.00	363.7	\$ 22,549.40
518	Structural Approach Slab (TXDOT Item 442)	CY	\$ 300.00	73.6	\$ 22,080.00
519	"Addison" Logo Form Liner	LS	\$ 5,000.00	1.0	\$ 5,000.00
520	Standard 24"x24" Monument Plaque	EA	\$ 2,000.00	2.0	\$ 4,000.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 143.59	\$ 21,107.73	\$ 272.00	\$ 39,984.00	\$ 149.51	\$ 21,977.97	\$ 188.37	\$ 27,689.90
\$ 229.63	\$ 71,644.56	\$ 236.00	\$ 73,632.00	\$ 240.75	\$ 75,114.00	\$ 235.46	\$ 73,463.52
\$ 518.46	\$ 189,237.90	\$ 532.00	\$ 194,180.00	\$ 538.81	\$ 196,865.65	\$ 529.76	\$ 193,361.18
\$ 500.00	\$ 39,650.00	\$ 525.00	\$ 41,632.50	\$ 476.25	\$ 37,766.63	\$ 500.42	\$ 39,683.04
\$ 600.00	\$ 622,500.00	\$ 644.00	\$ 668,150.00	\$ 605.47	\$ 628,175.13	\$ 616.49	\$ 639,608.38
\$ 650.00	\$ 328,380.00	\$ 552.00	\$ 278,870.40	\$ 483.01	\$ 244,016.65	\$ 561.67	\$ 283,755.68
\$ 1,400.00	\$ 139,160.00	\$ 1,570.00	\$ 156,058.00	\$ 1,292.92	\$ 126,516.25	\$ 1,420.97	\$ 141,244.75
\$ 10.00	\$ 836,800.00	\$ 12.90	\$ 1,079,472.00	\$ 11.73	\$ 981,566.40	\$ 11.54	\$ 965,946.13
\$ 250.00	\$ 1,522,250.00	\$ 286.00	\$ 1,741,454.00	\$ 247.87	\$ 1,509,280.43	\$ 261.29	\$ 1,590,994.81
\$ 0.39	\$ 3,626.22	\$ 3.80	\$ 35,332.40	\$ 0.78	\$ 7,252.44	\$ 1.66	\$ 15,403.69
\$ 5.00	\$ 875,000.00	\$ 4.90	\$ 857,500.00	\$ 4.40	\$ 770,000.00	\$ 4.77	\$ 834,166.67
\$ 3.72	\$ 47,247.72	\$ 4.10	\$ 52,074.10	\$ 3.45	\$ 43,818.45	\$ 3.76	\$ 47,713.42
\$ 163,709.30	\$ 163,709.30	\$ 139,500.00	\$ 139,500.00	\$ 156,643.42	\$ 156,643.42	\$ 153,284.24	\$ 153,284.24
\$ 61.99	\$ 99,431.98 <i>514</i>	\$ 82.50	\$ 132,330.00	\$ 86.27	\$ 138,377.08	\$ 76.92	\$ 123,379.68
\$ 92.19	\$ 145,383.63 <i>515</i>	\$ 87.70	\$ 138,302.90	\$ 70.93	\$ 111,856.61	\$ 83.61	\$ 131,847.71
\$ 61.95	\$ 97,633.20 <i>516</i>	\$ 86.00	\$ 135,536.00	\$ 70.93	\$ 111,785.68	\$ 72.96	\$ 114,984.96
\$ 73.21	\$ 26,628.48	\$ 80.20	\$ 29,168.74	\$ 78.54	\$ 28,565.00	\$ 77.32	\$ 28,120.07
\$ 200.86	\$ 14,768.58	\$ 414.00	\$ 30,470.40	\$ 275.35	\$ 20,265.76	\$ 296.67	\$ 21,834.91
\$ 9,144.80	\$ 9,144.80	\$ 500.00	\$ 500.00	\$ 12,402.60	\$ 12,402.60	\$ 7,349.13	\$ 7,349.13
\$ 1,139.01	\$ 2,278.02	\$ 500.00	\$ 1,000.00	\$ 2,583.88	\$ 5,167.76	\$ 1,407.63	\$ 2,815.26
<b>\$ 5,255,580.09</b>		<b>\$ 5,825,147.44</b>		<b>\$ 5,229,213.90</b>		<b>\$ 5,436,647.14</b>	

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	\$	\$	4,427,693.40
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**BID SCHEDULE IV  
BRIDGE LIGHTING IMPROVEMENTS  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDISON ROAD**

ENGINEER'S ESTIMATE					
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
601	Furnish & install Conduit, 3/4" schedule 40 PVC	LF	\$ 5.10	3,870	\$ 19,737.00
602	Furnish & install Conduit, 2" schedule 80 PVC	LF	\$ 6.50	760	\$ 4,940.00
603	Furnish & install Conduit, 3/4" schedule 40 RMC	LF	\$ 9.70	3,620	\$ 35,114.00
604	Furnish & install Conduit, 1" schedule 40 RMC	LF	\$ 8.60	150	\$ 1,290.00
605	Furnish & install Electrical Conductor, # 2, Bare	LF	\$ 0.95	450	\$ 427.50
606	Furnish & install Electrical Conductor, # 2, Insulated	LF	\$ 1.20	1,000	\$ 1,200.00
607	Furnish & install Electrical Conductor, # 6, Bare	LF	\$ 0.70	1,040	\$ 728.00
608	Furnish & install Electrical Conductor, # 6, Insulated	LF	\$ 0.95	3,680	\$ 3,496.00
609	Furnish & install Electrical Conductor, # 8, Bare	LF	\$ 0.65	1,485	\$ 965.25
610	Furnish & install Electrical Conductor, # 8, Insulated	LF	\$ 0.70	3,190	\$ 2,191.00
611	Furnish & install Electrical Conductor, # 10, Bare	LF	\$ 0.55	4,630	\$ 2,546.50
612	Furnish & install Electrical Conductor, # 10, Insulated	LF	\$ 0.70	10,410	\$ 7,287.00
613	Furnish & install Electrical Conductor, # 12, Bare	LF	\$ 0.50	3,420	\$ 1,710.00
614	Furnish & install Electrical Conductor, # 12, Insulated	LF	\$ 0.65	6,840	\$ 4,446.00
615	Furnish & install Ground Box (Type E)	EA	\$ 600.00	9	\$ 5,400.00
616	Furnish & install Junction Box	EA	\$ 100.00	52	\$ 5,200.00
617	Furnish & install Fused Disconnects	EA	\$ 300.00	3	\$ 900.00
618	Furnish & install Pedestal Service & Foundation	EA	\$ 8,000.00	1	\$ 8,000.00
619	Furnish & install Load Distribution Center & Foundation	EA	\$ 8,200.00	2	\$ 16,400.00
620	Furnish & install 120v Weatherproof Duplex Receptacles	EA	\$ 50.00	12	\$ 600.00
621	Furnish & install LED Drivers	EA	\$ 300.00	36	\$ 10,800.00
622	Furnish & install Fixtures & Mounting Type "A-1A", Arch Floodlight w/Baffles, 175w	EA	\$ 3,800.00	2	\$ 7,600.00
623	Furnish & install Fixtures & Mounting Type "A-1B", Arch Floodlight w/Baffles, 250w	EA	\$ 3,800.00	4	\$ 15,200.00
624	Furnish & install Fixtures & Mounting Type "A-1C", Arch Floodlight w/Baffles, 400w	EA	\$ 3,800.00	3	\$ 11,400.00
625	Furnish & install Fixtures & Mounting Type "A-2A", Arch Floodlight, 175w	EA	\$ 1,800.00	2	\$ 3,600.00
626	Furnish & install Fixtures & Mounting Type "A-2B", Arch Floodlight, 250w	EA	\$ 1,800.00	4	\$ 7,200.00
627	Furnish & install Fixtures & Mounting Type "A-2C", Arch Floodlight, 400w	EA	\$ 1,800.00	3	\$ 5,400.00
628	Furnish & install Fixtures & Mounting Type "B", Blue LED Marker Light	EA	\$ 3,000.00	22	\$ 66,000.00
629	Furnish & install Fixtures & Mounting Type "C-1", LED Linear Grazing Accent, 18"	EA	\$ 800.00	54	\$ 43,200.00
830	Furnish & install Fixtures & Mounting Type "C-2", LED Linear Grazing Accent, 12"	EA	\$ 800.00	54	\$ 43,200.00
631	Furnish & install Fixtures & Mounting Type "D", Induction Area Light	EA	\$ 2,000.00	48	\$ 96,000.00
632	Furnish & install Fixtures & Mounting Type "E-1", Slinger Lighting, Deck Mount	EA	\$ 3,000.00	2	\$ 6,000.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 3.00	\$ 11,610.00	\$ 3.00	\$ 11,610.00	\$ 3.19	\$ 12,345.30	\$ 3.06	\$ 11,655.10
\$ 6.00	\$ 4,560.00	\$ 6.00	\$ 4,560.00	\$ 6.39	\$ 4,856.40	\$ 6.13	\$ 4,658.80
\$ 10.00	\$ 36,200.00	\$ 10.00	\$ 36,200.00	\$ 10.65	\$ 38,553.00	\$ 10.22	\$ 36,984.33
\$ 10.00	\$ 1,500.00	\$ 10.00	\$ 1,500.00	\$ 10.65	\$ 1,597.50	\$ 10.22	\$ 1,532.50
\$ 2.00	\$ 900.00	\$ 12.00	\$ 5,400.00	\$ 2.13	\$ 958.50	\$ 5.38	\$ 2,419.50
\$ 2.00	\$ 2,000.00	\$ 2.00	\$ 2,000.00	\$ 2.13	\$ 2,130.00	\$ 2.04	\$ 2,043.33
\$ 1.00	\$ 1,040.00	\$ 1.00	\$ 1,040.00	\$ 1.06	\$ 1,102.40	\$ 1.02	\$ 1,060.80
\$ 1.00	\$ 3,680.00	\$ 1.00	\$ 3,680.00	\$ 1.06	\$ 3,900.80	\$ 1.02	\$ 3,753.60
\$ 0.85	\$ 1,262.25	\$ 0.85	\$ 1,262.25	\$ 0.90	\$ 1,336.50	\$ 0.87	\$ 1,287.00
\$ 0.85	\$ 2,660.50	\$ 0.85	\$ 2,660.50	\$ 0.90	\$ 2,817.00	\$ 0.87	\$ 2,712.67
\$ 0.45	\$ 2,083.50	\$ 0.45	\$ 2,083.50	\$ 0.48	\$ 2,222.40	\$ 0.46	\$ 2,129.80
\$ 0.45	\$ 4,684.50	\$ 0.45	\$ 4,684.50	\$ 0.48	\$ 4,998.80	\$ 0.46	\$ 4,788.60
\$ 0.35	\$ 1,197.00	\$ 0.35	\$ 1,197.00	\$ 0.37	\$ 1,265.40	\$ 0.36	\$ 1,219.80
\$ 0.35	\$ 2,394.00	\$ 0.35	\$ 2,394.00	\$ 0.37	\$ 2,530.80	\$ 0.36	\$ 2,439.60
\$ 500.00	\$ 4,500.00	\$ 500.00	\$ 4,500.00	\$ 532.28	\$ 4,790.52	\$ 510.78	\$ 4,595.84
\$ 150.00	\$ 7,800.00	\$ 150.00	\$ 7,800.00	\$ 159.68	\$ 8,303.38	\$ 153.23	\$ 7,967.79
\$ 800.00	\$ 2,400.00	\$ 800.00	\$ 2,400.00	\$ 851.65	\$ 2,554.95	\$ 817.22	\$ 2,461.65
\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,387.34	\$ 6,387.34	\$ 6,129.11	\$ 6,129.11
\$ 12,000.00	\$ 24,000.00	\$ 12,000.00	\$ 24,000.00	\$ 12,774.68	\$ 25,549.36	\$ 12,258.23	\$ 24,516.45
\$ 200.00	\$ 2,400.00	\$ 200.00	\$ 2,400.00	\$ 212.91	\$ 2,554.92	\$ 204.30	\$ 2,451.64
\$ 1,000.00	\$ 36,000.00	\$ 1,000.00	\$ 36,000.00	\$ 1,064.56	\$ 38,324.16	\$ 1,021.52	\$ 36,774.72
\$ 4,700.00	\$ 9,400.00	\$ 4,700.00	\$ 9,400.00	\$ 5,003.42	\$ 10,006.84	\$ 4,801.14	\$ 9,602.28
\$ 4,850.00	\$ 19,400.00	\$ 4,850.00	\$ 19,400.00	\$ 5,163.10	\$ 20,652.40	\$ 4,954.37	\$ 19,817.47
\$ 5,100.00	\$ 15,300.00	\$ 5,100.00	\$ 15,300.00	\$ 5,429.24	\$ 16,287.72	\$ 5,209.75	\$ 15,629.24
\$ 4,100.00	\$ 8,200.00	\$ 4,100.00	\$ 8,200.00	\$ 4,364.68	\$ 8,729.36	\$ 4,168.23	\$ 8,376.45
\$ 4,250.00	\$ 17,000.00	\$ 4,250.00	\$ 17,000.00	\$ 4,524.37	\$ 18,097.48	\$ 4,341.46	\$ 17,365.83
\$ 4,500.00	\$ 13,500.00	\$ 4,500.00	\$ 13,500.00	\$ 4,790.50	\$ 14,371.50	\$ 4,596.83	\$ 13,790.50
\$ 5,500.00	\$ 121,000.00	\$ 5,500.00	\$ 121,000.00	\$ 5,855.06	\$ 128,811.32	\$ 5,616.35	\$ 123,603.77
\$ 1,000.00	\$ 54,000.00	\$ 1,000.00	\$ 54,000.00	\$ 1,064.56	\$ 57,486.24	\$ 1,021.52	\$ 55,162.08
\$ 1,000.00	\$ 54,000.00	\$ 1,000.00	\$ 54,000.00	\$ 1,064.56	\$ 57,486.24	\$ 1,021.52	\$ 55,162.08
\$ 1,750.00	\$ 64,000.00	\$ 1,750.00	\$ 64,000.00	\$ 1,662.97	\$ 89,422.56	\$ 1,787.66	\$ 85,807.52
\$ 2,300.00	\$ 4,600.00	\$ 2,300.00	\$ 4,600.00	\$ 2,448.48	\$ 4,696.96	\$ 2,349.49	\$ 4,698.99



ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD. TO ADDISON ROAD

ENGINEER'S ESTIMATE

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
633	Furnish & Install Fixtures & Mounting Type "E-2", Stinger Lighting, Triangular Bent Mount	EA	\$ 3,000.00	2	\$ 6,000.00
634	Furnish & Install Fixtures & Mounting Type "F", Roadway Lighting, 20' Height	EA	\$ 6,500.00	20	\$ 130,000.00
635	Furnish & Install Fixtures & Mounting Type "G", Roadway Lighting, 35' Height	EA	\$ 7,500.00	9	\$ 67,500.00
636	Grounding of Steel Structures	LS	\$ 5,000.00	1	\$ 5,000.00

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 2,300.00	\$ 4,600.00	\$ 2,300.00	\$ 4,600.00	\$ 2,448.48	\$ 4,896.96	\$ 2,349.49	\$ 4,698.99
\$ 4,800.00	\$ 96,000.00	\$ 4,800.00	\$ 96,000.00	\$ 5,109.67	\$ 102,197.40	\$ 4,903.29	\$ 98,065.80
\$ 5,000.00	\$ 45,000.00	\$ 5,000.00	\$ 45,000.00	\$ 5,322.78	\$ 47,905.02	\$ 5,107.59	\$ 45,968.34
\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,322.78	\$ 5,322.78	\$ 5,107.59	\$ 5,107.59
\$ 709,871.75		\$ 714,371.75		\$ 755,648.19		\$ 726,630.56	

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\$	\$ 646,678.25
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**BID SCHEDULE VII - BID SCHEDULE IX  
ALTERNATE BID  
ARAPAHO ROAD - PHASE III  
SURVEYOR BLVD TO ADDISON ROAD**

**ENGINEER'S ESTIMATE**

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
701	Pedestrian Light Pole	EA.	\$ 3,750.00	3	\$ 11,250.00
702	Pedestrian Light Pole Foundation	EA.	\$ 600.00	3	\$ 1,800.00
703	Cable, Insulated #6 AWG	LF	\$ 0.90	135	\$ 121.50
704	Bare Ground, #6 AWG	LF	\$ 0.90	270	\$ 243.00
<b>TOTAL AMOUNT BID FOR MATERIALS AND SERVICES, SCHEDULE VII, ITEMS 701 THROUGH 706, INCLUSIVE</b>					<b>\$ 13,414.50</b>

Archer		Orval		Austin Bridge	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 3,000.00	\$ 9,000.00	\$ 800.00	\$ 2,400.00	\$ 3,193.67	\$ 9,581.01
\$ 800.00	\$ 2,400.00	\$ 1.00	\$ 3.00	\$ 851.65	\$ 2,554.95
\$ 1.00	\$ 135.00	\$ 1.00	\$ 135.00	\$ 1.06	\$ 143.10
\$ 1.00	\$ 270.00	\$ 1.00	\$ 270.00	\$ 1.06	\$ 286.20
<b>\$ 11,805.00</b>		<b>\$ 2,808.00</b>		<b>\$ 12,565.26</b>	

Bid Average	
UNIT PRICE	AMOUNT BID
\$ 2,331.22	\$ 6,993.67
\$ 550.88	\$ 1,652.65
\$ 1.02	\$ 137.70
\$ 1.02	\$ 275.40
<b>\$ 9,059.42</b>	

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
801	Furnish and install Shanlung Maple (3" cal.)	EA.	\$ 450.00	22	\$ 9,900.00
802	Furnish and install Vilex/Chaste Tree (30 gal. specimen)	EA.	\$ 275.00	9	\$ 2,475.00
803	Furnish and install Wildflower Mix (seed)	S.F.	\$ 0.20	2,642	\$ 528.40
804	Furnish and install Indian Grass (5 gal)	EA.	\$ 22.00	9	\$ 198.00
805	Furnish and install Little Bluestem Grass (3 gal)	EA.	\$ 12.00	522	\$ 6,264.00
806	Furnish and install Lindheimer's Muhly (3 gal)	EA.	\$ 16.00	136	\$ 2,176.00
807	Furnish and install Weeping Love Grass (see specs)	S.Y.	\$ 1.00	1,323	\$ 1,323.00
808	Furnish and install solid sod (Buffalo 609)	S.Y.	\$ 3.65	5,616	\$ 20,498.40
809	Furnish and install solid sod (Bermuda)	S.Y.	\$ 2.85	2,790	\$ 7,951.50
810	Furnish and place compost @ sod (Bermuda), wildflower & Weeping Love grass	C.Y.	\$ 30.00	233	\$ 6,990.00
811	Furnish and install finely shredded hardwood bark mulch	C.Y.	\$ 30.00	40	\$ 1,200.00
812	Furnish and install bed preparation with compost	C.Y.	\$ 30.00	40	\$ 1,200.00
813	Furnish and install walkway pavers (see specs)	S.F.	\$ 7.50	2,465	\$ 18,487.50
814	Furnish and place 12" concrete bands	L.F.	\$ 9.00	2,245	\$ 20,205.00
815	Furnish and place 6" concrete bands	L.F.	\$ 9.00	540	\$ 4,860.00
816	Embankment	C.Y.	\$ 10.00	8,060	\$ 80,600.00
817	Furnish and install flush concrete strips (2'x10')	S.F.	\$ 4.50	100	\$ 450.00
818	Furnish and place river cobbles with drain pipe, if shown	C.Y.	\$ 75.00	15	\$ 1,125.00
819	Furnish and place landscape boulders	EA.	\$ 675.00	26	\$ 17,550.00
820	Furnish and install flagstone paving	S.F.	\$ 20.00	4,888	\$ 97,760.00
821	Furnish and place concrete benches (18" ht.)	EA.	\$ 400.00	18	\$ 7,200.00
822	Furnish and place concrete benches (22" ht.)	EA.	\$ 750.00	7	\$ 5,250.00
823	Furnish and place concrete retaining wall (includes footing)	C.Y.	\$ 475.00	82	\$ 38,950.00
824	Furnish and install steel edging	L.F.	\$ 4.00	85	\$ 340.00

\$ 377.83	\$ 8,312.26	\$ 495.00	\$ 10,890.00	\$ 374.50	\$ 8,239.00
\$ 248.29	\$ 2,234.61	\$ 325.00	\$ 2,925.00	\$ 246.10	\$ 2,214.90
\$ 0.16	\$ 422.72	\$ 0.90	\$ 2,377.80	\$ 0.16	\$ 422.72
\$ 21.59	\$ 194.31	\$ 25.00	\$ 225.00	\$ 21.40	\$ 192.60
\$ 17.27	\$ 9,014.94	\$ 25.00	\$ 13,050.00	\$ 17.12	\$ 8,936.64
\$ 17.27	\$ 2,348.72	\$ 25.00	\$ 3,400.00	\$ 17.12	\$ 2,328.32
\$ 0.66	\$ 899.64	\$ 0.60	\$ 793.80	\$ 0.67	\$ 886.41
\$ 4.05	\$ 22,744.80	\$ 2.70	\$ 15,163.20	\$ 4.01	\$ 22,520.16
\$ 2.43	\$ 6,779.70	\$ 2.30	\$ 6,417.00	\$ 2.41	\$ 6,723.90
\$ 32.39	\$ 7,546.87	\$ 38.00	\$ 8,654.00	\$ 32.10	\$ 7,479.30
\$ 32.39	\$ 1,295.60	\$ 38.00	\$ 1,520.00	\$ 32.10	\$ 1,264.00
\$ 34.54	\$ 1,381.60	\$ 55.00	\$ 2,200.00	\$ 34.24	\$ 1,369.60
\$ 6.89	\$ 16,983.65	\$ 7.40	\$ 16,241.00	\$ 13.43	\$ 33,104.95
\$ 12.50	\$ 28,267.00	\$ 7.40	\$ 16,613.00	\$ 9.32	\$ 20,923.40
\$ 11.03	\$ 5,956.20	\$ 4.20	\$ 2,268.00	\$ 8.02	\$ 4,330.80
\$ 12.88	\$ 103,812.80	\$ 16.89	\$ 136,133.40	\$ 15.35	\$ 123,721.00
\$ 10.92	\$ 1,092.00	\$ 3.60	\$ 360.00	\$ 9.95	\$ 995.00
\$ 446.80	\$ 6,702.00	\$ 350.00	\$ 5,250.00	\$ 401.25	\$ 6,018.75
\$ 400.27	\$ 10,407.02	\$ 500.00	\$ 13,000.00	\$ 602.50	\$ 20,865.00
\$ 15.88	\$ 77,621.44	\$ 13.50	\$ 65,988.00	\$ 19.86	\$ 97,075.68
\$ 449.15	\$ 8,084.70	\$ 385.00	\$ 6,930.00	\$ 509.04	\$ 10,962.72
\$ 640.97	\$ 4,486.79	\$ 407.00	\$ 2,849.00	\$ 708.72	\$ 4,961.04
\$ 297.97	\$ 24,433.54	\$ 400.00	\$ 32,800.00	\$ 560.49	\$ 45,960.18
\$ 2.43	\$ 206.55	\$ 4.50	\$ 382.50	\$ 2.41	\$ 204.85

\$ 415.78	\$ 9,147.09
\$ 273.13	\$ 2,458.17
\$ 0.41	\$ 1,074.41
\$ 22.66	\$ 203.97
\$ 19.80	\$ 10,333.86
\$ 19.80	\$ 2,692.35
\$ 0.65	\$ 859.95
\$ 3.59	\$ 20,142.72
\$ 2.36	\$ 6,640.20
\$ 34.16	\$ 7,960.06
\$ 34.16	\$ 1,366.53
\$ 41.26	\$ 1,650.40
\$ 9.24	\$ 22,776.60
\$ 9.77	\$ 21,941.13
\$ 7.75	\$ 4,185.00
\$ 15.04	\$ 121,222.40
\$ 8.16	\$ 815.67
\$ 399.35	\$ 5,990.25
\$ 567.59	\$ 14,757.34
\$ 16.41	\$ 80,228.37
\$ 481.06	\$ 8,659.14
\$ 585.56	\$ 4,098.94
\$ 419.49	\$ 34,397.91
\$ 3.11	\$ 264.83

<b>SUB-TOTAL AMOUNT BID ALTERNATE #1 FOR MATERIALS AND SERVICES, SCHEDULE VII, ITEMS 801 THROUGH 824, INCLUSIVE</b>					<b>\$ 353,481.80</b>
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<b>\$ 351,249.66</b>		<b>\$ 368,630.70</b>		<b>\$ 431,720.92</b>	
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<b>\$ 383,867.09</b>	
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BID SCHEDULE VII - BID SCHEDULE IX  
 ALTERNATE BID  
 ARAPAHO ROAD - PHASE III  
 SURVEYOR BLVD TO ADDISON ROAD

ENGINEER'S ESTIMATE

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT - BID
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DEDUCTIONS IF ALTERNATE #1 ACCEPTED					
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT - BID
901	Furnish and place 5" reinforced concrete paving	S.F.	\$ 4.00	-2,476	\$ (9,904.00)
902	Furnish and place Hydromulch (Bermuda)	S.F.	\$ 0.15	-105,082	\$ (15,762.30)
903	Furnish and install tree grate	EA.	\$ 950.00	-1	\$ (950.00)

SUB-TOTAL AMOUNT OF DEDUCTIONS FOR BID ALTERNATE #1 FOR MATERIALS AND SERVICES, SCHEDULE IX ITEMS 901 THROUGH 903, INCLUSIVE					\$	\$ (26,616.30)
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TOTAL AMOUNT BID ALTERNATE #1 FOR MATERIALS AND SERVICES, SCHEDULE VII - IX, ITEMS 701 THROUGH 903, INCLUSIVE ALL DEDUCTIONS					\$	\$ 340,280.00
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Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT - BID	UNIT PRICE	AMOUNT - BID	UNIT PRICE	AMOUNT - BID	UNIT PRICE	AMOUNT - BID
\$ 6.64	\$ (16,440.64)	\$ 3.50	\$ (8,666.00)	\$ 3.50	\$ (8,666.00)	\$ 4.55	\$ (11,257.55)
\$ 0.05	\$ (5,254.10)	\$ 0.05	\$ (5,254.10)	\$ 0.05	\$ (5,254.10)	\$ 0.05	\$ (5,254.10)
\$ 1,913.90	\$ (1,913.90)	\$ 1,000.00	\$ (1,000.00)	\$ 1,500.00	\$ (1,500.00)	\$ 1,471.30	\$ (1,471.30)
				\$	\$ -		
	\$ (23,608.64)		\$ (14,920.10)		\$ (15,420.10)		\$ (17,982.95)
	\$ 339,446.02		\$ 356,518.60		\$ 426,866.08		\$ 374,943.57

ARAPAHO ROAD - PHASE III  
SURVEYOR BOULEVARD. TO ADDISON ROAD

Roadway Lighting		ENGINEER'S ESTIMATE			
ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
1001	35'3" Street Light Pole (Steel Type)	EA.		9	
1002	Pedestrian Light Pole (Steel Type)	EA.		64	
1003	Combination, Street Light w/ Pedestrian Fixture (Steel T	EA.		13	
1004	Retaining Wall Mounted Light Pole (Steel Type)	EA.		4	
<b>TOTAL AMOUNT BID FOR MATERIALS AND SERVICES, SCHEDULE X, ITEMS 1001 THROUGH 1004, INCLUSIVE</b>					\$ -

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**EDUCTIONS IF ADDITIVE ALTERNATE II ACCEPTED**

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
1101	35'3" Street Light Pole (aluminum)	EA.		-9	
1102	Pedestrian Light Pole (aluminum)	EA.		-64	
1103	Combination, Street Light w/Pedestrian Fixture (aluminu	EA.		-13	
1104	Retaining Wall Mounted Light Pole (aluminum)	EA.		-4	
<b>SUB-TOTAL AMOUNT OF DEDUCTIONS FOR BID ALTERNATE #2 FOR MATERIALS AND SERVICES, SCHEDULE XI, ITEMS 1101 THROUGH 1104, INCLUSIVE</b>					\$ -
<b>TOTAL AMOUNT BID ALTERNATE #2 FOR MATERIALS AND SERVICES, SCHEDULE X THROUGH SCHEDULE XI, ITEMS 1001 THROUGH 1104, INCLUSIVE ALL DEDUCTIONS</b>					\$ -

Archer		Orval		Austin Bridge		Bid Average	
UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID	UNIT PRICE	AMOUNT BID
\$ 1,200.00	\$ 10,800.00	\$ 1,200.00	\$ 10,800.00	\$ 1,236.00	\$ 11,124.00	\$ 1,212.00	\$ 10,908.00
\$ 3,200.00	\$ 204,800.00	\$ 3,200.00	\$ 204,800.00	\$ 3,296.00	\$ 210,944.00	\$ 3,232.00	\$ 206,848.00
\$ 7,200.00	\$ 93,600.00	\$ 7,200.00	\$ 93,600.00	\$ 7,416.00	\$ 96,408.00	\$ 7,272.00	\$ 94,536.00
\$ 5,600.00	\$ 22,400.00	\$ 5,600.00	\$ 22,400.00	\$ 5,768.00	\$ 23,072.00	\$ 5,656.00	\$ 22,624.00
<b>\$ 331,600.00</b>		<b>\$ 331,600.00</b>		<b>\$ 341,548.00</b>		<b>\$ 334,916.00</b>	
\$ 2,000.00	\$ (18,000.00)	\$ 2,000.00	\$ (18,000.00)	\$ 2,000.00	\$ (18,000.00)	\$ (18,000.00)	\$ (18,000.00)
\$ 3,300.00	\$ (211,200.00)	\$ 3,300.00	\$ (211,200.00)	\$ 3,300.00	\$ (211,200.00)	\$ (211,200.00)	\$ (211,200.00)
\$ 8,500.00	\$ (110,500.00)	\$ 8,500.00	\$ (110,500.00)	\$ 8,500.00	\$ (110,500.00)	\$ (110,500.00)	\$ (110,500.00)
\$ 6,750.00	\$ (27,000.00)	\$ 6,750.00	\$ (27,000.00)	\$ 6,750.00	\$ (27,000.00)	\$ (27,000.00)	\$ (27,000.00)
<b>\$ (366,700.00)</b>		<b>\$ (366,700.00)</b>		<b>\$ (366,700.00)</b>		<b>\$ (366,700.00)</b>	
<b>\$ (35,100.00)</b>		<b>\$ (35,100.00)</b>		<b>\$ (25,152.00)</b>		<b>\$ (31,784.00)</b>	

# Arapaho Road Bridge at Midway Road

## Phase 2 - Conceptual Estimate of Construction Costs

### Estimated Cost Range

Description	TxDOT Bridge w/ landscaping, & lighting	Comments
<b>Urban Design Elements</b>		
Trees & shrubs @ thrust blocks	\$50,000	minimalistic
Trees & shrubs @ retaining walls	\$50,000	minimalistic
Railing around parking lot	\$160,000	1600 ft @ \$100/lf
<b>Civil Works (subtotal)</b>		
Traffic Control & Temp works	\$10,000	
<b>Bridge Structure</b>		
Steel Arch	\$3,100,000	abutment to abutment (\$35/sf)
Soundwalls	\$260,000	1400 ft conc. wall
Pedestrian/Traffic Rail separation	\$80,000	1600 ft @ \$50/lf
<b>Lighting</b>		
Bridge Stinger Lights	\$0	
Arch and Hanger Lights	\$0	
Marker Light - Arch top	\$0	
Marker Light - Hanger side	\$0	
Bridge Railing Lights	\$107,000	400 ft of rail each side
Approach Bridge Deck Lighting	\$170,000	45 light assemblies
Under-Deck Lighting	\$85,000	77 light fixtures
Electrical Services	\$55,000	
<b>Subtotal</b>	<b>\$4,127,000</b>	
<b>Contingency</b>		
<b>Overhead Utility Relocation</b>	<b>???</b>	
<b>Total</b>		



June 25, 2003

Mr. Steven Z. Chutchian, P.E.  
Assistant City Engineer  
16801 Westgrove Drive  
Addison, TX 75001

**Re: Arapaho Road Bridge at Midway Road  
Electronic File for Bridge Presentation**

Dear Mr. Chutchian:

As requested, please find enclosed a Compact Disc (CD) containing the PowerPoint file for our presentation that we have been asked to prepare for the Town Council. Please review and provide any comments. We await notification of the date that we are to make the presentation. Please be advised that I will be out of town from July 12 through 16.

Sincerely,

**URS Corporation**

A handwritten signature in black ink, appearing to read "Cliff R. Hall".

Cliff R. Hall, P.E.  
Project Manager

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951



June 25, 2003

Mr. Jerry D. Holder, P.E.  
Director of Capital Projects  
5910 W. Plano Parkway, Suite 200  
Plano, TX 75093

Re: **Arapaho Road Bridge at Midway Road**  
**30% Bridge Plans**

Dear Mr. Holder:

Please find enclosed 11"x17" prints of our 30% bridge plans for the Arapaho Road project for inclusion in your plan set and subsequent submittal to the Town of Addison. These prints include the Bridge Layouts (sheets 1-4 of 4) and the Typical Sections.

Sincerely,

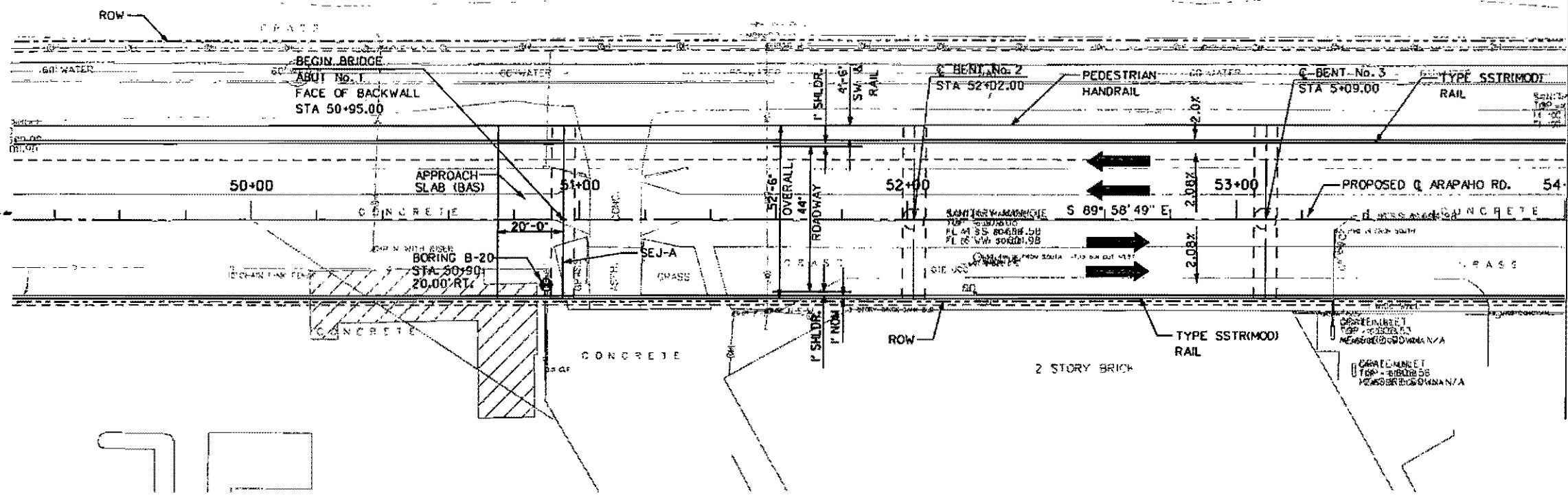
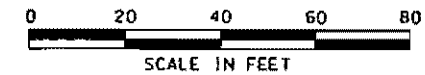
URS Corporation

Cliff R. Hall, P.E.  
Project Manager

c.c. Steve Chutchian – Town of Addison

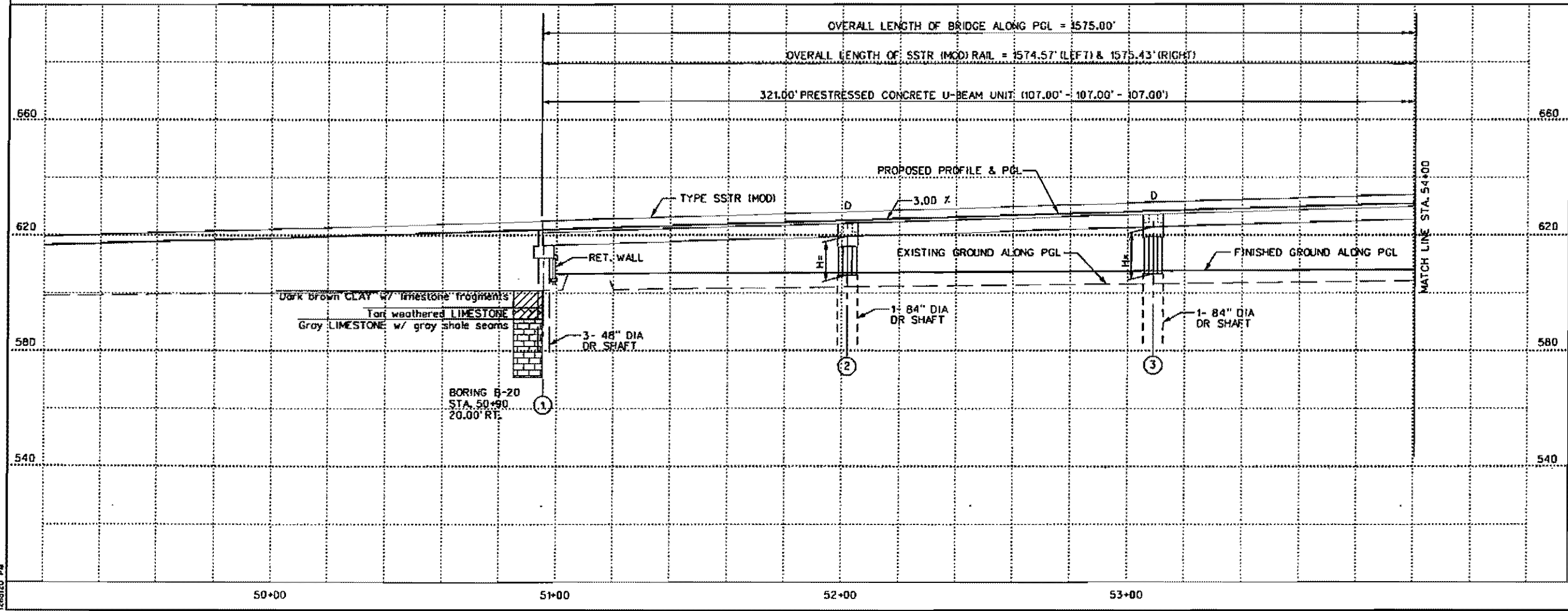
enclosures

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951



MATCH LINE STA. 54+00

- GENERAL NOTES:
- DESIGNED IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 17TH EDITION- 2002, FOR HS20-44 LOADING.
  - ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE, CROWN, AND/OR SUPERELEVATION.
  - ALL BENTS ARE RADIAL UNLESS NOTED OTHERWISE.



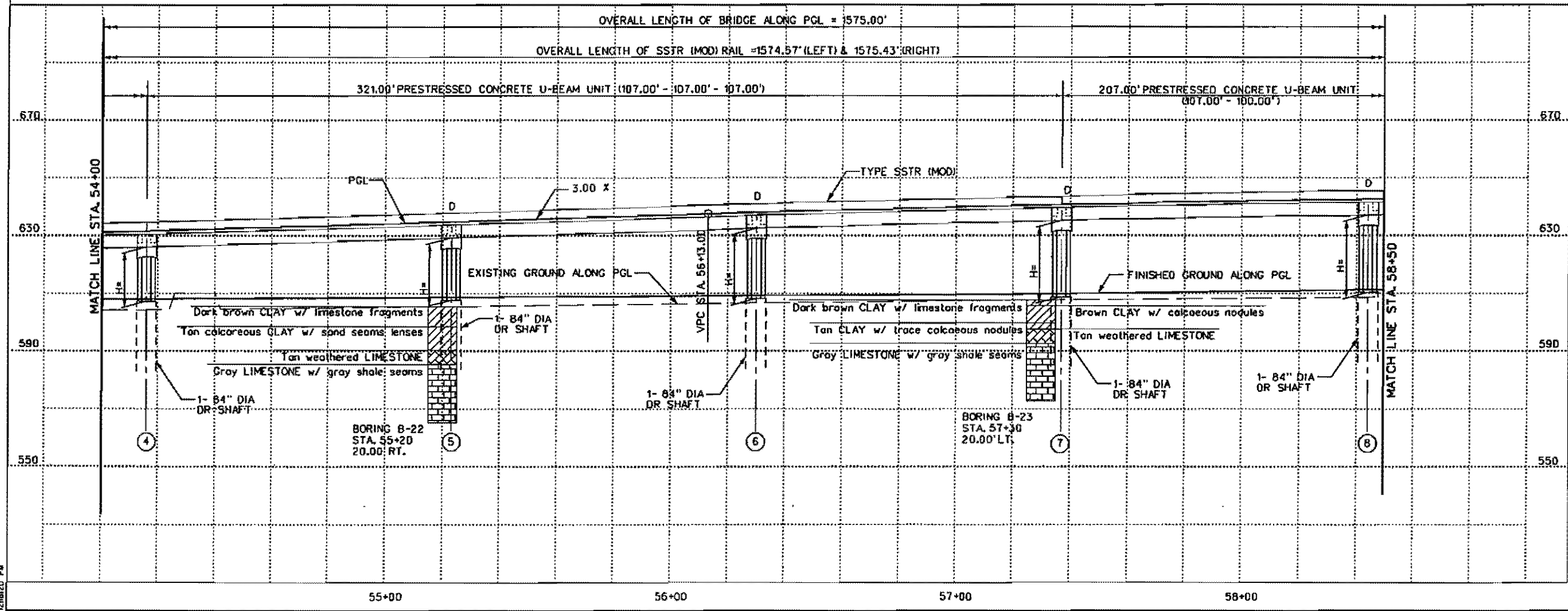
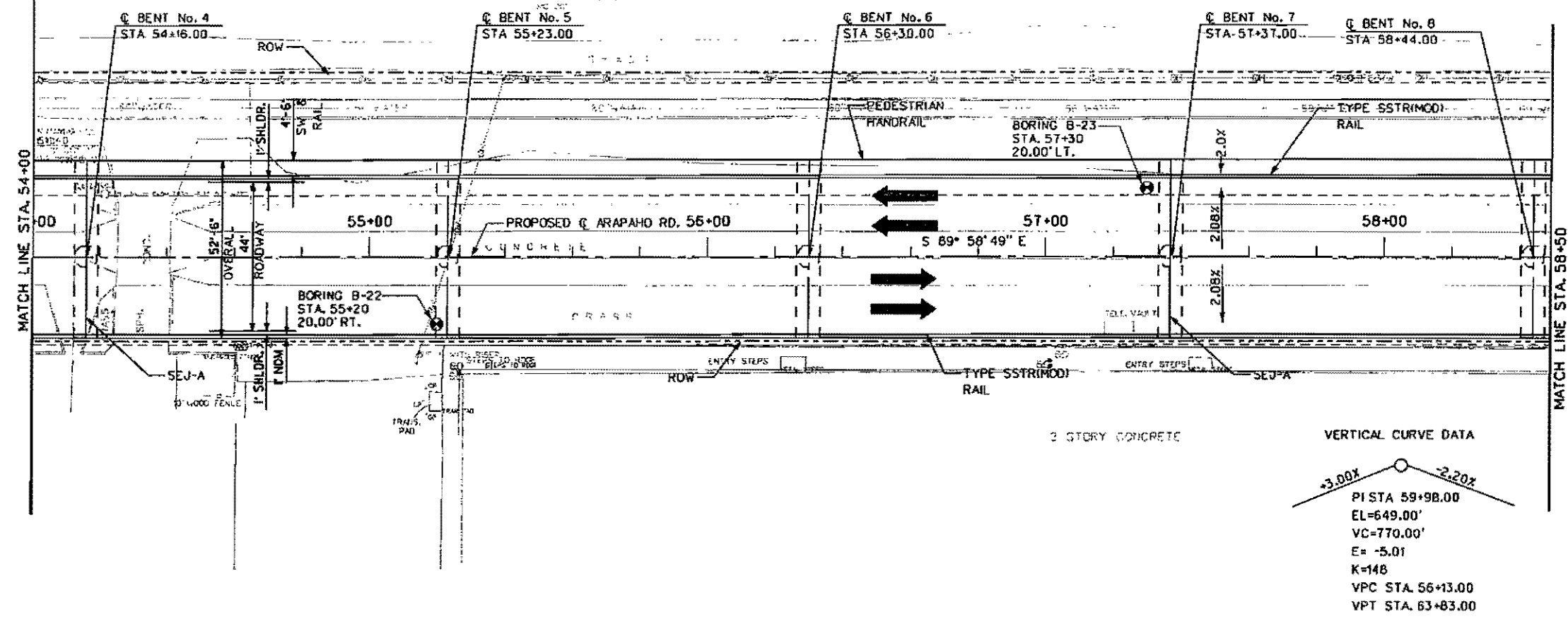
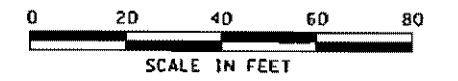
MATCH LINE STA. 54+00

FOR INTERIM REVIEW ONLY  
 By CLIFF R. HALL .P.E. # 82211  
 URS CORPORATION  
 Date 6-25-03  
 NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

NO.	DATE	REVISION	APPROV.
<b>URS</b> GREYSTONE CENTRE 3010 LBJ FREETWY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 1 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
Design: CBF	Drawn: JBT	DATE: 6-25-03	SCALE: 1" = 40'
Check: _____	Check: CBF		PROJECT NO. SHEET NO.

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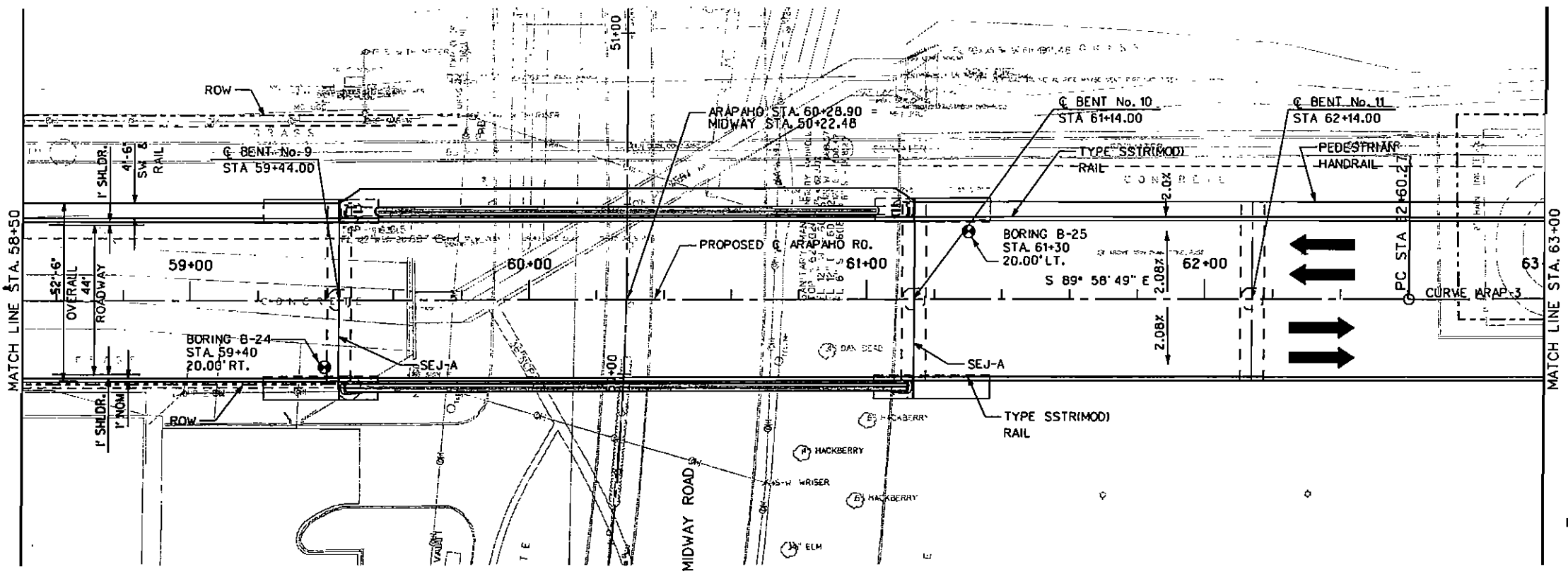
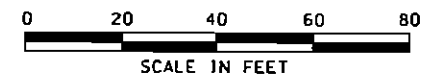




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 By CLIFF R. HALL, P.E. - 82211  
 URS CORPORATION  
 Date 6-25-03  
 NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

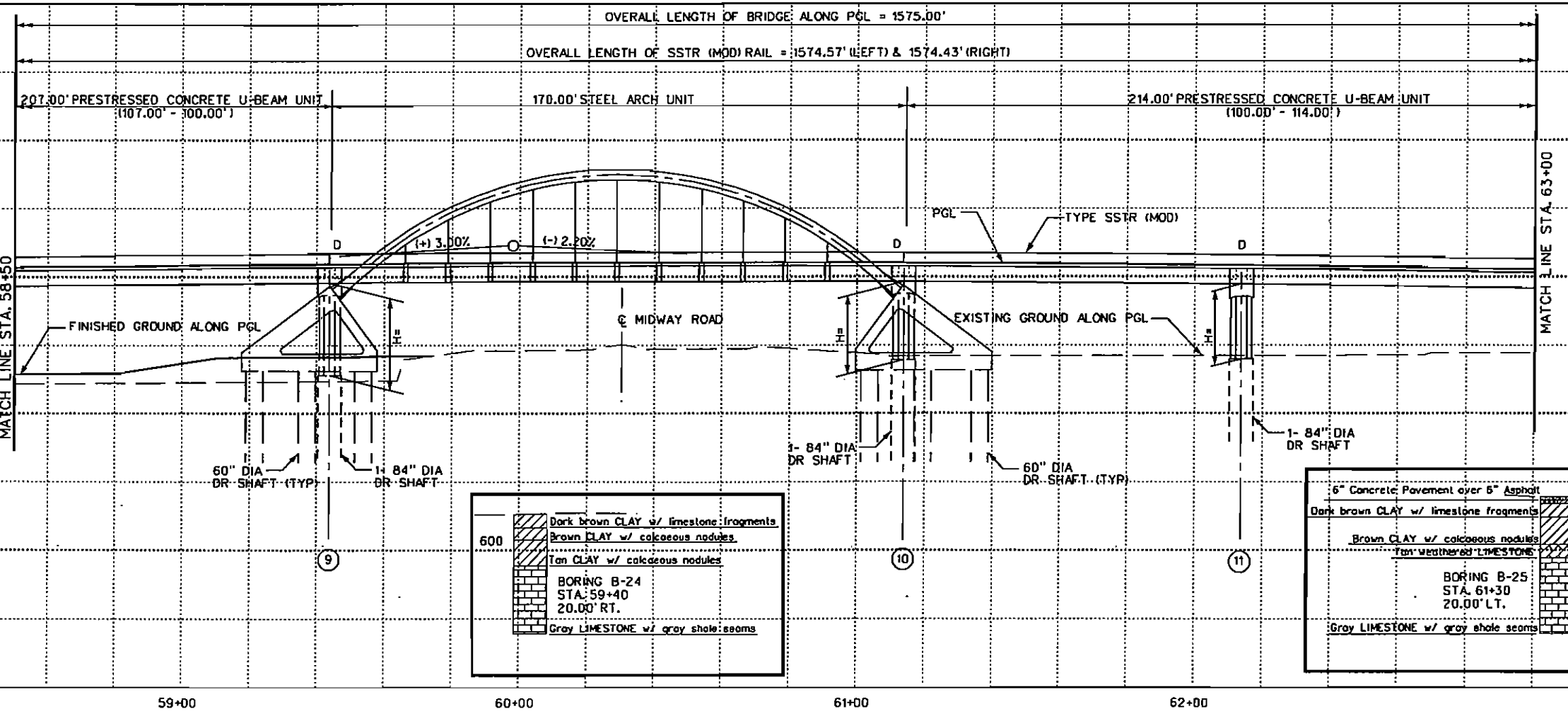
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GREYSTONE CENTRE 3010 LOJ FREEMAN, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 2 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
Design: CBJ	Drawn: JBJ	DATE: 6-25-03	SCALE: 1" = 40'
Check: ---	Check: CBJ	PROJECT NO.:	SHEET NO.:

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HORIZONTAL CURVE DATA  
CURVE ARAP-3  
PI STA 63+05.13  
 $\Delta=0^{\circ}01'41''$  LT  
 $D=0^{\circ}08'45''$   
 $T=44.86'$   
 $L=89.72'$   
 $R=5000.00'$   
PC STA 62+60.27  
PT STA 63+49.99

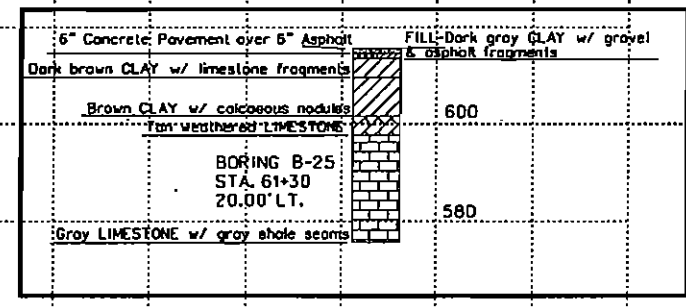
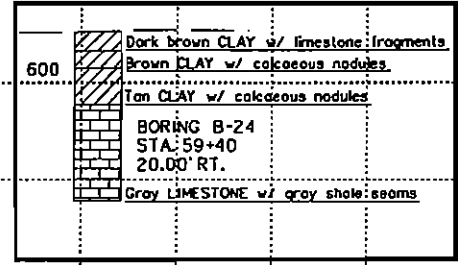
VERTICAL CURVE DATA  
 $+3.00\%$   $-2.20\%$   
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EL=649.00'  
VC=770.00'  
E= -5.01  
K=148  
VPC STA. 56+13.00  
VPT STA. 63+83.00



60" DIA DR-SHAFT (TYP)  
1- 84" DIA DR-SHAFT

1- 84" DIA DR-SHAFT  
60" DIA DR-SHAFT (TYP)

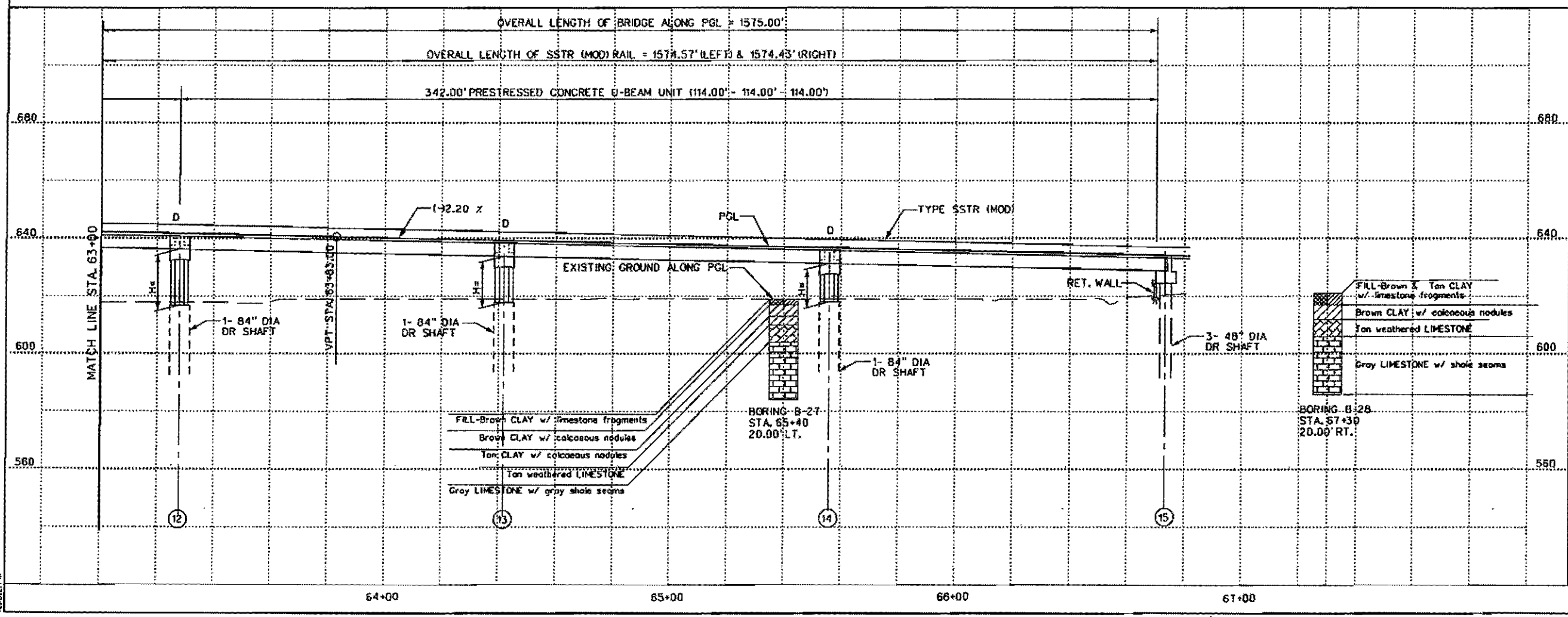
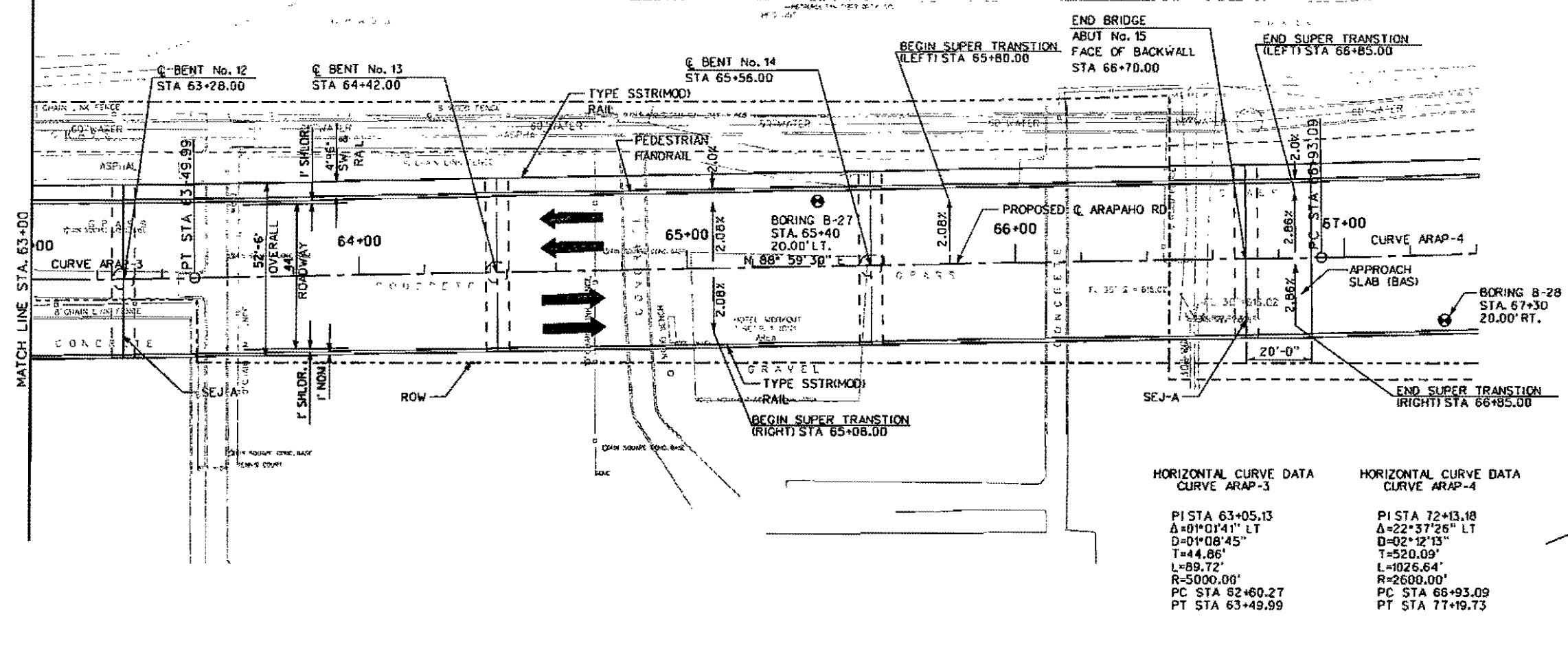
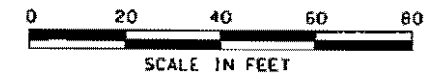
1- 84" DIA DR-SHAFT



FOR INTERIM REVIEW ONLY  
BY CLIFF R. HALL, P.E. - 82211  
URS CORPORATION  
Date 6-25-03  
NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

NO.	DATE	REVISION	APPROV.
<b>URS</b> CRYSTAL CENTRE 3010 LBJ FREEWAY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 3 OF 4			
TOWN OF ADDISON, TEXAS			
Design: CBJ	Drawn: JBY	DATE: 6-25-03	SCALE: 1" = 40'
Check: _____	Check: CBJ	PROJECT NO.:	SHEET NO.:

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By CLIFF R. HALL P.E. # 82211

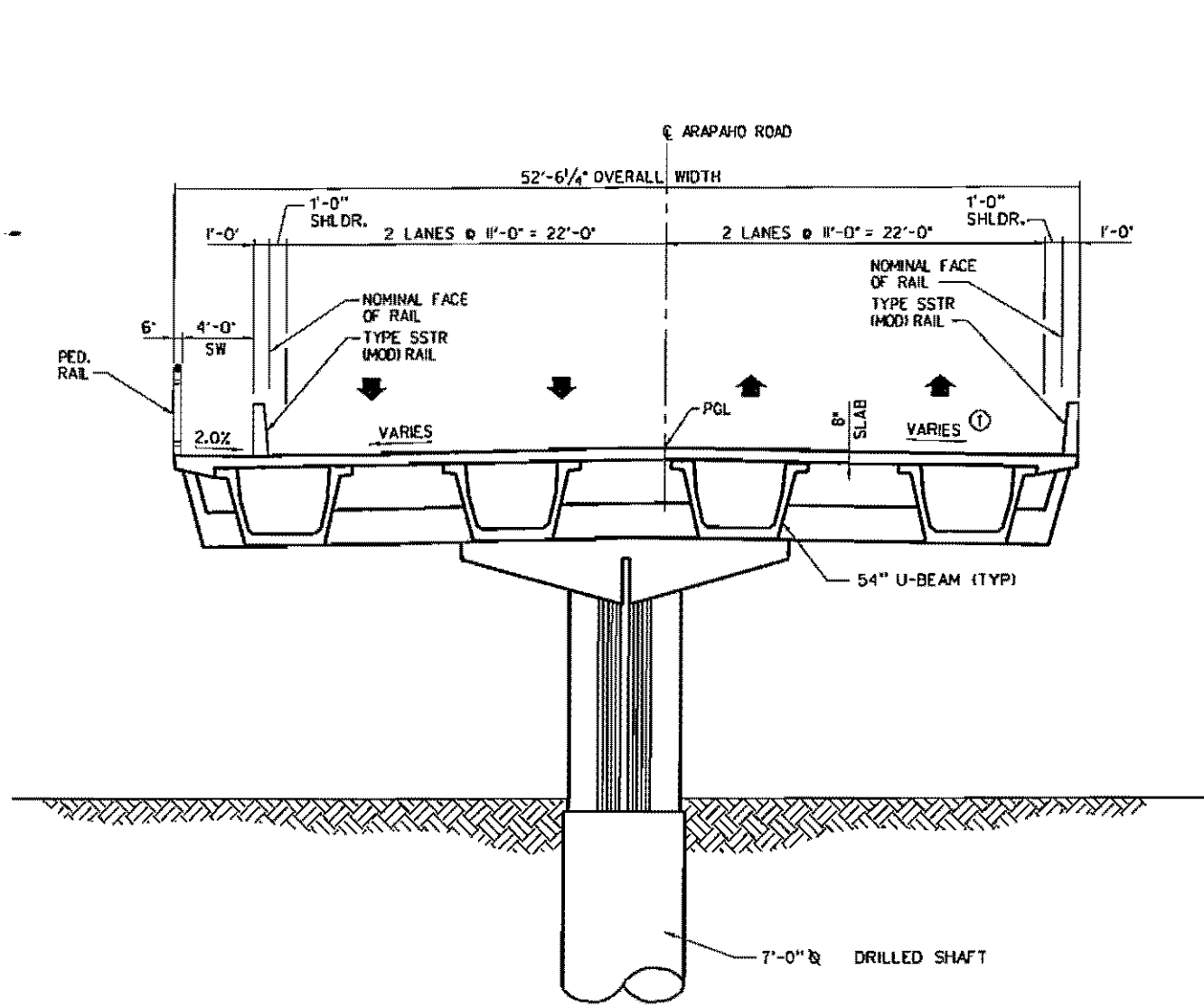
URS CORPORATION

Date 6-25-03

NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

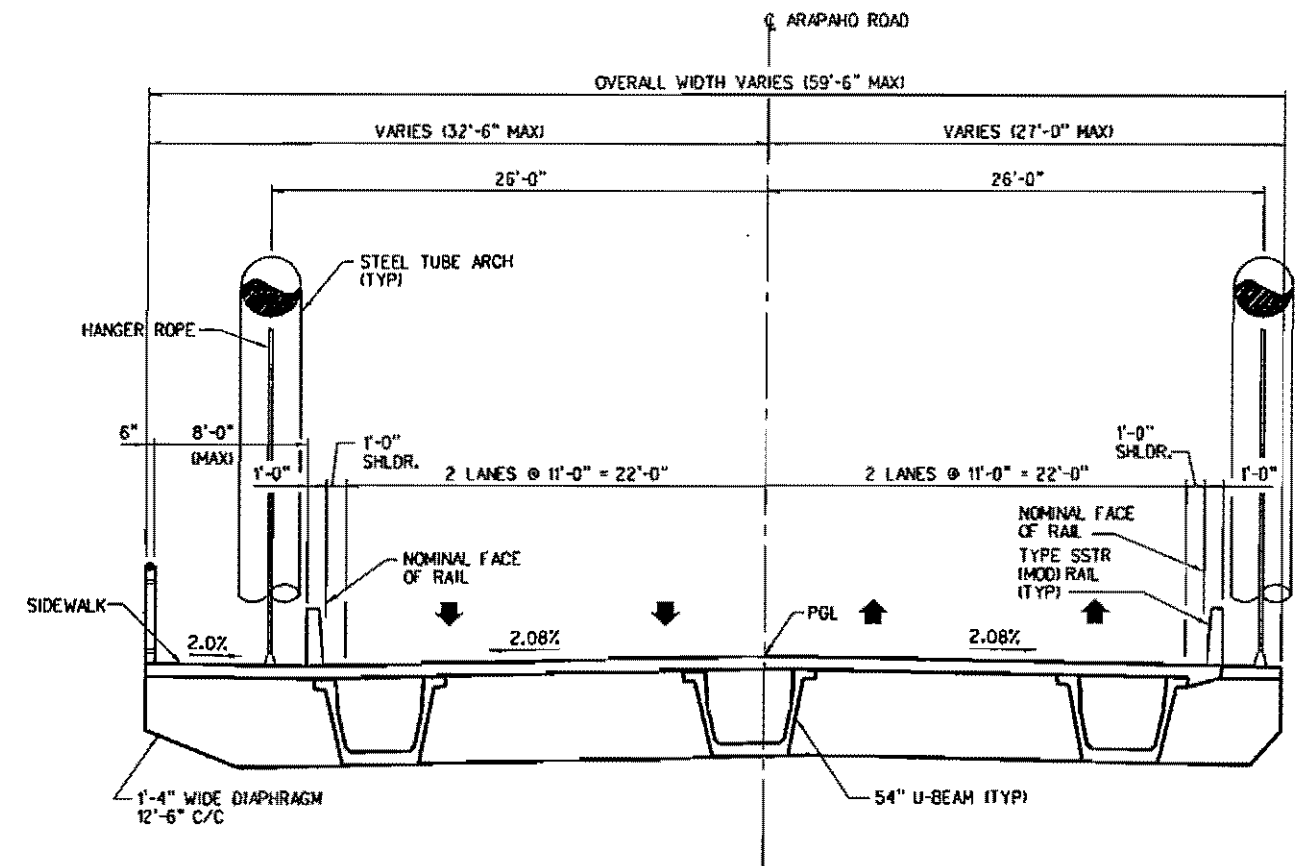
NO.	DATE	REVISION	APPROV.
<b>URS</b>			
GREYSTONE CENTRE 3010 LBJ FREWAY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 4 OF 4			
TOWN OF ADDISON, TEXAS			
Design	CBH	Drawn	JRH
Check	---	Check	CBH
DATE	6-25-03	SCALE	1" = 40'
PROJECT NO.	---		
SHEET NO.	---		

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TYPICAL SECTION (SPANS 1-8 & 10-14)

① REVERSE DIRECTION IN SUPERELEVATION



TYPICAL SECTION (SPAN 9)

FOR INTERIM REVIEW ONLY  
 BY CLIFF R. HALL, P.E. # 82211  
 URS CORPORATION  
 DATE 6-25-03  
 NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

NO.	DATE	REVISION	APPROV.
<b>URS</b> GREYSTONE CENTRE 3070 LBJ FREEWAY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b> SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>TYPICAL SECTIONS</b>			
<b>TOWN OF ADDISON, TEXAS</b>			
Design: CRH	Drawn: JRH	DATE: 6-25-03	SCALE: 1" = 40'
Check: CRH	Check: CRH	PROJECT NO.:	SHEET NO.:

DATE SUBMITTED: September 3, 2002  
FOR COUNCIL MEETING: September 10, 2002

### **Council Agenda Item**

#### **SUMMARY:**

This item is for the approval of a Professional Services Agreement for the design of the Arapaho Road Bridge at Midway Road.

#### **FINANCIAL IMPACT:**

Budgeted Amount: \$10.00 Million

Cost: \$550,965.00 (Engineering)

Source of Funds: Funds are available from the FY 2002 General Obligation Bond Program.

#### **BACKGROUND:**

The third phase of the proposed Arapaho Road extension project extends from Surveyor Blvd. to Addison Road. Construction of this section of Arapaho Road will complete an east-west minor arterial roadway that is necessary to relieve traffic congestion on Belt Line Road. It is anticipated that the new street will initially absorb approximately 11,000 vehicles per day, with a maximum future count of 25,000 vehicles per day. A proposed bridge over Midway Road is also proposed as an integral component of the roadway section in the third phase. The firm of URS Corporation was selected by the Town's Bridge Selection Committee to perform the design of this bridge. Attached is a Professional Services Agreement, in the amount not to exceed \$550,965.00, for design services related to the construction of the proposed Midway Road Bridge. This agreement provides for coordination of the bridge design by URS Corporation with the design of the roadway by HNTB Corporation. The anticipated construction cost of the bridge is approximately \$4,600,000. The proposed scope of work that this firm will provide is as follows:

- a. Bridge Design, including Civil & Electrical
- b. Architectural Design
- c. Lighting Design
- d. Noise Study, including Modeling & Analyses
- e. Project Management

The design of the proposed bridge by URS Corporation shall be performed concurrently with the design efforts on the roadway by HNTB Corporation.

**AGREEMENT FOR PROFESSIONAL SERVICES  
("Agreement")**

This Agreement between Town of Addison, ("Client") and URS Corporation ("URS"), a Nevada corporation; Graystone Centre, 3010 LBJ Freeway, Suite 1300 75234; 972.406.6950 ("URS"), is effective as of September 11, 2002. The parties agree as follows:

It is the expressed intent of the parties that this Agreement shall be made available to the subsidiaries and affiliated companies of URS. For the purposes of this Agreement, as it applies to each Work Order, the term "URS" shall mean either, URS Corporation, or the affiliated company identified in the Work Order. The applicable Work Order shall clearly identify the legal name of the affiliate or subsidiary accepting the Work Order.

**ARTICLE I - Work Orders.** The Scope of Services ("Services"), the Time Schedule and the Charges are to be set forth in a written Work Order to this Agreement. The terms and conditions of this Agreement shall apply to each Work Order, except to the extent expressly modified by the Work Order. Where charges are "not to exceed" a specified sum, URS shall notify Client before such sum is exceeded and shall not continue to provide the Services beyond such sum unless Client authorizes an increase in the sum. If a "not to exceed" sum is broken down into budgets for specific tasks, the task budget may be exceeded without Client authorization as long as the total sum is not exceeded. Changes in conditions, including, without limitation, changes in laws or regulations occurring after the budget is established or other circumstances beyond URS control shall be a basis for equitable adjustments in the budget and schedule.

**ARTICLE II - Payment.** Unless otherwise stated in an Work Order, payment shall be on a time and materials basis under the Schedule of Fees and Charges in effect when the Services are performed. Client shall pay undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, URS may suspend further performance until payments are current. Client shall notify URS of any disputed amount within fifteen (15) days from date of the invoice, give reasons for the objection, and promptly pay the undisputed amount. Client shall pay an additional charge of one and one-half percent (1½%) per month or the maximum percentage allowed by law, whichever is the lesser, for any past due amount. In the event of a legal action for invoice amounts not paid, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party.

**ARTICLE III - Professional Responsibility.** URS is obligated to comply with applicable standards of professional care in the performance of the Services. Client recognizes that opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where the data are obtained, despite the use of due professional care.

**ARTICLE IV - Responsibility for Others.** URS shall be responsible to Client for URS Services and the services of URS subcontractors. URS shall not be responsible for the acts or omissions of other parties engaged by Client nor for their construction means, methods, techniques, sequences, or procedures, or their health and safety precautions and programs.

**ARTICLE V - Risk Allocation.** The liability of URS, its employees, agents and subcontractors (referred to collectively in this Article as "URS"), for Client's claims of loss, injury, death, damage, or expense, including, without limitation, Client's claims of contribution and indemnification, express or implied, with respect to third party claims relating to services rendered or obligations imposed under this Agreement, including all Work Orders, shall not exceed in the aggregate:

(1) The total sum of \$250,000 for claims arising out of professional negligence, including errors, omissions, or other professional acts, and including unintentional breach of contract; and any actual or potential environmental pollution or contamination, including, without limitation, any actual or threatened release of toxic, irritant, pollutant, or waste gases, liquids, or solid materials, or failure to detect or properly evaluate the presence of such substances, except to the extent such release, threatened release, or failure to detect or evaluate is caused by the willful misconduct of URS; or

(2) The total sum of \$1,000,000 for claims arising out of negligence, breach of contract, or other causes for which URS has any legal liability, other than as limited by (1) above.

**ARTICLE VI - Insurance.** URS agrees to maintain during the performance of the Services: (1) statutory Workers' Compensation coverage; (2) Employer's Liability; (3) General Liability; and (4) Automobile Liability insurance coverage each in the sum of \$1,000,000.

**ARTICLE VII - Consequential Damages.** Neither Party shall be liable to the other for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by breach of contract, willful misconduct, negligent act or omission, or other wrongful act of either of them.

**ARTICLE VIII - Client Responsibility.** Client shall: (1) provide URS, in writing, all information relating to Client's requirements for the project; (2) correctly identify to URS, the location of subsurface structures, such as pipes, tanks, cables and utilities; (3) notify URS of any potential hazardous substances or other health and safety hazard or condition known to Client existing on or near the project site; (4) give URS prompt written notice of any suspected deficiency in the Services; and (5) with reasonable promptness, provide required approvals and decisions. In the event that URS is requested by Client or is required by subpoena to produce documents or give testimony in any action or proceeding to which Client is a party and URS is not a party, Client shall pay URS for any time and expenses required in connection therewith, including reasonable attorney's fees.

Client shall reimburse URS for all taxes, duties and levies such as Sales, Use, Value Added Taxes, Deemed Profits Taxes, and other similar taxes which are added to or deducted from the value of URS Services. For the purpose of this Article such taxes shall not include taxes imposed on URS net income, and employer or employee payroll taxes levied by any United States taxing authority, or the taxing authorities of the countries or any agency or subdivision thereof in which URS subsidiaries, affiliates, or divisions are permanently domiciled. It is agreed and understood that these net income, employer or employee payroll taxes are included in the unit prices or lump sum to be paid URS under the respective Work Order.

**ARTICLE IX - Force Majeure.** An event of "Force Majeure" occurs when an event beyond the control of the Party claiming Force Majeure prevents such Party from fulfilling its obligations. An event of Force Majeure includes, without limitation, acts of God (including floods, hurricanes and other adverse weather), war, riot, civil disorder, acts of terrorism, disease, epidemic, strikes and labor disputes, actions or inactions of government or other authorities, law enforcement actions, curfews, closure of transportation systems or other unusual travel difficulties, or inability to provide a safe working environment for employees.

In the event of Force Majeure, the obligations of URS to perform the Services shall be suspended for the duration of the event of Force Majeure. In such event, URS shall be equitably compensated for time expended and expenses incurred during the event of Force Majeure and the schedule shall be extended by a like number of days as the event of Force Majeure. If Services are suspended for thirty (30) days or more, URS may, in its sole discretion, upon 5 days prior written notice, terminate this Agreement or the affected Work Order, or both. In the case of such termination, in addition to the compensation and time extension set forth above, URS shall be compensated for all reasonable termination expenses.

**ARTICLE X - Right of Entry.** Client grants to URS, and, if the project site is not owned by Client, warrants that permission has been granted for, a right of entry from time to time by URS, its employees, agents and subcontractors, upon the project site for the purpose of providing the Services. Client recognizes that the use of investigative equipment and practices may unavoidably alter the existing site conditions and affect the environment in the area being studied, despite the use of reasonable care.



**ARTICLE XI - Documents.** Provided that URS has been paid for the Services, Client shall have the right to use the documents, maps, photographs, drawings and specifications resulting from URS efforts on the project. Reuse of any such materials by Client on any extension of this project or any other project without the written authorization of URS shall be at Client's sole risk. URS shall have the right to retain copies of all such materials. URS retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

**ARTICLE XII - Termination.** Client may terminate all or any portion of the Services for convenience, at its option, by sending a written Notice to URS. Either party can terminate this Agreement or a Work Order for cause if the other commits a material, uncured breach of this Agreement or becomes insolvent. Termination for cause shall be effective twenty (20) days after receipt of a Notice of Termination, unless a later date is specified in the Notice. The Notice of Termination for cause shall contain specific reasons for termination and both parties shall cooperate in good faith to cure the causes for termination stated in the Notice. Termination shall not be effective if reasonable action to cure the breach has been taken before the effective date of the termination. Client shall pay URS upon invoice for Services performed and charges incurred prior to termination, plus reasonable termination charges. In the event of termination for cause, the parties shall have their remedies at law as to any other rights and obligations between them, subject to the other terms and conditions of this Agreement.

**ARTICLE XIII - No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS. No third party shall have the right to rely on URS opinions rendered in connection with the Services without the written consent of URS and the third party's agreement to be bound to the same conditions and limitations as Client.

**ARTICLE XIV - Assignments.** Neither party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other party.

**ARTICLE XV - Hazardous Substances.** All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by URS in accordance with applicable law; provided, however, that any and all such materials, including wastes, that cannot be introduced back into the environment under existing law without additional treatment, and all hazardous wastes, radioactive wastes, or hazardous substances ("Hazardous Substances") related to the Services, shall be packaged in accordance with the applicable law by URS and turned over to Client for appropriate disposal. URS shall not arrange or otherwise dispose of Hazardous Substances under this Agreement. URS, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but URS shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances. If Client requires: (1) URS agents or employees to sign such manifests; or (2) URS to hire, for Client, the Hazardous Substances transportation, treatment, or disposal contractor, then for these two purposes, URS shall be considered to act as Client's agent so that URS will not be considered to be a generator, transporter, or disposer of such substances or considered to be the arranger for disposal of Hazardous Substances, and Client shall indemnify URS against any claim or loss resulting from such signing.

**ARTICLE XVI - Venue.** In the event of any dispute between the parties to this Agreement, the venue for the dispute resolution shall be any state or federal court in the United States having jurisdiction over the parties. The foregoing notwithstanding, if the project is located outside the United States, the laws of the State of California shall govern and in such event, any dispute under the Agreement not resolved amicably shall be resolved under the binding rules of the American Arbitration Association.

**ARTICLE XVII - Integrated Writing and Enforceability.** This Agreement constitutes the final and complete repository of the agreements between Client and URS relating to the Services and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written. Modifications of this Agreement shall not be binding unless made in writing and signed by an Authorized Representative of each party. The provisions of this Agreement shall be enforced to the fullest extent



permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision.

**THE PARTIES ACKNOWLEDGE** that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

**CLIENT**

**URS**

\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Signature

**Emily Taylor, P.E. / Vice President**

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

\_\_\_\_\_  
Date of Signature

LUIMP SUM WORK ORDER NO. 001

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated September 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
DESIGN DEVELOPMENT & CONTRACT DOCUMENTS**

**Client Authorized  
Representative:**

**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010

**Telephone No.:** 972.450.2871

**URS Authorized  
Representative:**

**Address:** Emily Taylor, P.E.  
Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234

**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein.

**PAYMENT.** The Services described in Attachment A will be performed for a "lump sum" amount of **\$550,965.00**. A breakdown of this "lump sum" cost is included in Attachment C. URS charges shall be on a percent complete basis and payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**  
\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

**URS**

\_\_\_\_\_  
Signature

**Emily Taylor, P.E. / Vice President**  
\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the engineering, architectural, lighting design and noise study services including plans, specifications and estimates as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) on a tangent alignment. URS shall prepare plans, details and compute quantities for a steel arch bridge, the "blue-bridge concept", over Midway Road, with prestressed concrete beam approaches. Design and details will include all bridge details including any soundwalls located on the bridge. URS will also provide all bridge drainage details to accommodate the drainage in accordance with the Town's Consultant's drainage requirements. URS will also prepare plans, details and compute quantities for any lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road with the exception of those portions to be prepared by the Town of Addison's Consultant. URS will also prepare architectural details for the bridge, the mechanically stabilized earth (MSE) retaining walls and the sound walls. Additionally, URS will prepare a noise study including ambient noise measurements, modeling and noise analyses. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of one set of comments, URS will prepare all final detail plans, specifications, and estimates as previously described, to be included into one final construction package prepared by the Town's Consultant. URS will submit four sets of plans for review to the Town for 65% review and 95% review and will incorporate the Town's comments (one set per submittal) in the next submittals. URS will also provide signed and sealed mylar plans, electronic copies of drawing files, and specifications related to the bridge structure at the 100% final submittal.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format and consolidation of construction plans, specification and estimate into one final construction package. URS will coordinate with the Town and/or the Town's Consultant for revising the horizontal alignment and vertical profile of Arapaho Road to accommodate the proposed bridge structure. URS will coordinate with the Town and/or the Town's Consultant for the revised alignment of the proposed box-culvert under Arapaho Road as well as bridge drainage and bridge drain tie-ins. URS will coordinate with the Town and/or the Town's Consultant for all geotechnical information required for the foundation design for the bridge and retaining walls.

The Town of Addison will provide to URS all available Arapaho Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical sections, topography survey, field survey, and utility information. The Town will also provide boring logs, soil parameters and foundation design recommendations (allowable bearing capacities, lateral load analysis, etc.) required for the bridge foundation designs. The Town of Addison will provide to URS a field location survey of the existing 60-in. diameter water main, locating the water main precisely, both vertically and horizontally, along the project limits and specifically in the vicinity of the arch-bridge's main foundations. Additionally the Town will provide any applicable noise regulations or ordinance

information, obtain right of entry, and provide all traffic data including but not limited to, peak hourly volumes, average daily traffic, percentages of trucks, and design and posted speeds that may be required for the noise study. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Arapaho Road geometrics and roadway design, drainage, parking lot layout and design, retaining wall layout and design, survey, geotechnical engineering, design and details for soundwalls on retaining walls or at grade, landscaping, hardscaping and irrigation for landscaping, permitting, and construction administration, inspection and record drawings are outside the scope of this agreement and will be performed by others.

**Itemized Scope of Services Provided by URS  
for the Arapaho Road Bridge**

**TASK I - ENGINEERING**

**A. Civil Site Works**

1. Final Civil Design & PS&E (65%, 95%, 100% submittal)
  - Midway Road Traffic Control Plan
  - Coordinate Relocation of Overhead Utilities (Along Midway Road)
  - Retaining Wall Architectural Details
  - Soundwall Architectural Details
  - QA/QC
  - Cost Estimate
  - Special Provisions & Specifications
  - Coordination with Town's Consultants

**B. Bridges**

1. Preliminary Bridge Design (~30% submittal)
  - Develop Design Criteria
  - Preliminary Bridge Layout (Finalize Bridge Location)
  - Preliminary Typical Section
  - Refine Arch Shape
  - Size Thrust Block & Refine Shape
  - Size Foundation
  - Size Diaphragms
  - Size Traffic Railing Members
  - Develop Soundwall
  - Coordinate Culvert Layout
  - Quantities and Cost Estimate
  - QA/QC
2. Final Bridge Design, & PS&E (65%, 95%, 100% submittals)
  - Final Bridge Layout
  - Final Typical Section
  - General Notes
  - Quantities and Bearing Seats
  - Foundation Layout
  - Drilled Shaft Details
  - Abutment Plan & Elevation
  - Abutment Details
  - Bent Plan & Elevation
  - Bent Details
  - Thrust Block Plan & Elevation
  - Thrust Block Details
  - Prestressed Concrete Beam Unit – Deck Plan
  - Prestressed Concrete Beam Unit – Deck Sections
  - Bridge Soundwall Details
  - Miscellaneous Superstructure Details (drains, lighting)
  - Diaphragm Details
  - Closure Pour Details
  - Suspension Hanger Details
  - Steel Arch Design and Details
  - Steel Arch Camber Details
  - Bearing Details
  - Drainage Details
  - Railing Details
  - Architectural Details

- Erection Sequencing
- Prestressed Beam Tables
- Compile, Verify & Modify TxDOT Standard Drawings
- QA/QC
- Coordination with Town's Consultants
- Bridge Total Quantities & Cost Estimate
- Bridge Special Provisions & Specifications

### **C. Electrical Engineering**

1. Design Development
  - Prepare a preliminary cost estimate
2. Final Electrical Design & PS&E (65%, 95%, 100% submittals)
  - Develop and finalize a load study for each electrical service source.
  - Prepare Lighting Calculations for under-deck lighting above the parking lot.
  - Illumination Layout (2961', 1200'/sht + 1 sheet under the bridge)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents Summary
  - Insert Lighting Consultant Special Details
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - QA ON 95% PLANS
  - Update Drawings per City Review

## **TASK II - ARCHITECTURAL**

### **A. Design Development**

1. Architectural Studies & Details
  - Develop one rail option addressing the issues of hiker/biker separation from the vehicular traffic and the architectural options to realize the proposed triangular pattern in the rail.
  - Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing a viable option
  - Develop option for the final material and form of the thrust block. Provide CADD drawings of preferred scheme.
  - Develop a panel scheme for precast concrete retaining walls at approaches.
  - Develop center pier support shape.
  - Develop bridge mounted soundwalls
  - Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.

### **B. Final Design**

1. Coordination
2. Review
3. Specifications

## **TASK III – LIGHTING DESIGN**

### **A. Design Development (includes two meetings in Addison)**

1. Develop one alternative for lighting of elevated roadway.
2. Develop mounting concepts for bridge structure lighting.
3. Develop one alternative for lighting of outboard railings.
4. Develop one alternative for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.

### **B. Final Design (includes one meeting in Addison)**

1. Final details of fixtures and mounting for bridge structure illumination.
2. Final details of fixtures and mounting for elevated roadway lighting.
3. Final details of fixtures and mounting for outboard railing illumination.

4. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.
5. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

#### **TASK IV – NOISE STUDY**

##### **A. Noise Measurements**

1. Review existing noise ordinance and criteria documents
2. Coordinate with the Town of Addison to discuss noise issues and objectives
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings

##### **B. Noise Modeling and Analyses**

1. Create a noise model to predict future noise emissions from the proposed roadway and bridge
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.
4. Prepare report and respond to one round of comments.

#### **TASK V - PROJECT MANAGEMENT**

##### **A. Reports and Invoices**

1. Prepare Project Management Plan
2. Prepare Progress Reports
3. Prepare Invoices and Billings

##### **B. Coordination**

1. Coordinate/Administer the Project
2. Manage Subconsultants
3. Implement Quality Assurance/Quality Control Program
4. Prepare for and Attend Town Council or other Town Meetings (1 total)
5. Prepare for and run internal project coordination meetings (8 total)
6. Prepare for and attend project meetings with Addison Public Works (3 total)



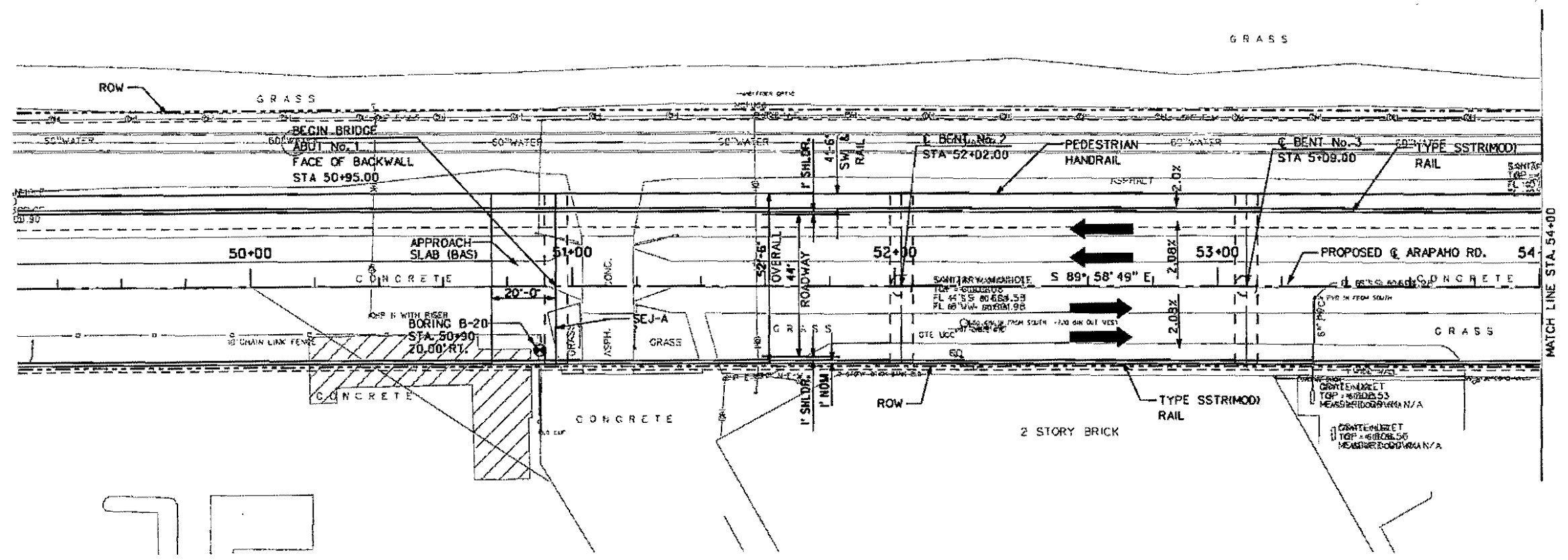
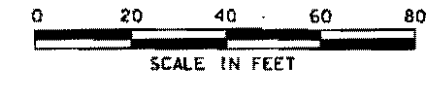


**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001 – ARAPAHO ROAD BRIDGE  
ATTACHMENT C**

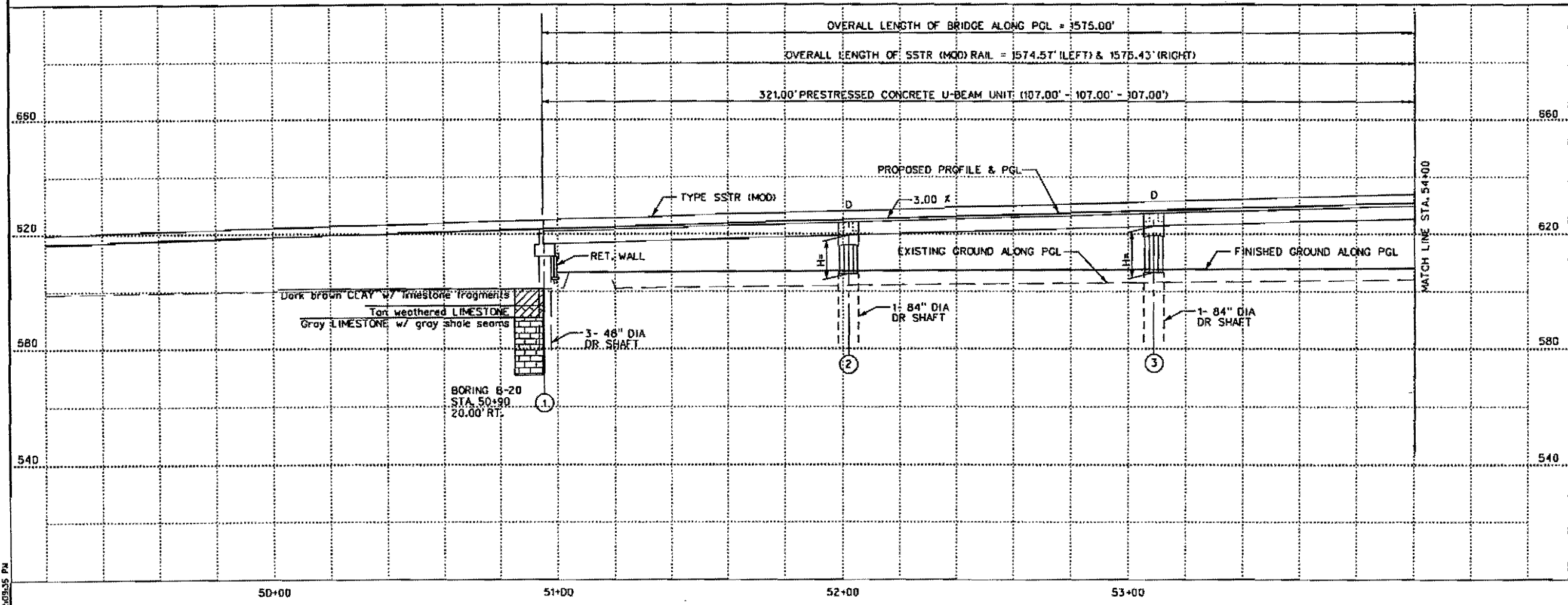
**LUMP SUM FEE BREAKDOWN  
URS CORPORATION**

**Total Cost**

<b>TASK I - ENGINEERING</b>	<b>\$ 434,400.00</b>
A. Civil Site Works	\$ 19,370.00
B. Bridges	\$ 384,680.00
C. Electrical Engineering	\$ 30,350.00
<b>TASK II – ARCHITECTURAL (Corgan)</b>	<b>\$ 39,220.00</b>
A. Design Development	\$ 33,920.00
B. Final Design	\$ 5,300.00
<b>TASK III – LIGHTING DESIGN (Brandston)</b>	<b>\$ 39,580.00</b>
A. Design Development	\$ 20,620.00
B. Final Design	\$ 18,960.00
<b>TASK IV – NOISE STUDY</b>	<b>\$ 14,045.00</b>
A. Noise Measurements	\$ 5,540.00
B. Noise Modeling and Analyses	\$ 8,505.00
<b>TASK V - PROJECT MANAGEMENT</b>	<b>\$ 20,920.00</b>
A. Reports and Invoices	\$ 8,080.00
B. Coordination	\$ 12,840.00
<b>Printing &amp; Copying Expenses</b>	<b>\$ 2800.00</b>
<hr/>	
<b>GRAND TOTAL</b>	<b>\$ 550,965.00</b>



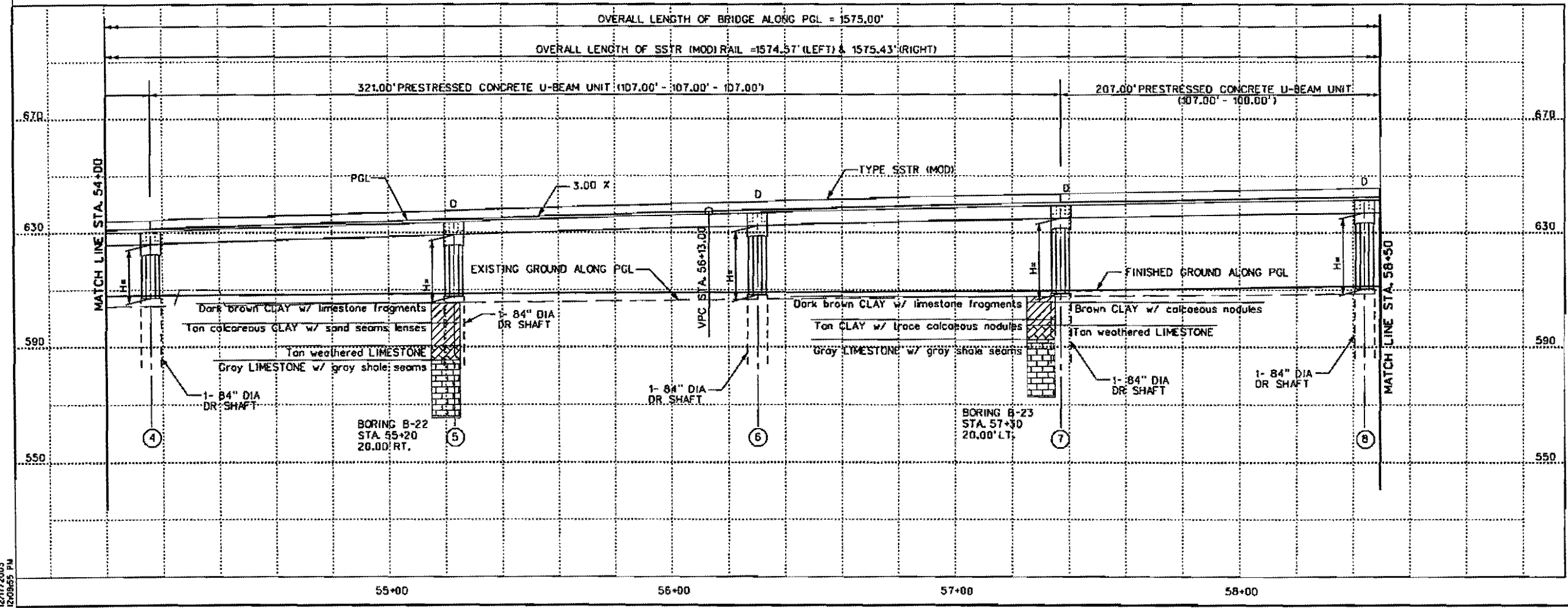
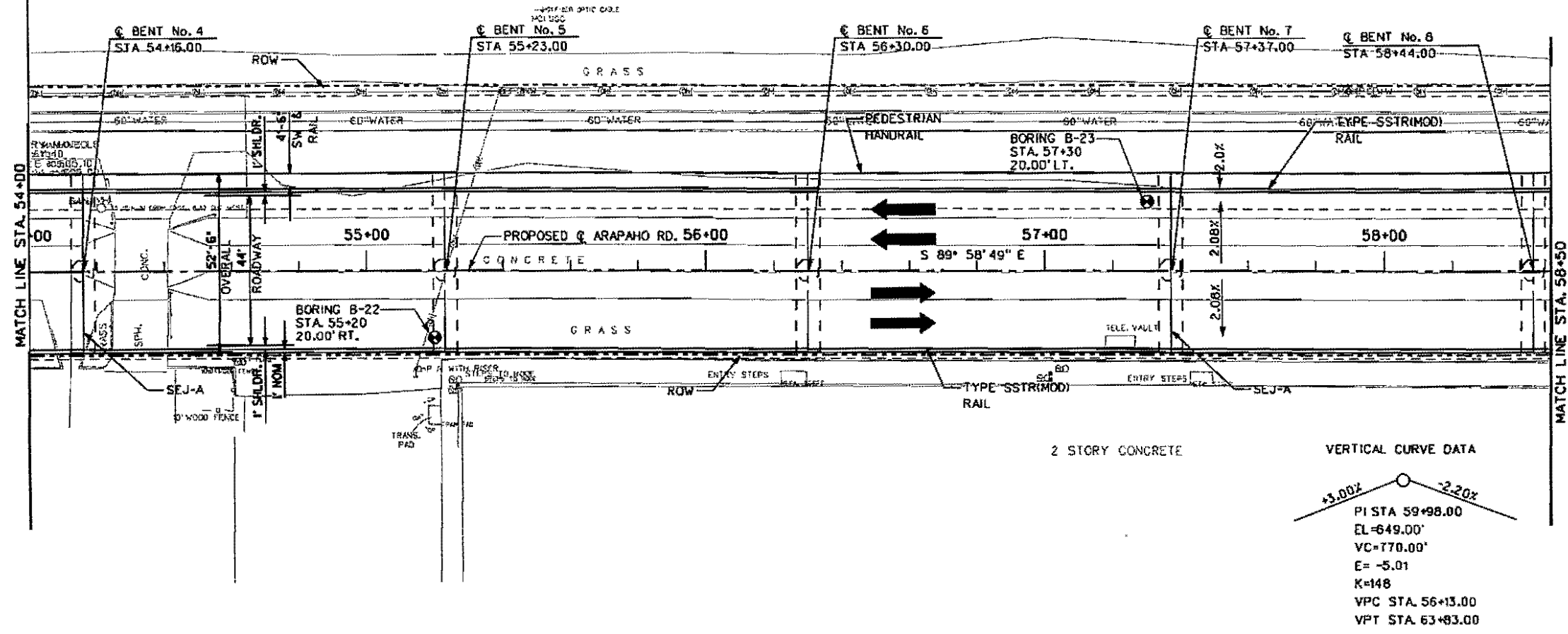
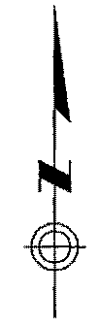
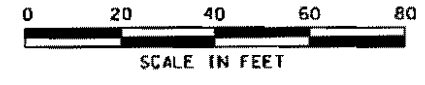
- GENERAL NOTES:
1. DESIGNED IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 17TH EDITION- 2002, FOR HS20-44 LOADING.
  2. ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE, CROWN, AND/OR SUPERELEVATION.
  3. ALL BENTS ARE RADIAL UNLESS NOTED OTHERWISE.



FOR INTERIM REVIEW ONLY  
 BY CLIFF R. HALL, P.E. 82211  
 URS CORPORATION  
 Date 12-12-03  
 NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

NO.	DATE	REVISION	APPROV.
<b>URS</b> GREYSTONE CENTRE 3010 LBJ FREEWAY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 1 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
Design	CRH	Drawn	JRH
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		SCALE	1" = 40'
		PROJECT NO.	
		SHEET NO.	

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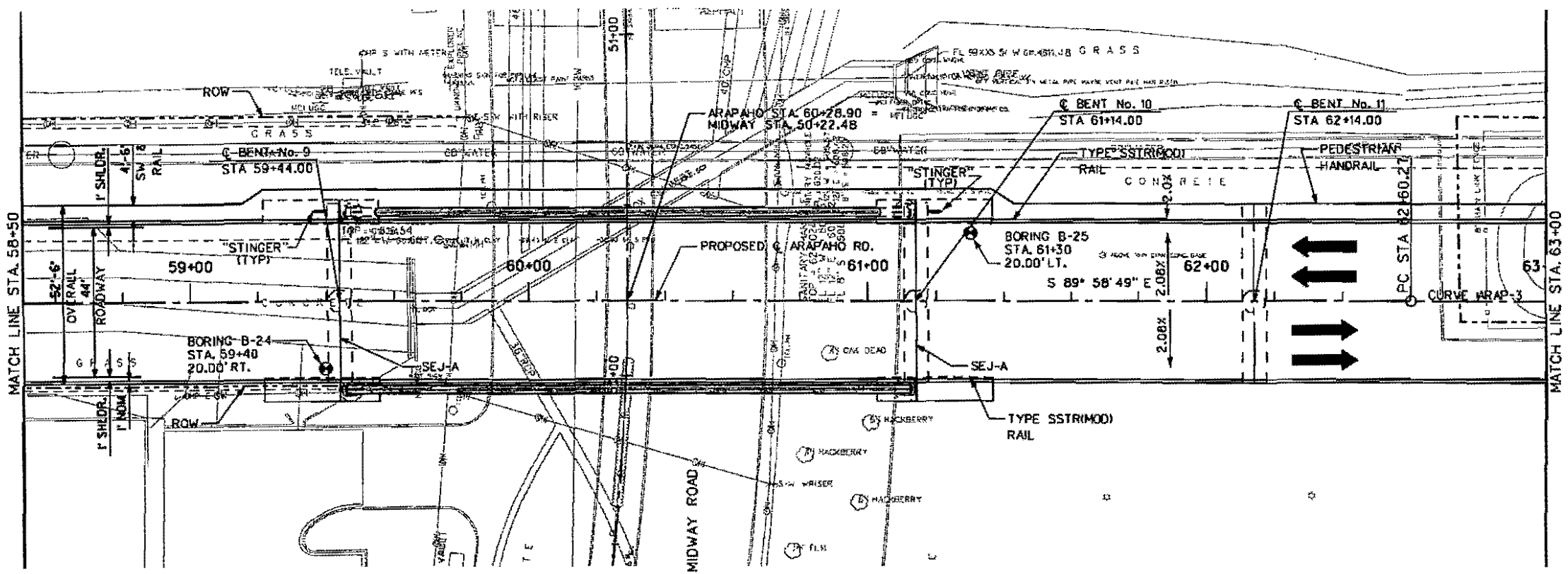
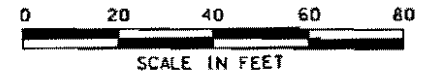
By CLIFF R. HALL, P.E. # 82211

URS CORPORATION  
 Date 12-12-03

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<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 2 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
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DATE	12-12-03	SCALE	1" = 40'
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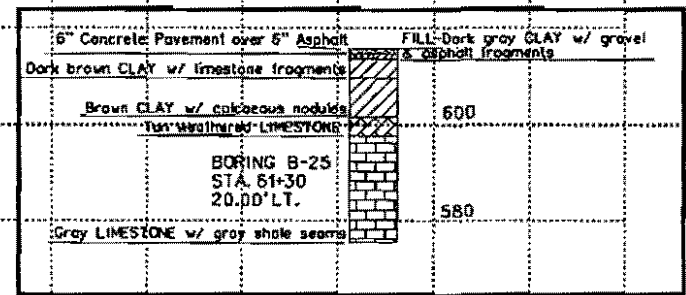
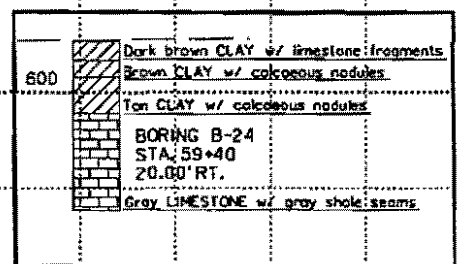
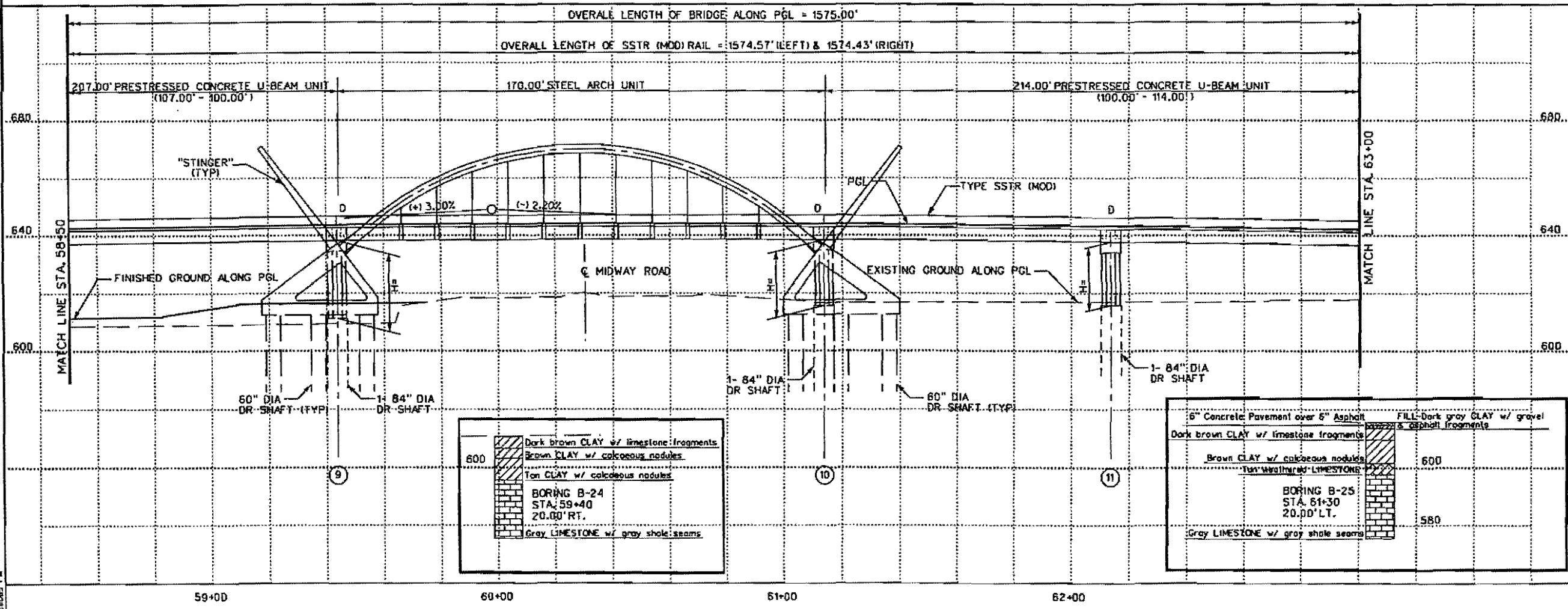
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CURVE ARAP-3

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 $D=01^{\circ}08'45''$   
 $T=44.86'$   
 $L=89.72'$   
 $R=5000.00'$   
 PC STA 62+60.27  
 PT STA 63+49.99

**VERTICAL CURVE DATA**

$+3.00\%$   $-2.20\%$

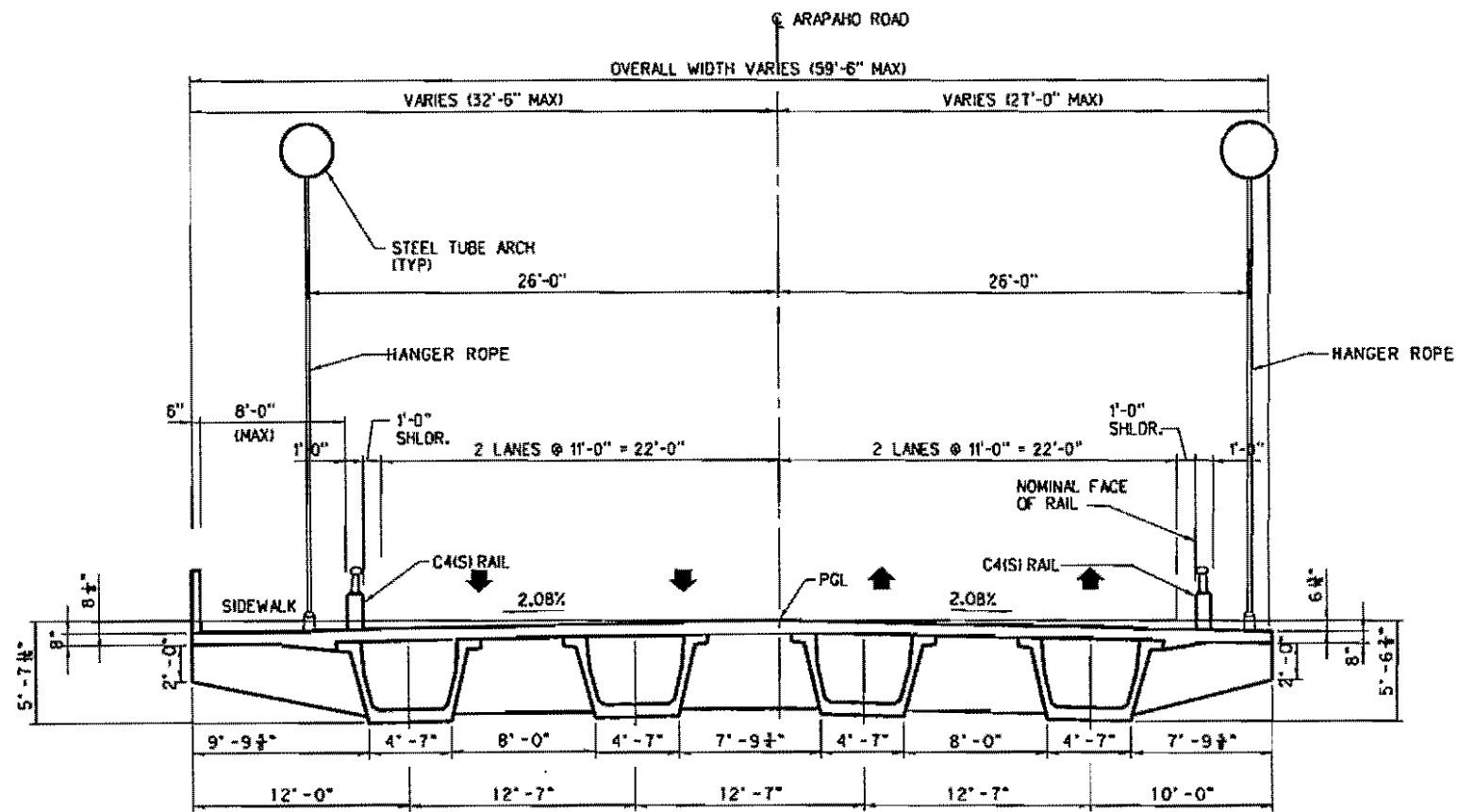
PI STA 59+98.00  
 EL=649.00'  
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 $E=-5.01'$   
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 VPC STA. 56+13.00  
 VPT STA. 63+83.00



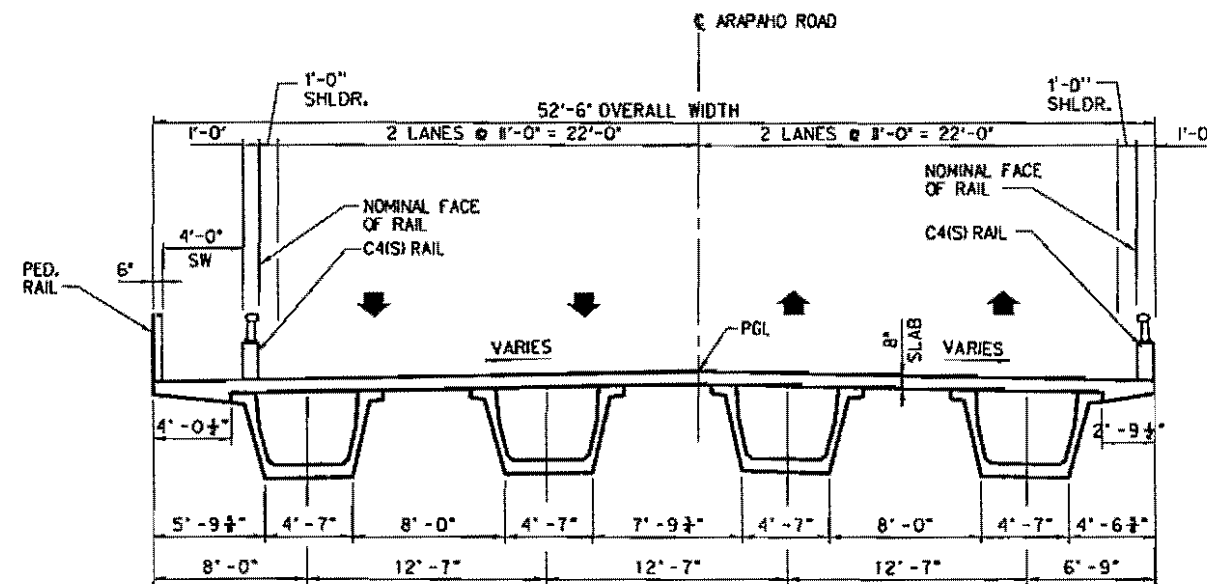
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 URS CORPORATION  
 Date 12-12-03  
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NO.	DATE	REVISION	APPROV.
<b>URS</b>			
GREYSTONE CENTRE 3010 LBJ FREEWAY, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 3 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
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TYPICAL SECTION (SPAN 9)



TYPICAL SECTION (SPANS 1-8 & 10-14)

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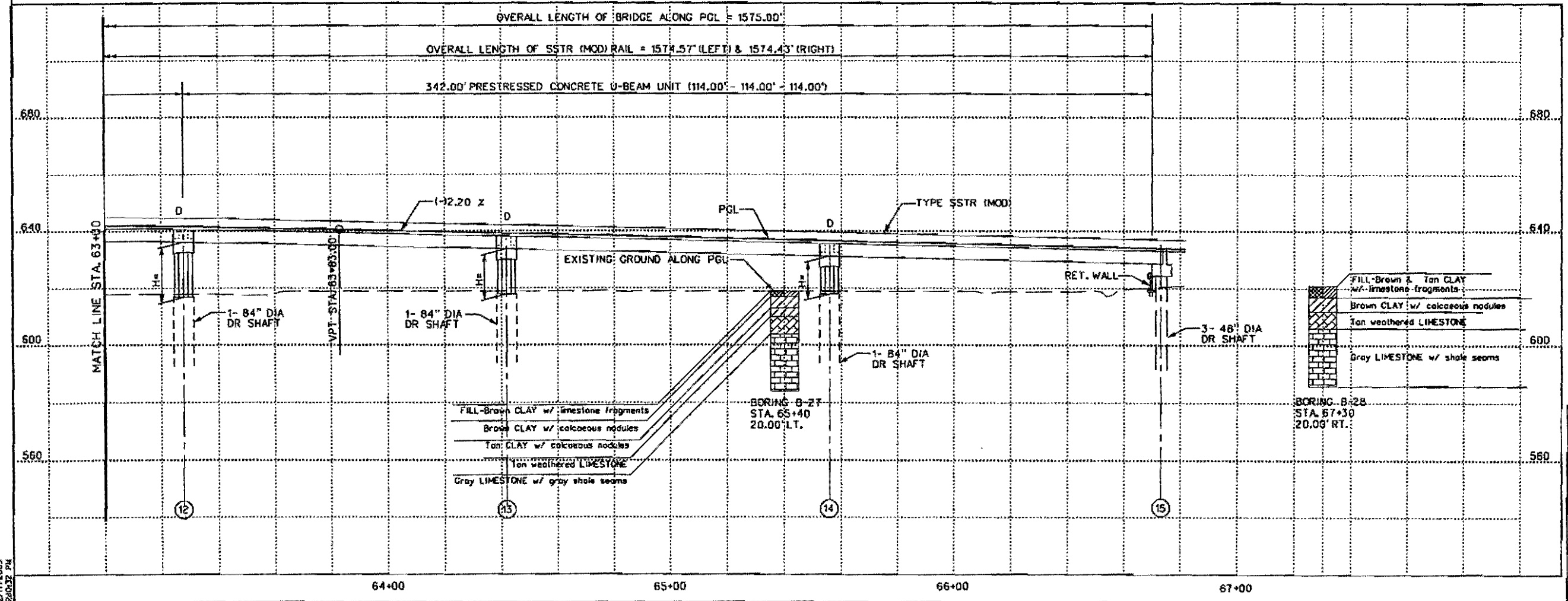
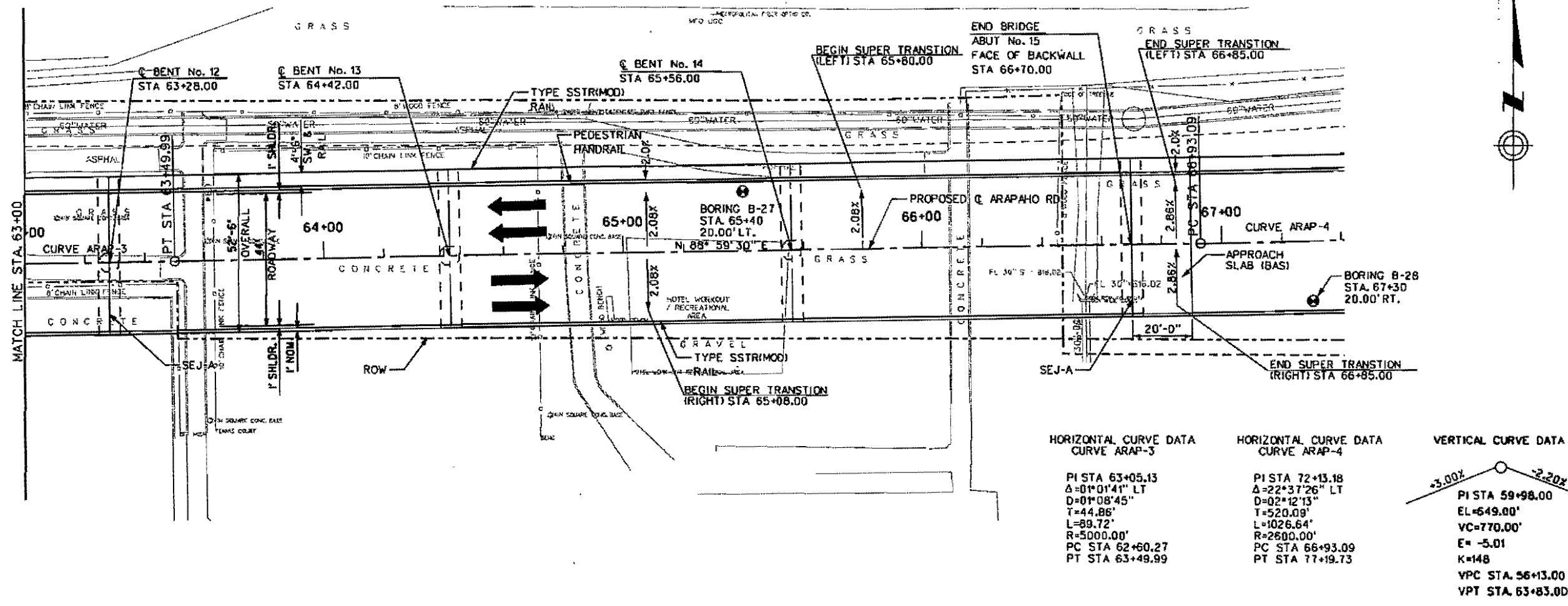
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Date 12-12-03

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<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>TYPICAL SECTIONS</b>			
<b>TOWN OF ADDISON, TEXAS</b>			
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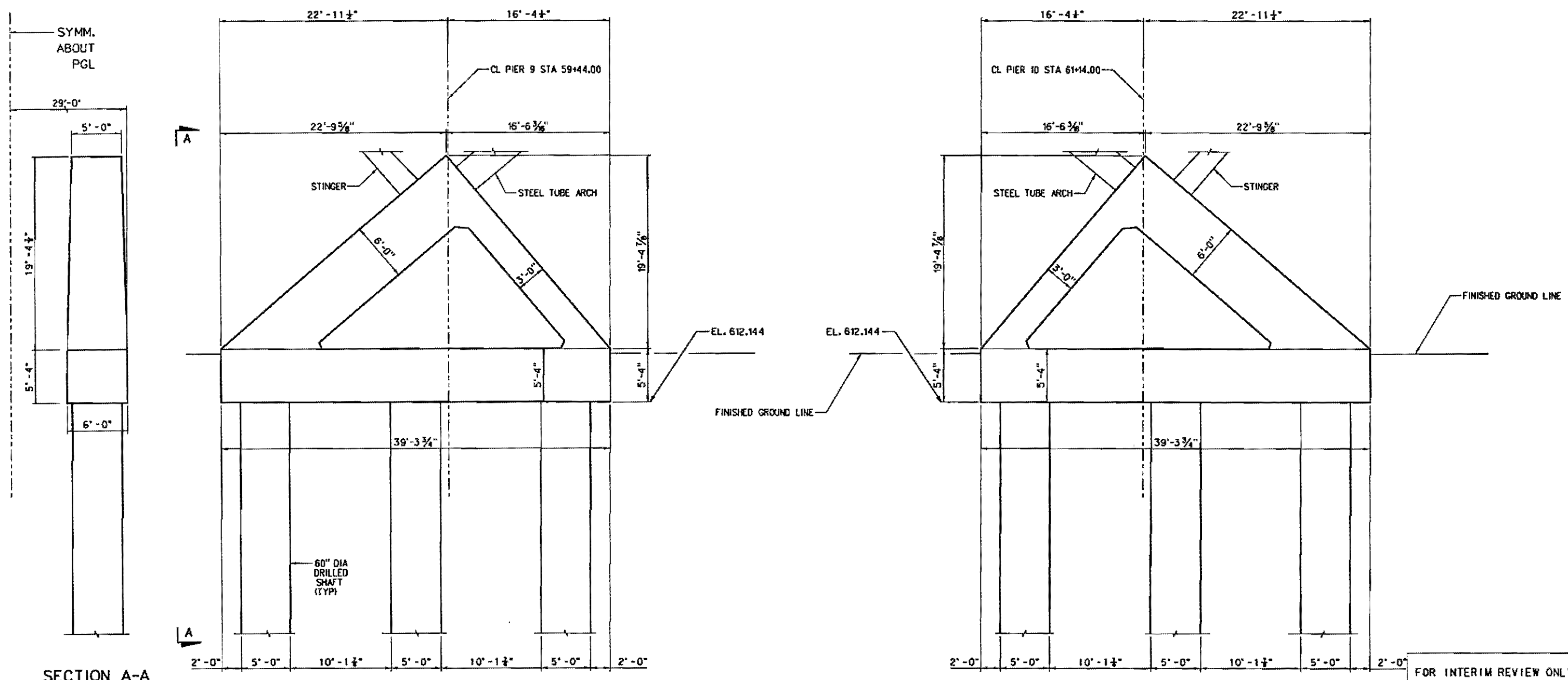


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<b>ARAPAHO ROAD - PHASE III</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>BRIDGE LAYOUT</b>			
SHEET 4 OF 4			
<b>TOWN OF ADDISON, TEXAS</b>			
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PROJECT NO.	SHEET NO.		

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**ELEVATION**

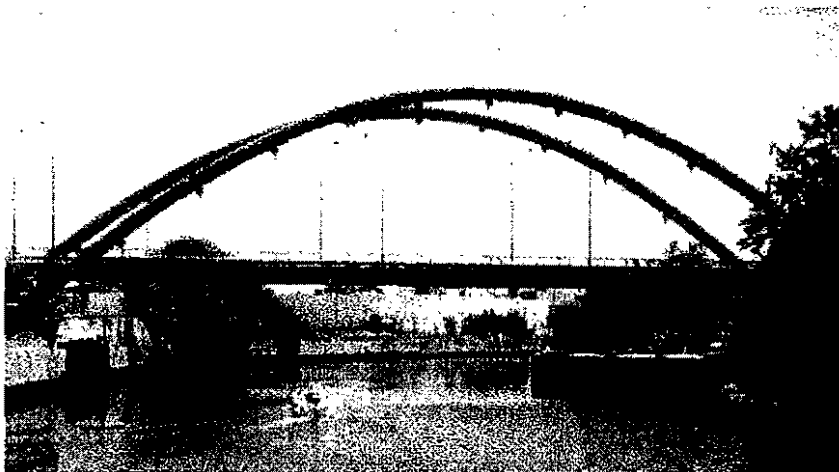
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 By CLIFF R. HALL, P.E. - 82211  
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 Date 12-12-03  
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NO.	DATE	REVISION	APPROV.
<b>URS</b> GREYSTONE CENTRE 3010 LBJ FREEMAN, SUITE 1300 DALLAS, TX 75234			
<b>ARAPAHO ROAD - PHASE III</b> SURVEYOR BOULEVARD TO ADDISON ROAD			
<b>ARCH ANCHORAGE PIERS</b>			
<b>TOWN OF ADDISON, TEXAS</b>			
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SCALE	1" = 40'	PROJECT NO.	
SHEET NO.			



# Damen Avenue Arch Bridge

Chicago, Illinois



## Jurors Comments

**The use of bent, steel pipes for the arches  
without lateral bracing is  
innovative...aesthetically pleasing**

**T**he bridge, located six kilometers northwest of downtown Chicago, is part of a \$12.6-million improvement project along a section of North Damen Avenue. The mixed-use properties surrounding the site are rapidly transitioning from factories to mini-malls and condominiums. In view of this redevelopment, the city of Chicago proposed to build a signature bridge at this site to act as the focal point for the overall public and private revitalization of the area.

Among the project's innovations are the arch ribs, which are freestanding and constructed without lateral bracing. Additionally, the arch is not tied. Tied arches represented potential durability and safety concerns for both the Federal Highway Administration and the city of Chicago, concerns which were avoided by eliminating the tie.

## Bridge Description

The new structure spans 94 m over the river and carries two lanes of traffic, with sidewalks along each side, in each direction. The two ribs are fabricated from 1.2 m-diameter steel pipe that is formed into a compound circular curve using induction heat bending. Each rib lies in a vertical plane and is located between the roadway and sidewalks. The ribs have a constant wall thickness of 25 mm throughout their length, and is filled with concrete over a distance of 8 m at each end in order to resist the higher thrust and moment near the spring points.

The superstructure is comprised of a longitudinally post-tensioned, cast-in-place concrete deck and stiffening girders that are supported by transverse steel box beams. The transverse beams act compositely with the deck. The beams are supported from the ribs by structural strand hangers anchored at the bottom flange and attached to the ribs using steel gusset plates and an open socket. The gusset plates penetrate the rib and are welded to stiffener plates and bolted to angles to transfer the hanger forces into the rib.

The semi-integral abutments and rib thrust blocks are founded on a common



Passed  
5-14-02

#R11-1

**Council Agenda Item: #R11**

**SUMMARY:**

This item is to authorize the City Manager to enter into a contract with URS Corporation for pre-design services/concept refinement.

**FINANCIAL IMPACT:**

Cost: \$19,800

Funding Source: Year 2002 General Obligation Bond Program – Arapaho Road Project

**BACKGROUND:**

On April 11, 2002, three firms presented their design concepts for the Arapaho Road Bridge over Midway Road as part of the Town's design competition to select a firm for the final design of the bridge. URS Corporation won the competition, and has been invited to show the visuals to Council that was part of their presentation to the review committee.

The purpose of this contract (copy attached) is to provide funding for URS to present their design concepts and conduct a conceptual design charrette with all of their team members and staff. The purpose of the design charrette is to work on and clarify all of the design issues connected with the proposed bridge such that URS can prepare their proposal for the final design of the project.

**RECOMMENDATION:**

Staff recommends Council authorize the City Manager enter into a contract with URS Corporation for \$19,800 for pre-design services/concept refinement.

#R112

**AGREEMENT FOR PROFESSIONAL SERVICES  
("Agreement")**

This Agreement between Town of Addison, ("Client") and URS Corporation ("URS"), a Nevada corporation; Prestonwood Tower, 5151 Beltline Road, Suite 700 75254; 972/980-4961 ("URS"), is effective as of May 14, 2002. The parties agree as follows:

It is the expressed intent of the parties that this Agreement shall be made available to the subsidiaries and affiliated companies of URS. For the purposes of this Agreement, as it applies to each Work Order, the term "URS" shall mean either, URS Corporation, or the affiliated company identified in the Work Order. The applicable Work Order shall clearly identify the legal name of the affiliate or subsidiary accepting the Work Order.

**ARTICLE I - Work Orders.** The Scope of Services ("Services"), the Time Schedule and the Charges are to be set forth in a written Work Order to this Agreement. The terms and conditions of this Agreement shall apply to each Work Order, except to the extent expressly modified by the Work Order. Where charges are "not to exceed" a specified sum, URS shall notify Client before such sum is exceeded and shall not continue to provide the Services beyond such sum unless Client authorizes an increase in the sum. If a "not to exceed" sum is broken down into budgets for specific tasks, the task budget may be exceeded without Client authorization as long as the total sum is not exceeded. Changes in conditions, including, without limitation, changes in laws or regulations occurring after the budget is established or other circumstances beyond URS control shall be a basis for equitable adjustments in the budget and schedule.

**ARTICLE II - Payment.** Unless otherwise stated in an Work Order, payment shall be on a time and materials basis under the Schedule of Fees and Charges in effect when the Services are performed. Client shall pay undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, URS may suspend further performance until payments are current. Client shall notify URS of any disputed amount within fifteen (15) days from date of the invoice, give reasons for the objection, and promptly pay the undisputed amount. Client shall pay an additional charge of one and one-half percent (1½%) per month or the maximum percentage allowed by law, whichever is the lesser, for any past due amount. In the event of a legal action for invoice amounts not paid, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party.

**ARTICLE III - Professional Responsibility.** URS is obligated to comply with applicable standards of professional care in the performance of the Services. Client recognizes that opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where the data are obtained, despite the use of due professional care.

**ARTICLE IV - Responsibility for Others.** URS shall be responsible to Client for URS Services and the services of URS subcontractors. URS shall not be responsible for the acts or omissions of other parties engaged by Client nor for their construction means, methods, techniques, sequences, or procedures, or their health and safety precautions and programs.

**ARTICLE V - Risk Allocation.** The liability of URS, its employees, agents and subcontractors (referred to collectively in this Article as "URS"), for Client's claims of loss, injury, death, damage, or expense, including, without limitation, Client's claims of contribution and indemnification, express or implied, with respect to third party claims relating to services rendered or obligations imposed under this Agreement, including all Work Orders, shall not exceed in the aggregate:

- (1) The total sum of \$250,000 for claims arising out of professional negligence, including errors, omissions, or other professional acts, and including unintentional breach of contract; and any actual or potential environmental pollution or contamination, including, without limitation, any actual or threatened release of toxic, irritant, pollutant, or waste gases, liquids, or solid materials, or failure to detect or properly evaluate the presence of such substances, except to the extent such release, threatened release, or failure to detect or evaluate is caused by the willful misconduct of URS; or

(2) The total sum of \$1,000,000 for claims arising out of negligence, breach of contract, or other causes for which URS has any legal liability, other than as limited by (1) above.

**ARTICLE VI - Insurance.** URS agrees to maintain during the performance of the Services: (1) statutory Workers' Compensation coverage; (2) Employer's Liability; (3) General Liability; and (4) Automobile Liability insurance coverage each in the sum of \$1,000,000.

**ARTICLE VII - Consequential Damages.** Neither Party shall be liable to the other for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by breach of contract, willful misconduct, negligent act or omission, or other wrongful act of either of them.

**ARTICLE VIII - Client Responsibility.** Client shall: (1) provide URS, in writing, all information relating to Client's requirements for the project; (2) correctly identify to URS, the location of subsurface structures, such as pipes, tanks, cables and utilities; (3) notify URS of any potential hazardous substances or other health and safety hazard or condition known to Client existing on or near the project site; (4) give URS prompt written notice of any suspected deficiency in the Services; and (5) with reasonable promptness, provide required approvals and decisions. In the event that URS is requested by Client or is required by subpoena to produce documents or give testimony in any action or proceeding to which Client is a party and URS is not a party, Client shall pay URS for any time and expenses required in connection therewith, including reasonable attorney's fees.

Client shall reimburse URS for all taxes, duties and levies such as Sales, Use, Value Added Taxes, Deemed Profits Taxes, and other similar taxes which are added to or deducted from the value of URS Services. For the purpose of this Article such taxes shall not include taxes imposed on URS net income, and employer or employee payroll taxes levied by any United States taxing authority, or the taxing authorities of the countries or any agency or subdivision thereof in which URS subsidiaries, affiliates, or divisions are permanently domiciled. It is agreed and understood that these net income, employer or employee payroll taxes are included in the unit prices or lump sum to be paid URS under the respective Work Order.

**ARTICLE IX - Force Majeure.** An event of "Force Majeure" occurs when an event beyond the control of the Party claiming Force Majeure prevents such Party from fulfilling its obligations. An event of Force Majeure includes, without limitation, acts of God (including floods, hurricanes and other adverse weather), war, riot, civil disorder, acts of terrorism, disease, epidemic, strikes and labor disputes, actions or inactions of government or other authorities, law enforcement actions, curfews, closure of transportation systems or other unusual travel difficulties, or inability to provide a safe working environment for employees.

In the event of Force Majeure, the obligations of URS to perform the Services shall be suspended for the duration of the event of Force Majeure. In such event, URS shall be equitably compensated for time expended and expenses incurred during the event of Force Majeure and the schedule shall be extended by a like number of days as the event of Force Majeure. If Services are suspended for thirty (30) days or more, URS may, in its sole discretion, upon 5 days prior written notice, terminate this Agreement or the affected Work Order, or both. In the case of such termination, in addition to the compensation and time extension set forth above, URS shall be compensated for all reasonable termination expenses.

**ARTICLE X - Right of Entry.** Client grants to URS, and, if the project site is not owned by Client, warrants that permission has been granted for, a right of entry from time to time by URS, its employees, agents and subcontractors, upon the project site for the purpose of providing the Services. Client recognizes that the use of investigative equipment and practices may unavoidably alter the existing site conditions and affect the environment in the area being studied, despite the use of reasonable care.

**ARTICLE XI - Documents.** Provided that URS has been paid for the Services, Client shall have the right to use the documents, maps, photographs, drawings and specifications resulting from URS efforts on the project. Reuse of any such materials by Client on any extension of this project or any other project without the written authorization of URS shall be at Client's sole risk. URS shall have the right to retain copies of all such materials. URS retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

**ARTICLE XII - Termination.** Client may terminate all or any portion of the Services for convenience, at its option, by sending a written Notice to URS. Either party can terminate this Agreement or a Work Order for cause if the other commits a material, uncured breach of this Agreement or becomes insolvent. Termination for cause shall be effective twenty (20) days after receipt of a Notice of Termination, unless a later date is specified in the Notice. The Notice of Termination for cause shall contain specific reasons for termination and both parties shall cooperate in good faith to cure the causes for termination stated in the Notice. Termination shall not be effective if reasonable action to cure the breach has been taken before the effective date of the termination. Client shall pay URS upon invoice for Services performed and charges incurred prior to termination, plus reasonable termination charges. In the event of termination for cause, the parties shall have their remedies at law as to any other rights and obligations between them, subject to the other terms and conditions of this Agreement.

**ARTICLE XIII - No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS. No third party shall have the right to rely on URS opinions rendered in connection with the Services without the written consent of URS and the third party's agreement to be bound to the same conditions and limitations as Client.

**ARTICLE XIV - Assignments.** Neither party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other party.

**ARTICLE XV - Hazardous Substances.** All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by URS in accordance with applicable law; provided, however, that any and all such materials, including wastes, that cannot be introduced back into the environment under existing law without additional treatment, and all hazardous wastes, radioactive wastes, or hazardous substances ("Hazardous Substances") related to the Services, shall be packaged in accordance with the applicable law by URS and turned over to Client for appropriate disposal. URS shall not arrange or otherwise dispose of Hazardous Substances under this Agreement. URS, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but URS shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances. If Client requires: (1) URS agents or employees to sign such manifests; or (2) URS to hire, for Client, the Hazardous Substances transportation, treatment, or disposal contractor, then for these two purposes, URS shall be considered to act as Client's agent so that URS will not be considered to be a generator, transporter, or disposer of such substances or considered to be the arranger for disposal of Hazardous Substances, and Client shall indemnify URS against any claim or loss resulting from such signing.

**ARTICLE XVI - Venue.** In the event of any dispute between the parties to this Agreement, the venue for the dispute resolution shall be any state or federal court in the United States having jurisdiction over the parties. The foregoing notwithstanding, if the project is located outside the United States, the laws of the State of California shall govern and in such event, any dispute under the Agreement not resolved amicably shall be resolved under the binding rules of the American Arbitration Association.

**ARTICLE XVII - Integrated Writing and Enforceability.** This Agreement constitutes the final and complete repository of the agreements between Client and URS relating to the Services and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written. Modifications of this Agreement shall not be binding unless made in writing and signed by an Authorized Representative of each party. The provisions of this Agreement shall be enforced to the fullest extent permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision.

THE PARTIES ACKNOWLEDGE that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

**CLIENT**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

**URS**

*Emily Taylor*  
\_\_\_\_\_  
Signature

**Emily Taylor, P.E. / Vice President**  
\_\_\_\_\_  
Typed Name/Title

**May 6, 2002**  
\_\_\_\_\_  
Date of Signature

TIME AND MATERIALS WORK ORDER NO. 001

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated April 14, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD

**Client Authorized Representative:**

**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized Representative:**

**Address:** Emily Taylor, P.E.  
Prestonwood Tower, 5151 Bellline Road, Suite 700  
Dallas, TX 75254  
**Telephone No.:** 972.980.4961

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein.

**PAYMENT.** The estimated cost for these services are included in attachment C. URS charges shall be on a "time and materials" basis and shall be in accordance with the URS Schedule of Fees and Charges in effect at the time the Services are performed. Payment provisions and the URS current Schedule of Fees and Charges are attached to this Work Order as Attachment D.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

**URS**

Signature

Signature

Typed Name/Title

Emily Taylor, P.E. / Vice President

Typed Name/Title

Date of Signature

May 6, 2002

Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER 001**

**ATTACHMENT A  
URS CORPORATION  
SCOPE OF SERVICES**

**PHASE I - CONCEPT REFINEMENT**

1. Update Powerpoint presentation and provide boards from design competition for the Mayor's presentation to the Town Council.
2. Local URS Team members attend Town Council meeting on May 14, 2002, 7:30 p.m.
3. All URS Team members attend design charette with Addison stakeholders.





# URS Corporation

Arapaho Road Bridge at Midway Road  
Phase I - Concept Refinement  
Work Order 001

## ATTACHMENT C

### Not to Exceed Amounts

URS Corporation (URS)	\$13,090.00
Brandston Partnership, Inc (BPI)	\$4,450.00
Corgan Associates, Inc. (CAI)	<u>\$2,260.00</u>
Total	\$19,800.00

### Estimated Fee Breakdown

	Description	Hours	Rate	Labor	Expenses*	Total
URS	Principal	16	\$ 185	\$ 2,960	\$ -	\$ 2,960
	Sr. Consultant	14	\$ 175	\$ 2,450	\$ 1,500	\$ 3,950
	Project Manager	20	\$ 142	\$ 2,840	\$ -	\$ 2,840
	Senior Engineer/Planner	16	\$ 140	\$ 2,240	\$ 1,100	\$ 3,340
	Subtotal	66		\$ 10,490	\$ 2,600	\$ 13,090
BPI	Partner	12	\$ 175	\$ 2,100	\$ 2,350	\$ 4,450
CAI	Principal	14	\$ 140	\$ 1,960	\$ 300	\$ 2,260
<b>TOTAL</b>						\$ 19,800

\* Expenses include travel expenses with the exception of CAI's expense to update the architectural boards.

**URS CORPORATION  
ATTACHMENT D  
2002 SCHEDULE OF FEES AND CHARGES  
TOWN OF ADDISON**

**Engineering/Environmental & Consulting Services**

The following describes the basis for compensation for services performed during the fiscal year 2002. This Schedule of Fees and Charges will be adjusted annually on November 1 of each subsequent year to reflect merit and economic salary increases, and changes in the expected level and mode of operations for the new year. The new Schedule of Fees and Charges will apply to existing and new assignments.

**PERSONNEL CHARGES**

The charge for all time required in the performance of the Scope of Services, including office, field and travel time, will be at the Unit Priced Hourly Rates set forth below for the labor classifications indicated.

<u>Labor Classification</u>	<u>Hourly Rate (\$)</u>
Technical Typist/Word Processor*	55
Senior Technician*	80
Assistant Project Engineer/Planner	78
Project Engineer/Planner	100
Senior Project Engineer/Planner	140
Project Manager	142
Senior Consulting Engineer	175
Principal Professional	185

Charges for contract personnel under URS supervision and using URS facilities will be made according to the hourly rate corresponding to their classification.

When staff are performing project fieldwork, a minimum daily charge of 4 hours will apply.

A maximum of eight (8) hours travel time per day will be charged for travel within the continental United States.

When URS staff appears as expert witnesses at court trials, arbitration hearings, mediation and depositions, their time will be charged at \$250.00 per hour.

Overtime (hours worked in excess of eight (8) hours per day) by exempt personnel will be charged at the above straight time hourly rate. Overtime by non-exempt personnel (classifications identified with an asterisk "\*\*") will be charged at 1.3 times the above hourly rate.

Special project accounting reporting and financial services, including submission of invoice support documentation, will be charged at the rate of a Technical Typist/Word Processor.

**OTHER PROJECT CHARGES**

**Subcontracts and Equipment Rental**

Other direct costs (excluding subconsultants) incurred by URS will be charged at cost plus 10%.

**Communications**

The cost of communications for office telephone, telex, facsimile, postage, and incidental copying costs will be charged at a flat rate of 2.5% of total gross labor charges.

**Computer Generated Plots**

There will be a charge of \$5.00 each for paper plot and \$15.00 each for mylar plot generated by the CADD and GIS systems.

**Document Reproduction**

In-house reproduction will be charged at \$.10 a page for black & white and \$1.50 a page for color for letter, legal, and 11 x 17 size copies. Other size document copying will be charged at \$2.75 a page.

**Vehicles and Mileage**

Field vehicles (pick-ups, vans, trucks, etc.) used on project assignments will be charged at \$50.00 per day. The mileage charge for personal autos will be the then current mileage rate established by the Internal Revenue Service.

**Specialized Equipment**

The use of specialized URS equipment will be the fixed rental rates set forth in the Schedule of URS Specialized Equipment Charges.

*This fee schedule contains confidential business information and is not to be copied or distributed for any purpose other than the use intended in this contract or proposal.*

**URS**



DALLAS WATER UTILITIES  
ISSUES

April 18, 2003

\$ 23,410

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road**  
**Work Order No. 003**  
**Resolution of DWU Issues**

Dear Mr. Chutchian:

As you know the URS Team performed additional modifications to conceptual drawings and participated in numerous meetings to resolve the issues with Dallas Water Utilities (DWU). These modifications and meetings were outside our scope as defined in Work Order No. 001. Therefore we are submitting a request for additional fee for these services performed. The fee provided was derived from actual hours spent to resolve DWU concerns.

Enclosed please find two originals of Work Order Number 003 for services provided to resolve the issues with DWU with Attachment A - Scope of Services, Attachment B - Estimated Schedule, and Attachment C - Lump Sum Fee Breakdown. Please execute both originals of the work order and return to us for our signature. We will then return one original fully executed work order to you.

Sincerely,

URS Corporation

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
RESOLUTION OF DWU ISSUES

**Client Authorized**

**Representative:** \_\_\_\_\_

**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010

**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.

**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234

**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed for a total fixed amount of **\$23,410.00**; in no event shall the payment by Client for the Services exceed the said amount. A breakdown of this amount is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

**URS**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

Ron Whitehead / City Manager  
Typed Name/Title

Emily Taylor, P.E. / Vice President  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

\_\_\_\_\_  
Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003**

**ATTACHMENT A  
SCOPE OF SERVICES**

**RESOLUTION OF DALLAS WATER UTILITIES (DWU) ISSUES**

URS will provide conceptual engineering and modifications to the conceptual plans, as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 to resolve the DWU concerns related to the 60" water main inside the proposed Arapaho Road right-of-way (ROW). URS shall modify the conceptual bridge layouts and typical sections as necessary to obtain approval from DWU for the construction of Arapaho Road. URS will attend meetings with the Town of Addison, DWU and the Town's consultant as necessary. URS will coordinate the alignment, profile, width and other issues related to Arapaho Road with the Town's consultant as necessary

**Itemized Scope of Services Provided by URS  
for the Arapaho Road Bridge**

**TASK I – Resolution of DWU Issues**

1. Modifications of Conceptual Bridge Layouts
2. Modifications of Conceptual Typical Sections
3. Preparation for and Attendance of Meetings With Addison Public Works and/or DWU



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003 – RESOLUTION OF DWU ISSUES  
ATTACHMENT C**

**FIXED PRICE BREAKDOWN**

**Total Cost**

**URS CORPORATION**

<b>TASK I – Resolution of DWU Issues</b>	<b>\$ 22,430.00</b>
1. Modifications of Conceptual Bridge Layouts	\$ 2,440.00
2. Modifications of Conceptual Typical Sections	\$ 12,030.00
3. Preparation for and Attendance of Meetings With Addison Public Works and/or DWU	\$ 7,960.00

**CORGAN ASSOCIATES, INC** **\$ 980.00**

**GRAND TOTAL** **\$ 23,410.00**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003 - ARAPAHO ROAD BRIDGE - Resolution of DWU Issues**

MAN-HOUR & EXPENSE COST ESTIMATE

CONSULTANT:

**URS Corporation**

URS CORPORATION

	Expert Witness	Senior Consul.	Project Mangr	Sr Project	Project Eng/Plan	Staff Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
	\$270.00	\$165.00	\$135.00	\$135.00	\$95.00	\$65.00	\$60.00	\$65.00	\$50.00				

**TASK 1 - Resolution of DWU Issues**

- 1. Adjustments to Conceptual Bridge Layout
- 2. Modifications to Conceptual Typical Sections
- 3. Meetings with Addison Public Works and/or DWU (14 total)

	0	0	68	24	26	68	12	24	12	234	\$ 22,430.00	\$ -	\$ 22,430.00
			4		8	12		4	2	30	\$ 2,440.00		\$ 2,440.00
			8	24	18	56	12	20	2	140	\$ 12,030.00		\$ 12,030.00
			56						8	64	\$ 7,960.00		\$ 7,960.00

CORGAN ASSOCIATES, INC

7 hrs @ \$ 140.00 / hr = \$ 980.00

\$ 23,410.00



**LETTER OF TRANSMITTAL**

---

**DATE:** March 22, 2005

*for shop drawings?*

**TO:** City of Addison  
16801 West Grove  
Addison, TX 75001

---

**ATTN:** Jenny Nicewander

**RE:** Copy of Subcontract for Arapaho Road Bridge

**ENCLOSED ARE THE FOLLOWING:**

Report Copies

Plans

Instructions and Requests

Other

---

**FOR YOUR:**

Approval

Files

Comments

Distribution

Information

Use

**REMARKS:**

Give me a call if you have any questions

**PLEASE NOTIFY US IF ENCLOSURES LISTED ARE NOT RECEIVED.**

**E-Mail:** [debbie.jacoby@urscorp.com](mailto:debbie.jacoby@urscorp.com)

**Phone:** (972) 406-6955

**Fax:** (972) 406-6951

**AGREEMENT FOR PROFESSIONAL SERVICES  
("Agreement")**

This Agreement between the Town of Addison, Texas, ("Client") and URS Corporation ("URS"), a Nevada corporation; Graystone Centre, 3010 LBJ Freeway, Suite 1300 75234; 972.406.6950 ("URS"), is effective as of November 11, 2002. The parties agree as follows:

**ARTICLE I - Work Orders.** The Scope of Services ("Services"), the time schedule ("Time Schedule") and the charges for the Services ("Charges") are to be set forth in a written Work Order which is supplementary to this Agreement. The terms and conditions of this Agreement shall apply to each Work Order, except to the extent expressly modified by the Work Order. Where Charges are "not to exceed" a specified sum, all Services shall be provided by URS for Charges which do not exceed the specified sum. If a "not to exceed" sum is broken down into budgets for specific tasks, the task budget may be exceeded without Client authorization as long as the total sum is not exceeded. Changes in conditions which directly affect the Services, including, without limitation, changes in laws or regulations occurring after the budget is established or other circumstances beyond URS control shall be a basis for equitable adjustments in the budget and Time Schedule.

**ARTICLE II - Payment.**

A. Unless otherwise stated in a Work Order, payment shall be on a time and materials basis under the Schedule of Fees and Charges set forth in the Work Order which are in effect when the Services are performed. Client shall pay undisputed portions of each progress invoice within thirty (30) days of the date of the Client's receipt of an invoice from URS. If payment is not maintained on an at least forty-five (45) day basis, URS may suspend further performance until payments are current. Client shall notify URS of any disputed amount within fifteen (15) days from date of the Client's receipt of the invoice, give reasons for the objection, and pay the undisputed amount in accordance herewith. Client shall pay interest on any overdue payment at the rate of one percent (1%) per month or the maximum percentage allowed by law, whichever is the lesser. In the event of a legal action for invoice amounts not paid in accordance with this Agreement and the Work Order, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party.

B. URS shall submit to Client an invoice or billing statement for all work performed. All invoices or billing statements shall include a statement of Services rendered and the amount owed in connection therewith, an itemized statement of costs and expenses incurred to the date of the invoice, and the sum of all prior payments for the Services set forth in the letter agreement dated February 21, 2002 (Exhibit A). The cumulative amounts of progress payments for the Services shall not exceed the Charges. URS shall not be entitled to any compensation for any services or work not actually performed or for any lost profits as a result of any abandonment or suspension of work by the Client. URS shall perform all work hereunder in a manner satisfactory and acceptable to the Client in accordance with the standard of care set forth in this Agreement.

C. Notwithstanding any other provision of this Agreement or the Work Order, Client shall not be obligated to make payment to URS hereunder if:

1. URS is in default of any of its obligations under this Agreement, the Work Order, or any other documents in connection with the Services (and payment may be withheld to the extent of any such default);

2. Any part of such payment is attributable to any services of URS which are not performed in accordance with this Agreement and URS' proposal; or

3. If the Client, in its good faith judgment and after consultation with URS, determines that the portion of the compensation then remaining unpaid will not be sufficient to complete the Services hereunder, no additional payments will be due URS hereunder unless and until URS performs a sufficient

portion of the Services so that such portion of the compensation remaining unpaid is determined by Client to be sufficient to complete the Services.

**ARTICLE III - Professional Responsibility.** URS is obligated to comply with applicable standards of professional care in the performance of the Services. Client recognizes that opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where the data are obtained, despite the use of due professional care.

URS represents and warrants that it is authorized to practice engineering in the State of Texas and that any necessary licenses, permits or other authorization to practice engineering and to provide the Services set forth herein have been heretofore acquired as required by law, rule or regulation. Notwithstanding anything herein to the contrary, URS and Client agree and acknowledge that Client is entering into this Agreement in reliance on URS' professional abilities with respect to performing the Services set forth herein. URS agrees to use its professional skill, judgment and abilities in the performance of its Services hereunder, and shall render Services under this Agreement and in connection with the project in accordance with the professional standards of engineering prevailing in the Dallas-Fort Worth metroplex area and shall use the skill and care commensurate with the requirements of the engineering profession. URS shall perform its Services in accordance with laws, regulations, and rules in accordance with the standard of care set forth herein. Without in any way limiting the foregoing or any other provision of this Agreement, URS shall be liable to the Client for damages, injuries, liability, or other harm to the extent caused by or resulting from any negligent, grossly negligent, or intentionally wrongful errors, acts or omissions of URS, or URS' directors, partners, officers, employees, agents, contractors, subcontractors, or any person or entity for whom URS is legally liable, in the provision of its Services under this Agreement, and for other breaches by URS to the extent URS was negligent, grossly negligent, or intentionally wrongful in its performance of professional services under this Agreement.

**ARTICLE IV - Responsibility for Others.** URS shall be responsible to Client for URS Services and the services of URS directors, partners, officers, employees, agents, contractors, subcontractors, or any person or entity for whom URS is legally liable. URS shall not be responsible for the acts or omissions of other parties engaged by Client nor for their construction means, methods, techniques, sequences, or procedures, or their health and safety precautions and programs.

**ARTICLE V - Insurance; Indemnity.**

A. In connection with this Agreement, URS shall provide and maintain in full force and effect the following insurance:

(i) Workers' compensation and employer's liability insurance for the protection of URS' employees, to the extent required by the law of the State of Texas;

(ii) Commercial general liability insurance with limits not less than One Million and No/100 Dollars \$1,000,000.00 each occurrence combined single limit bodily injury and property damage, including contractual liability (covering, but not limited to, the liability assumed under the indemnification provisions of this Agreement), personal injury, broadform property damage, products and completed operations coverage (and if such commercial general liability insurance contains a general aggregate limit, it shall apply separately to the Services under this Agreement);

(iii) Comprehensive automobile liability insurance with limits not less than One Million and No/100 Dollars (\$1,000,000.00) each occurrence combined single limit bodily injury and property damage, including owned, non-owned and hired auto coverage, as applicable; and

(iv) Professional Liability Insurance to protect from liability arising out of the performance of professional services under this Agreement. Such coverage shall be in the sum of not less than One Million and No/100 Dollars (\$1,000,000.00) per claim and aggregate. Equivalent coverage must be maintained for at least two (2) years after the project contemplated herein is completed. If coverage is

written on a claims-made basis, the retroactive date must not be later than the inception date of this Agreement.

All such policies of insurance shall (a) be issued by insurance companies reasonably acceptable to Client, (b) except for professional liability and worker's compensation insurance, shall name (by endorsement) the Town of Addison, Texas, its officials, officers, employees and agents as an additional insured or loss payee, as the case may be, (c) in all liability policies (except for professional liability), provide that such policies are primary insurance to any other insurance available to the additional insureds, with respect to any claims arising out of activities conducted hereunder, (d) contain a waiver of subrogation endorsement in favor of the Town of Addison, Texas, and (e) provide for at least thirty (30) days written notice to the Town of Addison, Texas prior to cancellation or non-renewal which affects this Agreement. Certificates of insurance, along with the endorsement naming the Town of Addison, Texas as an additional insured or loss payee, as the case may be, satisfactory to Client, evidencing all coverage above, shall be promptly delivered to Town and updated as may be appropriate. The Client reserves the right to review the insurance requirements contained herein and to reasonably adjust coverages and limits when deemed necessary and prudent by the Client. If, however, the insurance requirements being adjusted results in additional premium cost to URS, URS shall be reimbursed for such additional premium cost by Client.

B. In connection with this Agreement (together with the Work Order) and the provision of Services, URS agrees to and shall indemnify the Town of Addison, Texas, its officials, officers, agents and employees (together, for purposes of this paragraph, the "Indemnified Persons") against, and hold the Indemnified Persons harmless from, any and all claims, actions, causes of action, demands, losses, harm, damages, liability, expenses, lawsuits, judgments, costs, and fees (including reasonable attorney fees and court costs), for any injury to or the death of any person, or any damage to or destruction of any property, or any other harm for which damages or any other form of recovery is sought (whether at law or in equity), to the extent resulting from, based upon, or arising out of any negligent, grossly negligent, reckless, or intentionally wrongful act, error, or omission of URS, its officers, employees, agents, engineers, consultants, contractors, subcontractors, or any person or entity for whom URS is legally liable, under, in connection with, or in the performance of, this Agreement. The provisions of this paragraph shall survive the expiration or termination of this Agreement.

**ARTICLE VI - Client Responsibility.** Client shall: (1) provide URS, in writing, all information relating to Client's requirements for the project; (2) correctly identify to URS, the location of subsurface structures which have been placed by Client, such as pipes, tanks, cables and utilities (and Client shall also, at URS' request, provide contact information for utility providers which may have placed subsurface structures at the project site); (3) notify URS of any potential hazardous substances or other health and safety hazard or condition known to Client existing on or near the project site; (4) give URS prompt written notice of any suspected deficiency in the Services; and (5) with reasonable promptness, provide required approvals and decisions. In the event that URS is requested by Client or is required by subpoena to produce documents or give testimony in any action or proceeding to which Client is a party and URS is not a party, Client shall pay URS for any time and expenses required in connection therewith, including reasonable attorney's fees.

**ARTICLE VII - Force Majeure.** An event of "Force Majeure" occurs when an event beyond the control of the Party claiming Force Majeure prevents such Party from fulfilling its obligations. An event of Force Majeure includes, without limitation, acts of God (including floods, hurricanes and other adverse weather), war, riot, civil disorder, acts of terrorism, disease, epidemic, strikes and labor disputes, actions or inactions of government or other authorities, law enforcement actions, curfews, closure of transportation systems or other unusual travel difficulties, or inability to provide a safe working environment for employees.

In the event of Force Majeure, the obligations of URS to perform the Services and the obligations of the Client hereunder shall be suspended for the duration of the event of Force Majeure. In such event, the Time Schedule shall be extended by a like number of days as the event of Force Majeure. If Services are suspended for sixty (60) consecutive days or more by such Force Majeure, either URS or the Client may, upon at least 5 days prior written notice, terminate this Agreement and the affected Work Order. In the case of such termination, URS shall be compensated in accordance herewith for all work properly performed to the date of termination. In the event of such termination of this Agreement and the Work Order, no amount shall be due for lost or anticipated profits.

**ARTICLE VIII - Right of Entry.** If Client is the owner of the project site, URS shall have access to the project site at all reasonable times for the purpose of providing the Services. If Client is not the owner of the project site, Client shall use its commercially reasonable efforts to obtain permission for URS to have access to the project site for such purpose. If such permission cannot be obtained, URS will not be liable for the delay in time or its ability to perform the Services at the site.

**ARTICLE IX - Documents.** Upon payment to URS for work properly performed, drawings, designs, plans, specifications, reports, information, and other documents or materials in whatever form or format (together, "Drawings") prepared by or for URS in connection herewith belong to, and remain the property of, the Client for its exclusive reuse at any time without further compensation and without any restrictions. Reuse of any such Drawings (whether in final form or not) by Client on any extension of this project or any other project without the written authorization of URS shall be at Client's sole risk. URS shall have the right to retain copies of all such materials.

Drawings shall be submitted to the Client for the Client's approval, and the same shall comply with all applicable laws, statutes, ordinances, codes and regulations. Notwithstanding Client's approval of any of the Drawings, URS warrants and represents that the Drawings, as the same may be amended or supplemented by URS, shall, to the best of URS' knowledge, information and belief as engineers performing the practice of engineering in accordance with the standards, duties, and obligations set forth in this Agreement and the Work Order, be sufficient and adequate for construction of the project for which the Services are provided, shall be free from material error, and shall be satisfactory to the Client. In accordance with the standard of care, URS agrees that if the design of the project should be defective in any way, URS will assume sole responsibility for any damages, loss, claims, or expenses to the extent caused by URS' defective design. In the event it is determined that any Drawings are so defective, URS shall promptly correct any defective Drawings at no cost to the Client. The Client's approval, acceptance, use of or payment for all or any part of the Services under this Agreement or the Work Order shall in no way alter URS' obligations or the Client's rights hereunder. Approval by the Client of any of URS' Drawings or work, or the use of or payment for all or any part of the Services, shall not constitute nor be deemed a release of the responsibility and liability of URS, its employees, contractors, subcontractors, agents and consultants for the accuracy and competency of the same, nor shall such approval be deemed to be an assumption of or an indemnification for such responsibility or liability by the Client for any defect, error or omission in such Drawings or work, it being understood that the Client at all times is ultimately relying on URS' skill and knowledge in preparing the Drawings.

**ARTICLE X - Termination.**

**A.** Client may at any time terminate all or any portion of the Services, or abandon or defer the project (or any part thereof) for which the Services are being provided, for convenience, at its option and in its sole discretion, by sending a written notice within ten (10) days of such termination, abandonment or deferral to URS. If the project (or portion thereof) for which the Services are being provided is abandoned or deferred by Client, Client shall have the right to restore and reinstate the project and the Services hereunder within one (1) year of such abandonment or deferral; provided, however, that if the abandonment or deferral is for more than 90 consecutive days, such restoration and reinstatement shall be subject to renegotiation of URS' compensation.

**B.** Either party can terminate this Agreement and Work Order for cause if the other party:

- (i) commits a material breach of this Agreement, and
  - (a) such breach remains uncured for a period of 7 days after notice thereof (which notice shall specifically identify the breach) is received by the breaching party, or
  - (b) if the breach cannot with diligence be cured within said 7 day period, if within such 7 day period the breaching party provides the non-breaching party written notice of the curative measures which it proposes to undertake, and proceeds promptly to initiate such measures to cure such failure, and thereafter prosecutes the curing of such failure with diligence and continuity, the time within which such failure may be cured shall be extended for such period as may be necessary to complete the curing of such failure with diligence and continuity, not to exceed 30 days following the occurrence of the breach, or
- (ii) becomes insolvent.

Termination for cause shall be effective ten (10) days after receipt of a Notice of Termination, unless a later date is specified in the Notice.

C. URS shall cease all work and labor being performed under this Agreement immediately upon receipt of the notice of termination (whether for convenience or for cause).

D. In the event this Agreement is terminated for any reason (whether for convenience or for cause), URS shall invoice Client for all work properly completed and shall be compensated in accordance with the terms of this Agreement for all such work accomplished prior to the receipt of the notice of termination. In the event of termination of this Agreement for any reason (whether for convenience or for cause), no amount shall be due for lost or anticipated profits. In the event of any termination and upon payment to URS for the work properly performed by URS, URS shall deliver to the Client all finished or unfinished documents, data, studies, surveys, drawings, maps, models, reports, photographs or other items prepared by or for URS in connection with this Agreement, its Services, and the project.

E. In the event of termination for cause, the parties shall have their remedies at law as to any other rights and obligations between them, subject to the other terms and conditions of this Agreement.

**ARTICLE XI - No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS. No third party shall have the right to rely on URS opinions rendered in connection with the Services without the written consent of URS and the third party's agreement to be bound to the same conditions and limitations as Client.

**ARTICLE XII - Assignments.** Neither URS nor Client shall have power to and shall not assign, transfer, or otherwise convey its interest, rights, duties, or responsibilities in this Agreement or any part thereof without the prior written consent of the other party, and any such assignment, subletting, transfer or other conveyance shall be deemed a material breach of this Agreement (without an opportunity to cure) and the party which has not attempted to assign, transfer or otherwise convey shall have the right to terminate this Agreement immediately and without further notice; provided, however, that nothing contained in this paragraph shall prevent URS from employing such independent professional associates, sub-consultants, and suppliers as URS may deem appropriate to assist in the performance of the Services. Unless specifically stated to the contrary in any written consent to an assignment or transfer, no assignment or transfer will release or discharge the assignor or transferor from any duty or responsibility under this Agreement.

**ARTICLE XIII - Hazardous Substances.** All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by URS in accordance with applicable law; provided, however, that any and all such materials, including wastes, that cannot be introduced back into the environment under existing law without additional treatment, and all hazardous wastes, radioactive wastes, or hazardous substances (eg, pollutants and contaminants regulated by law) ("Hazardous Substances") from the sampling processes in connection with the Services, shall be packaged in accordance with the applicable law by URS and turned over to Client for appropriate disposal (provided, however, that URS shall first give notice to Client of the existence of such Hazardous Substances). URS shall not arrange for or otherwise dispose of Hazardous Substances under this Agreement. URS, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but URS shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances if Client is required by law to sign such manifests. If Client requires: (1) URS agents or employees to sign such manifests; or (2) URS to hire, for Client, the Hazardous Substances transportation, treatment, or disposal contractor, then for these two purposes, URS shall be considered to act as Client's agent so that URS will not be considered to be a generator, transporter, or disposer of such substances or considered to be the arranger for disposal of Hazardous Substances, and Client shall indemnify URS against any claim or loss resulting from such signing.

**ARTICLE XIV – Venue; Dispute Resolution.**

A. In the event of any action under this Agreement, venue for all causes of action shall be instituted and maintained in Dallas County, Texas (state court) or in the northern district of Texas (federal court), as the case may be. The parties agree that the laws of the State of Texas shall apply to the interpretation, validity and enforcement of this Agreement, and, with respect to any conflict of law provisions, the parties agree that such conflict of law provisions shall not affect the application of the law of Texas (without reference to its conflict of law provisions) to the interpretation, validity and enforcement of this Agreement.

B. In an effort to resolve claims, disputes or other matters in question arising out of or relating to this Agreement or breach thereof, the parties agree that all claims, disputes, or other matters in question shall be submitted to nonbinding mediation as a first step in seeking a resolution of the same.

The dispute shall be mediated by a mutually acceptable third-party to be chosen by the disputing parties within thirty (30) days after written notice by one of them requesting mediation. The disputing parties shall share the costs of the mediation equally. By mutual agreement the parties may postpone mediation until each has completed some specified but limited discovery about the dispute. By mutual agreement, the parties may use a nonbinding form of dispute resolution other than mediation. Any nonbinding dispute resolution process conducted under this Agreement shall be confidential within the meaning of Sections 154.053 and 154.073 of the Texas Civil Practice and Remedies Code, as amended, and any successor statute thereto. If neither a negotiated settlement or mediated resolution is obtained within a reasonable time period, the parties may pursue any available legal or equitable remedy.

Any request for mediation or another form of nonbinding dispute resolution shall be filed in writing with the other party within a reasonable time after the claim, dispute or other matter in question has arisen. In no event shall the demand for mediation or other form of nonbinding dispute resolution be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statutes of limitations.

**ARTICLE XV - Integrated Writing and Enforceability.** This Agreement (together with the Work Order) constitutes the final and complete repository of the agreements between Client and URS relating to the Services and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written. Modifications of this Agreement shall not be binding unless made in writing and signed by an Authorized Representative of each party. The provisions of this Agreement shall be enforced to the fullest extent permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to

expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision.

**ARTICLE XVI Miscellaneous.**

**A.** The undersigned officers and/or agents of the parties hereto are the properly authorized officials and have the necessary authority to execute this Agreement on behalf of the parties hereto, and each party hereby certifies to the other that any necessary resolutions or other act extending such authority have been duly passed and are now in full force and effect.

**B.** Any provision of this Agreement later held to be unenforceable for any reason shall be deemed void and all remaining provisions shall continue in full force and effect. All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between URS and Client shall survive the cancellation, expiration or termination of this Agreement. Any rights and remedies either party may have with respect to the other arising out of the performance of services during the term of this agreement shall survive the cancellation, expiration or termination of this Agreement.

**C.** URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**D.** The rights and remedies provided by this Agreement are cumulative and the use of any one right or remedy by either party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the parties may have by law statute, ordinance, or otherwise.

**E.** URS acknowledges that the project for which the Services are being provided is a public project of the Town of Addison, Texas and is for a public purpose, and that the property on which the project is to be constructed, the improvements to be constructed thereon, and the funds used by Client in connection with the property acquisition and the design and construction of the project are exempt from the filing and enforcement of any liens thereon or with respect thereto and from forced sale. For the consideration set forth herein, URS waives and releases any lien, or claim or right of such lien, which URS has or may have in connection with the Services on or in connection with such property, improvements, and funds, this Agreement and the Work Order.

**F.** All notices, demands, or requests from one party to another shall be personally delivered or sent by United States mail certified, or registered, return receipt requested, postage prepaid, to the addresses stated below:

To Client:

Addison Service Center  
16801 Westgrove Drive  
Addison, Texas 75001-5190  
Attn: Mike Murphy, Director of Public Works

To URS:

Graystone Centre,  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Attn: Cliff R. Hall, Project Manager

All notices or communications required to be given in writing by one party or the other shall be considered as having been given to the addressee (i) if by hand delivery, at the time of delivery, or (ii) if mailed, seventy-two (72) hours after the deposit of same in any United States mail post office box. The addresses and addressees for the purpose hereof may be changed by giving notice of such change in the manner herein provided for giving notice. Unless and until such written notice is received the last addresses and addressee stated by written notice, or provided herein if no written notice of change has been sent or received, shall be deemed to continue in effect for all purposes hereunder.


**G.** The Client, without invalidating this Agreement, may request or authorize changes in the Services within the general scope of this Agreement consisting of additions, deletions, or other revisions. Such



changes shall be documented by Change Orders prepared by URS for Client's signature. Client and URS will agree to equitable adjustments in Estimated Costs and Schedule as appropriate for each such change. URS will not proceed with changed Services without written authorization from Client.

**THE PARTIES ACKNOWLEDGE** that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

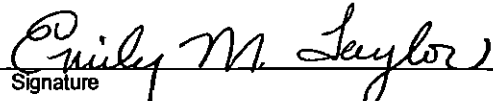
**CLIENT**

  
\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**  
\_\_\_\_\_  
Typed Name/Title

**11-13-02**  
\_\_\_\_\_  
Date of Signature

**URS**

  
\_\_\_\_\_  
Signature

**Emily Taylor, P.E. / Vice President**  
\_\_\_\_\_  
Typed Name/Title

**11-11-02**  
\_\_\_\_\_  
Date of Signature

FIXED PRICE WORK ORDER NO. 001

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**DESIGN DEVELOPMENT & CONTRACT DOCUMENTS**

**Client Authorized**

**Representative:** \_\_\_\_\_

**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010

**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.

**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234

**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.


**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed for a total fixed amount of **\$550,965.00**; in no event shall the payment by Client for the Services exceed the said amount. A breakdown of this amount is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

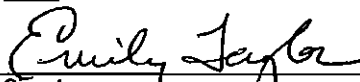
**CLIENT**

  
\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**  
\_\_\_\_\_  
Typed Name/Title

11-13-02  
\_\_\_\_\_  
Date of Signature

**URS**

  
\_\_\_\_\_  
Signature

**Emily Taylor, P.E. / Vice President**  
\_\_\_\_\_  
Typed Name/Title

11-11-02  
\_\_\_\_\_  
Date of Signature

October 18, 2005

Invoices paid to URS on the following dates and in the following amounts:

9/30/05	\$4550.00*	*Invoice not processed
8/31/05	1803.24	
7/26/05	5982.15	
7/19/05	2535.00	
5/26/05	3520.00	
5/05/05	2115.33	
4/01/05	1225.00	
2/17/05	2985.33	
1/28/05	9133.25	
1/03/05	1800.00	
11/19/04	1779.57	
11/10/04	2452.50	

Total                    \$39,881.37\*\*

\*\*This amount is \$2481.37 over the contract amount of \$37400.00

Sent By: TOWN OF ADDISON;

972 450 7074;

Oct-18-05 1:07PM;

Page 1/1

2937

REPORT: AACTIVITY GENERATED: 12 APR 05 17:45  
TOWN OF ADDISON  
VENDOR INVOICE PAYMENT ACTIVITY  
10/01/04 - 10/18/05

RUN: TUESDAY OCT182005 13:14

PAGE 2

CHECK # PAYMENT DATE INVOICE # AMOUNT

VENDOR # 09817 ADDRESS # 1  
NAME URS CORPORATION

CHECK #	PAYMENT DATE	INVOICE #	AMOUNT
30414	11/18/04	1319279	2452.50
30522	11/24/04	1375263	1779.57
31621	02/03/05	1469635	9133.25
31186	01/06/05	149866	1800.00
32010	02/24/05	1529436	2985.33
32901	04/21/05	1590533	1225.00
33258	05/12/05	1643967	2115.33
33493	05/26/05	1678669	3520.00
34709	07/21/05	1719301	2535.00
34838	07/28/05	1792284	5982.15
35468	09/08/05	1832556	1803.24

*Steve Chutek*

VENDOR TOTAL: 35331.37

GRAND TOTAL: 35331.37



VOID

September 30, 2005

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road  
Phase II – Construction Services  
Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our invoice for Professional Services during the construction of the Arapaho Road Bridge at Midway Road for the period of July 30, 2005 through August 26, 2005. Also included is our Progress Report for this period outlining the services provided.

Please note that due to the number of meetings, requests for information and issues with the Erection Plan and the Type B lighting that have occurred over the last three months, we have exceeded our budget by \$2,481.37. Outstanding issues that will need to be addressed include the review of the remaining portion of the Erection Plan for hanger stressing, review of the final hanger stresses, and other miscellaneous issues that arise. As construction of the main span arch is still ongoing, we expect that URS' services will be required for the next few months. In this regard we have previously sent Change Order No. 2 for your review. Per our Agreement, we will need written confirmation to continue to provide construction services. We request that the review and approval of this change order be expedited.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

# Monthly Progress Report

## Construction Services for the Arapaho Road Bridge Over Midway Road

URS Project No. 25334402

Period: From July 30, 2005 to August 26, 2005

---

### 1. General Accomplishments

- 1.1 Responded to questions from HNTB and RFI's from contractor.
- 1.2 Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with Deflections and Cable Forces".

### 2. Progress This Period

- 2.1 Responded to RFI-119 regarding bundled stirrups in diaphragms.
- 2.2 Responded to RFI-123 regarding stirrup widths in diaphragm transition zone.
- 2.3 Responded to RFI-120, 121 & 122 regarding the diaphragm reinforcing details. These RFIs concerned redetailing the U2 bars that were not placed by the contractor and stirrups that would not fit between the welded splices.
- 2.4 Responded to HNTB's & Contractor's questions related to the relocation of lighting sleeves in the diaphragm.
- 2.5 Responded to HNTB's & Contractor's questions related to the misplacement of a diaphragm mechanical coupler.
- 2.6 Responded to the Contractor's engineer's concern related to the stresses in the U-beams during erection.
- 2.7 Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with Deflections and Cable Forces".

### 3. Anticipated Next Period

- 3.1 Respond to RFIs
- 3.2 Respond to HNTB questions.
- 3.3 Review/respond to Contractor's "Check of Structural Performance During Construction."

### 4. Schedule Status

- 4.1 All outstanding questions have been responded to.

### 5. Issues / Impacts

- 5.1 URS has exceeded the fee for responding to RFI's and the Erection Reports and requires a change order to continue providing Construction Services.



Remittance Page

Invoice Date 10/03/05  
Invoice 1874266  
Project 25334402  
Page 1

For: Design of the Arapaho Bridge  
Over Midway Bridge

Professional Services for Period Ending 08/26/05

Town Of Addison  
Attn: Steven Z. Chutchain, PE  
16801 Westgrove Dr  
Addison TX 75001-5190

**Total Due: \$4,550.00 USD**  
Terms: Due upon Receipt

- \* Make checks payable to: URS Corporation
- \* Please indicate invoice number and/or project number on check
- \* Please include this stub with payment

**Regular Mail (USPS):** URS Corporation  
Dept. 1028  
P.O. Box 121028  
Dallas TX 75312-1028  
US

**Overnight Courier:** URS Corporation  
Lock Box No. 891028  
888 South Greenville Ave., Suite 200  
Richardson, TX 75081  
Attn: Wholesale Lock Box Processing  
(972) 680-1900

**Electronic Funds Transfer:**

Account: URS Corporation  
Bank: Wells Fargo Bank  
Account No.: 4520-086471  
ABA Routing No.: 121-000-248  
Swift Code: WFBIUS6S

Remittance Information can be sent to:

Email: RemitTo@URSCorp.com  
Fax: (512) 419-6937 Attn: Cash Applications

Please contact Laci Rosas at 512 419-6378 or via email at Laci\_Rosas@urscorp.com  
if you have any questions regarding this invoice.



Invoice Date 10/03/05  
Invoice 1874266  
Project 25334402  
Page 2

Town Of Addison  
Attn: Steven Z. Chutchain, PE  
16801 Westgrove Dr  
Addison TX 75001-5190

For: Design of the Arapaho Bridge  
Over Midway Bridge  
Professional Services for Period Ending 08/26/05

Job: 25334402 Design of Arapaho Road Bridge  
**Total this job**

<u>SERVICES</u>	<u>EXPENSES</u>	<u>TOTAL</u>
4,550.00	0.00	4,550.00
<b>4,550.00</b>	<b>0.00</b>	<b>4,550.00</b>
<b>4,550.00</b>	<b>0.00</b>	<b>\$4,550.00 USD</b>

**TOTAL THIS INVOICE**

Total Contract Value - \$37,400.00  
Amount Invoiced to Date - \$27,545.98  
Contract Value Remaining - \$9,854.02

Please contact Laci Rosas at 512 419-6378 or via email at Laci\_Rosas@urscorp.com if you have any questions regarding this invoice.





Invoice Date 10/03/05  
Invoice 1874266  
Project 25334402  
Page 3

Town Of Addison  
Attn: Steven Z. Chutchain, PE  
16801 Westgrove Dr  
Addison TX 75001-5190

For: Design of the Arapaho Bridge  
Over Midway Bridge

Professional Services for Period Ending 08/26/05

**Job: 25334402 Design of Arapaho Road Bridge**

<b>LABOR</b>	<b>HOURS</b>	<b>RATE</b>	<b>AMOUNT</b>
REGULAR			
Hall, Cliff R	10.00	155.00	1,550.00
Durham, Gregg T	2.50	80.00	200.00
Beaupre, Richard J	20.00	140.00	2,800.00
Subtotal	<u>32.50</u>		<u>4,550.00</u>
<b>Total Labor</b>			<b>4,550.00</b>
		<b>Total due this job</b>	<b><u><u>4,550.00</u></u></b>
		<b>TOTAL THIS INVOICE</b>	<b><u><u>\$4,550.00 USD</u></u></b>

Please contact Laci Rosas at 512 419-6378 or via email at [Laci\\_Rosas@urscorp.com](mailto:Laci_Rosas@urscorp.com)  
if you have any questions regarding this invoice.

F15491744

Invoice Date 10/03/05  
 Invoice 1874266  
 Project 25334402

BILLING BACKUP

G/L DATE	JOB/	GL ACCT	TASK	DOC / INV#	EMP /	NAME /	HOURS /	RATE	BILLING
SRV DATE	LBR CMT				VENDOR #	DESCRIPTION	QTY		AMOUNT
<b>Job: 25334402 Design of Arapaho Road Bridge</b>									
<b>Labor</b>									
<b>REGULAR</b>									
08/26/05	25334402	50110	10000	T4 1808638	118081	Hall, Cliff R Project Manager	2.00	155.00	310.00
08/26/05									
08/19/05	25334402	50110	10000	T4 1793148	118081	Hall, Cliff R Project Manager	3.00	155.00	465.00
08/19/05									
08/12/05	25334402	50110	10000	T4 1777858	118081	Hall, Cliff R Project Manager	1.00	155.00	155.00
08/12/05									
08/05/05	25334402	50110	10000	T4 1762846	118081	Hall, Cliff R Project Manager	4.00	155.00	620.00
08/05/05									
08/19/05	25334402	50110	10000	T4 1793084	98483	Durham, Gregg T Assistant Project Eng.	2.50	80.00	200.00
08/19/05									
08/26/05	25334402	50110	20000	T4 1812250	51513	Beaupre, Richard J Senior Project Engineer	12.00	140.00	1,680.00
08/26/05									
08/19/05	25334402	50110	10000	T4 1796372	51513	Beaupre, Richard J Senior Project Engineer	8.00	140.00	1,120.00
08/19/05									
<b>Total Labor</b>									<b>4,550.00</b>

## Steve Chutchian

---

**From:** Steve Chutchian  
**Sent:** Thursday, September 22, 2005 9:45 AM  
**To:** Nancy Cline  
**Subject:** FW: Arapaho Road Bridge Fee

Nancy: Thanks for your comments.

Steve C.

-----Original Message-----

**From:** Steve Chutchian  
**Sent:** Thursday, September 22, 2005 9:43 AM  
**To:** 'Cliff\_Hall@URSCorp.com'  
**Subject:** RE: Arapaho Road Bridge Fee

Cliff:

We would ask you to refer to issues regarding the couplers (addressed earlier in the project, problems with the concrete due to size of aggregate, and all problems that stemmed from the various steel design components of the bridge. These all appear to be design issues that came into focus during construction. Thanks.

Steve C.

-----Original Message-----

**From:** Cliff\_Hall@URSCorp.com [mailto:Cliff\_Hall@URSCorp.com]  
**Sent:** Wednesday, September 21, 2005 4:04 PM  
**To:** Steve Chutchian  
**Cc:** Jenny Nicewander; Nancy Cline  
**Subject:** RE: Arapaho Road Bridge Fee

Steve,

Could you be more specific on which items you believe are a result of not meeting the standard of care for design errors or omissions so we can review and respond to these specifically.

We do not believe that we have charged the project for services that were a direct result of items that were not "addressed fully or adequately on (our) plans and in the specifications". We believe that many of the redesign items resulted from contractor changes or preferences.

Cliff R. Hall, P.E.  
Vice President  
Engineering Manager  
URS Corporation  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Main: 972.406.6950  
Direct: 972.406.6976  
Fax: 972.406.6951

This e-mail and any attachments are confidential. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

"Steve Chutchian"  
<schutchian@ci.addison.tx.us>

09/21/2005 03:37  
PM

<Cliff\_Hall@urscorp.com>

"Nancy Cline"  
<ncline@ci.addison.tx.us>, "Jenny  
Nicewander"  
<jnicewander@ci.addison.tx.us>

Subject

RE: Arapaho Road Bridge Fee

To

cc

Cliff:

We have reviewed the spreadsheet breakdown that was submitted. This spreadsheet shows several item descriptions and associated costs passed on to the Town that are a result of changes made to the original bridge design. The Town cannot be responsible for any re-design or other changes for construction that were not addressed fully or adequately on your plans and in the specifications. Please review your current list of items and back these costs out. From that point, we can more accurately address the amount of additional funding that will be necessary to complete the project. Your assistance in this matter is greatly appreciated. Should you have any questions, please let me know. Thanks.

Steve Chutchian

-----Original Message-----

From: Cliff\_Hall@URSCorp.com [mailto:Cliff\_Hall@URSCorp.com]

Sent: Monday, September 19, 2005 4:55 PM

To: Steve Chutchian

Subject: RE: Arapaho Road Bridge Fee

Steve,

The best I can do is provide a spreadsheet break down of the tasks completed and the hours spent under each labor classification by invoice period. This information has been provided throughout the project in our progress reports and our invoices. I have created the attached spreadsheet to consolidate this information for your use. I am hopeful that this will help expedite the Change Order approval process so we can continue to provide construction phase services as necessary.

(See attached file: Manhour breakdown.xls)

Cliff R. Hall, P.E.  
Vice President

Engineering Manager  
URS Corporation  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Main: 972.406.6950  
Direct: 972.406.6976  
Fax: 972.406.6951

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"Steve Chutchian"  
<schutchian@ci.ad  
dison.tx.us>

09/19/2005 01:46  
PM

<Cliff\_Hall@urscorp.com>

To

cc

Subject

RE: Arapaho Road Bridge Fee

Cliff:

Nancy asked me to contact you and request a manhour breakout of previous work performed on the construction administration/bridge analysis work on Arapaho Rd. She said that she would be more comfortable approving the next amendment if she had that information in hand. Your assistance is very much appreciated. Thanks.

Steve Chutchian

-----Original Message-----

\*\*\*\*\*  
\*\*\*\*\*

This e-mail and any files or attachments transmitted with it contains Information that is confidential and privileged. This document may contain Protected Health Information (PHI) or other information that is intended only for the use of the individual(s) and entity(ies) to whom it is addressed. If you are the intended recipient, further disclosures are prohibited without proper authorization. If you are not the intended recipient, any disclosure, copying, printing, or use of this information is strictly prohibited and possibly a violation of federal or state law and regulations. If you have received this information in error, please delete it and notify Hamid Khaleghipour at 972-450-2868 immediately. Thank you.

\*\*\*\*\*  
\*\*\*\*\*

From: Cliff\_Hall@URSCorp.com [mailto:Cliff\_Hall@URSCorp.com]  
Sent: Thursday, September 15, 2005 1:36 PM  
To: Nancy Cline  
Cc: Steve Chutchian  
Subject: Arapaho Road Bridge Fee

Nancy,

We still have not received a response to our e-mails regarding URS' continuation of services during construction. Please advise as soon as possible as to how you would like us to proceed.

Cliff R. Hall, P.E.  
Vice President  
Engineering Manager  
URS Corporation  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Main: 972.406.6950  
Direct: 972.406.6976  
Fax: 972.406.6951

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---

Nancy,

See attached copy of an e-mail we sent to Steve Chutchian on August 22, 2005. We have currently exceeded our fee on this project as outlined below and will need additional fee to continue providing services throughout construction. Please advise if the attached proposal is acceptable so we can send a signed Change Order for the Town's execution. Thank you for your attention to this matter.

Cliff R. Hall, P.E.  
Vice President  
Engineering Manager  
URS Corporation  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Main: 972.406.6950  
Direct: 972.406.6976  
Fax: 972.406.6951

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Steve,

We will be sending you an invoice soon that will cover work performed through the month of July. Please note that due to several issues including additional meetings and discussions on the erection sequence report, the revised lighting (specified fixture no longer available), and contractor's RFIs, as of Friday, August 19, 2005, we have consumed the budget as estimated in Change Order No. 1.

As you may recall, in Change Order No. 1 we only budgeted for three months (May, June & July) of responses to RFIs @ \$1800 / month. The amount of time addressing the issues has exceeded the budget for RFI responses as well as the budget for reviewing the erection report as we have spent \$2,535 in May, \$5,982 in June, \$1,803 in July and to date, \$2,560 in August. In this regard, we would propose another Change Order to cover any future RFIs and the review of the erection report. We have attached a draft copy of these documents that are in line with what was approved previously for your review.

Today we have finally received the Erection Analysis report from Archer Western. We are willing to commence the review of this report with your confirmation that a Change Order is agreeable. We look forward to hearing from you on this matter.

(See attached file: fee proposal CO2.doc) (See attached file: CHANGE ORDER 02.doc)

Cliff R. Hall, P.E.  
Vice President  
Engineering Manager  
URS Corporation  
3010 LBJ Freeway, Suite 1300  
Dallas, Texas 75234  
Main: 972.406.6950  
Direct: 972.406.6976  
Fax: 972.406.6951

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Addison!

STEVEN Z. CHUTCHIAN, P.E.  
Assistant City Engineer  
(972) 450-2886  
(972) 450-2837 FAX  
(214) 673-2518 Mobile  
schutchian@ci.addison.tx.us E-mail

Town of Addison 16801 Westgrove Dr. P.O. Box 9010, Addison, Texas 75001-9010

NANCY!

9/29/05

I RECEIVED THE ATTACHED MAN-HOUR  
BREAKDOWN FROM URS, REGARDING  
THEIR ARAPAHO RD. CONSTRUCTION  
BILLINGS. THANKS!

Steve C.

Steve,

Please ask Cliff to remove items  
pertaining to problems w/ their plans.  
Please check over + remove ones you  
see also - (Review RFIs)

Nancy



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR BREAKDOWN THROUGH AUGUST 26, 2005  
 URS CORPORATION**

**Manhours Spent per Labor Classification**

Principal	Project Mangr	Sr. Project Engr/Arch	Project Engr/Arch	Assistant Engr/Arch	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses (*)	Total Cost
\$185.00	\$165.00	\$140.00	\$110.00	\$80.00	\$85.00	\$70.00	\$55.00				

**INVOICE PERIOD**

**WORK ORDER NO. 1**

August 16, 2004 through September 24, 2004

Responded to RFI Nos. 9, 11, 20 & 21

Responded to questions from HNTB

Created a CD of all drawing files for contractor as requested by HNTB

September 25, 2004 through October 29, 2004

Responded to RFI Nos. 29

Responded to questions from HNTB

October 30, 2004 through November 26, 2004

Responded to RFI Nos. 31

Responded to questions from HNTB

Field visit to review column starter bar misalignment.

November 27, 2004 through December 31, 2004

Responded to RFI Nos. 38

Responded to questions from HNTB regarding the U-beam connection detail in Span 9.

Redesigned the U-beam connection detail in Span 9. This was a design change requested by HNTB & the contractor

- Revised and submitted drawings to incorporate the new U-beam connection detail.

Responded to questions regarding hanger lengths and shop drawings for hangers.

January 1, 2005 through January 28, 2005

Responded to RFI-F

Responded to questions from HNTB regarding the hanger lengths and erection sequencing of the hangers.

Revised the U-beam diaphragm detail to avoid conflicts with the revised welded rebar connection that was a design change requested by HNTB & the contractor

Responded to questions about the Precast Concrete Panel (PCP) shop drawing.

January 29, 2005 through February 25, 2005

Responded to RFI-61, RFI-62 & RFI-74

Performed field review of Bent 10 cap steel that was misplaced and responded to the acceptance of misplaced steel in bent cap.

February 26, 2005 through April 1, 2005

Responded to RFI-69, RFI-74 & RFI-77

Responded to HNTB's questions.

April 2, 2005 through April 29, 2005

Responded to RFI-I regarding epoxy rebar.

Responded to RFI-I regarding interference between deck and bent cheek wall.

Responded to HNTB's & Contractor's questions related to the attachment of the pedestrian rail pennant to the pickets.

Responded to questions regarding the pedestrian rail paint spec.

**SUBTOTAL WORK ORDER NO. 1**

Principal	Project Mangr	Sr. Project Engr/Arch	Project Engr/Arch	Assistant Engr/Arch	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses (*)	Total Cost	
	2	11.5			1	6	0.5	21	\$ 2,452.50	\$ -	\$ 2,452.50	
	3.5	4.5		7.5				15.5	\$ 1,772.50	\$ 7.07	\$ 1,779.57	
	8	4						12	\$ 1,800.00	\$ -	\$ 1,800.00	
	14	44.5		6	2.75			67.25	\$ 9,113.75	\$ 19.50	\$ 9,133.25	
	5.5	2		8	14			29.5	\$ 2,962.50	\$ 22.83	\$ 2,985.33	
	7	1						8	\$ 1,225.00	\$ -	\$ 1,225.00	
	4	1.5		12			5.5	23	\$ 2,092.50	\$ 22.83	\$ 2,115.33	
	13	1		15			3	32	\$ 3,520.00	\$ -	\$ 3,520.00	
	0	57	70	0	48.5	17.75	6	9	208.3	\$ 24,938.75	\$ 72.23	\$ 25,010.98

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR BREAKDOWN THROUGH AUGUST 26, 2005  
 URS CORPORATION**

**Manhours Spent per Labor Classification**

Principal	Project Mangr	Sr. Project Engr/Arch	Project Engr/Arch	Assistant Engr/Arch	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses (*)	Total Cost
\$185.00	\$155.00	\$140.00	\$110.00	\$80.00	\$85.00	\$70.00	\$55.00				

**CHANGE ORDER NO. 1**

**April 30, 2005 through May 27, 2005**

Responded to RFI-74 regarding the T-4 rail anchorage.  
 Responded to RFI-85 regarding the approach slab detail.  
 Responded to RFI-86 regarding the stinger connection detail.  
 Responded to HNTB's & Contractor's questions related to the prestressed concrete panel details.  
 Attended meetings with the Town regarding the bridge rail painting and the Span 9 U-Beam splice detail.  
 Investigated the paint types and application for the rail painting.

**May 28, 2005 through July 1, 2005**

Responded to RFI-95 regarding offset hole in base plate of stinger.  
 Responded to RFI-98 regarding ground rods in T-4 rail at light posts.  
 Responded to RFI-101 regarding the T-4 rail anchor bolt template.  
 Responded to HNTB's & Contractor's questions related to the prestressed concrete panel details.  
 Responded to HNTB's & Contractor's questions related to the number of conduit allowed in the T-4 rail.  
 Responded to HNTB's & Town's questions related to the allowable spacing of the expansion joint in the T-4 rail.  
 Reviewed the Contractor's (partial) submittal of the Erection Plan and provided comments.

Attended meetings with the Town and Contractor regarding the Erection Sequence Plan.

**July 2, 2005 through July 29, 2005**

Responded to RFI-105 regarding electrical conduit placement.  
 Responded to RFI-109 regarding pedestrian rail lighting.  
 Responded to HNTB's & Contractor's questions related to the Type B lighting. Type B lighting as specified was unavailable when Contractor tried to procure it. Coordinated with lighting designer to develop a suitable alternative.  
 Responded to HNTB's & Contractor's questions related to the diaphragm reinforcement.  
 Reviewed the Contractor's engineer's questions related to the stresses in the U-beams during erection.  
 Attended meeting with the Town, HNTB and Contractor regarding the pedestrian rail lighting and Type B lighting.

	15	1.5									
	20	11.5	7	5.5			1				
	10		2								

16.5 \$ 2,535.00 \$ - \$ 2,535.00

45 \$ 5,975.00 \$ 7.15 \$ 5,982.15

12 \$ 1,770.00 \$ 33.24 \$ 1,803.24

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR BREAKDOWN THROUGH AUGUST 26, 2005  
 URS CORPORATION**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR BREAKDOWN THROUGH AUGUST 26, 2005  
 URS CORPORATION**

**Manhours Spent per Labor Classification**

	Principal	Project Mangr	Sr. Project Engr/Arch	Project Engr/Arch	Assistant Engr/Arch	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	D Expe
	\$185.00	\$155.00	\$140.00	\$110.00	\$80.00	\$85.00	\$70.00	\$55.00			
July 30, 2005 through August 26, 2005 (not yet invoiced)		10	20		2.5				32.5	\$ 4,550.00	\$
Responded to RFI-119 regarding bundled stirrups in diaphragms.											
Responded to RFI-123 regarding stirrup widths in diaphragm transition zone.											
Responded to RFI-120, 121 & 122 regarding the diaphragm reinforcing details. These RFIs concerned re-detailing the U2 bars that were not placed by the contractor and stirrups that would not fit between the welded splices.											
Responded to HNTB's & Contractor's questions related to the relocation of lighting sleeves in the diaphragm.											
Responded to HNTB's & Contractor's questions related to the misplacement of a diaphragm mechanical coupler.											
Responded to the Contractor's engineer's concern related to the stresses in the U-beams during erection.											
Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with											
<b>SUBTOTAL CHANGE ORDER NO. 1</b>	0	55	33	9	8	0	0	1	106	\$14,830.00	\$
<b>Grand Total (through August 26, 2005)</b>	0	112	103	9	57	18	6	10	314	\$39,768.75	\$

**CHANGE ORDER NO. 1**  
 April 30, 2005 through August 26, 2005  
 Responded to RFI-7 regarding bundled stirrups in diaphragms.  
 Responded to RFI-8 regarding stirrup widths in diaphragm transition zone.  
 Responded to RFI-9, 10 & 11 regarding the diaphragm reinforcing details. These RFIs concerned re-detailing the U2 bars that were not placed by the contractor and stirrups that would not fit between the welded splices.  
 Responded to HNTB's & Contractor's questions related to the relocation of lighting sleeves in the diaphragm.  
 Responded to HNTB's & Contractor's questions related to the misplacement of a diaphragm mechanical coupler.  
 Responded to the Contractor's engineer's concern related to the stresses in the U-beams during erection.  
 Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with

May 28, 2005 through August 26, 2005  
 Responded to RFI-5 regarding bundled stirrups in diaphragms.  
 Responded to RFI-6 regarding stirrup widths in diaphragm transition zone.  
 Responded to HNTB's & Contractor's questions related to the relocation of lighting sleeves in the diaphragm.  
 Responded to HNTB's & Contractor's questions related to the misplacement of a diaphragm mechanical coupler.  
 Responded to the Contractor's engineer's concern related to the stresses in the U-beams during erection.  
 Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with

July 2, 2005 through August 26, 2005  
 Responded to RFI-1 regarding bundled stirrups in diaphragms.  
 Responded to RFI-2 regarding stirrup widths in diaphragm transition zone.  
 Responded to HNTB's & Contractor's questions related to the relocation of lighting sleeves in the diaphragm.  
 Responded to HNTB's & Contractor's questions related to the misplacement of a diaphragm mechanical coupler.  
 Responded to the Contractor's engineer's concern related to the stresses in the U-beams during erection.  
 Completed the review and approval of the Contractor's "Step-by-Step Construction Analysis with



April 28, 2004

Mr. Steven Z. Chutchian, P.E.  
Assistant City Engineer  
16801 Westgrove Drive  
Addison, TX 75001

Re: **Arapaho Road Bridge at Midway Road  
Coordination Comments on 100% Plans**

Dear Mr. Chutchian:

We have performed a coordination review of your consultant's roadway, utility, landscape, etc. plans for the subject project to check if certain coordination issues that have been previously discussed were included in the 100% plans. We have noted several items that we had requested to be included into the plans, and that impact the bridge or are required by the noise study, that were not included. We have included a partial copy of some of the plan sheets outlining these items, as well as listed them below.

1. All overhead electrical (OHE) lines that cross the bridge or interfere with the bridge deck need to be relocated.
2. The finished ground elevation at bents 9 & 10 (triangular thrust blocks) needs be at EL 616 or above.
3. A 3-ft high barrier is required by the noise study between Arapaho Road and the adjacent hotel beginning at approximate station 72+07 and ending at approximate station 73+50.

Sincerely,

**URS Corporation**

Cliff R. Hall, P.E.  
Project Manager

Enclosures

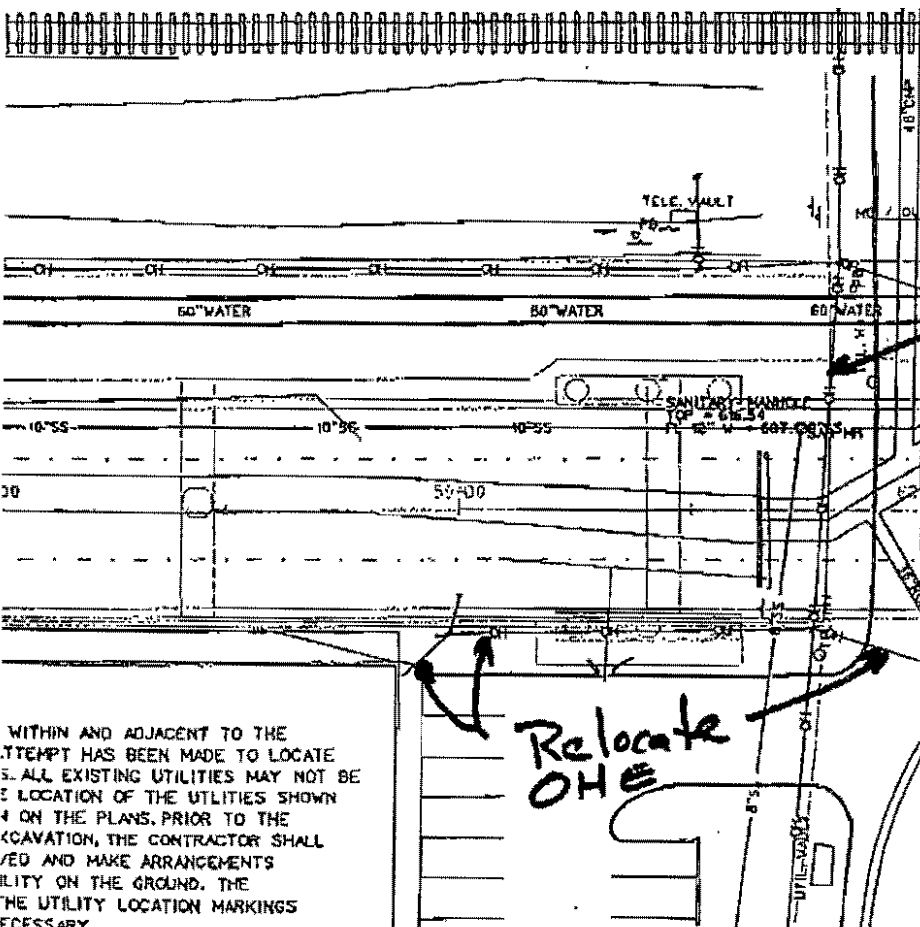
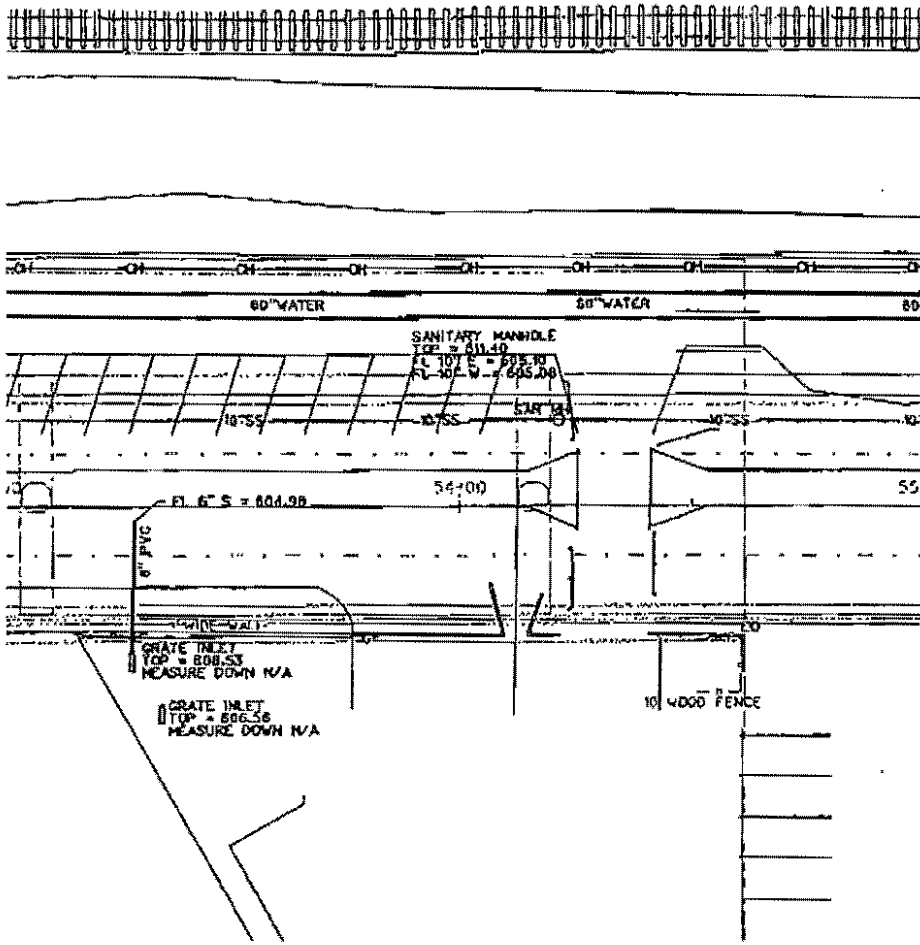
c.c. Jerry Holder (HNTB)

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951



**LEGEND**

- OH — OVERHEAD LINES
- CO SANITARY SEWER CLEANOUT
- FH FIRE HYDRANT
- WV WATER VALVE
- WM WATER METER
- GM GAS METER

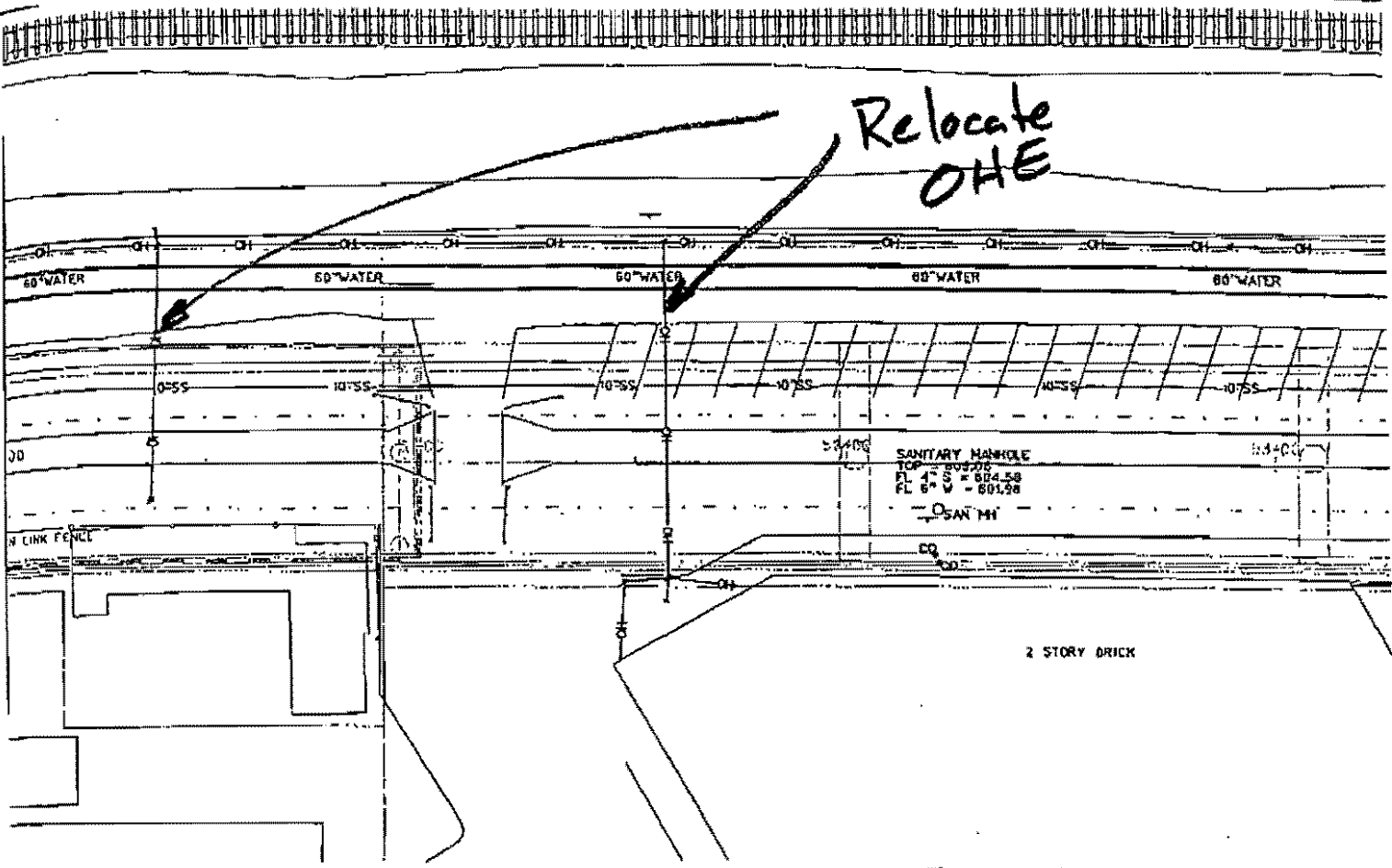


WITHIN AND ADJACENT TO THE ATTEMPT HAS BEEN MADE TO LOCATE ALL EXISTING UTILITIES MAY NOT BE LOCATION OF THE UTILITIES SHOWN ON THE PLANS. PRIOR TO THE CAVATION, THE CONTRACTOR SHALL AND MAKE ARRANGEMENTS ILITY ON THE GROUND. THE THE UTILITY LOCATION MARKINGS NECESSARY.

*Relocate OHE*

FOR INTERIM REVIEW ONLY  
 By JOSEPH D. HENDERSON, JR., P.E. 87171  
 HNTB CORPORATION  
 Date 12-02-2003  
 NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

		184	
NO.	DATE	REVISION	APPROV.
<b>HNTB</b> ARCHITECTS ENGINEERS PLANNERS THE HNTB COMPANY <b>ARAPAHO ROAD - PHASE III</b> SURVEYOR BOULEVARD TO ADDISON ROAD EXISTING UTILITY PLAN STA 50+00 TO 60+00 TOWN OF ADDISON, TEXAS			
Design	JSH	Drawn	GFS
Check	JSH	Date	APRIL 04
Scale	1" = 20'	Project No.	25768
		Sheet No.	U-3

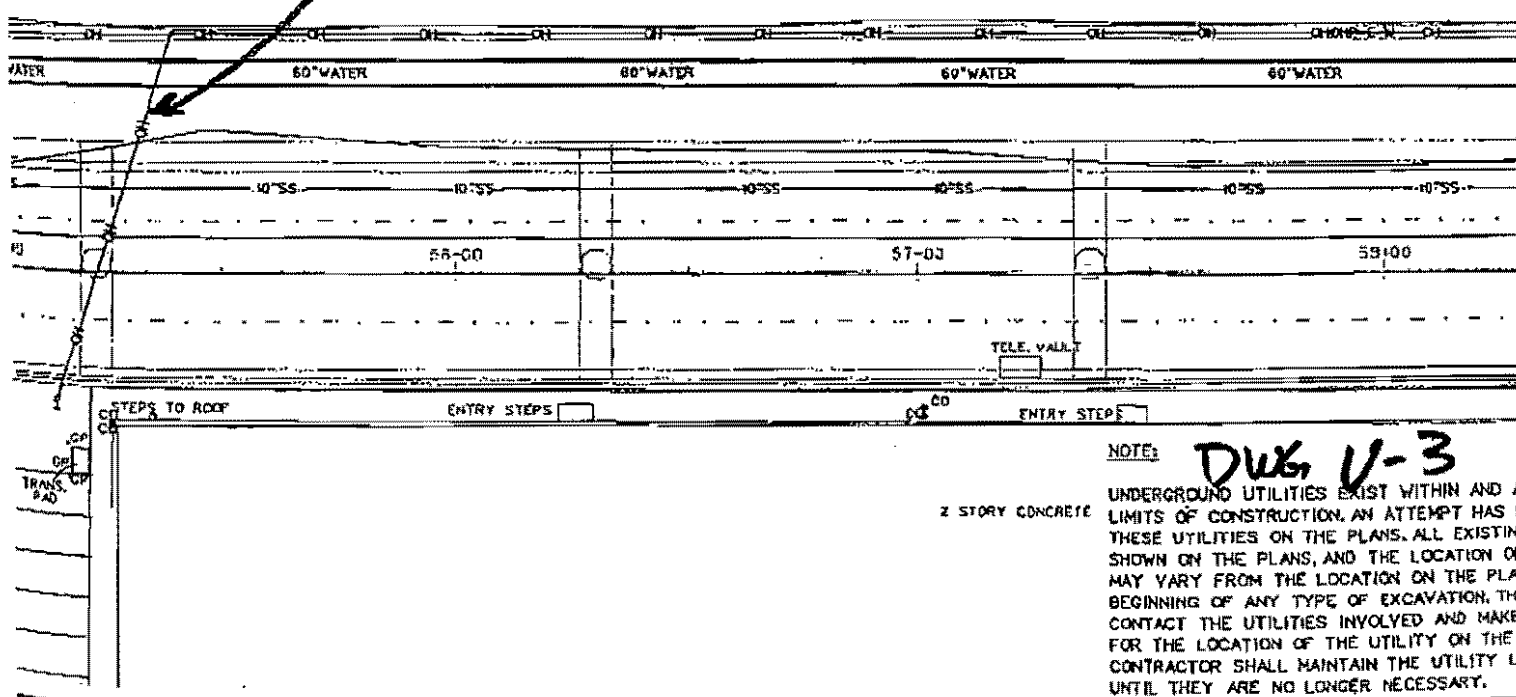


Relocate  
OHE

SANITARY MANHOLE  
TOP = 803.00  
FL 4\"/>

2 STORY BRICK

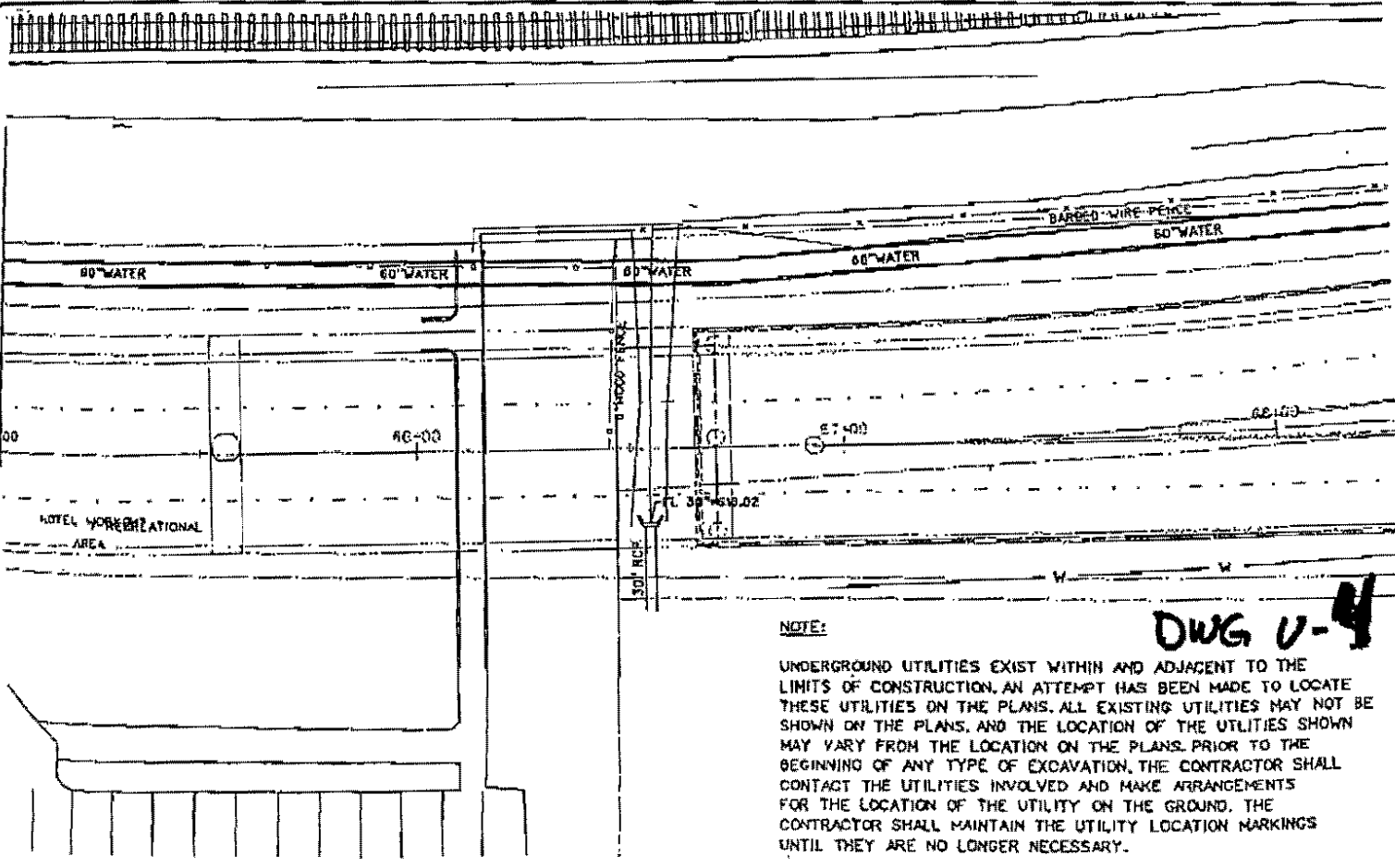
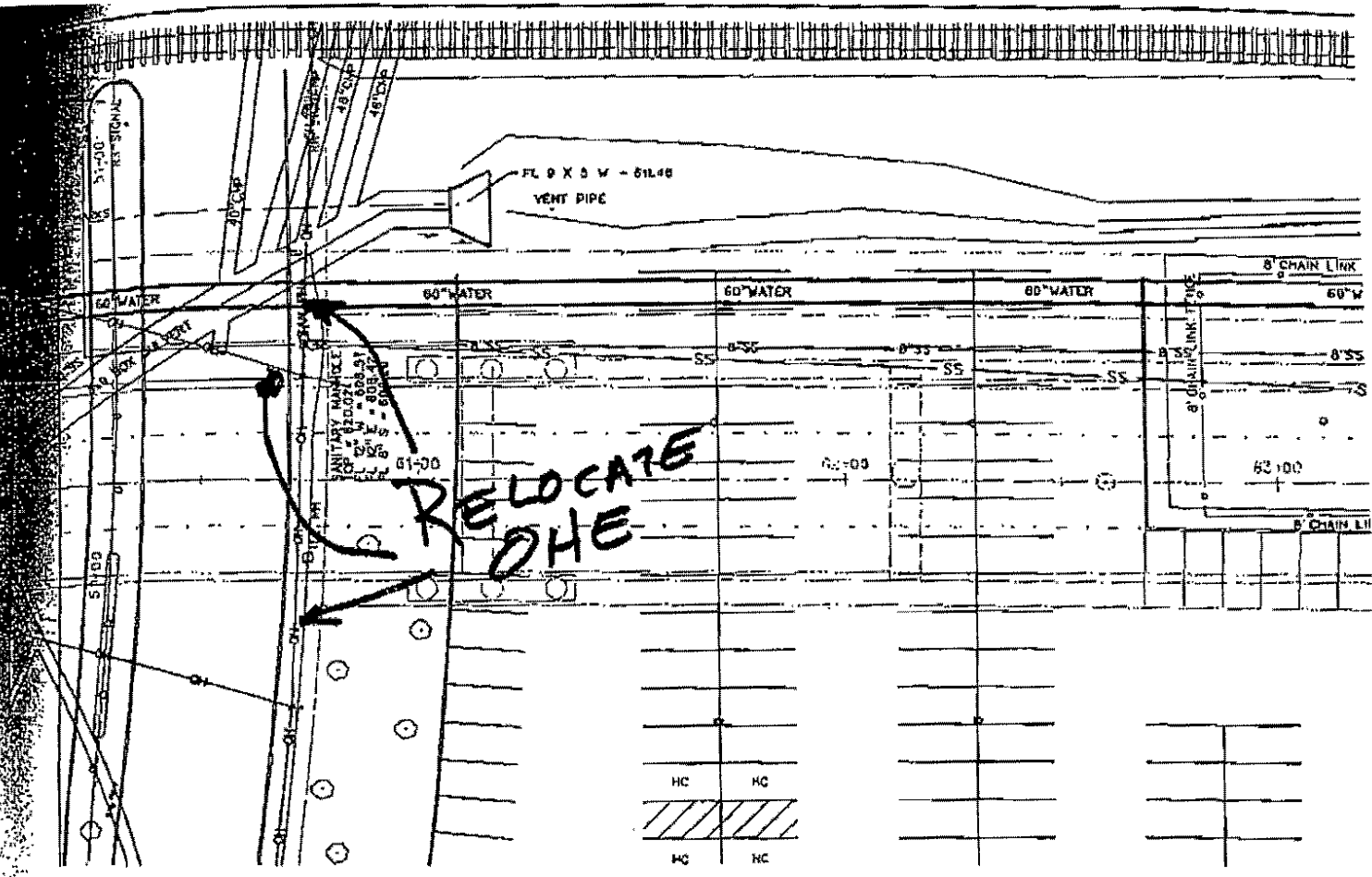
Relocate  
OHE



NOTE: **DUG U-3**

2 STORY CONCRETE

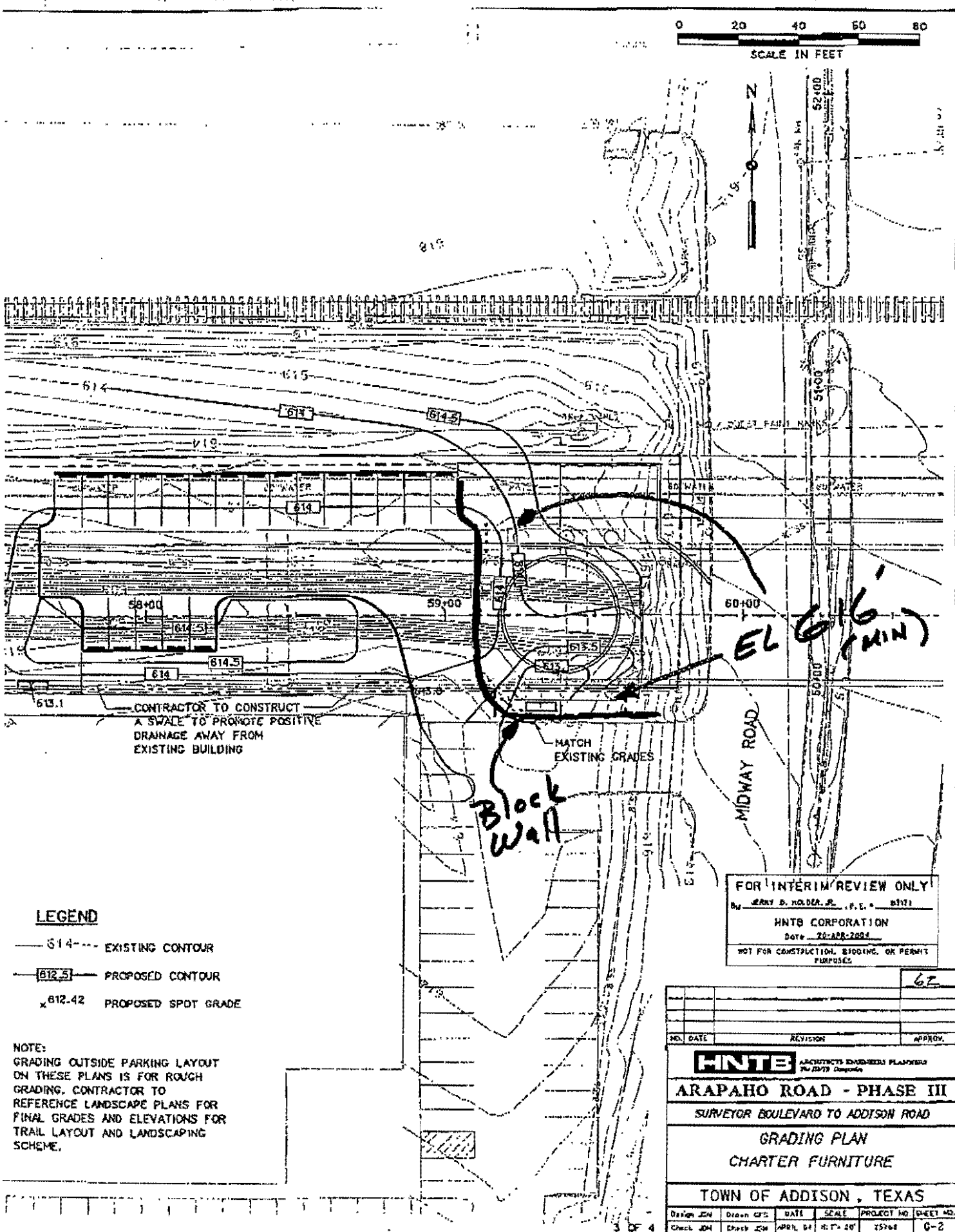
UNDERGROUND UTILITIES EXIST WITHIN AND A LIMITS OF CONSTRUCTION. AN ATTEMPT HAS B THESE UTILITIES ON THE PLANS. ALL EXISTING SHOWN ON THE PLANS, AND THE LOCATION OF MAY VARY FROM THE LOCATION ON THE PLAN BEGINNING OF ANY TYPE OF EXCAVATION, THE CONTACT THE UTILITIES INVOLVED AND MAKE FOR THE LOCATION OF THE UTILITY ON THE CONTRACTOR SHALL MAINTAIN THE UTILITY LC UNTIL THEY ARE NO LONGER NECESSARY.



**NOTE:**

UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS, AND THE LOCATION OF THE UTILITIES SHOWN MAY VARY FROM THE LOCATION ON THE PLANS. PRIOR TO THE BEGINNING OF ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITY ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

**DWG U-4**



CONTRACTOR TO CONSTRUCT A SWALE TO PROMOTE POSITIVE DRAINAGE AWAY FROM EXISTING BUILDING

MATCH EXISTING GRADES

Block Wall

EL 616 (MIN)

MIDWAY ROAD

LEGEND

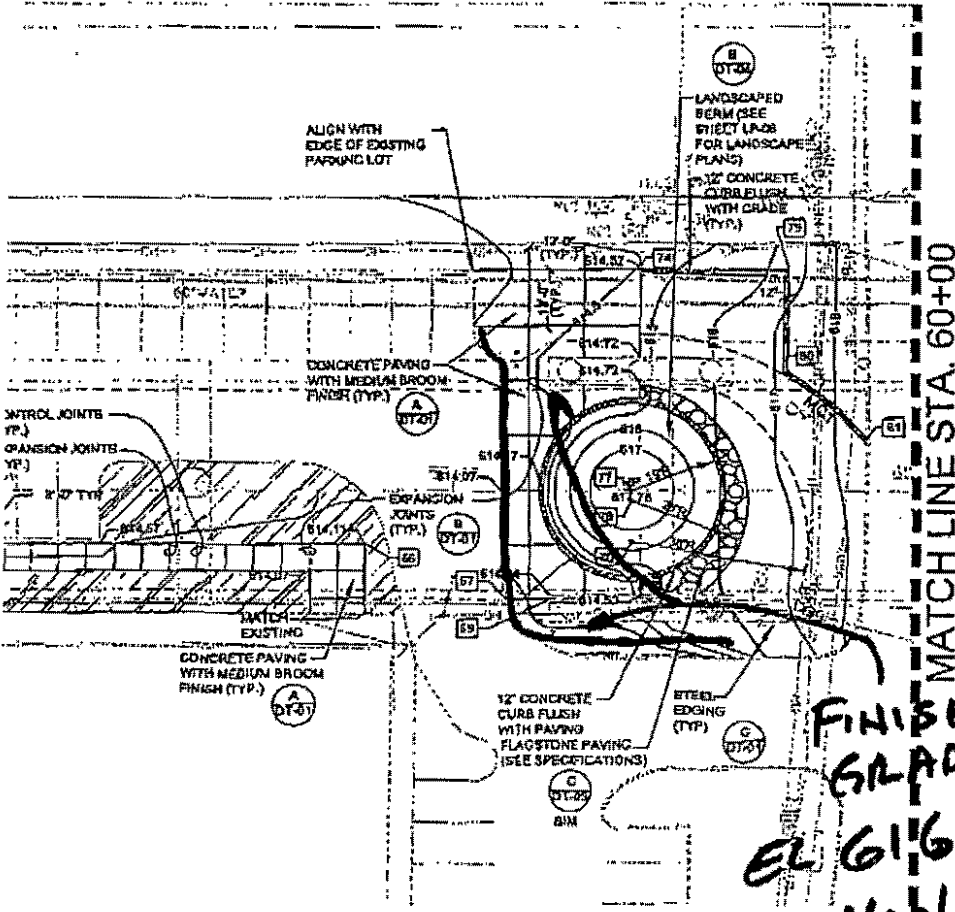
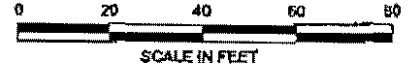
- 614 --- EXISTING CONTOUR
[612.5] PROPOSED CONTOUR
x 612.42 PROPOSED SPOT GRADE

NOTE: GRADING OUTSIDE PARKING LAYOUT ON THESE PLANS IS FOR ROUGH GRADING. CONTRACTOR TO REFERENCE LANDSCAPE PLANS FOR FINAL GRADES AND ELEVATIONS FOR TRAIL LAYOUT AND LANDSCAPING SCHEME.

FOR INTERIM REVIEW ONLY
By JERRY D. HOLDER, JR., P.E.
HNTB CORPORATION
Date 20-APR-2004
NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

Table with project details: HNTB ARCHITECTS ENGINEERS PLANNERS, ARAPAHO ROAD - PHASE III, SURVEYOR BOULEVARD TO ADDISON ROAD, GRADING PLAN, CHARTER FURNITURE, TOWN OF ADDISON, TEXAS. Includes revision table and design/check dates.





**GENERAL NOTES:**

- 1.) WRITTEN DIMENSIONS AND COORDINATE DATA SHALL GOVERN OVER SCALED DIMENSIONS.
- 2.) SEE THE SURVEY CONTROL PLAN SHEETS WITHIN THIS SET FOR COORDINATE CONTROL POINT INFORMATION.
- 3.) ALL IMPROVEMENTS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER'S REP. PRIOR TO CONSTRUCTION OR INSTALLATION.
- 4.) THE CONTRACTOR SHALL VERIFY ALL EASEMENT LINES IN THE FIELD PRIOR TO BEGINNING WORK.
- 5.) CONTRACTOR SHALL VERIFY ALL UTILITIES SHOWN ON THESE PLANS AS WELL AS ANY OTHERS IN FIELD PRIOR TO START OF CONSTRUCTION.
- 6.) ALL CONSTRUCTION WILL CONFORM TO THE TOWN OF ADDISON STANDARDS AND SPECIFICATIONS, AS WELL AS, ANY COVERING TxDOT OR RAILROAD STANDARDS AND SPECIFICATIONS RELATED TO THIS PROJECT.
- 7.) ALL DIMENSIONS ARE TO BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- 8.) REINFORCEMENT SHOULD BE CONTINUOUS THROUGH CONTROL JOINTS.
- 9.) THE CONTRACTOR WILL COORDINATE INSTALLATION OF ALL SIGNS, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES BY THE CITY DURING CONSTRUCTION.

**LEGEND:**

- DECOMPOSED GRANITE TRAIL (SEE SPECIFICATIONS)
- STONE PAVING (SEE SPECIFICATIONS)
- EXPANSION JOINTS
- CONTROL JOINTS
- EXISTING CONTOURS
- PROPOSED CONTOURS

**FINISHED GRADE EL 616' MIN**

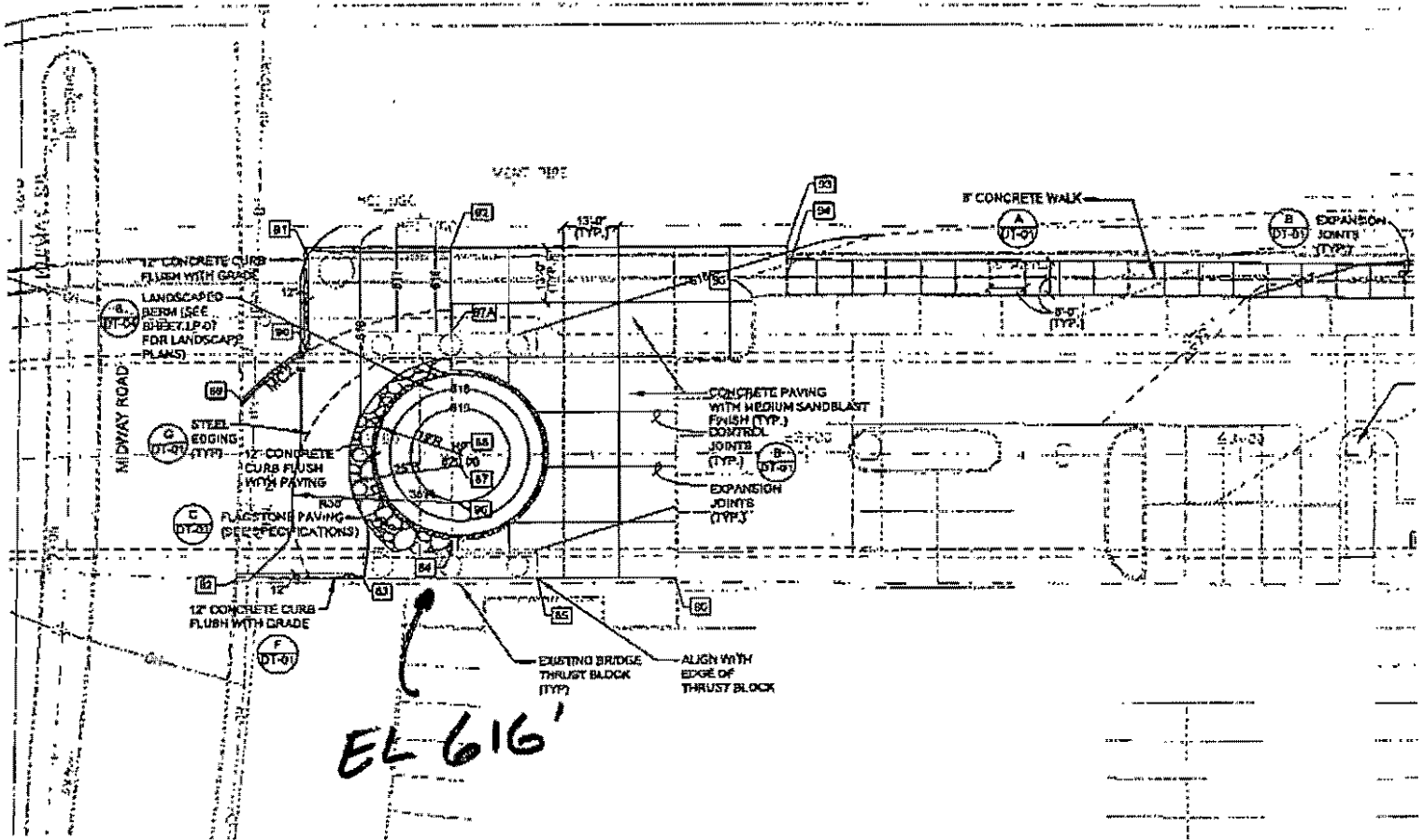
1182.02  
79.17  
1137.70  
179.17  
1022.81  
128.44

DATA	CHORD
101° 14'	22.60'



NO.	DATE	REVISION	APPROVED
<b>HNTB</b> ARCHITECTS ENGINEERS PLANNERS The HNTB Companies			
<b>ARAPAHO ROAD EXTENSION</b>			
SURVEYOR BOULEVARD TO ADDISON ROAD			
STA 55+00 TO 60+00 LAYOUT & DIMENSIONING PLAN			
TOWN OF ADDISON, TEXAS			
Design	DWG	Drawn	DWG
Check	UP	Check	NO
DATE	4/22/04	SCALE	VARIABLE
PROJECT NO.	25768	SHEET	LA-9

193



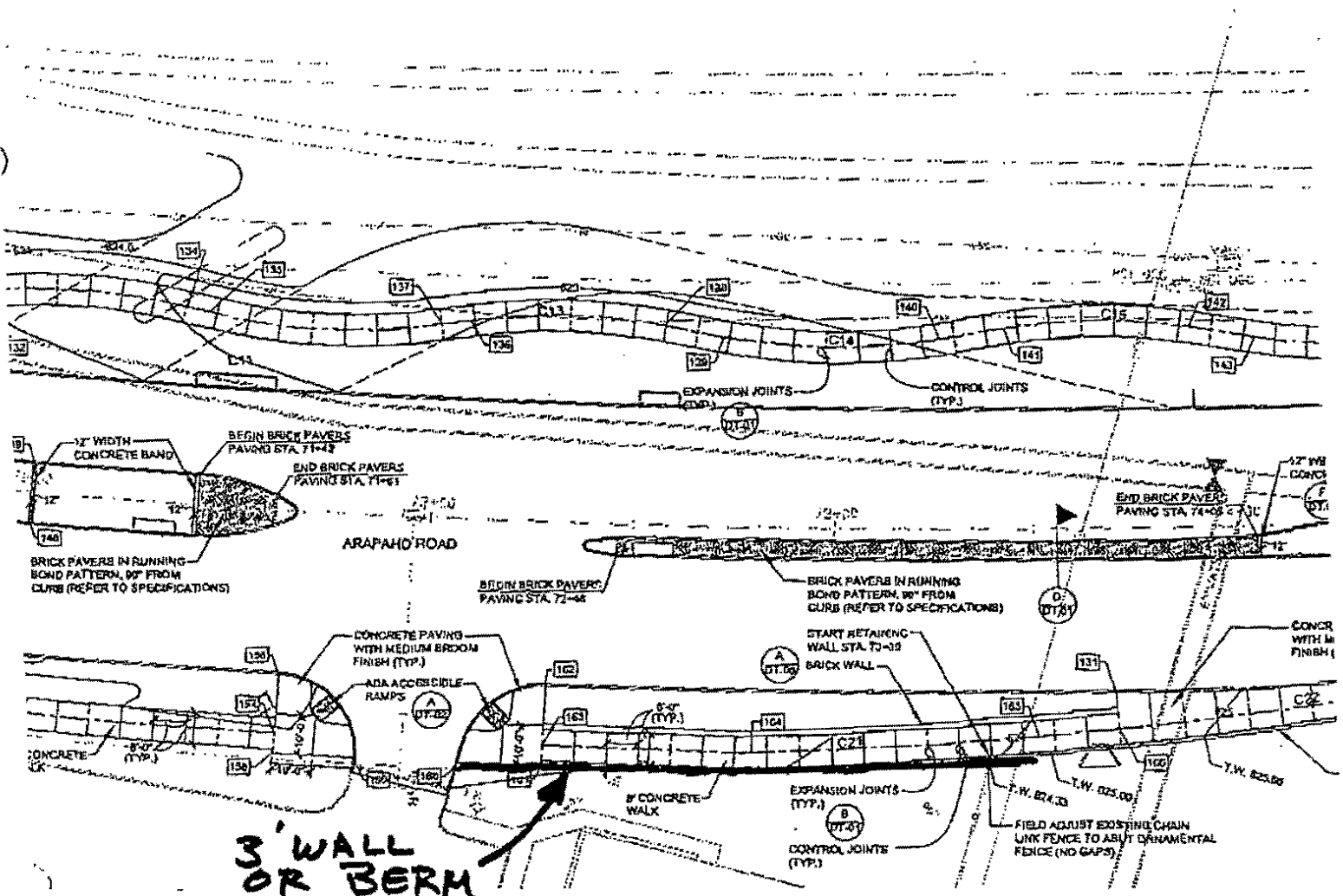
LAYOUT COORDINATE TABLE

82	N 10063.04 E 8275.94	87	N 10182.57 E 9326.49	92	N 10182.57 E 9326.49	97	N 10068.50 E 8258.30
83	N 10063.04 E 8009.04	88	N 10112.08 E 9326.52	93	N 10183.42 E 9411.49	97A	N 10130.01 E 8826.48
84	N 10076.82 E 8326.54	89	N 10124.59 E 9277.33	94	N 10186.01 E 9411.49		
85	N 10076.82 E 9231.78	90	N 10187.10 E 9291.99	95	N 10190.01 E 9384.69		
86	N 10078.50 E 9078.90	91	N 10182.83 E 8282.00	96	N 10184.01 E 9411.45		

CONTAINER / MOW CURB CENTERLINE CURVE DATA

CURVE	DELTA	RADIUS	ARC	TANGENT	BEARING	CHORD
MC2	16°59'25"	65.50'	19.42'	8.78'	8-49°43'51" W	19.35'

DWG  
LA-07



LAYOUT COORDINATE TABLE

127	N 10200.77 E 10236.66	136	N 10218.22 E 10279.06	141	N 10205.89 E 10227.94	146	N 10158.87 E 10295.43	151	N 10232.28 E 10642.01	156	N 10128.84 E 10378.83	161	N 10133.26 E 10443.88	166	N 10188.53 E 10502.08
130	N 10204.18 E 10277.28	137	N 10218.27 E 10289.13	142	N 10272.53 E 10271.99	147	N 10148.90 E 10289.04	152	N 10246.08 E 10680.16	157	N 10114.24 E 10379.03	162	N 10142.86 E 10441.04	167	N 10201.87 E 10628.49
131	N 10202.75 E 10286.91	138	N 10238.82 E 10448.86	143	N 10274.94 E 10288.18	148	N 10150.53 E 10307.42	153	N 10259.42 E 10679.98	158	N 10108.20 E 10280.49	163	N 10128.22 E 10468.37	168	N 10218.71 E 10638.04
132	N 10186.78 E 10287.82	139	N 10239.81 E 10461.60	144	N 10280.22 E 10659.10	149	N 10183.31 E 10304.61	154	N 10111.73 E 10282.21	159	N 10113.11 E 10400.17	164	N 10130.80 E 10425.29	169	N 10219.51 E 10687.49
134	N 10187.88 E 10330.19	140	N 10253.04 E 10313.09	145	N 10297.78 E 10638.59	150	N 10243.27 E 10638.81	155	N 10102.81 E 10280.26	160	N 10118.78 E 10425.40	165	N 10182.20 E 10583.97	170	N 10208.84 E 10588.56
135	N 10208.27 E 10384.34														

CONTAINER / MOW CURB CENTERLINE CURVE DATA

CURVE	DELTA	RADIUS	ARC	TANGENT	BEARING	CHORD
C10	14°52'50"	150.00'	38.86'	18.59'	S 88°05'13" W	38.85'
C11	20°17'54"	150.00'	53.14'	26.85'	S 69°26'38" W	52.88'
C12	10°58'07"	1000.00'	190.88'	83.72'	N 84°31'57" E	190.57'
C13	28°35'23"	150.00'	89.81'	35.44'	N 72°35'20" E	68.93'
C14	20°29'23"	150.00'	53.84'	27.11'	N 75°38'18" E	53.58'
C15	17°32'22"	150.00'	45.82'	23.14'	N 74°09'48" E	45.74'
C18	26°29'23"	150.00'	53.64'	27.11'	N 72°41'18" E	53.56'
C17	17°32'22"	150.00'	45.82'	23.14'	N 71°12'48" E	45.74'
C21	03°26'52"	1200.00'	71.88'	35.94'	N 71°35'15" E	71.85'
C22	02°58'28"	1597.06'	82.90'	41.46'	N 87°11'08" E	82.89'
C23	10°21'15"					



July 29, 2004

Mr. Michael Murphy, P.E.  
Director of Public Works  
16801 Westgrove Drive  
Addison, TX 75001

Re: **Arapaho Road Bridge at Midway Road**  
**URS Design Services**

STEVE,  
CHECK THIS  
OUT!

PS -  
PLEASE  
FILE

Mu

Dear Mr. Murphy:

As Project Manager for the design of the Arapaho Road Bridge, I was discouraged to hear of your displeasure with URS' service on the Arapaho Road project. On behalf of URS, I would like to apologize to you for not providing you the level of service that you have come to expect.

As bridge engineers who like to tackle challenging projects, the design of the arch bridge was a dream project for many of our Dallas engineers. In an effort to have more involvement with the design locally, we unfortunately began to sacrifice the schedule due to an over commitment of workload. As your project manager it was my duty to ensure that the project was on schedule. I regret that you and your staff felt it necessary to monitor our progress. I know that the effort spent by you and your staff was significant and that this effort was just one more task that each of you had to fit into an already demanding schedule.

More recently, we seem to have had a series of miscommunications that brought further disappointment. I take full responsibility for not better communicating the expected level of effort involved in the construction phase services and for not attending the pre-construction conference due to other conflicts.

Finally, I would like to thank you for your candor in expressing your displeasure with our performance. While it is always disheartening to hear, I will use your comments as a learning opportunity to ensure that I provide better and more responsive service in the future.

Sincerely,

URS Corporation

Cliff R. Hall, P.E.  
Project Manager

c.c. Dave Johnston, URS  
Emily Taylor, URS

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951



July 30, 2004

*Revisions  
needed!*

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase III -- Construction Administration  
Work Authorization No. 002**

Dear Mr. Chutchian:

Enclosed please find a copy of the Work Order Number 002 for the Construction Administration Services with Attachment A - Scope of Services, and Attachment C --Schedule of Fees and Charges. This work order has been revised as per our discussions on July 23, 2004 and per discussions with Mike Murphy on July 30, 2004.

Please have both originals signed and return one signed original to us.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

c.c. Mike Murphy

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

TIME & MATERIALS WORK ORDER NO. 002

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CONSTRUCTION ADMINISTRATION SERVICES

**Client Authorized**

**Representative:** Michael Murphy  
**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.  
**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
**Telephone No.:** 972.406.6950

*NOT APPROVED  
8/12/04  
su*

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment N/A to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed only when requested by Client for a not-to-exceed amount of **\$25,000.00**; payment by Client for the Services shall not exceed the said amount without written authorization. A Fee Schedule is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

Signature

Ron Whitehead / City Manager

Typed Name/Title

Date of Signature

**URS**

Signature

Emily Taylor, P.E. / Vice President

Typed Name/Title

07/30/04  
Date of Signature

## **ATTACHMENT A – SERVICES**

### **CONSTRUCTION ADMINISTRATION SERVICES FOR THE ARAPAHO ROAD BRIDGE**

When requested by the Town of Addison, URS will respond to the Contractor's request for information (RFIs), submittals, calculations, etc. as it relates to design changes of the bridge or bridge previously designed by URS.

All ROW documentation and plans; construction engineering design; review and approval of shop drawings, Contractor reports, calculations, testing results, erection methods, fabrication plants, etc.; survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement. In addition, all items related to construction materials testing, fabrication shop verification or certification, mill certifications, and welding qualifications and certifications are outside the scope of this agreement and will be performed by others.

**URS CORPORATION  
ATTACHMENT C  
2004 SCHEDULE OF FEES AND CHARGES  
TOWN OF ADDISON**

**Engineering & Consulting Services**

The following describes the basis for compensation for services performed during the fiscal year 2004. This Schedule of Fees and Charges will be adjusted annually on November 1 of each subsequent year to reflect merit and economic salary increases, and changes in the expected level and mode of operations for the new year. The new Schedule of Fees and Charges will apply to existing and new assignments.

**PERSONNEL CHARGES**

The charge for all time required in the performance of the Scope of Services, including office, field and travel time, will be at the Unit Priced Hourly Rates set forth below for the labor classifications indicated.

<u>Labor Classification</u>	<u>Hourly Rate (\$)</u>
Technical Typist/Word Processor*	55
Technician*	70
Senior Technician*	85
Assistant Project Engineer/Architect	80
Project Engineer/Architect	110
Senior Project Engineer/Architect	140
Project Manager	155
Principal/ Senior Consulting Professional	185

Charges for contract personnel and subconsultants under URS supervision and using URS facilities will be made according to the hourly rate corresponding to their classification.

When staff are performing project fieldwork, a minimum daily charge of 4 hours will apply.

A maximum of eight (8) hours travel time per day will be charged for travel within the continental United States.

When URS staff appears as expert witnesses at court trials, arbitration hearings, mediation and depositions, their time will be charged at \$250.00 per hour.

Overtime (hours worked in excess of eight (8) hours per day) by exempt personnel will be charged at the above straight time hourly rate. Overtime by non-exempt personnel (classifications identified with an asterisk "\*" ) will be charged at 1.3 times the above hourly rate.

Special project accounting reporting and financial services, including submission of invoice support documentation, will be charged at the rate of a Technical Typist/Word Processor.

**OTHER PROJECT CHARGES**

**Subcontracts and Equipment Rental**

Other direct costs (excluding subconsultants) incurred by URS will be charged at cost.

**Computer Generated Plots**

There will be a charge of \$3.00 each for paper plot and \$10.00 each for mylar plot generated by the CADD and GIS systems.

**Document Reproduction**

In-house reproduction will be charged at \$.10 a page for black & white and \$1.50 a page for color for letter, legal, and 11 x 17 size copies. Other size document copying will be charged at \$2.75 a page.

**Vehicles and Mileage**

Field vehicles (pick-ups, vans, trucks, etc.) used on project assignments will be charged at \$60.00 per day. The mileage charge for personal autos will be the then current mileage rate established by the Internal Revenue Service.

**Specialized Equipment**

The use of specialized URS equipment will be the fixed rental rates set forth in the Schedule of URS Specialized Equipment Charges.

*This fee schedule contains confidential business information and is not to be copied or distributed for any purpose other than the use intended in this contract or proposal.*

**URS**



In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CONSTRUCTION ADMINISTRATION SERVICES**

**Client Authorized Representative:** Michael Murphy  
**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized Representative:** Emily Taylor, P.E.  
**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment N/A to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed only when requested by Client for a not-to-exceed amount of **\$25,000.00**; payment by Client for the Services shall not exceed the said amount without written authorization. A Fee Schedule is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

Signature

Ron Whitehead / City Manager

Typed Name/Title

Date of Signature

**URS**

Signature

Emily Taylor, P.E. / Vice President

Typed Name/Title

07/30/04  
Date of Signature

## **ATTACHMENT A – SERVICES**

### **CONSTRUCTION ADMINISTRATION SERVICES FOR THE ARAPAHO ROAD BRIDGE**

When requested by the Town of Addison, URS will respond to the Contractor's request for information (RFIs), submittals, calculations, etc. as it relates to design changes of the bridge or bridge previously designed by URS.

All ROW documentation and plans; construction engineering design; review and approval of shop drawings, Contractor reports, calculations, testing results, erection methods, fabrication plants, etc.; survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement. In addition, all items related to construction materials testing, fabrication shop verification or certification, mill certifications, and welding qualifications and certifications are outside the scope of this agreement and will be performed by others.

**URS CORPORATION  
ATTACHMENT C  
2004 SCHEDULE OF FEES AND CHARGES  
TOWN OF ADDISON**

**Engineering & Consulting Services**

The following describes the basis for compensation for services performed during the fiscal year 2004. This Schedule of Fees and Charges will be adjusted annually on November 1 of each subsequent year to reflect merit and economic salary increases, and changes in the expected level and mode of operations for the new year. The new Schedule of Fees and Charges will apply to existing and new assignments.

**PERSONNEL CHARGES**

The charge for all time required in the performance of the Scope of Services, including office, field and travel time, will be at the Unit Priced Hourly Rates set forth below for the labor classifications indicated.

<u>Labor Classification</u>	<u>Hourly Rate (\$)</u>
Technical Typist/Word Processor*	55
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Project Engineer/Architect	110
Senior Project Engineer/Architect	140
Project Manager	155
Principal/ Senior Consulting Professional	185

Charges for contract personnel and subconsultants under URS supervision and using URS facilities will be made according to the hourly rate corresponding to their classification.

When staff are performing project fieldwork, a minimum daily charge of 4 hours will apply.

A maximum of eight (8) hours travel time per day will be charged for travel within the continental United States.

When URS staff appears as expert witnesses at court trials, arbitration hearings, mediation and depositions, their time will be charged at \$250.00 per hour.

Overtime (hours worked in excess of eight (8) hours per day) by exempt personnel will be charged at the above straight time hourly rate. Overtime by non-exempt personnel (classifications identified with an asterisk "\*\*") will be charged at 1.3 times the above hourly rate.

Special project accounting reporting and financial services, including submission of invoice support documentation, will be charged at the rate of a Technical Typist/Word Processor.

**OTHER PROJECT CHARGES**

**Subcontracts and Equipment Rental**

Other direct costs (excluding subconsultants) incurred by URS will be charged at cost.

**Computer Generated Plots**

There will be a charge of \$3.00 each for paper plot and \$10.00 each for mylar plot generated by the CADD and GIS systems.

**Document Reproduction**

In-house reproduction will be charged at \$.10 a page for black & white and \$1.50 a page for color for letter, legal, and 11 x 17 size copies. Other size document copying will be charged at \$2.75 a page.

**Vehicles and Mileage**

Field vehicles (pick-ups, vans, trucks, etc.) used on project assignments will be charged at \$60.00 per day. The mileage charge for personal autos will be the then current mileage rate established by the Internal Revenue Service.

**Specialized Equipment**

The use of specialized URS equipment will be the fixed rental rates set forth in the Schedule of URS Specialized Equipment Charges.

*This fee schedule contains confidential business information and is not to be copied or distributed for any purpose other than the use intended in this contract or proposal.*

**URS**



June 16, 2004

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

VOID

Re: **Arapaho Road Bridge at Midway Road  
Phase III – Construction Administration  
Work Authorization No. 002**

Dear Mr. Chutchian:

Enclosed please find a copy of the Work Order Number 002 for the Construction Administration Services with Attachment A - Scope of Services, and Attachment C – Time and Materials, “Not-to-Exceed” Fee Breakdown. Please note that this work order is established as a time and materials work order, since the number and quality of the Contractor submittals, requests for information (RFI), and shop drawings can only be estimated and is beyond our control.

We have revised the number of expected shop drawings, RFI) and submittals to arrive at a “Not-to-Exceed” amount of \$85,500 as you have requested. Please note that if the number of submittals, RFI, or shop drawings exceed the number estimated, an increase in fee might be warranted to complete the remaining reviews.

Please sign both originals and return one signed original to us.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CONSTRUCTION ADMINISTRATION SERVICES**

**Client Authorized**

**Representative:** Michael Murphy  
**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.  
**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment N/A to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed for a "not-to-exceed" amount of **\$85,500.00**; in no event shall the payment by Client for the Services exceed the said amount without written authorization. A breakdown of this amount is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

**URS**

W David Balfour / Sr Vice President  
Signature

Emily Taylor, P.E. / Vice President

\_\_\_\_\_  
Typed Name/Title

6-23-2004  
Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002**

**ATTACHMENT A  
SCOPE OF SERVICES**

**CONSTRUCTION ADMINISTRATION SERVICES  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the construction administration services as it relates to the Arapaho Road Bridge design services as performed under Work Order No. 001 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) from Station 50+95 to Station 66+70. URS shall provide construction phase services for a steel arch bridge over Midway Road, with prestressed concrete beam approaches and the bridge lighting & illumination for which URS provided design services under Work Order No. 001.

URS will attend the pre-construction meetings and respond to the contractor's or Town's request for information (RFIs), review shop drawings, and review the Contractor's submittals as related to the design services performed by URS under a separate agreement and as outlined in the Itemized Scope of Services.

All ROW documentation and plans, traffic control reviews, construction engineering design, survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement. In addition, all items related to construction materials testing, fabrication shop verification or certification, mill certifications, and welding qualifications and certifications are outside the scope of this agreement and will be performed by others.

## **Itemized Scope of Services Provided by URS for Construction Administration Services**

### **TASK I - ENGINEERING**

#### **A. Civil Site Works**

1. Respond to contractor's RFI's for traffic control (1 total).
2. Prepare one addenda
3. Omitted.

#### **B. Bridges**

1. Respond to contractor's RFI's (10 total)
2. Prepare one addenda
3. Omitted
4. Attend pre-construction meeting with the Town, the Town's Consultant, and the General Contractor.
5. Review Contractor's Schedule
6. Site visits (2 total)
7. Site Visits to Fabrication Facility (1 visit - 2 Engineers)
8. Review bridge contractor submittals for compliance with the contract documents (11 submittals total).
  - Concrete mix design (4 total)
  - Prestressed beam strand jacking stress reports (64 beams)
  - Prestressed beam redesign calculations (3 total)
  - Arch erection method statement
  - Arch hanger stressing reports
  - Formwork calculations
9. Review bridge contractor shop/fabrication drawings for compliance with contract documents (40 drawings total).
  - Foundations shaft details
  - Formwork
  - Miscellaneous superstructure details (SIP forms, P/S deck panels, screed elevations, expansion joints, lighting supports)
  - Suspension hanger details and connections
  - Steel arch details
  - Arch camber details
  - Bearing details
  - Railing details
  - Stinger details
  - Temporary shoring/falsework
  - Erection sequencing
  - Prestressed beam fabrication drawings (64 beams)

#### **C. Electrical Engineering**

1. Respond to contractor's RFI's (1 total)
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details.

### **TASK II - ARCHITECTURAL**

1. Respond to contractor's RFI's (1 total)
2. Review and approve contractor submittals as related to architectural details.
3. Observe site mock-ups.

### **TASK III - LIGHTING DESIGN**

1. Respond to contractor's RFI's (3 total)
2. Prepare one addenda

3. Review and approve contractor submittals as related to lighting details. (5 total)
4. Observe the installation of lighting equipment included in the lighting designer's final recommendations at the job site (one trip to Addison).
5. Focusing the lighting equipment and program control devices(s).

#### **TASK IV - PROJECT MANAGEMENT**

##### **A. Reports and Invoices**

1. Omitted
2. Prepare URS Invoices

##### **B. Coordination**

1. Coordinate one addenda
2. Omitted
3. Coordinate responses, reviews and approval of Contractor RFIs, submittals and shop drawings.



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD - ATTACHMENT C  
WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**

**MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION**

**CONSULTANT: URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mngnr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$155.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$55.00				
<b>TASK I - ENGINEERING</b>		0	0	88	154	182	58	0	28	0	610	\$ 60,000.00	\$ 4,250.00	\$ 64,250.00
<b>A. Civil Site Works</b>		0	0	4	14	0	0	0	4	0	22	\$ 2,860.00	\$ -	\$ 2,860.00
1. Respond to RFIs for traffic control (1 total)				2	8						8	\$ 1,160.00		\$ 1,160.00
2. Prepare one addenda				2	8				4		14	\$ 1,710.00		\$ 1,710.00
3. Review and approve Contractor submittal as related to traffic control (by HNTB)											0			
<b>B. Bridges</b>		0	0	84	116	182	58	0	24	0	464	\$ 53,780.00	\$ 4,250.00	\$ 58,030.00
1. Respond to RFIs (10 total)				16	8	16					40	\$ 5,200.00		\$ 5,200.00
2. Prepare one addenda				4	4	16			24		46	\$ 4,460.00		\$ 4,460.00
3. Review bridge bid tabulations - Omitted											0			
4. Attend construction kick-off meeting				4	4						8	\$ 1,160.00		\$ 1,160.00
5. Review Contractor's Schedule				2	4	2					8	\$ 1,070.00		\$ 1,070.00
6. Site visits (2 total)				8	8	4					20	\$ 2,760.00	\$ 1,050.00	\$ 3,810.00
7. One Site Visit to Fabrication Facility (2 people)				12	12						24	\$ 3,540.00	\$ 3,200.00	\$ 6,740.00
8. Review bridge contractor submittals (11 total)							10	0	0	0	106	\$ 2,210.00		\$ 2,210.00
Concrete mix design (4 total)						8	2				10	\$ 960.00		\$ 960.00
Prestressed beam strand jacking reports (64 beams)						12	4				16	\$ 1,520.00		\$ 1,520.00
Prestressed beam alternate design calculations (3 total)				2		12					14	\$ 1,810.00		\$ 1,810.00
Arch erection method statement				2	24						25	\$ 3,670.00		\$ 3,670.00
Arch hanger strapping reports				2	12	12					28	\$ 3,160.00		\$ 3,160.00
Formwork calculations						4	12				16	\$ 1,360.00		\$ 1,360.00
9. Review bridge contractor shop/fabrication drawings (40 drawings total)											208	\$ 23,800.00		\$ 23,800.00
Foundations/shaft details											0			
Formwork											0			
Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)											0			
Suspension hanger details and connections											0			
Steel arch details											0			
Arch camber details											0			
Bearing details											0			
Railing details											0			
Stinger details											0			
Temporary shoring/falsework											0			
Erection sequencing											0			
Prestressed beam fabrication drawings (64 beams)											0			
<b>C. Electrical Engineering</b>		0	0	0	24	0	0	0	0	0	24	\$ 3,360.00	\$ -	\$ 3,360.00
1. Respond to RFIs (1 RFIs)					6						6	\$ 840.00		\$ 840.00
2. Prepare one addenda					6						6	\$ 840.00		\$ 840.00
3. Review and approve Contractor submittal as related to lighting details					12						12	\$ 1,680.00		\$ 1,680.00
<b>TASK II - ARCHITECTURAL (Corgan Associates, Inc)</b>		0	0	0	8	20	0	0	0	2	28	\$ 2,950.00		\$ 2,950.00
1. Respond to RFIs (1 total)											0			
2. Prepare one addenda											0			
3. Review and approve Contractor submittal as related to architectural details											0			
<b>TASK III - LIGHTING DESIGN (Brandston Partnership, Inc)</b>		0	16	0	12	16	0	8	0	0	62	\$ 8,720.00	\$ 2,000.00	\$ 10,720.00
1. Respond to RFIs (3 total)											0			
2. Prepare one addenda											0			
3. Review and approve Contractor submittal as related to lighting details (5 total)											0			

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD - ATTACHMENT C**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT:

**URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$165.00	\$140.00	\$160.00	\$80.00	\$80.00	\$70.00	\$55.00				
4. Observe the installation of lighting equipment (one trip to Addison)											0	\$		\$
5. Focus the lighting equipment and program control devices											0	\$		\$
<b>TASK IV - PROJECT MANAGEMENT</b>		0	0	44	0	0	0	0	0	32	76	\$ 8,580.00	\$ 1,000.00	\$ 9,580.00
<b>A. Reports and Invoices</b>		0	0	12	0	0	0	0	0	20	32	\$ 2,960.00	\$ -	\$ 2,960.00
1. Prepare Progress Reports - Omitted											0	\$		\$
2. Prepare URS Invoices				12						20	32	\$ 2,960.00	\$ -	\$ 2,960.00
<b>B. Coordination</b>		0	0	32	0	0	0	0	0	12	44	\$ 5,620.00	\$ 1,000.00	\$ 6,620.00
1. Coordinate one addenda				16						4	20	\$ 2,700.00		\$ 2,700.00
2. Attend coordination meetings (0 total)											0	\$		\$
3. Coordinate shop drawing responses and approvals				16						8	24	\$ 2,920.00	\$ 1,000.00	\$ 3,920.00
<b>Grand Total</b>		0	16	132	172	218	58	8	28	34	666	\$ 76,250.00	\$ 7,250.00	\$ 83,500.00

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CONSTRUCTION ADMINISTRATION SERVICES**

**Client Authorized**

**Representative:** Michael Murphy  
**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.  
**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment N/A to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed for a "not-to-exceed" amount of **\$85,500.00**; in no event shall the payment by Client for the Services exceed the said amount without written authorization. A breakdown of this amount is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

Signature

Ron Whitehead / City Manager

Typed Name/Title

Date of Signature

**URS**

Signature

for: Emily Taylor, P.E. / Vice President

Typed Name/Title

Date of Signature

*W David Balfour Sr Vice President*

*10-23-2004*

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002**

**ATTACHMENT A  
SCOPE OF SERVICES**

**CONSTRUCTION ADMINISTRATION SERVICES  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the construction administration services as it relates to the Arapaho Road Bridge design services as performed under Work Order No. 001 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) from Station 50+95 to Station 66+70. URS shall provide construction phase services for a steel arch bridge over Midway Road, with prestressed concrete beam approaches and the bridge lighting & illumination for which URS provided design services under Work Order No. 001.

URS will attend the pre-construction meetings and respond to the contractor's or Town's request for information (RFIs), review shop drawings, and review the Contractor's submittals as related to the design services performed by URS under a separate agreement and as outlined in the Itemized Scope of Services.

All ROW documentation and plans, traffic control reviews, construction engineering design, survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement. In addition, all items related to construction materials testing, fabrication shop verification or certification, mill certifications, and welding qualifications and certifications are outside the scope of this agreement and will be performed by others.

## **Itemized Scope of Services Provided by URS for Construction Administration Services**

### **TASK I - ENGINEERING**

#### **A. Civil Site Works**

1. Respond to contractor's RFI's for traffic control (1 total).
2. Prepare one addenda
3. Omitted.

#### **B. Bridges**

1. Respond to contractor's RFI's (10 total)
2. Prepare one addenda
3. Omitted
4. Attend pre-construction meeting with the Town, the Town's Consultant, and the General Contractor.
5. Review Contractor's Schedule
6. Site visits (2 total)
7. Site Visits to Fabrication Facility (1 visit - 2 Engineers)
8. Review bridge contractor submittals for compliance with the contract documents (11 submittals total).
  - Concrete mix design (4 total)
  - Prestressed beam strand jacking stress reports (64 beams)
  - Prestressed beam redesign calculations (3 total)
  - Arch erection method statement
  - Arch hanger stressing reports
  - Formwork calculations
9. Review bridge contractor shop/fabrication drawings for compliance with contract documents (40 drawings total).
  - Foundations shaft details
  - Formwork
  - Miscellaneous superstructure details (SIP forms, P/S deck panels, screed elevations, expansion joints, lighting supports)
  - Suspension hanger details and connections
  - Steel arch details
  - Arch camber details
  - Bearing details
  - Railing details
  - Stinger details
  - Temporary shoring/falsework
  - Erection sequencing
  - Prestressed beam fabrication drawings (64 beams)

#### **C. Electrical Engineering**

1. Respond to contractor's RFI's (1 total)
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details.

### **TASK II - ARCHITECTURAL**

1. Respond to contractor's RFI's (1 total)
2. Review and approve contractor submittals as related to architectural details.
3. Observe site mock-ups.

### **TASK III - LIGHTING DESIGN**

1. Respond to contractor's RFI's (3 total)
2. Prepare one addenda

3. Review and approve contractor submittals as related to lighting details. (5 total)
4. Observe the installation of lighting equipment included in the lighting designer's final recommendations at the job site (one trip to Addison).
5. Focusing the lighting equipment and program control devices(s).

#### **TASK IV - PROJECT MANAGEMENT**

##### **A. Reports and Invoices**

1. Omitted
2. Prepare URS Invoices

##### **B. Coordination**

1. Coordinate one addenda
2. Omitted
3. Coordinate responses, reviews and approval of Contractor RFIs, submittals and shop drawings.

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD - ATTACHMENT C  
WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**

**MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION**

**CONSULTANT:**

**URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$155.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$55.00				
<b>TASK I - ENGINEERING</b>		0	0	88	164	182	56	0	28	0	610	\$ 60,000.00	\$ 4,250.00	\$ 64,250.00
<b>A. Civil Site Works</b>		0	0	4	14	0	0	0	4	0	22	\$ 2,860.00	\$ -	\$ 2,860.00
1. Respond to RFIs for traffic control (1 total)				2	6						8	\$ 1,160.00		\$ 1,160.00
2. Prepare one addenda				2	8				4		14	\$ 710.00		\$ 710.00
3. Review and approve Contractor submittal as related to traffic control (by HNTB)											0			
<b>B. Bridges</b>		0	0	84	116	182	58	0	24	0	464	\$ 53,780.00	\$ 4,250.00	\$ 58,030.00
1. Respond to RFIs (10 total)				18	8	16					40	\$ 5,200.00		\$ 5,200.00
2. Prepare one addenda				4	4	16			24		48	\$ 4,480.00		\$ 4,480.00
3. Review bridge bid tabulations - Omitted											0			
4. Attend construction kick-off meeting				4	4						6	\$ 1,180.00		\$ 1,180.00
5. Review Contractor's Schedule				2	4	2					6	\$ 1,070.00		\$ 1,070.00
6. Site visits (2 total)				8	8	4					20	\$ 2,760.00	\$ 1,050.00	\$ 3,810.00
7. One Site Visit to Fabrication Facility (2 people)				12	12						24	\$ 3,640.00	\$ 3,200.00	\$ 6,740.00
8. Review bridge contractor submittals (11 total)											108	\$ 2,200.00		\$ 2,200.00
Concrete mix design (4 total)						8	2				10	\$ 960.00		\$ 960.00
Prestressed beam strand jacking reports (64 beams)						12	4				16	\$ 1,520.00		\$ 1,520.00
Prestressed beam alternate design calculations (3 total)				2		12					14	\$ 1,510.00		\$ 1,510.00
Arch erection method statement				2	24						26	\$ 3,670.00		\$ 3,670.00
Arch hanger stressing reports				2	12	12					26	\$ 3,180.00		\$ 3,180.00
Formwork calculations						4	12				16	\$ 360.00		\$ 360.00
9. Review bridge contractor shop/fabrication drawings (40 drawings total)				32							208	\$ 23,380.00		\$ 23,380.00
Foundations/shaft details											0			
Formwork											0			
Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)											0			
Suspension hanger details and connections											0			
Steel arch details											0			
Arch camber details											0			
Bearing details											0			
Railing details											0			
Singer details											0			
Temporary shoring/falsework											0			
Erection sequencing											0			
Prestressed beam fabrication drawings (64 beams)											0			
<b>C. Electrical Engineering</b>		0	0	0	24	0	0	0	0	0	24	\$ 3,360.00	\$ -	\$ 3,360.00
1. Respond to RFIs (1 RFIs)					8						6	\$ 840.00		\$ 840.00
2. Prepare one addenda					8						6	\$ 840.00		\$ 840.00
3. Review and approve Contractor submittal as related to lighting details					12						12	\$ 1,680.00		\$ 1,680.00
<b>TASK II - ARCHITECTURAL (Corgan Associates, Inc)</b>		0	0	0	0	20	0	0	0	2	28	\$ 2,950.00	\$ -	\$ 2,950.00
1. Respond to RFIs (1 total)											0			
2. Prepare one addenda											0			
3. Review and approve Contractor submittal as related to architectural details											0			
<b>TASK III - LIGHTING DESIGN (Brandeton Partnership, Inc)</b>		0	16	0	12	16	0	8	0	0	52	\$ 6,720.00	\$ 2,000.00	\$ 8,720.00
1. Respond to RFIs (3 total)											0			
2. Prepare one addenda											0			
3. Review and approve Contractor submittal as related to lighting details (5 total)											0			

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD - ATTACHMENT C  
WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**

**MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION**

**CONSULTANT:**

**URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$155.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$55.00				
4. Observe the installation of lighting equipment (one trip to Addison)											0			
5. Focus the lighting equipment and program control devices											0			
<b>TASK IV - PROJECT MANAGEMENT</b>		0	0	44	0	0	0	0	0	32	76	\$ 8,580.00	\$ 1,000.00	\$ 9,580.00
<b>A. Reports and Invoices</b>		0	0	12	0	0	0	0	0	20	32	\$ 2,960.00	\$ -	\$ 2,960.00
1. Prepare Progress Reports - Omitted											0			
2. Prepare URS Invoices				12						20	32	\$ 2,960.00	\$ -	\$ 2,960.00
<b>B. Coordination</b>		0	0	32	0	0	0	0	0	12	44	\$ 5,620.00	\$ 1,000.00	\$ 6,620.00
1. Coordinate one addenda				16						4	20	\$ 2,700.00		\$ 2,700.00
2. Attend coordination meetings (0 total)											0			
3. Coordinate shop drawing responses and approvals				16						8	24	\$ 2,920.00	\$ 1,000.00	\$ 3,920.00
<b>Grand Total</b>		0	16	132	172	218	68	8	28	34	868	\$ 78,250.00	\$ 7,250.00	\$ 85,500.00





June 28, 2004

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development & Contract Documents  
Final Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our final invoice for Professional Services for the Arapaho Road Bridge at Midway Road for the period between April 30, 2004 and June 25, 2004. Also included is our Progress Report for this period outlining the services provided. Please note that we have completed our effort under Work Order No. 001.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

# Monthly Progress Report

## Design of the Arapaho Road Bridge Over Midway Road

URS Project No. 25334400

Period: April 30, 2004 to June 25, 2004

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### 1. General Accomplishments

- 1.1 Submitted final plans.
- 1.2 Submitted addendum plans.

### 2. Progress This Period

- 2.1 Submitted final plans.
- 2.2 Attended two pre-bid meetings and provided responses to contractor's RFIs (outside original contract scope).
- 2.3 Submitted two addendum plan sets.

### 3. Anticipated Next Period

- 3.1 None project is completed.

### 4. Schedule Status

- 4.1 Project is completed.

### 5. Issues / Impacts

- 5.1 Original scope provided for a 65% and 95% review set of plans and a 100% final signed and sealed set. Town has requested URS to provide a 65%, 95% and 100% review set, a final PDF plan set, and two sets of signed and sealed mylars (11'x17" & 22"x34"). Additionally URS was requested to attend two pre-bid meetings and respond to contractor's RFIs. Additional plan sets, pre-bid meetings and responses to RFIs were outside the scope of work of the original contract.

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated November 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
EXPERT WITNESS TESTIMONY OF NOISE & VIBRATION ANALYSIS

**Client Authorized**

**Representative:** \_\_\_\_\_  
**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010  
**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:** Emily Taylor, P.E.  
**Address:** Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein. URS acknowledges that timely performance of its services is an important element of this Agreement and the Work Order. URS will put forth its best efforts to timely complete the Services.

**PAYMENT.** The Services described in Attachment A will be performed for a total fixed amount of **\$21,985.00**; in no event shall the payment by Client for the Services exceed the said amount. A breakdown of this amount is included in Attachment C. Payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

CLIENT

URS

\_\_\_\_\_  
Signature  
Ron Whitehead / City Manager  
Typed Name/Title  
\_\_\_\_\_  
Date of Signature

\_\_\_\_\_  
Signature  
Emily Taylor, P.E. / Vice President  
Typed Name/Title  
\_\_\_\_\_  
Date of Signature

BRIDGE NOISE &  
VIBRATION ANALYSIS  
\$ 21,985

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002**

**ATTACHMENT A  
SCOPE OF SERVICES**

**EXPERT TESTIMONY OF NOISE AND VIBRATION ANALYSIS FOR PROPERTY  
CONDEMNATION**

URS will provide expert witness testimony for the condemnation hearings relating to the construction and use of Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) on a tangent alignment.

This task includes preparation and participation of staff qualified in airborne and groundborne noise analysis in the upcoming condemnation hearings (currently scheduled for April 16 and April 23, 2003) for the sites known as The Crouch Property (old MBNA Building) and the Motel 6 Property.

In addition to the airborne noise analysis conducted for the project, a groundborne noise (i.e., vibration) study will be conducted. Potential vibration impacts would be analyzed for 2 cases - a "close-in" case (the Crouch) property wherein the bridge pier is approximately 27 feet from the building of interest; the second for the Motel 6 property, in which the bridge/roadway is approximately 100 feet from the building of interest. Vibration from construction equipment and operations will also be addressed. This study will be a "screening" level of analysis as vibration is not expected to have an adverse impact.

URS' Michael Greene, INCE Bd. Cert. # 97008 and Project Manager, Cliff Hall, P.E., will attend a preparation meeting on April 7, 2003 in Dallas, Texas with Town of Addison legal representatives and other URS staff. Noise analysis results to-date will be reviewed and preparations/strategies for the condemnation hearings will be discussed. Following the preparation meeting, relevant presentation material will be prepared and presented to Town of Addison legal representatives for review. Because of the limited time available between the preparation meeting and the condemnation hearing, one (1) round of review and revision per hearing is anticipated. Additional review cycles will be considered out-of-scope work requiring additional budget authorization.

Michael Greene and Cliff Hall will attend one condemnation hearing for the Crouch Property and one condemnation hearing for the Motel 6 property and will present the results of the noise and vibration analyses as they pertain to the subject properties. They will be available for questions as necessary.

When URS staff appear as expert witnesses at court trials, mediation, arbitration hearings and depositions, their time is charged at 2.0 times the standard rate. All time spent preparing for such trials, hearings and depositions is charged at the standard labor rate.

**Itemized Scope of Services Provided by URS**  
**for the Expert Witness Testimony of Noise & Vibration**

**TASK I - Expert Testimony**

**A. Crouch Property**

1. Preparation for Strategy Meeting
2. Strategy Meeting
3. Preparation for Condemnation Hearing - Crouch
4. Vibration Screening (Constr & Opers.)
5. Crouch Condemnation Hearing and Debrief

**B. Motel 6 Property**

1. Preparation for Condemnation Hearing - Motel 6
2. Vibration Screening (Constr & Opers.)
3. Motel 6 Condemnation Hearing and Debrief



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002  
EXPERT WITNESS TESTIMONY OF NOISE & VIBRATION ANALYSIS  
ATTACHMENT C**

**FIXED PRICE BREAKDOWN  
URS CORPORATION**

**Total Cost**

**TASK I – EXPERT TESTIMONY**

**A. Crouch Property**

**\$ 14,955.00**

1. Preparation for Strategy Meeting
2. Strategy Meeting
3. Preparation for Condemnation Hearing - Crouch
4. Vibration Screening (Constr & Opers.)
5. Crouch Condemnation Hearing and Debrief

**B. Motel 6 Property**

**\$ 7,030.00**

1. Preparation for Condemnation Hearing - Motel 6
2. Vibration Screening (Constr & Opers.)
3. Motel 6 Condemnation Hearing and Debrief

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**TOTAL**

**\$ 21,985.00**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

**WORK ORDER NO. 002 - ARAPAHO ROAD BRIDGE - Expert Testimony for Condemnation Hearing**

MAN-HOUR & EXPENSE COST ESTIMATE

CONSULTANT:

URS Corporation

URS CORPORATION

	Expert Witness	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Staff Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
	\$270.00	\$165.00	\$135.00	\$135.00	\$95.00	\$65.00	\$80.00	\$65.00	\$50.00				

**TASK I - Expert Testimony**

**A. Crouch Property**

1. Preparation for Strategy Meeting
2. Strategy Meeting
3. Preparation for Condemnation Hearing - Crouch
4. Vibration Screening (Constr & Opers.)
5. Crouch Condemnation Hearing and Debrief (2 persons @ 4.5 hrs)

**B. Motel 6 Property**

1. Preparation for Condemnation Hearing - Motel 6
2. Vibration Screening (Constr & Opers.)
3. Motel 6 Condemnation Hearing and Debrief (2 persons @ 4.5 hours)

	18	6	17	64	8	0	8	0	8	129	\$	\$	\$
	18	6	17	64	8	0	8	0	8	129	\$ 18,585.00	\$ 3,400.00	\$ 21,985.00
<b>A. Crouch Property</b>													
1. Preparation for Strategy Meeting	4	2	8	8	0	4	0	6	92	\$ 12,705.00	\$ 2,250.00	\$ 14,955.00	
2. Strategy Meeting	1	2	4	12				1	17	\$ 1,615.00		\$ 1,615.00	
3. Preparation for Condemnation Hearing - Crouch	2	4	14	8		4		2	34	\$ 2,210.00	\$ 1,000.00	\$ 3,210.00	
4. Vibration Screening (Constr & Opers.)	1	1	6						8	\$ 3,940.00	\$ 250.00	\$ 4,190.00	
5. Crouch Condemnation Hearing and Debrief (2 persons @ 4.5 hrs)	8	2	8					1	20	\$ 1,110.00		\$ 1,110.00	
<b>B. Motel 6 Property</b>													
1. Preparation for Condemnation Hearing - Motel 6	2	1	4	4	0	4	0	2	37	\$ 3,830.00	\$ 1,000.00	\$ 4,830.00	
2. Vibration Screening (Constr & Opers.)	1	1	4					1	11	\$ 5,880.00	\$ 1,150.00	\$ 7,030.00	
3. Motel 6 Condemnation Hearing and Debrief (2 persons @ 4.5 hours)	1	1	4						6	\$ 1,210.00	\$ 150.00	\$ 1,360.00	
	8	2	8					1	20	\$ 840.00		\$ 840.00	
									0	\$ 3,830.00		\$ 3,830.00	
									0	\$ -	\$ 1,000.00	\$ 1,000.00	





**LETTER OF TRANSMITTAL**

Date: 7/7/04

TO: HNTB Corp  
5910 W. Plano Parkway  
Plano, TX 75093

FROM: Cliff R. Hall  
URS Corp  
3010 LBJ Freeway  
Suite 1300  
Dallas, TX 75234

Attention: Jenny Nicewander

JOB No.: 25334401

RE: ARAPAHO ROAD BRIDGE

The following items are being sent:  
 Shop Drawings     Prints  
 Other

Attached     Under separate cover by  
 Plans     Samples     Specifications     Copy of Letter

Item	Copies	Date	Description
1	1	7/6/04	Final Bridge Plans 11"x17" Mylar
2	1	7/6/04	Final Bridge Plans 22"x34" Vellum
3			
4			
5			

Transmittals for reasons checked:

For Your Approval     No Exceptions Taken     Resubmit    copies for approval  
 For Your Use     Make Corrections Noted     Submit    copies for distribution  
 As Requested     Amend and Resubmit     Return    corrected prints  
 For Review and Comment   

Remarks:

Copies: Steve Chutchian - Town of Addison

If enclosures are not as noted, kindly notify us at once.

Name: Cliff R. Hall  
Cliff R. Hall

URS Corporation

**URS**

Facsimile

To: STEVE CHUTCHIAN  
 Firm: TOWN OF ADDISON  
 Facsimile: 972.450.2837  
 From: CLIFF HALL  
 Date: 7/7/04  
 Page 1 of: 2

Subject: ARAPAHO ROAD BRIDGE

Message: FINAL PLANS SENT TO HNTB.

CC: \_\_\_\_\_

URS Corporation  
 3010 LBJ Freeway, Suite 1300  
 Dallas, TX 75234  
 Tel: 972.406.6950  
 Fax: 972.406.6951  
 www.urscorp.com

**CONFIDENTIALITY NOTICE**  
 The information in this facsimile transmission is intended solely for the stated recipient of this transmission. If you have received this fax in error, please notify the sender immediately by telephone. If you are not the intended recipient, please be advised that dissemination, distribution, or copying of the information contained in this fax is strictly prohibited.

TOWN OF  
ADDISON

PUBLIC WORKS

To: CLIFF HALL, P.E.

From: STEVE CHUTCHIAN

Company: URS CORP.

FAX #: 972-406-6951

Date: 6/9/04

No. of pages (including cover): 3

CLIFF: WE ARE NOT ON THE SAME  
PAGE WITH THIS ESTIMATE. OUR  
DEPT. REVISED THE NUMBERS TO GET A MORE REALISTIC  
VALUE. PLEASE MAKE REVISIONS & RE-SUBMIT ASAP.  
THANKS!

Phone: 972/450-2886

Fax: 972/450-2837

16801 Westgrove

P.O. Box 9010

Addison, TX 75001-9010

MIKE: REWSED  
ESTIMATE!  
SZC.  
6/9/04

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION  
MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION

CONSULTANT: URS Corporation

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hour	Total Labor Cost	Direct Expenses	Total Cost
	\$165.00	\$175.00	\$155.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$55.00				

TASK I - ENGINEERING

A. Civil Site Works

- Respond to RFIs for traffic control (2 total)
- Prepare one addenda
- Review and approve Contractor submittal as related to traffic control

0	0	102	290	334	100	0	32	0	858	\$ 100,050.00	\$ 8,350.00	\$ 108,400.00
0	0	6	24	4	0	0	8	0	42	\$ 5,250.00	\$ -	\$ 5,250.00
		2	8						10	\$ 1,430.00		\$ 1,430.00
		2	8				8		18	\$ 1,990.00		\$ 1,990.00
		2	8	4					14	\$ 1,830.00		\$ 1,830.00

2990  
1000

B. Bridges

- Respond to RFIs (30 total)
- Prepare one addenda
- Review bridge bid tabulations
- Attend construction kick-off meeting
- Review Contractor's Schedule
- Site visits (6 total)
- One Site Visit to Fabrication Facility (2 people)
- Review bridge contractor submittals (11 total)
  - Concrete mk design (4 total)
  - Prestressed beam strand jacking reports (64 beams)
  - Prestressed beam alternate design calculations (3 total)
  - Arch erection method statement
  - Arch hanger stressing reports
  - Formwork calculations
- Review bridge contractor shop/fabrication drawings (90 total)
  - Foundations/shaft details
  - Formwork
  - Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)
  - Suspension hanger details and connections
  - Steel arch details
  - Arch camber details
  - Bearing details
  - Railing details
  - Stinger details
  - Temporary shoring/falsework
  - Erection sequencing
  - Prestressed beam fabrication drawings (64 beams)

HMTB FACILITY & TOWN

DONE ALREADY

0	0	98	224	330	100	0	24	0	774	\$ 88,820.00	\$ 8,350.00	\$ 97,170.00	
		30	32	40					102	\$ 13,130.00		\$ 13,130.00	
		4	4	16			24		48	\$ 4,480.00		\$ 4,480.00	
		4	12						18	\$ 2,300.00		\$ 2,300.00	
		4	8						12	\$ 1,740.00	\$ 1,050.00	\$ 2,790.00	
		2	4	4					10	\$ 1,270.00		\$ 1,270.00	
		24	16	12					52	\$ 7,160.00	\$ 2,100.00	\$ 9,260.00	
		12	12								\$ 3,200.00		\$ 3,200.00
									108	\$ 12,210.00		\$ 12,210.00	
				8	2				10	\$ 960.00		\$ 960.00	
				12	4				18	\$ 1,620.00		\$ 1,620.00	
		2		12					14	\$ 1,610.00		\$ 1,610.00	
		2	24						26	\$ 3,670.00		\$ 3,670.00	
		2	12	12					28	\$ 3,190.00		\$ 3,190.00	
				4	12				18	\$ 1,360.00		\$ 1,360.00	
									402	\$ 43,110.00		\$ 43,110.00	
				12	4				16	\$ 1,620.00		\$ 1,620.00	
				8	16				24	\$ 2,080.00		\$ 2,080.00	
					20	32			62	\$ 4,560.00		\$ 4,560.00	
		2	24	8					34	\$ 4,470.00		\$ 4,470.00	
		2	60	60					122	\$ 14,710.00		\$ 14,710.00	
				32					32	\$ 3,200.00		\$ 3,200.00	
				6	6				12	\$ 1,080.00		\$ 1,080.00	
				8					8	\$ 800.00		\$ 800.00	
				4	4				8	\$ 720.00		\$ 720.00	
		2	8	16					28	\$ 3,030.00		\$ 3,030.00	
		2	8	16					28	\$ 3,030.00		\$ 3,030.00	
		2		20	20				42	\$ 3,910.00		\$ 3,910.00	

55670  
6000

1000

1000

3000

1000

3000

25,000

C. Electrical Engineering

- Respond to RFIs (4 RFIs)
- Prepare one addenda
- Review and approve Contractor submittal as related to lighting details

0	0	0	42	0	0	0	0	0	42	\$ 5,880.00		\$ 5,880.00
			24						24	\$ 3,360.00		\$ 3,360.00
			6						6	\$ 840.00		\$ 840.00
			12						12	\$ 1,680.00		\$ 1,680.00

3000

TASK II - ARCHITECTURAL (Corgan Associates, Inc)

- Respond to RFIs (2 total)
- Prepare one addenda
- Review and approve Contractor submittal as related to architectural details

0	0	0	10	42	0	0	0	2	64	\$ 5,710.00		\$ 5,710.00
									0	\$ -		\$ -
									0	\$ -		\$ -
									0	\$ -		\$ -

3000

TASK III - LIGHTING DESIGN (Brandeton Partnership, Inc)

- Respond to RFIs (8 total)
- Prepare one addenda
- Review and approve Contractor submittal as related to lighting details (12 total)

0	24	0	15	21	0	28	0	0	98	\$ 10,480.00	\$ 2,600.00	\$ 13,080.00
									0	\$ -		\$ -
									0	\$ -		\$ -
									0	\$ -		\$ -

8000

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **URS Corporation**

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
	\$185.00	\$176.00	\$166.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$56.00				

- 4. Observe the installation of lighting equipment (one trip to Addison)
- 5. Focus the lighting equipment and program control devices

										0	\$ -		\$ -
										0	\$ -		\$ -

**TASK IV - PROJECT MANAGEMENT**

**A. Reports and Invoices**

- 1. Prepare Progress Reports
- 2. Prepare Invoices and Billings
- 3. Coordinate
- 1. Coordinate one-on-one
- 2. Attend coordination meetings (4 total)
- 3. Coordinate responses, reviews and approvals

*3 INTS*

*PART OF BRIDGE DESIGN*

0	0	118	0	0	0	0	0	0	70	188	\$ 21,830.00	\$ 1,600.00	\$ 23,430.00
0	0	38	0	0	0	0	0	0	58	94	\$ 8,770.00	\$ -	\$ 8,770.00
		18							18	38	\$ 3,780.00		\$ 3,780.00
		18							40	58	\$ 4,990.00		\$ 4,990.00
0	0	80	0	0	0	0	0	0	12	92	\$ 13,080.00	\$ 1,800.00	\$ 14,880.00
		24							4	28	\$ 3,940.00		\$ 3,940.00
		24								24	\$ 3,720.00		\$ 3,720.00
		32							8	40	\$ 6,400.00	\$ 1,600.00	\$ 8,000.00

*9780*

*200*

*100*

*300*

**TASK V - MAINTENANCE AND INSPECTION MANUAL**

- 1. Prepare Draft Manual
- 2. Present to City
- 3. Prepare Final Manual

0	0	14	58	58	0	28	28	20		202	\$ 20,910.00	\$ 1,050.00	\$ 21,960.00
		8	40	40		20	20	20		148	\$ 14,940.00		\$ 14,940.00
		4	8							12	\$ 1,740.00	\$ 1,050.00	\$ 2,790.00
		2	8	16		8	8			42	\$ 4,230.00		\$ 4,230.00

*500*

<b>Grand Total</b>	0	24	232	371	463	100	64	80	92	1348	\$ 168,890.00	\$ 11,400.00	\$ 180,290.00
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*\$84,440*

I like your  
recommendations

lets present them  
to URS.

mh

ESTIMATE!  
SZC.  
6/19/04

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mngr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$155.00	\$140.00	\$100.00	\$80.00	\$80.00	\$70.00	\$65.00				
<b>TASK I - ENGINEERING</b>		0	0	102	290	334	100	0	32	0	858	\$ 100,050.00	\$ 8,350.00	\$ 108,400.00
<b>A. Civil Site Works</b>		0	0	8	24	4	0	0	8	0	42	\$ 5,250.00	\$ -	\$ 5,250.00
1. Respond to RFIs for traffic control (2 total)				2	8						10	\$ 1,430.00		\$ 1,430.00
2. Prepare one addenda				2	8				8		18	\$ 1,990.00		\$ 1,990.00
3. Review and approve Contractor submittal as related to traffic control				2	8	4					14	\$ 1,830.00		\$ 1,830.00
<b>B. Bridges</b>		0	0	86	224	330	100	0	24	0	774	\$ 88,920.00	\$ 8,350.00	\$ 97,270.00
1. Respond to RFIs (30 total)				30	32	40					102	\$ 13,130.00		\$ 13,130.00
2. Prepare one addenda				4	4	16			24		48	\$ 4,480.00		\$ 4,480.00
3. Review bridge bld tabulations				4	12						18	\$ 2,300.00		\$ 2,300.00
4. Attend construction kick-off meeting				4	8						12	\$ 1,740.00	\$ 1,050.00	\$ 2,790.00
5. Review Contractor's Schedule				2	4	4					10	\$ 1,270.00		\$ 1,270.00
8. Site visits (6 total)				24	16	12					52	\$ 7,160.00	\$ 2,100.00	\$ 9,260.00
7. One Site Visit to Fabrication Facility (2 people)				12	12								\$ 3,200.00	
8. Review bridge contractor submittals (11 total)		0	0	16	36	48	16	0	0	0	108	\$ 12,210.00	\$ -	\$ 12,210.00
Concrete mix design (4 total)						8	2				10	\$ 960.00		\$ 960.00
Prestressed beam strand jacking reports (64 beams)						12	4				18	\$ 1,620.00		\$ 1,620.00
Prestressed beam alternate design calculations (3 total)				2		12					14	\$ 1,510.00		\$ 1,510.00
Arch erection method statement				2	24						26	\$ 3,670.00		\$ 3,670.00
Arch hanger stressing reports				2	12	12					28	\$ 3,180.00		\$ 3,180.00
Formwork calculations						4	12				16	\$ 1,360.00		\$ 1,360.00
9. Review bridge contractor shop/fabrication drawings (90 total)		0	0	10	100	210	62	0	40	0	402	\$ 43,110.00	\$ -	\$ 43,110.00
Foundations/abut details						12	4				16	\$ 1,620.00		\$ 1,620.00
Formwork						8	16				24	\$ 2,080.00		\$ 2,080.00
Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)						20	32				52	\$ 4,560.00		\$ 4,560.00
Suspension hanger details and connections				2	24	8					34	\$ 4,470.00		\$ 4,470.00
Steel arch details				2	60	60					122	\$ 14,710.00		\$ 14,710.00
Arch camber details						32					32	\$ 3,200.00		\$ 3,200.00
Bearing details						6	6				12	\$ 1,080.00		\$ 1,080.00
Railing details						8					8	\$ 800.00		\$ 800.00
Stinger details						4	4				8	\$ 720.00		\$ 720.00
Temporary shoring/falsework				2	8	16					28	\$ 3,030.00		\$ 3,030.00
Erection sequencing				2	8	16					26	\$ 3,030.00		\$ 3,030.00
Prestressed beam fabrication drawings (64 beams)				2		20	20				42	\$ 3,910.00		\$ 3,910.00
<b>C. Electrical Engineering</b>		0	0	0	42	0	0	0	0	0	42	\$ 5,890.00	\$ -	\$ 5,890.00
1. Respond to RFIs (4 RFIs)					24						24	\$ 3,360.00		\$ 3,360.00
2. Prepare one addenda					6						6	\$ 840.00		\$ 840.00
3. Review and approve Contractor submittal as related to lighting details					12						12	\$ 1,680.00		\$ 1,680.00
<b>TASK II - ARCHITECTURAL (Corgan Associates, Inc)</b>		0	0	0	10	42	0	0	0	2	64	\$ 5,710.00	\$ -	\$ 5,710.00
1. Respond to RFIs (2 total)											0	\$ -		\$ -
2. Prepare one addenda											0	\$ -		\$ -
3. Review and approve Contractor submittal as related to architectural details											0	\$ -		\$ -
<b>TASK III - LIGHTING DESIGN (Brandston Partnership, Inc)</b>		0	24	0	16	21	0	26	0	0	96	\$ 10,490.00	\$ 2,500.00	\$ 12,990.00
1. Respond to RFIs (6 total)											0	\$ -		\$ -
2. Prepare one addenda											0	\$ -		\$ -
3. Review and approve Contractor submittal as related to lighting details (12 total)											0	\$ -		\$ -

HNTB FINISH & TOWN

DONE ALREADY

299

1000

5567

600

100

100

300

25,000

3000

3000

8000



June 1, 2004

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road  
Phase II – Design Development & Contract Documents  
Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our invoice for Professional Services for the Arapaho Road Bridge at Midway Road for the period between March 26, 2004 and April 30, 2004. Also included is our Progress Report for this period outlining the services provided.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951



# Monthly Progress Report

## Design of the Arapaho Road Bridge Over Midway Road

URS Project No. 25334400

Period: March 26, 2004 to April 30, 2004

---

### 1. General Accomplishments

- 1.1 Submitted 95% review plans.
- 1.2 Submitted 100% review plans.

### 2. Progress This Period

- 2.1 Continued final design and drawing production
- 2.2 Met with the Town to discuss 95% review comments and coordination issues (grading around thrust block, monument plaques, etc.).
- 2.3 Meet with Town's consultant to coordinate drainage, parking and other issues.
- 2.4 Submitted 95% review plans.
- 2.5 Submitted 100% review plans.

### 3. Anticipated Next Period

- 3.1 Submit final plans specifications.

### 4. Schedule Status

- 4.1 Final plans and specifications will be submitted on May 7, 2004.

### 5. Issues / Impacts

- 5.1 The final grading plan was received to finalize the elevations of the drilled shafts for the bridge bents. The elevations of the shafts for the thrust blocks are set. Ground elevations at the thrust blocks need to be revised to provided adequate cover on the shafts.
- 5.2 Original scope provided for a 65% and 95% review set of plans and a 100% final signed and sealed set. Town has requested URS to provide a 65%, 95% and 100% review set, a final PDF plan set, and two sets of signed and sealed mylars (11'x17" & 22"x34"). Additional plan sets are outside the scope of work.



July 24, 2002

Mr. Steven Z. Chutchian., PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development, Contract Documents, and Construction Administration  
Scope of Services & Fee Proposal**

Dear Mr. Chutchian:

Enclosed please find a copy of the Scope of Services and Fee Proposals for Phase II of the referenced project for your review. As advised previously, we have separated the scope and fee into three Work Orders as follows:

Work Order No. 001 – Arapaho Road Bridge Design Development and Construction Documents  
Work Order No. 002 – Arapaho Road Bridge Construction Administration Services  
Work Order No. 003 – Midway Road from Beltline to Lindberg Design Development and Construction Documents

Please note that we have also included a breakdown, by consultant, of our man-hour estimate for each work order. Please also be advised that the scope for Work Order Nos. 002 and 003 have undergone some slight revisions from those submitted last week. We look forward to discussing our Scope of Services and Fee Proposals with you and providing you the final agreement for your approval.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Prestonwood Tower  
5151 Beltline Road, Suite 700  
Dallas, TX 75254  
Tel: 972.980.4961  
Fax: 972.991.7685

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the engineering, architectural, urban design, lighting design and noise study services including plans, specifications and estimates as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW). URS shall prepare plans, details and compute quantities for a steel arch bridge, the "blue-bridge concept", over Midway Road, with prestressed concrete beam approaches. Design and details will include all bridge details including any soundwalls located on the bridge. URS will also provide all bridge drainage details to accommodate the drainage in accordance with the Town's Consultant's drainage requirements. URS will also prepare plans, details and compute quantities for any landscaping, hardscaping, sidewalks, lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road with the exception of those portions to be prepared by the Town of Addison's Consultant. URS will also prepare architectural details for the bridge, the mechanically stabilized earth (MSE) retaining walls and the sound walls. Additionally, URS will prepare a noise study including ambient noise measurements, modeling and noise analyses. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of one set of comments and selection of alternatives provided, URS will provide all final detail plans, specifications, and estimates as previously described, to be included into one final construction package prepared by the Town's Consultant. URS will submit four sets of plans for review to the Town for 65% review and 95% review and will incorporate the Town's comments (one set per submittal) in the next submittals. URS will also provide signed and sealed mylar plans at the 100% final submittal.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format and consolidation of construction plans, specification and estimate into one final construction package. URS will coordinate with the Town and/or the Town's Consultant for revising the horizontal alignment and vertical profile of Arapaho Road to accommodate the proposed bridge structure. URS will coordinate with the Town and/or the Town's Consultant for the revised alignment of the proposed box-culvert under Arapaho Road as well as bridge drainage and bridge drain tie-ins. URS will coordinate with the Town and/or the Town's Consultant for all geotechnical information required for the foundation design for the bridge and retaining walls.

The Town of Addison will provide to URS all available Arapaho Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical sections, topography survey, field survey, and utility information. The Town will also provide boring logs, soil parameters and foundation design recommendations (allowable bearing capacities, lateral load analysis, etc.) required for the bridge foundation designs. The Town of Addison will provide to URS a field location survey of the existing 60-in. diameter water main, locating the water main precisely, both vertically and horizontally, along the project limits and specifically in the vicinity of the arch-bridge's main foundations. Additionally the Town will provide any applicable noise regulations or ordinance

information, obtain right of entry, and provide all traffic data including but not limited to, peak hourly volumes, average daily traffic, percentages of trucks, and design and posted speeds that may be required for the noise study. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Arapaho Road geometrics and roadway design, drainage, parking lot layout and design, retaining wall layout and design, survey, geotechnical engineering, design and details for soundwalls on retaining walls or at grade, irrigation for landscaping, permitting, and construction administration, inspection and record drawings are outside the scope of this agreement and will be performed by others.

## **Itemized Scope of Services Provided by URS for the Arapaho Road Bridge**

### **TASK I - URBAN DESIGN**

#### **A. Design Development**

1. Inventory and Analysis of Project Area
  - Review existing plans and coordinate with Town's Consultant
  - Identify prevailing patterns
  - Analyze project needs based on above
  - Develop urban design principles for project
  - Prepare technical memo of understanding of existing plans
2. Develop two scenarios for the primary project area (limits of project) that incorporate the design principles in item number 1.
  - Landscape for bridge abutments and retaining wall areas
  - Hardscape: bridge elements at base to screen parking
  - Element relocation, adjustment, elimination, or addition (utility poles, signage, medians, sidewalk, etc.)
  - Prepare plan & elevation with typical sections of primary project area
3. Develop final preliminary concept
  - Identify a final preliminary concept to go forward into final design.
  - Prepare support drawings for final concept
4. Prepare for and attend meetings in Addison to collect data and present options (2 total)

#### **B. Final Design (65%, 95%, 100% submittals)**

1. Design development of hardscape (surfaces, railings, etc.)
2. Create Final Landscape Plan
  - Identify plants to be removed or relocated
  - Identify appropriate plant pallets
  - Design planting plan
  - Create plant list
  - Define maintenance requirements
  - Urban design and landscape construction documents for the project area
2. Prepare for and attend meetings in Addison (1 total)

### **TASK II - ENGINEERING**

#### **A. Civil Site Works**

1. Final Civil Design & PS&E (65%, 95%, 100% submittal)
  - Midway Road Traffic Control Plan
  - Overhead Utilities (Along Midway Road) Adjustment Plan
  - Retaining Wall Architectural Details
  - Soundwall Architectural Details
  - QA/QC
  - Cost Estimate
  - Special Provisions & Specifications
  - Coordination with Town's Consultants

#### **B. Bridges**

1. Preliminary Bridge Design (~30% submittal)
  - Develop Design Criteria
  - Preliminary Bridge Layout (Finalize Bridge Location)
  - Preliminary Typical Section
  - Refine Arch Shape
  - Size Thrust Block & Refine Shape
  - Size Foundation
  - Size Diaphragms
  - Size Traffic Railing Members

- Develop Soundwall
  - Investigate Culvert Layout
  - Quantities and Cost Estimate
  - QA/QC
2. Final Bridge Design, & PS&E (65%, 95%, 100% submittals)
- Final Bridge Layout
  - Final Typical Section
  - General Notes
  - Quantities and Bearing Seats
  - Foundation Layout
  - Drilled Shaft Details
  - Abutment Plan & Elevation
  - Abutment Details
  - Bent Plan & Elevation
  - Bent Details
  - Thrust Block Plan & Elevation
  - Thrust Block Details
  - Prestressed Concrete Beam Unit – Deck Plan
  - Prestressed Concrete Beam Unit – Deck Sections
  - Bridge Soundwall Details
  - Miscellaneous Superstructure Details (drains, lighting)
  - Diaphragm Details
  - Closure Pour Details
  - Suspension Hanger Details
  - Steel Arch Design and Details
  - Steel Arch Camber Details
  - Bearing Details
  - Drainage Details
  - Railing Details
  - Architectural Details
  - Stinger Design & Details
  - Approach Slab Details
  - Erection Sequencing
  - Prestressed Beam Tables
  - Compile, Verify & Modify TxDOT Standard Drawings
  - QA/QC
  - Coordination with Town's Consultants
  - Bridge Total Quantities & Cost Estimate
  - Bridge Special Provisions & Specifications

### C. Electrical Engineering

1. Design Development
- Develop a load study for Arapaho Road Bridge, approaches and parking areas
  - Prepare a preliminary cost estimate
2. Final Electrical Design & PS&E (65%, 95%, 100% submittals)
- Finalize a load study for each electrical service source.
  - Prepare Lighting Calculations for under-deck lighting above the parking lot.
  - Illumination Layout (2961', 1200'/sht + 1 sheet under the bridge)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents
  - Insert Lighting Consultant Special Details
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - QA ON 95% PLANS
  - Update Drawings per City Review

### **TASK III - ARCHITECTURAL**

#### **A. Design Development**

##### **1. Architectural Studies & Details**

- Develop three rail options addressing the issues of hiker/biker separation from the vehicular traffic and the architectural options to realize the proposed triangular pattern in the rail.
- Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing viable options
- Explore options for the final material and form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred scheme.
- Develop detailed options and refine panel schemes for precast concrete retaining walls at approaches.
- Study and Present Options for center pier support shape.
- Develop options for bridge mounted soundwalls
- Explore and refine alternate "stinger" designs incorporating lighting as the primary feature.
- Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.

##### **2. Computer Animation**

- Minor updates to existing video animation for landscaping, parking, etc.
- Produce video animation in DVD and VHS tape format

#### **B. Final Design**

##### **1. Coordination**

##### **2. Review**

##### **3. Specifications**

### **TASK IV – LIGHTING DESIGN**

#### **A. Design Development (includes two meetings in Addison)**

1. Develop two alternatives for lighting of stingers.
2. Research and mock-up options for color changing on existing Addison sculpture (to determine range of possibilities for color changing on bridge structure).
3. Develop two alternatives for lighting of bicycle/pedestrian path.
4. Develop two alternatives for lighting of elevated roadway.
5. Develop mounting concepts for bridge structure lighting.
6. Develop two alternatives for lighting of outboard railings.
7. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.

#### **B. Final Design (includes one meeting in Addison)**

1. Final details for lighting of stingers.
2. Final details of fixtures and mounting for bridge structure illumination.
3. Final details of fixtures and mounting for elevated roadway lighting.
4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.
5. Final details of fixtures and mounting for outboard railing illumination.
6. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.
7. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

### **TASK V – NOISE STUDY**

#### **A. Noise Measurements**

1. Review existing noise ordinance and criteria documents
2. Meeting with the Town of Addison to discuss noise issues and objectives
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings

**B. Noise Modeling and Analyses**

1. Create a noise model to predict future noise emissions from the proposed roadway and bridge
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.
4. Prepare report and respond to one round of comments.
5. Final meeting with Town of Addison

**TASK VI - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Project Management Plan
2. Prepare Progress Reports
3. Prepare Invoices and Billings

**B. Coordination**

1. Coordinate/Administer the Project
2. Prepare and Update Schedule
3. Manage Subconsultants
4. Implement Quality Assurance/Quality Control Program
5. Prepare for and Attend Town Council or other Town Meetings (3 total)
6. Prepare for and run internal project coordination meetings (8 total)
7. Prepare for and attend project meetings with Addison Public Works (8 total)





**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001 – ARAPAHO ROAD BRIDGE  
ATTACHMENT C**

**FEE PROPOSAL  
URS CORPORATION**

**Total Cost**

**TASK I - URBAN DESIGN**

A. Design Development	\$ 35,192.00
B. Final Design	\$ 14,228.00

**TASK II - ENGINEERING**

A. Civil Site Works	\$ 29,780.00
B. Bridges	\$ 498,454.00
C. Electrical Engineering	\$ 39,220.00

**TASK III – ARCHITECTURAL (Corgan & URS)**

A. Design Development	\$ 66,238.00
B. Final Design	\$ 6,436.00

**TASK IV – LIGHTING DESIGN (Brandston)**

A. Design Development	\$ 40,262.00
B. Final Design	\$ 38,787.00

**TASK V – NOISE STUDY**

A. Noise Measurements	\$ 6,942.00
B. Noise Modeling and Analyses	\$ 11,853.00

**TASK VI - PROJECT MANAGEMENT**

A. Reports and Invoices	\$ 28,362.00
B. Coordination	\$ 87,862.00

**Printing & Copying Expenses**

**\$ 5850.00**

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**GRAND TOTAL**

**\$ 909,466.00**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$65.00	\$55.00				
<b>TASK I - URBAN DESIGN</b>		0	0	30	85	162	0	128	0	24	429	\$ 43,920.00	\$ 5,500.00	\$ 49,420.00
<b>A. Design Development</b>		0	0	26	65	118	0	84	0	16	309	\$ 32,192.00	\$ 3,000.00	\$ 35,192.00
1. Inventory and Analysis of Project Area		0	0	8	25	46	0	16	0	8	103	\$ 10,968.00		\$ 10,968.00
Review existing plans					1	4		12			17	\$ 1,500.00		\$ 1,500.00
Identify prevailing patterns				2	4	6					12	\$ 1,244.00		\$ 1,244.00
Analyze project needs based on above				2	4	8					14	\$ 1,644.00		\$ 1,644.00
Develop urban design principles for project				2	8	12					22	\$ 2,604.00		\$ 2,604.00
Prepare technical memo of understanding of existing plans				2	8	16		4		8	38	\$ 3,764.00		\$ 3,764.00
2. Develop 2 scenarios for primary project area		0	0	10	24	48	0	24	0	8	114	\$ 11,940.00		\$ 11,940.00
Landscape for bridge abutments and retaining walls				2	8	16				2	28	\$ 3,114.00		\$ 3,114.00
Hardscape: bridge elements at base to screen parking				2	8	16				2	28	\$ 3,114.00		\$ 3,114.00
Element relocation, adjustment, elimination, or addition (utility poles, signage, medians, sidewalk, etc.)				2	8	16				2	28	\$ 3,114.00		\$ 3,114.00
Plan & elevation with typical sections of primary project area				4				24		2	30	\$ 2,598.00		\$ 2,598.00
3. Develop final preliminary concept		0	0	8	16	24	0	24	0	0	92	\$ 9,288.00		\$ 9,288.00
Identify a final preliminary concept to go forward into final design.				4	16	24		20			64	\$ 6,808.00		\$ 6,808.00
Support drawings for final concept				4				24			28	\$ 2,488.00		\$ 2,488.00
4. Meetings in Addison (2)											0	\$ -	\$ 3,000.00	\$ 3,000.00
<b>B. Final Design</b>		0	0	4	20	44	0	44	0	8	120	\$ 11,728.00	\$ 2,500.00	\$ 14,228.00
1. Design Development of Hardscape (surfaces, railings, etc.)					12	20		12		8	52	\$ 5,080.00		\$ 5,080.00
2. Create Final Landscape Plan		0	0	4	8	24	0	32	0	0	68	\$ 6,648.00	\$ 1,600.00	\$ 8,248.00
Identify plants to be removed or relocated					2	4					6	\$ 680.00		\$ 680.00
Identify appropriate plant pallets					2	4					6	\$ 680.00		\$ 680.00
Design planting plan					2	8		4			14	\$ 1,400.00		\$ 1,400.00
Create plant list					2	4		4			10	\$ 1,000.00		\$ 1,000.00
Define maintenance requirements						4					4	\$ 400.00		\$ 400.00
Urban design and landscape construction documents for the project area				4				24			28	\$ 2,488.00		\$ 2,488.00
3. Meetings in Addison (1)											0	\$ -	\$ 1,600.00	\$ 1,600.00
<b>TASK II - ENGINEERING</b>		0	320	0	1194	1450	1088	1228	164	46	5490	\$ 564,454.00	\$ 3,000.00	\$ 567,454.00
<b>A. Civil Site Works</b>		0	0	0	60	140	0	84	0	12	296	\$ 29,780.00	\$ -	\$ 29,780.00
1. Final Civil Design & PS&E (65%, 95%, 100% submittals)		0	0	0	60	140	0	84	0	12	296	\$ 29,780.00	\$ -	\$ 29,780.00
Midway Road Traffic Control Plan	4				4	32		24			60	\$ 5,680.00		\$ 5,680.00
Midway Road Overhead Utility Adjustment Plan	2					24		16			40	\$ 3,680.00		\$ 3,680.00
Retaining Wall Architectural Details	2				2	16		16			34	\$ 3,160.00		\$ 3,160.00
Sound Wall Architectural Details	2				2	16		16			34	\$ 3,160.00		\$ 3,160.00
QA/QC					24	12		8		4	48	\$ 5,420.00		\$ 5,420.00
Cost Estimate					4	12		4		4	24	\$ 2,300.00		\$ 2,300.00
Special Provisions & Specifications					8	12				2	22	\$ 2,450.00		\$ 2,450.00
Coordination with Other Consultants					16	16				2	34	\$ 3,950.00		\$ 3,950.00
<b>B. Bridges</b>		0	320	0	930	1310	1088	1144	0	34	4826	\$ 495,454.00	\$ 3,000.00	\$ 498,454.00
1. Preliminary Bridge Design (~30% submittal)		0	72	0	192	224	184	164	0	8	844	\$ 89,792.00	\$ -	\$ 89,792.00
Develop Design Criteria			8		32	16				8	64	\$ 7,920.00		\$ 7,920.00
Preliminary Bridge Layout (Finalize Bridge Location)	5					40	80	80			200	\$ 18,640.00		\$ 18,640.00
Preliminary Typical Section	1					8	16	12			36	\$ 3,008.00		\$ 3,008.00
Refine Arch Shape	1		8		80	40		16			144	\$ 17,880.00		\$ 17,880.00
Size Thrust Block & Refine Shape	1		8		40	20		16			84	\$ 10,280.00		\$ 10,280.00
Size Foundation			4			12	24				40	\$ 3,772.00		\$ 3,772.00
Size Diaphragms			4		24	16					44	\$ 5,660.00		\$ 5,660.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$65.00	\$55.00				
Size Traffic Railing Members			4			12	16	12			44	\$ 4,108.00		\$ 4,108.00
Develop Soundwall	1					16	24	8			48	\$ 4,112.00		\$ 4,112.00
Investigate Culvert Layout						8	16	4			28	\$ 2,368.00		\$ 2,368.00
Quantities and Cost Estimate		4		16	24	8					52	\$ 5,964.00		\$ 5,964.00
QA/QC		32			12			16			60	\$ 8,080.00		\$ 8,080.00
<b>2. Final Bridge Design, PS&amp;E (65%, 95%, 100% submittals)</b>		<b>0</b>	<b>288</b>	<b>0</b>	<b>788</b>	<b>1,088</b>	<b>904</b>	<b>980</b>	<b>0</b>	<b>26</b>	<b>3982</b>	<b>\$ 409,682.00</b>	<b>\$ 0.00</b>	<b>\$ 409,682.00</b>
Final Bridge Layout	5				16	48	96	80			240	\$ 20,928.00		\$ 20,928.00
Final Typical Section	1				2	6	12	12			32	\$ 2,776.00		\$ 2,776.00
General Notes	2	6			32	20		24			82	\$ 9,450.00		\$ 9,450.00
Quantities and Bearing Seats	2					44	88	32			164	\$ 13,824.00		\$ 13,824.00
Foundation Layout	3					32	60	48			140	\$ 11,720.00		\$ 11,720.00
Drilled Shaft Details	1		4			32	16	16			68	\$ 6,428.00		\$ 6,428.00
Abutment Plan & Elevation	2					32	64	40			136	\$ 11,392.00		\$ 11,392.00
Abutment Details	2					24	40	32			96	\$ 8,080.00		\$ 8,080.00
Bent Plan & Elevation	2		4			36	72	40			152	\$ 13,116.00		\$ 13,116.00
Bent Details	2		4			32	64	40			140	\$ 12,092.00		\$ 12,092.00
Thrust Block Plan & Elevation	1		6		32	20		16			74	\$ 8,810.00		\$ 8,810.00
Thrust Block Details	2		8		96	48		48			200	\$ 23,480.00		\$ 23,480.00
Prestressed Concrete Beam Unit - Deck Plan	6					40		80			200	\$ 16,640.00		\$ 16,640.00
Prestressed Concrete Beam Unit - Deck Sections	2					24	48	32			104	\$ 8,704.00		\$ 8,704.00
Bridge Soundwall Details	2		2			20	40	24			66	\$ 7,390.00		\$ 7,390.00
Miscellaneous Superstructure Details	2		2			48	24	32			106	\$ 9,582.00		\$ 9,582.00
Diaphragm Details	1		8		32	20		16			76	\$ 9,160.00		\$ 9,160.00
Closure Pour Details	1		8		40	24		24			96	\$ 11,320.00		\$ 11,320.00
Suspension Hanger Details	1		16		40	24		24			104	\$ 12,720.00		\$ 12,720.00
Steel Arch Design and Details	3		24		240	160		72			496	\$ 59,560.00		\$ 59,560.00
Steel Arch Camber Details	1		8		40	24		24			96	\$ 11,320.00		\$ 11,320.00
Bearing Details	1		4			24	12	12			52	\$ 4,996.00		\$ 4,996.00
Drainage Details	2					24	48	32			104	\$ 8,704.00		\$ 8,704.00
Railing Details	2					32	20	32			84	\$ 7,320.00		\$ 7,320.00
Stringer Design & Details	1					24	12	24			60	\$ 5,256.00		\$ 5,256.00
Architectural Details	2					32	16	24			72	\$ 6,368.00		\$ 6,368.00
Approach Slab Details	1					12	24	16			52	\$ 4,352.00		\$ 4,352.00
Erection Sequencing	2		8		40	20		32			100	\$ 11,560.00		\$ 11,560.00
Prestressed Beam Tables	1					24	12	12			48	\$ 4,296.00		\$ 4,296.00
Compile, Verify & Modify TxDOT Standard Drawings	17					24	16	16			56	\$ 4,928.00		\$ 4,928.00
QA/QC			96		16	24		24		4	164	\$ 23,580.00		\$ 23,580.00
Coordination with Town or Town's Consultants			24		32	24				4	84	\$ 14,300.00	\$ 3,000.00	\$ 14,300.00
Bridge Total Quantities & Cost Estimate					20	32	40			2	94	\$ 9,230.00		\$ 9,230.00
Bridge Special Provisions & Specifications			16		60	32				16	124	\$ 15,280.00		\$ 15,280.00
<b>C. Electrical Engineering</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>204</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>164</b>	<b>0</b>	<b>368</b>	<b>\$ 39,220.00</b>	<b>\$ -</b>	<b>\$ 39,220.00</b>
<b>1. Design Development</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>\$ 1,400.00</b>	<b>\$ -</b>	<b>\$ 1,400.00</b>
Develop a load study for Arapaho Road, bridge, parking and portion of Midway Road					4						4	\$ 560.00		\$ 560.00
Prepare a preliminary cost estimate					6						6	\$ 840.00		\$ 840.00
<b>2. Final Electrical Design &amp; PS&amp;E (65%, 95%, 100% submittals)</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>194</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>164</b>	<b>0</b>	<b>358</b>	<b>\$ 37,820.00</b>	<b>\$ -</b>	<b>\$ 37,820.00</b>
Finalize a load study for each electrical service source.											0	\$ -		\$ -
Prepare Lighting Calculations for Under-Deck Lighting above the Parking Lot					4				4		8	\$ 920.00		\$ 920.00
Illumination Layout (2961', 1200'sht + 1 sht under the bridge)					80				64		144	\$ 15,360.00		\$ 15,360.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$165.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$55.00	\$55.00				
Electric Service / Pole Summary					16				8		24	\$ 2,760.00		\$ 2,760.00
Conduit Runs / Contents					18				10		28	\$ 3,170.00		\$ 3,170.00
Insert Lighting Consultant Special Details					16				16		32	\$ 3,260.00		\$ 3,260.00
Insert Latest Town or TxDOT Standards					8				8		16	\$ 1,640.00		\$ 1,640.00
Quantity Summary					8				6		14	\$ 1,510.00		\$ 1,510.00
Develop Final Cost Estimate (Using Estimator)					12						12	\$ 1,580.00		\$ 1,580.00
QA ON 95% PLANS					20				16		36	\$ 3,840.00		\$ 3,840.00
Update Drawings per City Review (3 Submittals, All Dwgs.)					12				32		44	\$ 3,760.00		\$ 3,760.00
<b>TASK III - ARCHITECTURAL</b>		0	0	42	20	0	0	100	0	40	202	\$ 18,964.00	\$ 450.00	\$ 19,414.00
<b>A. Design Development</b>		0	0	34	20	0	0	100	0	40	194	\$ 17,828.00	\$ 450.00	\$ 18,278.00
<b>1. Architectural Studies &amp; Details</b>		0	0	28	0	0	0	0	0	0	28	\$ 3,976.00	\$ -	\$ 3,976.00
Develop three rail options addressing the issues of hiker/biker separation from the vehicular traffic and the Architectural options to realize the proposed triangular pattern.				4							4	\$ 568.00		\$ 568.00
Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing viable options				4							4	\$ 568.00		\$ 568.00
Explore options for the final material and form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred schema.				4							4	\$ 568.00		\$ 568.00
Develop detailed options and refine panelization schemes for precast concrete retaining walls at approaches.				4							4	\$ 568.00		\$ 568.00
Study and Present Options for center pier support shape.				4							4	\$ 568.00		\$ 568.00
Develop options for bridge mounted soundwalls				4							4	\$ 568.00		\$ 568.00
Explore and refine alternate "slinger" designs incorporating lighting as the primary feature.				4							4	\$ 568.00		\$ 568.00
Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.				0							0	\$ -		\$ -
<b>2. Computer Animation</b>		0	0	6	20	0	0	100	0	40	166	\$ 18,852.00	\$ 450.00	\$ 19,302.00
Minor updates to existing video animation for landscaping, parking, etc.				4	17			90		30	141	\$ 11,798.00		\$ 11,798.00
Produce video animation in DVD and VHS tape format				2	3			10		10	25	\$ 2,054.00	\$ 450.00	\$ 2,504.00
<b>B. Final Design</b>		0	0	8	0	0	0	0	0	0	8	\$ 1,138.00	\$ -	\$ 1,138.00
<b>1. Coordination</b>				4							4	\$ 568.00		\$ 568.00
<b>2. Review</b>				2							2	\$ 284.00		\$ 284.00
<b>3. Specifications</b>				2							2	\$ 284.00		\$ 284.00
<b>TASK IV - LIGHTING DESIGN</b>		0	0	52	0	0	0	0	0	0	52	\$ 7,384.00	\$ -	\$ 7,384.00
<b>A. Design Development</b>		0	0	26	0	0	0	0	0	0	26	\$ 3,692.00	\$ -	\$ 3,692.00
<b>1. Develop two alternatives for lighting of slingers.</b>				2							2	\$ 284.00		\$ 284.00
<b>2. Research and mock-up options for color-changing on existing Addison sculpture (determine range of possibilities for color-changing on bridge)</b>				6							6	\$ 852.00		\$ 852.00
<b>3. Develop two alternatives for lighting of bicycle/pedestrian path.</b>				2							2	\$ 284.00		\$ 284.00
<b>4. Develop two alternatives for lighting of elevated roadway.</b>				2							2	\$ 284.00		\$ 284.00
<b>5. Develop mounting concepts for bridge structure lighting.</b>				6							6	\$ 852.00		\$ 852.00
<b>6. Develop two alternatives for lighting of outboard railings.</b>				4							4	\$ 568.00		\$ 568.00
<b>7. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.</b>				4							4	\$ 568.00		\$ 568.00
<b>B. Final Design</b>		0	0	26	0	0	0	0	0	0	26	\$ 3,692.00	\$ -	\$ 3,692.00
<b>1. Final details for lighting of slingers.</b>				2							2	\$ 284.00		\$ 284.00
<b>2. Final details of fixtures and mounting for bridge structure illumination.</b>				6							6	\$ 852.00		\$ 852.00
<b>3. Final details of fixtures and mounting for elevated roadway lighting.</b>				6							6	\$ 852.00		\$ 852.00
<b>4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.</b>				2							2	\$ 284.00		\$ 284.00





**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **Brandston Partnership**

	No. of Sheets	Principal	Senior Consult.	Project Managr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
Size Traffic Railing Members											0			
Develop Soundwall											0			
Investigate Culvert Layout											0			
Quantities and Cost Estimate											0			
QA/QC											0			
<b>2. Final Bridge Design, PS&amp;E (65%, 95%, 100% submittals)</b>											0			
Final Bridge Layout											0			
Final Typical Section											0			
General Notes											0			
Quantities and Bearing Seats											0			
Foundation Layout											0			
Drilled Shaft Details											0			
Abutment Plan & Elevation											0			
Abutment Details											0			
Bent Plan & Elevation											0			
Bent Details											0			
Thrust Block Plan & Elevation											0			
Thrust Block Details											0			
Prestressed Concrete Beam Unit - Deck Plan											0			
Prestressed Concrete Beam Unit - Deck Sections											0			
Bridge Soundwall Details											0			
Miscellaneous Superstructure Details											0			
Diaphragm Details											0			
Closure Pour Details											0			
Suspension Hanger Details											0			
Steel Arch Design and Details											0			
Steel Arch Camber Details											0			
Bearing Details											0			
Drainage Details											0			
Railing Details											0			
Stinger Design & Details											0			
Architectural Details											0			
Approach Slab Details											0			
Erection Sequencing											0			
Prestressed Beam Tables											0			
Compile, Verify & Modify TxDOT Standard Drawings											0			
QA/QC											0			
Coordination with Town's Consultants											0			
Bridge Total Quantities & Cost Estimate											0			
Bridge Special Provisions & Specifications											0			
<b>C. Electrical Engineering</b>											0	\$ -	\$ -	\$ -
<b>1. Design Development</b>											0	\$ -	\$ -	\$ -
Develop a load study for Arapaho Road, bridge, parking and portion of Midway Road											0			
Prepare a preliminary cost estimate											0			
<b>2. Final Electrical Design &amp; PS&amp;E (65%, 95%, 100% submittals)</b>											0	\$ -	\$ -	\$ -
Finalize a load study for each electrical service source.											0			
Prepare Lighting Calculations for Under-Deck Lighting above the Parking Lot											0			
Illumination Layout (2961', 1200'sht + 1 sht under the bridge)											0			



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **Brandston Partnership**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
Electric Service / Pole Summary											0			
Conduit Runs / Contents											0			
Insert Lighting Consultant Special Details											0			
Insert Latest Town or TxDOT Standards											0			
Quantity Summary											0			
Develop Final Cost Estimate (Using Estimator)											0			
QA ON 95% PLANS											0			
Update Drawings per City Review (3 Submittals, All Dwgs.)											0			
<b>TASK III - ARCHITECTURAL</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Design Development</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>1. Architectural Studies &amp; Details</b>		0	0	0	0	0	0	0	0	0	0			
Develop three reit options addressing the issues of hiker/biker separation from the vehicular traffic and the Architectural options to realize the proposed triangular pattern.											0			
Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing viable options											0			
Explore options for the final material end form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred scheme.											0			
Develop detailed options and refine panelization schemes for precast concrete retaining walls at approaches.											0			
Study and Present Options for center pier support shape.											0			
Develop options for bridge mounted soundwalls											0			
Explore and refine alternate "stinger" designs incorporating lighting as the primary feature.											0			
Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.											0			
<b>2. Computer Animation</b>		0	0	0	0	0	0	0	0	0	0			
Minor updates to existing video animation for landscaping, parking, etc.											0			
Produce video animation in DVD and VHS tape format											0			
<b>B. Final Design</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>1. Coordination</b>											0			
<b>2. Review</b>											0			
<b>3. Specifications</b>											0			
<b>TASK IV - LIGHTING DESIGN</b>		0	109	0	138	122	0	144	0	0	513	\$ 64,165.00	\$ 7,500.00	\$ 71,665.00
<b>A. Design Development</b>		0	72	0	68	60	0	35	0	0	235	\$ 31,570.00	\$ 5,000.00	\$ 36,570.00
<b>1. Develop two alternatives for lighting of stingers.</b>											0			
<b>2. Research and mock-up options for color-changing on existing Addison sculpture (determine range of possibilities for color-changing on bridge)</b>											0			
<b>3. Develop two alternatives for lighting of bicycle/pedestrian path.</b>											0			
<b>4. Develop two alternatives for lighting of elevated roadway.</b>											0			
<b>5. Develop mounting concepts for bridge structure lighting.</b>											0			
<b>6. Develop two alternatives for lighting of outboard railings.</b>											0			
<b>7. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.</b>											0			
<b>B. Final Design</b>		0	37	0	70	62	0	109	0	0	278	\$ 32,595.00	\$ 2,500.00	\$ 35,095.00
<b>1. Final details for lighting of stingers.</b>											0			
<b>2. Final details of fixtures and mounting for bridge structure illumination.</b>											0			
<b>3. Final details of fixtures and mounting for elevated roadway lighting.</b>											0			
<b>4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.</b>											0			

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **Brandston Partnership**

	No. of Sheets	Principal	Senior Consult.	Project Mngnr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
5. Final details of fixtures and mounting for outboard railing illumination.											0			
6. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.											0			
7. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.											0			
<b>TASK V - NOISE STUDY</b>											0	\$ -	\$ -	\$ -
<b>A. Noise Measurements</b>											0	\$ -	\$ -	\$ -
1. Review existing noise ordinance and criteria documents											0			
2. Meeting with the Town of Addison to discuss noise issues and objectives											0			
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.											0			
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings											0			
<b>B. Noise Modeling and Analyses</b>											0	\$ -	\$ -	\$ -
1. Create a noise model to predict future noise emissions from the proposed roadway and bridge											0			
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards											0			
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.											0			
4. Prepare report and respond to one round of comments.											0			
5. Final meeting with the Town											0			
<b>TASK VI - PROJECT MANAGEMENT</b>											0	\$ -	\$ -	\$ -
<b>A. Reports and Invoices</b>											0	\$ -	\$ -	\$ -
1. Prepare Project Management Plan											0			
2. Prepare Progress Reports											0			
3. Prepare Invoices and Billings											0			
<b>B. Coordination</b>											0	\$ -	\$ -	\$ -
1. Coordinate/Administer the Project											0			
2. Prepare and Update Schedule											0			
3. Manage Subconsultants											0			
4. Implement Quality Assurance/Quality Control Program											0			
5. Council or other Town Meetings (3)											0			
6. Internal Project Coordination Meetings (8)											0			
7. Project Meetings with Addison Public Works (8)											0			
<b>Grand Total</b>			0	109	0	138	122	0	144	0	513	\$ 64,185.00	\$ 7,500.00	\$ 71,665.00



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT:

**Corgan Associates**

	No. of Sheets	Principal	Senior Consul.	Project Mangr.	Sr Project Eng/Plan	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
					\$140.00	\$125.00	\$80.00		\$35.00					
Size Traffic Railing Members											0			
Develop Soundwall											0			
Investigate Culvert Layout											0			
Quantities and Cost Estimate											0			
QA/QC											0			
<b>2. Final Bridge Design, PS&amp;E (65%, 95%, 100% submittals)</b>											0			
Final Bridge Layout											0			
Final Typical Section											0			
General Notes											0			
Quantities and Bearing Seats											0			
Foundation Layout											0			
Drilled Shaft Details											0			
Abutment Plan & Elevation											0			
Abutment Details											0			
Bent Plan & Elevation											0			
Bent Details											0			
Thrust Block Plan & Elevation											0			
Thrust Block Details											0			
Prestressed Concrete Beam Unit - Deck Plan											0			
Prestressed Concrete Beam Unit - Deck Sections											0			
Bridge Soundwall Details											0			
Miscellaneous Superstructure Details											0			
Diaphragm Details											0			
Closure Pour Details											0			
Suspension Hanger Details											0			
Steel Arch Design and Details											0			
Steel Arch Camber Details											0			
Bearing Details											0			
Drainage Details											0			
Railing Details											0			
Stringer Design & Details											0			
Architectural Details											0			
Approach Slab Details											0			
Erection Sequencing											0			
Prestressed Beam Tables											0			
Compile, Verify & Modify TxDOT Standard Drawings											0			
QA/QC											0			
Coordination with Town's Consultants											0			
Bridge Total Quantities & Cost Estimate											0			
Bridge Special Provisions & Specifications											0			
<b>C. Electrical Engineering</b>											0			
<b>1. Design Development</b>											0			
Develop a load study for Arapaho Road, bridge, parking and portion of Midway Road											0			
Prepare a preliminary cost estimate											0			
<b>2. Final Electrical Design &amp; PS&amp;E (65%, 95%, 100% submittals)</b>											0			
Finalize a load study for each electrical service source.											0			
Prepare Lighting Calculations for Under-Deck Lighting above the Parking Lot											0			
Illumination Layout (2961', 1200'/shl + 1 shl under the bridge)											0			

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **Corgan Associates**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
					\$140.00	\$125.00	\$60.00		\$35.00					
Electric Service / Pole Summary											0			
Conduit Runs / Contents											0			
Insert Lighting Consultant Special Details											0			
Insert Latest Town or TxDOT Standards											0			
Quantity Summary											0			
Develop Final Cost Estimate (Using Estimator)											0			
QA QN 95% PLANS											0			
Update Drawings per City Review (3 Submittals, All Dwg.)											0			
<b>TASK III - ARCHITECTURAL</b>		0	0	0	226	20	216	0	176	0	538	\$ 53,260.00	\$ -	\$ 53,260.00
<b>A. Design Development</b>		0	0	0	286	0	216	0	176	0	598	\$ 47,960.00	\$ -	\$ 47,960.00
<b>1. Architectural Studies &amp; Details</b>		0	0	0	208	0	216	0	176	0	596	\$ 47,960.00	\$ -	\$ 47,960.00
Develop three rail options addressing the issues of hiker/biker separation from the vehicular traffic and the Architectural options to realize the proposed triangular pattern.					32		48		48		128	\$ 9,040.00	\$ -	\$ 9,040.00
Coordinate with the engineering team to refine the curvatures and size of the steel. Produce drawings representing viable options					18		20				38	\$ 3,720.00	\$ -	\$ 3,720.00
Explore options for the final material and form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred scheme.					40		48		32		120	\$ 9,600.00	\$ -	\$ 9,600.00
Develop detailed options and refine panelization schemes for precast concrete retaining walls at approaches.					32		48		48		128	\$ 9,040.00	\$ -	\$ 9,040.00
Study and Present Options for center pier support shape.					12		12				24	\$ 2,400.00	\$ -	\$ 2,400.00
Develop options for bridge mounted soundwalls					8		8		8		24	\$ 1,880.00	\$ -	\$ 1,880.00
Explore and refine alternate "slinger" designs incorporating lighting as the primary feature.					32		32		40		104	\$ 7,800.00	\$ -	\$ 7,800.00
Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.					32						32	\$ 4,480.00	\$ -	\$ 4,480.00
<b>2. Computer Animation</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Minor updates to existing video animation for landscaping, parking, etc.											0			
Produce video animation in DVD and VHS tape format											0			
<b>B. Final Design</b>		0	0	0	20	20	0	0	0	0	40	\$ 5,300.00	\$ -	\$ 5,300.00
<b>1. Coordination</b>					16						16	\$ 2,240.00	\$ -	\$ 2,240.00
<b>2. Review</b>					4						4	\$ 560.00	\$ -	\$ 560.00
<b>3. Specifications</b>						20					20	\$ 2,500.00	\$ -	\$ 2,500.00
<b>TASK IV - LIGHTING DESIGN</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Design Development</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>1. Develop two alternatives for lighting of slingers.</b>											0			
<b>2. Research and mock-up options for color-changing on existing Addison sculpture (determine range of possibilities for color-changing on bridge)</b>											0			
<b>3. Develop two alternatives for lighting of bicycle/pedestrian path.</b>											0			
<b>4. Develop two alternatives for lighting of elevated roadway.</b>											0			
<b>5. Develop mounting concepts for bridge structure lighting.</b>											0			
<b>6. Develop two alternatives for lighting of outboard railings.</b>											0			
<b>7. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.</b>											0			
<b>B. Final Design</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>1. Final details for lighting of slingers.</b>											0			
<b>2. Final details of fixtures and mounting for bridge structure illumination.</b>											0			
<b>3. Final details of fixtures and mounting for elevated roadway lighting.</b>											0			
<b>4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.</b>											0			

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 001 - ARAPAHO ROAD BRIDGE  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT:

**Corgan Associates**

	No. of Sheets	Principal	Senior Consult	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
					\$140.00	\$125.00	\$60.00		\$35.00					
5. Final details of fixtures and mounting for outboard railing illumination.											0			
6. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.											0			
7. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.											0			
<b>TASK V - NOISE STUDY</b>											0	\$ -	\$ -	\$ -
<b>A. Noise Measurements</b>											0	\$ -	\$ -	\$ -
1. Review existing noise ordinance and criteria documents											0			
2. Meeting with the Town of Addison to discuss noise issues and objectives											0			
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.											0			
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings											0			
<b>B. Noise Modeling and Analyses</b>											0	\$ -	\$ -	\$ -
1. Create a noise model to predict future noise emissions from the proposed roadway and bridge											0			
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards											0			
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.											0			
4. Prepare report and respond to one round of comments.											0			
5. Final meeting with the Town											0			
<b>TASK VI - PROJECT MANAGEMENT</b>											0	\$ -	\$ -	\$ -
<b>A. Reports and Invoices</b>											0	\$ -	\$ -	\$ -
1. Prepare Project Management Plan											0			
2. Prepare Progress Reports											0			
3. Prepare Invoices and Billings											0			
<b>B. Coordination</b>											0	\$ -	\$ -	\$ -
1. Coordinate/Administer the Project											0			
2. Prepare and Update Schedule											0			
3. Manage Subconsultants											0			
4. Implement Quality Assurance/Quality Control Program											0			
5. Council or other Town Meetings (3)											0			
6. Internet Project Coordination Meetings (8)											0			
7. Project Meetings with Addison Public Works (8)											0			
<b>Grand Total</b>					226	20	216	0	176	0	638	\$ 53,260.00	\$ -	\$ 53,260.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002**

**ATTACHMENT A  
SCOPE OF SERVICES**

**CONSTRUCTION ADMINISTRATION SERVICES  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the construction administration services as it relates to the Arapaho Road Bridge design services under Work Order No. 001 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) from approximate Station 40+67 to approximate Station 70+28. URS shall provide construction phase services for a steel arch bridge over Midway Road, with prestressed concrete beam approaches and any landscaping, hardscaping, sidewalks, lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road for which URS provided design services.

URS will attend the pre-bid and pre-construction meetings, review bridge bid tabs, respond to the contractor's or Town's request for information (RFIs), review shop drawings, and review the Contractor's submittals as related to the design services performed by URS under a separate agreement.

All ROW documentation and plans, engineering design, survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement. In addition, all items related to construction materials testing, fabrication shop verification or certification, mill certifications, and welding qualifications and certifications are outside the scope of this agreement and will be performed by others.

## **Itemized Scope of Services Provided by URS for Construction Administration Services**

### **TASK I - URBAN DESIGN**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve subcontractor submittals as related to landscape and hardscape.

### **TASK II - ENGINEERING**

#### **A. Civil Site Works**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve Contractor submittals as related to traffic control.

#### **B. Bridges**

1. Respond to contractor's RFI's (30 total)
2. Prepare one addenda
3. Review bridge bid tabulations
4. Attend kick-off meeting with the Town, the Town's Consultant, and the General Contractor.
5. Site visits (6 total)
6. Review bridge contractor submittals for compliance with the contract documents (10 total).
  - Concrete mix design (4 total)
  - Prestressed beam strand jacking stress reports (64 beams)
  - Prestressed beam redesign calculations (3 total)
  - Arch erection method statement
  - Arch hanger stressing reports
  - Formwork calculations
7. Review bridge contractor shop/fabrication drawings for compliance with contract documents (90 total).
  - Foundations shaft details
  - Formwork
  - Miscellaneous superstructure details (SIP forms, P/S deck panels, screed elevations, expansion joints, lighting supports)
  - Suspension hanger details and connections
  - Steel arch details
  - Arch camber details
  - Bearing details
  - Bridge Drainage details
  - Railing details
  - Stinger details
  - Soundwalls
  - Temporary shoring/falsework
  - Erection sequencing
  - Prestressed beam fabrication drawings (64 beams)

#### **C. Electrical Engineering**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details.

### **TASK III - ARCHITECTURAL**

1. Respond to contractor's RFI's
2. Review and approve contractor submittals as related to architectural details.
3. Observe site mock-ups.



#### **TASK IV – LIGHTING DESIGN**

1. Respond to contractor's RFI's (20 total)
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details. (12 total)
4. Observe the installation of lighting equipment included in the lighting designer's final recommendations at the job site (one trip to Addison).
5. Focusing the lighting equipment and program control devices(s).

#### **TASK V - PROJECT MANAGEMENT**

##### **A. Reports and Invoices**

1. Prepare Progress Reports
2. Prepare Invoices and Billings

##### **B. Coordination**

1. Coordinate one addenda
2. Attend pre-bid, pre-construction and progress meetings with the Town, the Town's Consultant, and the General Contractor (4 total).
3. Coordinate responses, reviews and approval of bridge bid tabs, Contractor RFIs, submittals and shop drawings.

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002 – CONSTRUCTION ADMINISTRATION  
ATTACHMENT C**

**FEE PROPOSAL  
URS CORPORATION**

**Total Cost**

<b>TASK I - URBAN DESIGN</b>	<b>\$ 8,240.00</b>
<b>TASK II - ENGINEERING</b>	<b>\$ 88,964.00</b>
A. Civil Site Works	\$ 4,280.00
B. Bridges	\$ 78,804.00
C. Electrical Engineering	\$ 5,880.00
<b>TASK III – ARCHITECTURAL (Corgan)</b>	<b>\$ 5,710.00</b>
<b>TASK IV – LIGHTING DESIGN (Brandston)</b>	<b>\$ 12,970.00</b>
<b>TASK V - PROJECT MANAGEMENT</b>	<b>\$ 29,080.00</b>
A. Reports and Invoices	\$ 13,084.00
B. Coordination	\$ 15,996.00

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**GRAND TOTAL** **\$ 144,964.00**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT:

**URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clinical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$65.00	\$55.00				
<b>TASK I - URBAN DESIGN</b>		0	0	0	36	32	0	0	0	0	68	\$ 8,240.00	\$ -	\$ 8,240.00
1. Respond to RFIs					16	16					32	\$ 3,840.00		\$ 3,840.00
2. Prepare one addenda					4						4	\$ 580.00		\$ 580.00
3. Review and approve Contractor submittal as related to landscape and hardscape					16	16					32	\$ 3,840.00		\$ 3,840.00
<b>TASK II - ENGINEERING</b>		0	0	0	316	350	98	0	32	0	796	\$ 88,964.00	\$ -	\$ 88,964.00
<b>A. CIVIL Site Works</b>		0	0	0	24	4	0	0	8	0	36	\$ 4,280.00	\$ -	\$ 4,280.00
1. Respond to RFIs					8						8	\$ 1,120.00		\$ 1,120.00
2. Prepare one addenda					8				8		16	\$ 1,840.00		\$ 1,640.00
3. Review and approve Contractor submittal as related to traffic control					8	4					12	\$ 1,520.00		\$ 1,520.00
<b>B. Bridges</b>		0	0	0	250	346	98	0	24	0	718	\$ 78,804.00	\$ -	\$ 78,804.00
1. Respond to RFIs					60	40					100	\$ 12,400.00		\$ 12,400.00
2. Prepare one addenda					8	16			24		48	\$ 4,280.00		\$ 4,280.00
3. Review bridge bid tabulations					16						16	\$ 2,240.00		\$ 2,240.00
4. Attend construction kick-off meeting					6						6	\$ 840.00		\$ 840.00
5. Site visits (6 total)					24	12					36	\$ 4,560.00		\$ 4,560.00
6. Review bridge contractor submittals		0	0	0	36	54	12	0	0	0	102	\$ 11,376.00	\$ -	\$ 11,376.00
Concrete mix design (4 total)						10					10	\$ 1,000.00		\$ 1,000.00
Prestressed beam strand jacking reports (64 beams)						16					16	\$ 1,600.00		\$ 1,600.00
Prestressed beam alternate design calculations (3 total)						12					12	\$ 1,200.00		\$ 1,200.00
Arch erection method statement					24						24	\$ 3,360.00		\$ 3,360.00
Arch hanger stressing reports					12	12					24	\$ 2,880.00		\$ 2,880.00
Formwork calculations						4	12				16	\$ 1,336.00		\$ 1,336.00
7. Review bridge contractor shop/fabrication drawings		0	0	0	100	229	67	0	0	0	410	\$ 43,108.00	\$ -	\$ 43,108.00
Foundations/shaft details						16					16	\$ 1,600.00		\$ 1,600.00
Formwork						8	16				24	\$ 2,048.00		\$ 2,048.00
Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)						20	32				52	\$ 4,496.00		\$ 4,496.00
Suspension hanger details and connections					24	8					32	\$ 4,160.00		\$ 4,160.00
Steel arch details					60	60					120	\$ 14,400.00		\$ 14,400.00
Arch camber details						32					32	\$ 3,200.00		\$ 3,200.00
Bearing details						6	6				12	\$ 1,068.00		\$ 1,068.00
Bridge drainage details						6	6				12	\$ 1,068.00		\$ 1,068.00
Railing details						8					8	\$ 800.00		\$ 800.00
Slinger details						8					8	\$ 800.00		\$ 800.00
Soundwalls							6				6	\$ 468.00		\$ 468.00
Temporary shoring/falsework					8	16					24	\$ 2,720.00		\$ 2,720.00
Erection sequencing					8	16					24	\$ 2,720.00		\$ 2,720.00
Prestressed beam fabrication drawings (64 beams)						20	20				40	\$ 3,560.00		\$ 3,560.00
<b>C. Electrical Engineering</b>		0	0	0	42	0	0	0	0	0	42	\$ 5,880.00	\$ -	\$ 5,880.00
1. Respond to RFIs (6 RFIs)					24						24	\$ 3,360.00		\$ 3,360.00
2. Prepare one addenda					6						6	\$ 840.00		\$ 840.00
3. Review and approve Contractor submittal as related to lighting details					12						12	\$ 1,680.00		\$ 1,680.00
<b>TASK III - ARCHITECTURAL</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs											0	\$ -		\$ -
2. Prepare one addenda											0	\$ -		\$ -
3. Review and approve Contractor submittal as related to architectural details											0	\$ -		\$ -

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior ConsulL	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$65.00	\$55.00				
<b>TASK IV - LIGHTING DESIGN</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs (20 total)											0	\$ -		\$ -
2. Prepare one addenda											0	\$ -		\$ -
3. Review and approve Contractor submittal as related to lighting details (12 total)											0	\$ -		\$ -
4. Observe the installation of lighting equipment (one trip to Addison)											0	\$ -		\$ -
5. Focus the lighting equipment and program control devices											0	\$ -		\$ -
<b>TASK V - PROJECT MANAGEMENT</b>		0	0	180	0	0	0	0	0	64	244	\$ 29,080.00	\$ -	\$ 29,080.00
<b>A. Reports and Invoices</b>		0	0	72	0	0	0	0	0	52	124	\$ 13,084.00	\$ -	\$ 13,084.00
1. Prepare Progress Reports				36						12	48	\$ 5,772.00		\$ 5,772.00
2. Prepare Invoices and Billings				36						40	76	\$ 7,312.00		\$ 7,312.00
<b>B. Coordination</b>		0	0	108	0	0	0	0	0	12	120	\$ 15,996.00	\$ -	\$ 15,996.00
1. Coordinate one addenda				24						4	28	\$ 3,628.00		\$ 3,628.00
2. Attend meetings (4 total)				24							24	\$ 3,408.00		\$ 3,408.00
3. Coordinate responses, reviews and approvals				60						8	68	\$ 8,960.00		\$ 8,960.00
<b>Grand Total</b>		0	0	180	352	382	98	0	32	64	1108	\$ 126,284.00	\$ -	\$ 126,284.00



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT:

**Brandston Partnership**

	No. of Sheets	Principal	Senior Consult	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
<b>TASK IV - LIGHTING DESIGN</b>	0	24	0	15	20	0	23	0	0		82	\$ 10,470.00	\$ 2,500.00	\$ 12,970.00
1. Respond to RFIs (20 total)											0	\$ -	\$ -	\$ -
2. Prepare one addenda											0	\$ -	\$ -	\$ -
3. Review and approve Contractor submittal as related to lighting details (12 total)											0	\$ -	\$ -	\$ -
4. Observe the installation of lighting equipment (one trip to Addison)											0	\$ -	\$ -	\$ -
5. Focus the lighting equipment and program control devices											0	\$ -	\$ -	\$ -
<b>TASK V - PROJECT MANAGEMENT</b>	0	0	0	0	0	0	0	0	0		0	\$ -	\$ -	\$ -
<b>A. Reports and Invoices</b>	0	0	0	0	0	0	0	0	0		0	\$ -	\$ -	\$ -
1. Prepare Progress Reports											0	\$ -	\$ -	\$ -
2. Prepare Invoices and Billings											0	\$ -	\$ -	\$ -
<b>B. Coordination</b>	0	0	0	0	0	0	0	0	0		0	\$ -	\$ -	\$ -
1. Coordinate one addenda											0	\$ -	\$ -	\$ -
2. Attend meetings (4 total)											0	\$ -	\$ -	\$ -
3. Coordinate responses, reviews and approvals											0	\$ -	\$ -	\$ -
<b>Grand Total</b>	0	24	0	15	20	0	23	0	0		82	\$ 10,470.00	\$ 2,500.00	\$ 12,970.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT:

**Corgan Associates**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
					\$140.00	\$125.00	\$60.00		\$38.00					
<b>TASK I - URBAN DESIGN</b>														
		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs												0	\$ -	\$ -
2. Prepare one addenda												0	\$ -	\$ -
3. Review and approve Contractor submittal as related to landscape and hardscape												0	\$ -	\$ -
<b>TASK II - ENGINEERING</b>														
<b>A. Civil Site Works</b>														
		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs												0	\$ -	\$ -
2. Prepare one addenda												0	\$ -	\$ -
3. Review and approve Contractor submittal as related to traffic control												0	\$ -	\$ -
<b>B. Bridges</b>														
	n/a	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs												0	\$ -	\$ -
2. Prepare one addenda												0	\$ -	\$ -
3. Review bridge bid tabulations												0	\$ -	\$ -
4. Attend construction kick-off meeting												0	\$ -	\$ -
5. Site visits (8 total)												0	\$ -	\$ -
6. Review bridge contractor submittals												0	\$ -	\$ -
Concrete mix design (4 total)												0	\$ -	\$ -
Prestressed beam strand jacking reports (64 beams)												0	\$ -	\$ -
Prestressed beam alternate design calculations (3 total)												0	\$ -	\$ -
Arch erection method statement												0	\$ -	\$ -
Arch hanger stressing reports												0	\$ -	\$ -
Formwork calculations												0	\$ -	\$ -
7. Review bridge contractor shop/fabrication drawings												0	\$ -	\$ -
Foundations/shaft details												0	\$ -	\$ -
Formwork												0	\$ -	\$ -
Miscellaneous Superstructure Details (SIP forms, P/S concrete deck panels, expansion joints, etc.)												0	\$ -	\$ -
Suspension hanger details and connections												0	\$ -	\$ -
Steel arch details												0	\$ -	\$ -
Arch camber details												0	\$ -	\$ -
Bearing details												0	\$ -	\$ -
Bridge drainage details												0	\$ -	\$ -
Railing details												0	\$ -	\$ -
Stinger details												0	\$ -	\$ -
Soundwalls												0	\$ -	\$ -
Temporary shoring/falsework												0	\$ -	\$ -
Erection sequencing												0	\$ -	\$ -
Prestressed beam fabrication drawings (64 beams)												0	\$ -	\$ -
<b>C. Electrical Engineering</b>														
		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Respond to RFIs												0	\$ -	\$ -
2. Prepare one addenda												0	\$ -	\$ -
3. Review and approve Contractor submittal as related to lighting details												0	\$ -	\$ -
<b>TASK III - ARCHITECTURAL</b>														
		0	0	0	10	34	0	0	0	0	44	\$ 5,650.00	\$ 60.00	\$ 5,710.00
1. Respond to RFIs						20					20	\$ 2,500.00		\$ 2,500.00
2. Review and approve Contractor submittal as related to architectural details					4	6					12	\$ 1,660.00		\$ 1,560.00
3. Observe Site Mock-up					6	6					12	\$ 1,590.00	\$ 60.00	\$ 1,650.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 002 - CONSTRUCTION ADMINISTRATION  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT:

**Corgan Associates**

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
				\$140.00	\$125.00	\$60.00		\$35.00					

**TASK IV - LIGHTING DESIGN**

1. Respond to RFIs (20 total)
2. Prepare one addenda
3. Review and approve Contractor submittal as related to lighting details (12 total)
4. Observe the installation of lighting equipment (one trip to Addison)
5. Focus the lighting equipment and program control devices

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
0	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
										0	\$ -		\$ -
										0	\$ -		\$ -
										0	\$ -		\$ -
										0	\$ -		\$ -

**TASK V - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Progress Reports
2. Prepare Invoices and Billings

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
0	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
										0	\$ -		\$ -
										0	\$ -		\$ -

**B. Coordination**

1. Coordinate one addenda
2. Attend meetings (4 total)
3. Coordinate responses, reviews and approvals

No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
0	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
										0	\$ -		\$ -
										0	\$ -		\$ -

<b>Grand Total</b>											44	\$ 5,650.00	\$ 60.00	\$ 5,710.00
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**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR MIDWAY ROAD FROM BELT LINE TO LINDBERG**

URS will provide the engineering, urban design, and lighting design services including plans, specifications and estimates as it relates to Midway Road from approximately Belt Line Road to approximately Lindberg Road and as provided in the itemized scope. The construction will consist of landscaping, hardscaping, and lighting & illumination along Midway Road to be consistent with the urban design and architectural features of the Arapaho Road Bridge at Midway Road. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of comments and selection of alternatives provided, URS will provide all final detail plans, specifications, and estimates as previously described, to be included into one final construction package.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format of construction plans, specification and estimate into a complete stand-alone construction package.

The Town of Addison will provide to URS all available Midway Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical section, topography survey, field survey, and utility information. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Midway Road geometrics, survey, irrigation design for landscaping, permitting, construction administration, construction inspection, and record drawings are outside the scope of this agreement and will be performed by others or are covered in a separate work order.

## **Itemized Scope of Services Provided by URS For Midway Road from Beltline to Lindberg**

### **TASK I - URBAN DESIGN**

#### **A. Design Development**

1. Scenario Development
  - Develop two scenarios for the influence area (up to ½ mile)
  - Design enhancement themes for connections to existing areas (Beltline Road, Lindberg Road)
  - Determine the design principles germane to integrating the bridge project into the overall urban design of the area
2. Develop the preferred alternative urban design theme
  - Landscape and hardscape "Kit of Parts"
  - General design guidelines for implementation of urban design development
  - Plans and sections that show typical application of the "Kit of Parts"

#### **B. Final Design**

1. Develop Construction Documents
2. Develop Specifications

### **TASK II – ENGINEERING**

#### **A. Design Development**

1. Electrical
  - Develop a load study for portion of Midway Road
  - Prepare a preliminary cost estimate

#### **B. Final PS&E**

1. General
  - Title Sheet
  - Index of Sheets
  - General Notes
  - Summary of Quantities
  - Removal Plan
  - Cost Estimate
  - Special provisions & specifications
  - QA/QC
  - Coordination
2. Electrical
  - Finalize a load study for each electrical service source.
  - Prepare Lighting Calculations
  - Illumination Layout (2 sheets along Midway)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - QA ON 95% PLANS
  - Update Drawings per City Review

### **TASK III – LIGHTING DESIGN**

#### **A. Design Development**

1. Develop two alternative lighting concepts for Midway Road in the blocks immediately north and south of Arapaho.

**B. Final Design**

1. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

**TASK IV - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Progress Reports
2. Prepare Invoices and Billings

**B. Coordination**

1. Coordinate/Administer the Project
2. Prepare and Update Schedule
3. Manage Subconsultants
4. Implement Quality Assurance/Quality Control Program
5. Prepare for and attend project meetings with Addison Public Works (3 total)

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003 – MIDWAY ROAD  
ATTACHMENT C**

**FEE PROPOSAL  
URS CORPORATION**

**Total Cost**

<b>TASK I - URBAN DESIGN</b>	<b>\$ 47,284.00</b>
A. Design Development	\$ 40,580.00
B. Final Design	\$ 6,704.00
<b>TASK II - ENGINEERING</b>	<b>\$ 34,340.00</b>
A. Design Development	\$ 1,120.00
B. Final Design	\$ 33,220.00
<b>TASK III – LIGHTING DESIGN</b>	<b>\$ 13,145.00</b>
A. Design Development	\$ 12,345.00
B. Final Design	\$ 800.00
<b>TASK IV - PROJECT MANAGEMENT</b>	<b>\$ 14,802.00</b>
A. Reports and Invoices	\$ 3,372.00
B. Coordination	\$ 11,430.00
<b>Printing &amp; Copying Expenses</b>	<b>\$ 1,180.00</b>
<hr/>	
<b>GRAND TOTAL</b>	<b>\$ 110,751.00</b>

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 003 - MIDWAY ROAD**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
		\$185.00	\$175.00	\$142.00	\$140.00	\$100.00	\$78.00	\$80.00	\$65.00	\$55.00				
<b>TASK I - URBAN DESIGN</b>		0	0	8	120	152	16	120	0	60	476	\$ 47,284.00	\$ -	\$ 47,284.00
<b>A. Design Development</b>		0	0	0	112	152	0	80	0	60	404	\$ 49,580.00	\$ -	\$ 49,580.00
1. Scenario Development		148			48	56	16	32	20		148	\$ 15,340.00	\$ -	\$ 15,340.00
Develop two scenarios for the influence area (up to 1/2 mile)					24	24		16		12	76	\$ 7,700.00		\$ 7,700.00
Design enhancement themes for connections to existing areas (Beltline Road, Lentberg Road)					8	16					24	\$ 2,720.00		\$ 2,720.00
Determine the design principles germane to integrating the bridge project into the overall urban design of the area					16	16		8		8	48	\$ 4,920.00		\$ 4,920.00
2. Develop the preferred alternative urban design theme		256			64	96	16	56	40		256	\$ 25,240.00	\$ -	\$ 25,240.00
Landscape and hardscape "Kit of Parts"					16	32		24		8	80	\$ 7,800.00		\$ 7,800.00
General design guidelines for implementation of urban design development					24	32		16		24	80	\$ 8,280.00		\$ 8,280.00
Plans and sections that show typical application of the "Kit of Parts"					24	32		16		8	80	\$ 8,280.00		\$ 8,280.00
<b>B. Final Design</b>		0	0	8	8	0	16	40	0	0	72	\$ 6,704.00	\$ -	\$ 6,704.00
1. Develop construction documents				8				40			46	\$ 4,336.00		\$ 4,336.00
2. Develop specifications					8		16				24	\$ 2,368.00		\$ 2,368.00
<b>TASK II - ENGINEERING</b>		0	0	0	118	64	0	64	80	20	346	\$ 34,340.00	\$ -	\$ 34,340.00
<b>A. Design Development</b>		0	0	0	8	0	0	0	0	0	8	\$ 1,120.00	\$ -	\$ 1,120.00
1. Electrical Engineering		8			4						8	\$ 1,120.00	\$ -	\$ 1,120.00
Develop a load study for Midway Road					4						4	\$ 560.00		\$ 560.00
Prepare a preliminary cost estimate					4						4	\$ 560.00		\$ 560.00
<b>B. Final PS&amp;E</b>		0	0	0	110	64	0	64	80	20	338	\$ 33,220.00	\$ -	\$ 33,220.00
1. General		180			64	64	16	64	20		180	\$ 17,100.00	\$ -	\$ 17,100.00
Title Sheet					2	4		8			14	\$ 1,320.00		\$ 1,320.00
Index of Sheets						4		8			12	\$ 1,040.00		\$ 1,040.00
General Notes					2	8		12			22	\$ 2,040.00		\$ 2,040.00
Summary of Quantities						8		12			20	\$ 1,760.00		\$ 1,760.00
Removal Plan						12		16			26	\$ 2,480.00		\$ 2,480.00
Cost Estimate						8		4			12	\$ 1,120.00		\$ 1,120.00
Special Provisions and Specifications					4	8				12	24	\$ 2,020.00		\$ 2,020.00
QA/QC					12	6		4			22	\$ 2,600.00		\$ 2,600.00
Coordination					12	6				8	26	\$ 2,720.00		\$ 2,720.00
2. Electrical		158			78	20	0	80	0		158	\$ 16,120.00	\$ -	\$ 16,120.00
Finalize a load study for each electrical service source.											0	\$ -		\$ -
Prepare Lighting Calculations											0	\$ -		\$ -
Illumination Layout (2 sheets along Midway)					40			32			72	\$ 7,680.00		\$ 7,680.00
Electric Service / Pole Summary					4			4			8	\$ 820.00		\$ 820.00
Conduit Runs / Contents					2			4			6	\$ 540.00		\$ 540.00
Insert Latest Town or TxDOT Standards					10			2			12	\$ 1,530.00		\$ 1,530.00
Quantity Summary					2			4			6	\$ 540.00		\$ 540.00
Develop Final Cost Estimate (Using Estimator)					4						4	\$ 560.00		\$ 560.00
QA QN 95% PLANS					4				2		6	\$ 690.00		\$ 690.00
Update Drawings per City Review (3 Submittals, All Dwg.)					12				32		44	\$ 3,760.00		\$ 3,760.00
<b>TASK III - LIGHTING DESIGN</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Design Development</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Develop two alternative lighting concepts for Midway Road in the blocks immediately north and south of Arapaho.											0	\$ -	\$ -	\$ -
<b>B. Final Design</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**WORK ORDER NO. 003 - MIDWAY ROAD**  
**MAN-HOUR & EXPENSE COST ESTIMATE**  
**URS CORPORATION**

CONSULTANT: **Brandston Partnership**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
<b>TASK I - URBAN DESIGN</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Design Development</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Scenario Development		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Develop two scenarios for the influence area (up to 1/2 mile)												\$ -	\$ -	\$ -
Design enhancement themes for connections to existing areas (Bellline Road, Landberg Road)												\$ -	\$ -	\$ -
Determine the design principles germane to integrating the bridge project into the overall urban design of the area												\$ -	\$ -	\$ -
2. Develop the preferred alternative urban design theme		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Landscape and hardscape "Kit of Parts"												\$ -	\$ -	\$ -
General design guidelines for implementation of urban design development												\$ -	\$ -	\$ -
Plans and sections that show typical application of the "Kit of Parts"												\$ -	\$ -	\$ -
<b>B. Final Design</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Develop construction documents												\$ -	\$ -	\$ -
2. Develop specifications												\$ -	\$ -	\$ -
<b>TASK II - ENGINEERING</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Design Development</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Electrical Engineering		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Develop a load study for Midway Road												\$ -	\$ -	\$ -
Prepare a preliminary cost estimate												\$ -	\$ -	\$ -
<b>B. Final PS&amp;E</b>		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. General		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Title Sheet												\$ -	\$ -	\$ -
Index of Sheets												\$ -	\$ -	\$ -
General Notes												\$ -	\$ -	\$ -
Summary of Quantities												\$ -	\$ -	\$ -
Removal Plan												\$ -	\$ -	\$ -
Cost Estimate												\$ -	\$ -	\$ -
Special Provisions and Specifications												\$ -	\$ -	\$ -
QA/QC												\$ -	\$ -	\$ -
Coordination												\$ -	\$ -	\$ -
2. Electrical		0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
Finalize a load study for each electrical service source.												\$ -	\$ -	\$ -
Prepare Lighting Calculations												\$ -	\$ -	\$ -
Illumination Layout (2 sheets along Midway)												\$ -	\$ -	\$ -
Electric Service / Pole Summary												\$ -	\$ -	\$ -
Conduit Runs / Contents												\$ -	\$ -	\$ -
Insert Latest Town or TxDOT Standards												\$ -	\$ -	\$ -
Quantity Summary												\$ -	\$ -	\$ -
Develop Final Cost Estimate (Using Estimator)												\$ -	\$ -	\$ -
QA ON 95% PLANS												\$ -	\$ -	\$ -
Update Drawings per City Review (3 Submittals, All Dwgs.)												\$ -	\$ -	\$ -
<b>TASK III - LIGHTING DESIGN</b>		0	30	0	28	13	0	29	0	0	100	\$ 13,145.00	\$ -	\$ 13,145.00
<b>A. Design Development</b>		0	28	0	28	13	0	24	0	0	93	\$ 12,345.00	\$ -	\$ 12,345.00
1. Develop two alternative lighting concepts for Midway Road in the blocks immediately north and south of Arapaho.			28		28	13		24			93	\$ 12,345.00	\$ -	\$ 12,345.00
<b>B. Final Design</b>		0	2	0	0	0	0	5	0	0	7	\$ 800.00	\$ -	\$ 800.00

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
 WORK ORDER NO. 003 - MIDWAY ROAD  
 MAN-HOUR & EXPENSE COST ESTIMATE  
 URS CORPORATION**

CONSULTANT: **Brandston Partnership**

	No. of Sheets	Principal	Senior Consult.	Project Mangr	Sr Project	Project Eng/Plan	Asst Proj Eng/Plan	Sr. Tech.	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
			\$175.00		\$140.00	\$105.00		\$90.00						
1. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.			2					5			7	\$ 800.00		\$ 800.00
<b>TASK IV - PROJECT MANAGEMENT</b>			0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
<b>A. Reports and Invoices</b>			0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Prepare Progress Reports												\$ -	\$ -	\$ -
2. Prepare Invoices and Billings												\$ -	\$ -	\$ -
<b>B. Coordination</b>			0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
1. Coordinate/Administer the Project												\$ -	\$ -	\$ -
2. Prepare and Update Schedule												\$ -	\$ -	\$ -
3. Manage Subconsultants												\$ -	\$ -	\$ -
4. Implement Quality Assurance/Quality Control Program												\$ -	\$ -	\$ -
5. Prepare and attend project meetings with Addison (3 total)												\$ -	\$ -	\$ -
<b>Grand Total</b>			0	30	0	28	13	0	29	0	100	\$ 13,145.00	\$ -	\$ 13,145.00





July 18, 2002

Mr. Steven Z. Chutchian., PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development, Contract Documents, and Construction Administration  
Scope of Services**

Dear Mr. Chutchian:

Enclosed please find a copy of the Scope of Services for Phase II of the referenced project for your review. We have revised this scope after discussions with you and your Consultant (HNTB) to eliminate any overlap of provided services. We have separated the scope into three Work Orders as follows:

Work Order No. 001 – Arapaho Road Bridge Design Development and Construction Documents  
Work Order No. 002 – Arapaho Road Bridge Construction Administration Services  
Work Order No. 003 – Midway Road from Beltline to Lindberg Design Development and Construction Documents

We are currently developing a fee proposal based on the enclosed scope of services and should be able to provide the fee proposal to you by no later than July 22, 2002. We look forward to discussing our Scope of Services with you and finalizing our fee proposal for your approval.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Prestonwood Tower  
5151 Beltline Road, Suite 700  
Dallas, TX 75254  
Tel: 972.980.4961  
Fax: 972.991.7665

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the engineering, architectural, urban design, lighting design and noise study services including plans, specifications and estimates as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW). URS shall prepare plans, details and compute quantities for a steel arch bridge, the "blue-bridge concept", over Midway Road, with prestressed concrete beam approaches. Design and details will include all bridge details including any soundwalls located on the bridge. URS will also provide all bridge drainage details to accommodate the drainage in accordance with the Town's Consultant's drainage requirements. URS will also prepare plans, details and compute quantities for any landscaping, hardscaping, sidewalks, lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road with the exception of those portions to be prepared by the Town of Addison's Consultant. URS will also prepare architectural details for the bridge, the mechanically stabilized earth (MSE) retaining walls and the sound walls. Additionally, URS will prepare a noise study including ambient noise measurements, modeling and noise analyses. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of comments and selection of alternatives provided, URS will provide all final detail plans, specifications, and estimates as previously described, to be included into one final construction package prepared by the Town's Consultant. URS will submit four sets of plans for review to the Town for 65% review and 95% review and will incorporate the Town's comments in the next submittals. URS will also provide signed and sealed mylar plans at the 100% final submittal.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format and consolidation of construction plans, specification and estimate into one final construction package. URS will coordinate with the Town and/or the Town's Consultant for revising the horizontal alignment and vertical profile of Arapaho Road to accommodate the proposed bridge structure. URS will coordinate with the Town and/or the Town's Consultant for the revised alignment of the proposed box-culvert under Arapaho Road as well as bridge drainage and bridge drain tie-ins. URS will coordinate with the Town and/or the Town's Consultant for all geotechnical information required for the foundation design for the bridge and retaining walls.

The Town of Addison will provide to URS all available Arapaho Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical sections, topography survey, field survey, and utility information. The Town will also provide boring logs, soil parameters and foundation design recommendations (allowable bearing capacities, lateral load analysis, etc.) required for the bridge foundation designs. The Town of Addison will provide to URS a field location survey of the existing 60-in. diameter water main, locating the water main precisely, both vertically and horizontally, along the project limits and specifically in the vicinity of the arch-bridge's main foundations. Additionally the Town will provide any applicable noise regulations or ordinance

information, obtain right of entry, and provide all traffic data including but not limited to, peak hourly volumes, average daily traffic, percentages of trucks, and design and posted speeds that may be required for the noise study. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Arapaho Road geometrics and roadway design, drainage, parking lot layout and design, retaining wall layout and design, survey, geotechnical engineering, design and details for soundwalls on retaining walls or at grade, irrigation for landscaping, permitting, and construction administration, inspection and record drawings are outside the scope of this agreement and will be performed by others.

## **Itemized Scope of Services Provided by URS for the Arapaho Road Bridge**

### **TASK I - URBAN DESIGN**

#### **A. Design Development**

1. Inventory and Analysis of Project Area
  - Review existing plans and coordinate with Town's Consultant
  - Identify prevailing patterns
  - Analyze project needs based on above
  - Develop urban design principles for project
  - Prepare technical memo of understanding of existing plans
2. Develop two scenarios for the primary project area (limits of project) that incorporate the design principles in item number 1.
  - Landscape for bridge abutments and retaining wall areas
  - Hardscape: bridge elements at base to screen parking
  - Element relocation, adjustment, elimination, or addition (utility poles, signage, medians, sidewalk, etc.)
  - Prepare plan & elevation with typical sections of primary project area
3. Develop final preliminary concept
  - Identify a final preliminary concept to go forward into final design.
  - Prepare support drawings for final concept
4. Prepare for and attend meetings in Addison to collect data and present options (2 total)

#### **B. Final Design (65%, 95%, 100% submittals)**

1. Design development of hardscape (surfaces, railings, etc.)
2. Create Final Landscape Plan
  - Identify plants to be removed or relocated
  - Identify appropriate plant pallets
  - Design planting plan
  - Create plant list
  - Define maintenance requirements
  - Urban design and landscape construction documents for the project area
2. Prepare for and attend meetings in Addison (2)

### **TASK II - Engineering**

#### **A. Civil Site Works**

1. Final Civil Design & PS&E (65%, 95%, 100% submittal)
  - Midway Road Traffic Control Plan
  - Overhead Utilities (Along Midway Road) Adjustment Plan
  - Retaining Wall Architectural Details
  - Soundwall Architectural Details
  - QA/QC
  - Cost Estimate
  - Special Provisions & Specifications
  - Coordination with Town's Consultants

#### **B. Bridges**

1. Preliminary Bridge Design (~30% submittal)
  - Develop Design Criteria
  - Preliminary Bridge Layout (Finalize Bridge Location)
  - Preliminary Typical Section
  - Refine Arch Shape
  - Size Thrust Block & Refine Shape
  - Size Foundation
  - Size Diaphragms
  - Size Traffic Railing Members

- Develop Soundwall
  - Investigate Culvert Layout
  - Quantities and Cost Estimate
  - QA/QC
2. Final Bridge Design, & PS&E (65%, 95%, 100% submittals)
- Final Bridge Layout
  - Final Typical Section
  - General Notes
  - Quantities and Bearing Seats
  - Foundation Layout
  - Drilled Shaft Details
  - Abutment Plan & Elevation
  - Abutment Details
  - Bent Plan & Elevation
  - Bent Details
  - Thrust Block Plan & Elevation
  - Thrust Block Details
  - Prestressed Concrete Beam Unit – Deck Plan
  - Prestressed Concrete Beam Unit – Deck Sections
  - Bridge Soundwall Details
  - Miscellaneous Superstructure Details (drains, lighting)
  - Diaphragm Details
  - Closure Pour Details
  - Suspension Hanger Details
  - Steel Arch Design and Details
  - Steel Arch Camber Details
  - Bearing Details
  - Drainage Details
  - Railing Details
  - Architectural Details
  - Stinger Design & Details
  - Approach Slab Details
  - Erection Sequencing
  - Prestressed Beam Tables
  - Compile, Verify & Modify TxDOT Standard Drawings
  - QA/QC
  - Coordination with Town's Consultants
  - Bridge Total Quantities & Cost Estimate
  - Bridge Special Provisions & Specifications

### **C. Electrical Engineering**

1. Design Development
- Develop a load study for Arapaho Road Bridge, approaches and parking areas
  - Prepare a preliminary cost estimate
2. Final Electrical Design & PS&E (65%, 95%, 100% submittals)
- Finalize a load study for each electrical service source.
  - Prepare Lighting Calculations for under-deck lighting above the parking lot.
  - Illumination Layout (2961', 1200'/sht + 1 sheet under the bridge)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents
  - Insert Lighting Consultant Special Details
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - QA ON 95% PLANS
  - Update Drawings per City Review

### **TASK III - ARCHITECTURAL**

#### **A. Design Development**

##### **1. Architectural Studies & Details**

- Develop three rail options addressing the issues of hiker/biker separation from the vehicular traffic and the architectural options to realize the proposed triangular pattern in the rail.
- Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing viable options
- Explore options for the final material and form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred scheme.
- Develop detailed options and refine panel schemes for precast concrete retaining walls at approaches.
- Study and Present Options for center pier support shape.
- Develop options for bridge mounted soundwalls
- Explore and refine alternate "stinger" designs incorporating lighting as the primary feature.
- Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.

##### **2. Computer Animation**

- Minor updates to existing video animation for landscaping, parking, etc.
- Produce video animation in DVD and VHS tape format

#### **B. Final Design**

1. Coordination
2. Review
3. Specifications

### **TASK IV - Lighting Design**

#### **A. Design Development**

1. Develop two alternatives for lighting of stingers.
2. Research and mock-up options for color changing on existing Addison sculpture (to determine range of possibilities for color changing on bridge structure).
3. Develop two alternatives for lighting of bicycle/pedestrian path.
4. Develop two alternatives for lighting of elevated roadway.
5. Develop mounting concepts for bridge structure lighting.
6. Develop two alternatives for lighting of outboard railings.
7. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.

#### **B. Final Design**

1. Final details for lighting of stingers.
2. Final details of fixtures and mounting for bridge structure illumination.
3. Final details of fixtures and mounting for elevated roadway lighting.
4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.
5. Final details of fixtures and mounting for outboard railing illumination.
6. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.
7. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

### **TASK V - NOISE STUDY**

#### **A. Noise Measurements**

1. Review existing noise ordinance and criteria documents
2. Meeting with the Town of Addison to discuss noise issues and objectives
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings

**B. Noise Modeling and Analyses**

1. Create a noise model to predict future noise emissions from the proposed roadway and bridge
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.
4. Prepare report and respond to one round of comments.
5. Final meeting with the Town

**TASK VI - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Project Management Plan
2. Prepare Progress Reports
3. Prepare Invoices and Billings

**B. Coordination**

1. Coordinate/Administer the Project
2. Prepare and Update Schedule
3. Manage Subconsultants
4. Implement Quality Assurance/Quality Control Program
5. Prepare for and Attend Town Council or other Town Meetings (3 total)
6. Prepare for and run internal project coordination meetings (8 total)
7. Prepare for and attend project meetings with Addison Public Works (8 total)

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002**

**ATTACHMENT A  
SCOPE OF SERVICES**

**CONSTRUCTION ADMINISTRATION SERVICES  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the construction administration services as it relates to the Arapaho Road Bridge design services under Work Order No. 001 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) from approximate Station 40+67 to approximate Station 70+28. URS shall provide construction phase services for a steel arch bridge over Midway Road, with prestressed concrete beam approach and any landscaping, hardscaping, sidewalks, lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road for which URS provided design services.

URS will attend the pre-bid and pre-construction meetings, review bridge bid tabs, respond to the contractor's or Town's request for information (RFIs), review shop drawings, and review the Contractor's submittals as related to the design services performed by URS under a separate agreement.

All ROW documentation and plans, engineering design, survey, geotechnical services, permitting, construction inspection and preparation of construction record drawings are outside the scope of this agreement and will be performed by others or under a separate agreement.



## **Itemized Scope of Services Provided by URS for Construction Administration Services**

### **TASK I - URBAN DESIGN**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve subcontractor submittals as related to landscape and hardscape.

### **TASK II - ENGINEERING**

#### **A. Civil Site Works**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve Contractor submittals as related to traffic control.

#### **B. Bridges**

1. Respond to contractor's RFI's (30 total)
2. Prepare one addenda
3. Review bridge bid tabulations
4. Attend kick-off meeting with the Town, the Town's Consultant, and the General Contractor.
5. Review bridge contractor submittals for compliance with the contract documents (10 total).
  - Concrete mix design (4 total)
  - Prestressed beam strand jacking stress reports (64 beams)
  - Prestressed beam redesign calculations (3 total)
  - Arch erection method statement
  - Arch hanger stressing reports
6. Review bridge contractor shop/fabrication drawings for compliance with contract documents (90 total).
  - Foundations layouts and shaft details
  - Abutment formwork, details and bar schedules
  - Bents formwork, details and bar schedules
  - Thrust block formwork, details and bar schedules
  - Deck slab plan and bar schedules
  - Miscellaneous superstructure details (SIP forms, P/S deck panels, screed elevations, expansion joints, lighting supports)
  - Diaphragm details and bar schedules
  - Closure pour details and bar schedules
  - Suspension hanger details and connections
  - Steel arch details
  - Arch camber details
  - Bearing details
  - Drainage details
  - Railing details
  - Stinger details
  - Approach slab plan and bar schedule
  - Erection sequencing
  - Prestressed beam fabrication drawings (64 beams)

#### **C. Electrical Engineering**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details.

**TASK III - ARCHITECTURAL**

1. Respond to contractor's RFI's
2. Review and approve contractor submittals as related to architectural details.
3. Observe site mock-ups.

**TASK IV - Lighting Design**

1. Respond to contractor's RFI's
2. Prepare one addenda
3. Review and approve contractor submittals as related to lighting details.
4. Observe the installation of lighting equipment included in the lighting designer's final recommendations at the job site (one trip to Addison).
5. Focusing the lighting equipment and program control decices(s).

**TASK V – NOISE STUDY (No CA Scope)**

**TASK VI - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Progress Reports
2. Prepare Invoices and Billings

**B. Coordination**

1. Coordinate one addenda
2. Attend pre-bid, pre-construction and progress meetings with the Town, the Town's Consultant, and the General Contractor (4 total).
3. Coordinate responses, reviews and approval of bridge bid tabs, Contractor RFIs, submittals and shop drawings.

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 003**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR MIDWAY ROAD FROM BELT LINE TO LINDBERG**

URS will provide the engineering, urban design, and lighting design services including plans, specifications and estimates as it relates to Midway Road from approximately Belt Line Road to approximately Lindberg Road and as provided in the itemized scope. The construction will consist of landscaping, hardscaping, and lighting & illumination along Midway Road to be consistent with the urban design and architectural features of the Arapaho Road Bridge at Midway Road. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of comments and selection of alternatives provided, URS will provide all final detail plans, specifications, and estimates as previously described, to be included into one final construction package.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format of construction plans, specification and estimate into a complete stand-alone construction package.

The Town of Addison will provide to URS all available Midway Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical section, topography survey, field survey, and utility information. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Midway Road geometrics, survey, irrigation design for landscaping, permitting, construction administration, construction inspection, and record drawings are outside the scope of this agreement and will be performed by others or are covered in a separate work order.

## **Itemized Scope of Services Provided by URS For Midway Road from Beltline to Lindberg**

### **TASK I - URBAN DESIGN**

#### **A. Design Development**

1. Inventory and Analysis of Influence Area
  - Review existing plans
  - Identify prevailing patterns
  - Analyze project needs based on above
  - Develop urban design principles for project
  - Prepare technical memo of understanding of existing plans
3. Develop 2 scenarios for the influence area (up to ½ mile)
  - Integration into existing urban design
  - Enhancement of connections to existing nearby areas (Belt Line Road, Arapaho hike/bike trail)
  - Develop designs and plans that integrate with existing plans
  - Prepare plan & perspective views with typical sections of influence area
4. Develop final preliminary concept
  - Identify a final preliminary concept to go forward into final design.
  - Prepare support drawings for final concept

#### **B. Final Design**

1. Design development of hardscape (surfaces, railings, etc.)
2. Create Final Landscape Plan
  - Identify plants to be removed or relocated
  - Identify appropriate plant pallets
  - Design planting plan
  - Create plant list
  - Define maintenance requirements
  - Urban design and landscape construction documents for the project area

### **TASK II – Engineering**

#### **A. Design Development**

1. Electrical
  - Develop a load study for portion of Midway Road
  - Prepare a preliminary cost estimate

#### **B. Final PS&E**

1. General
  - Title Sheet
  - Index of Sheets
  - General Notes
  - Summary of Quantities
  - Removal Plan
  - QA/QC
  - Coordination
2. Electrical
  - Finalize a load study for each electrical service source.
  - Prepare Lighting Calculations
  - Illumination Layout (2 sheets along Midway)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)

- Prepare Construction Scope of Work
- QA ON 95% PLANS
- Update Drawings per City Review

### **TASK III - Lighting Design**

#### **A. Design Development**

1. Develop lighting concepts for Midway Road in the blocks immediately north and south of Arapaho.

#### **B. Final Design**

1. Final details of fixtures and mounting for roadway lighting.
2. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

### **TASK IV - PROJECT MANAGEMENT**

#### **A. Reports and Invoices**

1. Prepare Progress Reports
3. Prepare Invoices and Billings

#### **B. Coordination**

1. Coordinate/Administer the Project
2. Prepare and Update Schedule
3. Manage Subconsultants
4. Implement Quality Assurance/Quality Control Program
5. Prepare for and attend project meetings with Addison Public Works (3 total)

**URS**

**Cliff R. Hall, PE**  
*Project Manager*

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Prestonwood Tower  
5151 Beltline Road, Suite 700  
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**URS**

**Paulette M. Vander Kamp, EIT**  
*Civil - Highway Engineer*

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**URS**

**David C. Johnston, PE**  
*Manager of Surface Transportation*

URS Corporation  
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Direct: 972.406.6956  
Fax: 972.406.6951  
david\_johnston @ urscorp.com

June 6, 2002

cc *Mike*  
*Steve*

Mr. James C. Pierce, Jr., PE  
Assistant Public Works Director  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

*for review & comment*  
*Jim*

Re: **Arapaho Road Bridge at Midway Road**  
**Phase II – Design Development and Final Plans, Specifications and Estimate**  
**Draft Scope of Services**

Dear Mr. Pierce:

Enclosed please find a draft copy of the Scope of Services for Phase II of the referenced project for your review. We would like to discuss this scope with you and perhaps your Consultant (HNTB) to ensure that there is no overlap of services within the draft scope before we finalize our fee proposal. We can be available any time next week that is convenient for you

We have also examined the construction costs in a very preliminary manner for the items detailed in our scope and based on the discussions in our May 28 meeting. As previously advised, we believe the construction cost of the bridge structure will be approximately \$4,000,000. The construction costs for the other items such as; landscaping and hardscaping along Arapaho and Midway Roads, retaining walls, grading and parking lot pavement under the bridge, parking lot drainage, parking lot lighting, Midway Road lighting, etc., we believe could be an additional \$2,500,000 to \$3,000,000. Additionally, standard estimating practice would apply a contingency factor to an estimate of this preliminary nature.

*SLIGHTLY HIGHER THAN ORIGINAL STATED ESTIMATE OF \$3.7-3.8 MILLION*

*4 + 3 = 7 MILLION*

This project differs from a typical roadway project given the importance and scope of aesthetics, lighting, urban design and landscaping as well as the unique characteristics of the bridge structure. In addition, we are tasked with developing multiple concepts for some areas of lighting, landscaping and architectural details. While a typical project may consider 10% to 12% of the construction cost as a benchmark for an appropriate design fee, the uniqueness of this project may preclude such typical "rules-of-thumb". *(implying a possible \$1 million fee)*

We look forward to discussing our Scope of Services with you and finalizing our fee proposal for your approval.

Sincerely,

*4 7 MILLION (11%) = \$770,000*

URS Corporation

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Prestonwood Tower  
5151 Beltline Road, Suite 700  
Dallas, TX 75254  
Tel: 972.980.4961  
Fax: 972.991.7665

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 002

ATTACHMENT A  
SCOPE OF SERVICES

PHASE II – DESIGN DEVELOPMENT AND FINAL PLANS, SPECIFICATIONS  
AND ESTIMATES

AESTHETIC  
RESTRICTIONS / BIKE ACCESS

URS will provide the engineering, architectural, urban design and lighting design services including plans, specifications and estimates as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW). URS shall prepare plans, details and compute quantities for a steel arch bridge over Midway Road, with prestressed concrete beam approach spans and mechanically stabilized earth (MSE) retaining walls. URS will also prepare plans, details and compute quantities for any grading, paving, landscaping, hardscaping, sidewalks, parking areas, drainage, lighting & illumination, pavement markings, traffic control, and storm water pollution prevention plans for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road with the exception of those portions to be prepared by the Town of Addison's Consultant. Additionally, URS will prepare plans, details and compute quantities for landscaping, hardscaping, and lighting & illumination along Midway Road from approximately Belt Line Road to approximately Lindberg Road. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of comments and selection of alternatives provided, URS will provide all final detail plans, specifications, and estimates as previously described, to be included into one final construction package prepared by the Town's Consultant.

COORDINATED  
DESIGN w/  
HNTB

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format and consolidation of construction plans, specification and estimate into one final construction package. URS will coordinate with the Town and/or the Town's Consultant for revising the horizontal alignment and vertical profile of Arapaho Road to accommodate the proposed bridge structure. URS will coordinate with the Town and/or the Town's Consultant for the revised alignment and construction sequencing of the proposed box-culvert under Arapaho Road as well as surface and bridge drainage tie-ins. URS will coordinate with the Town and/or the Town's Consultant for all geotechnical information required for the foundation design for the bridge and retaining walls.

The Town of Addison will provide to URS all available Arapaho Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, topography survey, field survey, and utility information. The Town will also provide boring logs, stability analysis, settlement analysis, soil parameters and foundation design recommendations required for the bridge and retaining wall foundation designs. The Town of Addison will provide to URS a field location survey of the existing 60-in. diameter water main, locating the water main precisely, both vertically and horizontally, along the project limits and specifically in the vicinity of the arch-bridge's main foundations.

All ROW documentation and plans, Arapaho Road geometrics and roadway design, noise modeling, survey, and geotechnical engineering are outside the scope of this agreement and will be performed by others.

THIS WAS  
PRESENTED AS  
AN INTERVAL  
PART OF THE  
DESIGN  
BY URS

ARE WE  
O.K. WITH  
THIS?

THIS COULD  
AFFECT  
R.O.W. (EASE-  
MENT TAKINGS)  
BE CAREFUL



# Itemized Scope of Services Provided by URS

## TASK I - URBAN DESIGN

### A. Design Development

1. Inventory and Analysis of Project Area and Influence Area
  - Review existing plans
  - Identify prevailing patterns
  - Analyze project needs based on above
  - Develop urban design principles for project — *ALREADY DONE?*
  - Prepare technical memo of understanding of existing plans
2. Develop two scenarios for the primary project area (limits of project) that incorporate the design principles in item number 1.
  - Landscape
  - Parking and parking access — *COORDINATE DESIGN w/ HNTB - WHO REALLY DESIGN?*
  - Hardscape
  - Element relocation, adjustment, elimination, or addition (utility poles, signage, medians, sidewalk, etc.)
  - Prepare plan & elevation with typical sections of primary project area
3. Develop 2 scenarios for the influence area (up to 1/2 mile)
  - Integration into existing urban design
  - Enhancement of connections to existing nearby areas (Belt Line Road, Arapaho hike/bike trail) —?
  - Develop designs and plans that integrate with existing plans ?
  - Prepare plan & perspective views with typical sections of influence area
4. Develop final preliminary concept
  - Identify a final preliminary concept to go forward into final design.
5. Prepare for and attend meetings in Dallas to collect data and present options (2 total)

### B. Final Design

1. Project Area
  - Design development of hardscape (surfaces, railings, etc.) — *PROVIDE ROCK, PIECES, RETAINING WALLS, etc.*
  - Plant identification, planting plan, plant list, maintenance requirements
  - Urban design and landscape construction documents for the project area
2. Influence Area
  - Draft report and graphics to integrate the project area into its surroundings — *ALREADY DONE IN PART A*
  - Final report document with supporting plan graphics.
3. Prepare for and attend meetings in Dallas (1)

## TASK II - Engineering

### A. Civil Site Works

1. Design Development
  - Geometric Layout / Paving Plans
  - Quantities & Cost Estimate
2. Final Civil Design & PS&E
  - Title Sheet (By Town's Consultant)
  - Index of Sheets (By Town's Consultant)
  - General Notes (By Town's Consultant)
  - Typical Sections
  - Summary of Quantities (By Town's Consultant)
  - Removal Plan
  - Geometric Layout
  - Grading and Drainage Plan — *HNTB?*
  - Paving Details
  - Storm Sewer Computation Data — *HNTB?*
  - Drainage Area Map

*input from URS?*

- Drainage Profiles ?
- Drainage Details
- Storm Water Pollution Prevention Plan
- Traffic Control Plan
- Utility Adjustment Plan
- Cross Sections
- Roadway Lighting Plan
- Miscellaneous Roadway Details
- Striping and Marking Plan
- Retaining Wall Layouts (2 walls ~ 2120' & 710')
- Retaining Wall Typical Sections
- Retaining Wall Miscellaneous & Architectural Details
- Compile, Verify & Modify TxDOT Standard Drawings
- QA/QC
- Cost Estimate
- Special Provisions & Specifications
- Coordination with Town's Consultants

ACTB ?

} ?

**B. Bridges**

1. Preliminary Bridge Design
  - Preliminary Bridge Layout (Finalize Bridge Location)
  - Typical Section
  - Refine Arch Shape
  - Size Thrust Block & Refine Shape
  - Size Foundation
  - Size Diaphragms
  - Size Traffic Railing Members
  - Investigate Culvert Layout
  - Quantities and Cost Estimate
  - QA/QC

NO EXTRA PAY FOR ACCURACY!

2. Final Bridge Design, Plans, Specifications and Estimate
  - Final Bridge Layout
  - Quantities and Bearing Seats
  - Foundation Layout
  - Drilled Shaft Details
  - Abutment Plan & Elevation
  - Abutment Details
  - Bent Plan & Elevation
  - Bent Details
  - Thrust Block Plan & Elevation
  - Thrust Block Details
  - Prestressed Concrete Beam Unit – Deck Plan
  - Prestressed Concrete Beam Unit – Deck Sections
  - Miscellaneous Superstructure Details (drains, lighting)
  - Diaphragm Details
  - Closure Pour Details
  - Suspension Hanger Details
  - Steel Arch Design and Details
  - Bearing Details
  - Drainage Details
  - Railing Details
  - Stinger Design & Details
  - Approach Slab Details
  - Erection Sequencing
  - Prestressed Beam Tables
  - Compile, Verify & Modify TxDOT Standard Drawings
  - QA/QC

- Coordination with Town's Consultants
- Bridge Total Quantities & Cost Estimate
- Bridge Special Provisions & Specifications

### C. Electrical Engineering

1. Design Development
  - Develop a load study for Arapaho Road, bridge, parking and portion of Midway Road
  - Prepare a preliminary cost estimate
2. Final PS&E
  - Finalize a load study for each electrical service source.
  - Prepare Lighting Calculations
  - Illumination Layout (4500', 1200'/sht x 2 Elevations + 2 Midway\*) —?
  - Electric Service / Pole Summary
  - Conduit Runs / Contents
  - Insert Lighting Consultant Special Details
  - Insert Latest Town or TxDOT Standards —?
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - Prepare Construction Scope of Work
  - QA ON 90% PLANS
  - Update Drawings per City Review

### TASK III - ARCHITECTURAL

#### A. Design Development

1. Architectural Studies & Details
  - Develop three rail options addressing the issues of hiker/biker separation from the vehicular traffic and the architectural options to realize the proposed triangular pattern. ?
  - Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing viable options
  - Explore options for the final material and form of the thrust block. Provide sketch options initially - followed by CADD drawings of preferred scheme.
  - Develop detailed options and refine panel schemes for precast concrete retaining walls at approaches.
  - Study and Present Options for center pier support shape.
  - Explore and refine alternate "stinger" designs incorporating lighting as the primary feature.
  - Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.
2. Computer Animation
  - Minor updates to existing video animation for landscaping, parking, etc.
  - Produce video animation in DVD and VHS tape format

#### B. Final Design

1. Coordination
2. Review
3. Specifications

### TASK IV - Lighting Design

#### A. Design Development

1. Develop two alternatives for lighting of stingers.
2. Research and mock-up options for color changing on existing Addison sculpture (to determine range of possibilities for color changing on bridge structure).
3. Develop lighting concepts for Midway Road in the blocks immediately north and south of Arapaho.
4. Develop two alternatives for lighting of bicycle/pedestrian path.
5. Develop two alternatives for lighting of roadway.
6. Develop mounting concepts for bridge structure lighting.
7. Develop two alternatives for lighting of outboard railings.

8. Develop two alternatives for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.

**B. Final Design**

1. Final details for lighting of stingers.
2. Final details of fixtures and mounting for bridge structure illumination.
3. Final details of fixtures and mounting for roadway lighting.
4. Final details of fixtures and mounting for bicycle/pedestrian pathway lighting.
5. Final details of fixtures and mounting for outboard railing illumination.
6. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.
7. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

**TASK V - PROJECT MANAGEMENT**

**A. Reports and Invoices**

1. Prepare Project Management Plan
2. Prepare Progress Reports
3. Prepare Invoices and Billings

**B. Coordination**

1. Coordinate/Administer the Project
2. Prepare and Update Schedule
3. Manage Subconsultants
4. Implement Quality Assurance/Quality Control Program
5. Prepare for and Attend Town Council or other Town Meetings (3 total)
6. Prepare for and run internal project coordination meetings (8 total)
7. Prepare for and attend project meetings with Addison Public Works (8 total)

A CENTURY OF SERVICE  
ENGINEERS • ENVIRONMENTAL SCIENTISTS • ARCHITECTS

Trooper Smith, E.I.T.  
Water/Wastewater



**FREESE-NICHOLS**  
Freese and Nichols, Inc.

1701 North Market Street • Suite 500 LB 51 • Dallas, Texas 75202  
214-920-2500 • Fax 214-920-2565 • Email tws@freese.com

Mr. CHUTCHIAN:

THANK YOU FOR PROVIDING ME WITH  
THE ADDITIONAL INFORMATION FOR THE  
ADDISON BRIDGE PROJECT.

IT WAS A PLEASURE MEETING YOU.

TROOPER



*Steve -  
for your files  
Jim*

May 7, 2002

Mr. James C. Pierce, Jr., PE  
Assistant Public Works Director  
Town of Addison  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road  
Phase I - Concept Refinement  
Professional Services Agreement**

Dear Mr. Pierce:

As we discussed, please find enclosed two signed copies of the Agreement for Professional Services for the Arapaho Road Bridge at Midway Road project. This Agreement includes the Time and Materials Work Order Number 001 and Attachment A Scope of Services, Attachment B Estimated Schedules, Attachment C Not-to-Exceed Fee, and Attachment D Schedule of Fees.

Due to the uncertainty in the level of effort required and the deliverables expected for the concept refinement phase, this work order only covers the attendance of the May 14, 2002 Town Council meeting by the local URS Team members and a one day design charette by all of the URS Team members. A second work order will need to be approved to cover the remaining tasks for the concept refinement phase upon agreement of the Scope of Services.

It should be noted that during the concept refinement phase, firm Principals, Partners or Senior Professionals perform the bulk of the work. However, as the work progresses into final design, project professionals and technicians will have a greater role in the project.

Please sign each copy of the Agreement for Professional Services and the Time and Material Work Order No. 001 and return one copy with the original signatures. We look forward to working with you on this exciting project.

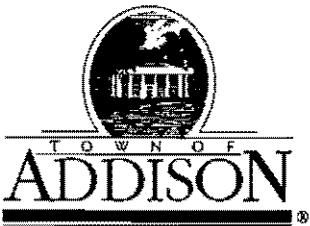
Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Prestonwood Tower  
5151 Beltline Road, Suite 700  
Dallas, TX 75254  
Tel: 972.980.4961  
Fax: 972.991.7665



# LETTER OF TRANSMITTAL

**Public Works / Engineering**  
16801 Westgrove • P.O. Box 9010  
Addison, Texas 75001  
Telephone: (972) 450-2871 • Fax: (972) 450-2837

DATE	5-22-02	JOB NO.
ATTENTION		
RE:	Arapaho Road Bridge	

TO Dave Johnston  
URS

- GENTLEMAN:**  
**WE ARE SENDING YOU**
- Attached
  - Under separate cover via \_\_\_\_\_ the following items:
  - Shop Drawings
  - Prints
  - Plans
  - Samples
  - Specifications
  - Copy of letter
  - Change order
  - \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
1			Agreement for Professional Services Phase 1 - Concept Refinement

- THESE ARE TRANSMITTED as checked below:**
- For approval
  - For your use
  - As requested
  - For review and comment
  - FOR BIDS DUE \_\_\_\_\_ 19\_\_\_\_
  - Approved as submitted
  - Approved as noted
  - Returned for corrections
  - \_\_\_\_\_
  - Resubmit \_\_\_\_\_ copies for approval
  - Submit \_\_\_\_\_ copies for distribution
  - Return \_\_\_\_\_ corrected prints
  - PRINTS RETURNED AFTER LOAN TO US

**REMARKS** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**COPY TO** Steve Chutchian

**SIGNED:** [Signature]

If enclosures are not as noted, please notify us at once.



# LETTER OF TRANSMITTAL

**Public Works / Engineering**  
16801 Westgrove • P.O. Box 9010  
Addison, Texas 75001  
Telephone: (972) 450-2871 • Fax: (972) 450-2837

DATE	5-22-02	JOB NO.	
ATTENTION			
RE:	Arapaho Road Bridge Phase 1 Concept Refinement		

TO Carmen Moran  
Town Hall

- GENTLEMAN:**  
**WE ARE SENDING YOU**
- Shop Drawings
  - Copy of letter
  - Attached
  - Prints
  - Change order
  - Under separate cover via \_\_\_\_\_ the following items:
  - Plans
  - Samples
  - Specifications
  - \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
1			Agreement for Professional Services with URS for Concept Refinement

- THESE ARE TRANSMITTED as checked below:**
- For approval
  - For your use
  - As requested
  - For review and comment
  - FOR BIDS DUE \_\_\_\_\_ 19\_\_\_\_
  - Approved as submitted
  - Approved as noted
  - Returned for corrections
  - \_\_\_\_\_
  - Resubmit \_\_\_\_\_ copies for approval
  - Submit \_\_\_\_\_ copies for distribution
  - Return \_\_\_\_\_ corrected prints
  - PRINTS RETURNED AFTER LOAN TO US

**REMARKS** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**COPY TO** \_\_\_\_\_

**SIGNED:** J. P. [Signature]

*If enclosures are not as noted, please notify us at once.*



**AGREEMENT FOR PROFESSIONAL SERVICES  
("Agreement")**

This Agreement between Town of Addison, ("Client") and URS Corporation ("URS"), a Nevada corporation; Prestonwood Tower, 5151 Beltline Road, Suite 700 75254; 972/980-4961 ("URS"), is effective as of May 14, 2002. The parties agree as follows:

It is the expressed intent of the parties that this Agreement shall be made available to the subsidiaries and affiliated companies of URS. For the purposes of this Agreement, as it applies to each Work Order, the term "URS" shall mean either, URS Corporation, or the affiliated company identified in the Work Order. The applicable Work Order shall clearly identify the legal name of the affiliate or subsidiary accepting the Work Order.

**ARTICLE I - Work Orders.** The Scope of Services ("Services"), the Time Schedule and the Charges are to be set forth in a written Work Order to this Agreement. The terms and conditions of this Agreement shall apply to each Work Order, except to the extent expressly modified by the Work Order. Where charges are "not to exceed" a specified sum, URS shall notify Client before such sum is exceeded and shall not continue to provide the Services beyond such sum unless Client authorizes an increase in the sum. If a "not to exceed" sum is broken down into budgets for specific tasks, the task budget may be exceeded without Client authorization as long as the total sum is not exceeded. Changes in conditions, including, without limitation, changes in laws or regulations occurring after the budget is established or other circumstances beyond URS control shall be a basis for equitable adjustments in the budget and schedule.

**ARTICLE II - Payment.** Unless otherwise stated in an Work Order, payment shall be on a time and materials basis under the Schedule of Fees and Charges in effect when the Services are performed. Client shall pay undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, URS may suspend further performance until payments are current. Client shall notify URS of any disputed amount within fifteen (15) days from date of the invoice, give reasons for the objection, and promptly pay the undisputed amount. Client shall pay an additional charge of one and one-half percent (1½%) per month or the maximum percentage allowed by law, whichever is the lesser, for any past due amount. In the event of a legal action for invoice amounts not paid, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party.

**ARTICLE III - Professional Responsibility.** URS is obligated to comply with applicable standards of professional care in the performance of the Services. Client recognizes that opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where the data are obtained, despite the use of due professional care.

**ARTICLE IV - Responsibility for Others.** URS shall be responsible to Client for URS Services and the services of URS subcontractors. URS shall not be responsible for the acts or omissions of other parties engaged by Client nor for their construction means, methods, techniques, sequences, or procedures, or their health and safety precautions and programs.

**ARTICLE V - Risk Allocation.** The liability of URS, its employees, agents and subcontractors (referred to collectively in this Article as "URS"), for Client's claims of loss, injury, death, damage, or expense, including, without limitation, Client's claims of contribution and indemnification, express or implied, with respect to third party claims relating to services rendered or obligations imposed under this Agreement, including all Work Orders, shall not exceed in the aggregate:

(1) The total sum of \$250,000 for claims arising out of professional negligence, including errors, omissions, or other professional acts, and including unintentional breach of contract; and any actual or potential environmental pollution or contamination, including, without limitation, any actual or threatened release of toxic, irritant, pollutant, or waste gases, liquids, or solid materials, or failure to detect or properly evaluate the presence of such substances, except to the extent such release, threatened release, or failure to detect or evaluate is caused by the willful misconduct of URS; or

(2) The total sum of \$1,000,000 for claims arising out of negligence, breach of contract, or other causes for which URS has any legal liability, other than as limited by (1) above.

**ARTICLE VI - Insurance.** URS agrees to maintain during the performance of the Services: (1) statutory Workers' Compensation coverage; (2) Employer's Liability; (3) General Liability; and (4) Automobile Liability insurance coverage each in the sum of \$1,000,000.

**ARTICLE VII - Consequential Damages.** Neither Party shall be liable to the other for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by breach of contract, willful misconduct, negligent act or omission, or other wrongful act of either of them.

**ARTICLE VIII - Client Responsibility.** Client shall: (1) provide URS, in writing, all information relating to Client's requirements for the project; (2) correctly identify to URS, the location of subsurface structures, such as pipes, tanks, cables and utilities; (3) notify URS of any potential hazardous substances or other health and safety hazard or condition known to Client existing on or near the project site; (4) give URS prompt written notice of any suspected deficiency in the Services; and (5) with reasonable promptness, provide required approvals and decisions. In the event that URS is requested by Client or is required by subpoena to produce documents or give testimony in any action or proceeding to which Client is a party and URS is not a party, Client shall pay URS for any time and expenses required in connection therewith, including reasonable attorney's fees.

Client shall reimburse URS for all taxes, duties and levies such as Sales, Use, Value Added Taxes, Deemed Profits Taxes, and other similar taxes which are added to or deducted from the value of URS Services. For the purpose of this Article such taxes shall not include taxes imposed on URS net income, and employer or employee payroll taxes levied by any United States taxing authority, or the taxing authorities of the countries or any agency or subdivision thereof in which URS subsidiaries, affiliates, or divisions are permanently domiciled. It is agreed and understood that these net income, employer or employee payroll taxes are included in the unit prices or lump sum to be paid URS under the respective Work Order.

**ARTICLE IX - Force Majeure.** An event of "Force Majeure" occurs when an event beyond the control of the Party claiming Force Majeure prevents such Party from fulfilling its obligations. An event of Force Majeure includes, without limitation, acts of God (including floods, hurricanes and other adverse weather), war, riot, civil disorder, acts of terrorism, disease, epidemic, strikes and labor disputes, actions or inactions of government or other authorities, law enforcement actions, curfews, closure of transportation systems or other unusual travel difficulties, or inability to provide a safe working environment for employees.

In the event of Force Majeure, the obligations of URS to perform the Services shall be suspended for the duration of the event of Force Majeure. In such event, URS shall be equitably compensated for time expended and expenses incurred during the event of Force Majeure and the schedule shall be extended by a like number of days as the event of Force Majeure. If Services are suspended for thirty (30) days or more, URS may, in its sole discretion, upon 5 days prior written notice, terminate this Agreement or the affected Work Order, or both. In the case of such termination, in addition to the compensation and time extension set forth above, URS shall be compensated for all reasonable termination expenses.

**ARTICLE X - Right of Entry.** Client grants to URS, and, if the project site is not owned by Client, warrants that permission has been granted for, a right of entry from time to time by URS, its employees, agents and subcontractors, upon the project site for the purpose of providing the Services. Client recognizes that the use of investigative equipment and practices may unavoidably alter the existing site conditions and affect the environment in the area being studied, despite the use of reasonable care.

**ARTICLE XI - Documents.** Provided that URS has been paid for the Services, Client shall have the right to use the documents, maps, photographs, drawings and specifications resulting from URS efforts on the project. Reuse of any such materials by Client on any extension of this project or any other project without the written authorization of URS shall be at Client's sole risk. URS shall have the right to retain copies of all such materials. URS retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

**ARTICLE XII - Termination.** Client may terminate all or any portion of the Services for convenience, at its option, by sending a written Notice to URS. Either party can terminate this Agreement or a Work Order for cause if the other commits a material, uncured breach of this Agreement or becomes insolvent. Termination for cause shall be effective twenty (20) days after receipt of a Notice of Termination, unless a later date is specified in the Notice. The Notice of Termination for cause shall contain specific reasons for termination and both parties shall cooperate in good faith to cure the causes for termination stated in the Notice. Termination shall not be effective if reasonable action to cure the breach has been taken before the effective date of the termination. Client shall pay URS upon invoice for Services performed and charges incurred prior to termination, plus reasonable termination charges. In the event of termination for cause, the parties shall have their remedies at law as to any other rights and obligations between them, subject to the other terms and conditions of this Agreement.

**ARTICLE XIII - No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS. No third party shall have the right to rely on URS opinions rendered in connection with the Services without the written consent of URS and the third party's agreement to be bound to the same conditions and limitations as Client.

**ARTICLE XIV - Assignments.** Neither party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other party.

**ARTICLE XV - Hazardous Substances.** All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by URS in accordance with applicable law; provided, however, that any and all such materials, including wastes, that cannot be introduced back into the environment under existing law without additional treatment, and all hazardous wastes, radioactive wastes, or hazardous substances ("Hazardous Substances") related to the Services, shall be packaged in accordance with the applicable law by URS and turned over to Client for appropriate disposal. URS shall not arrange or otherwise dispose of Hazardous Substances under this Agreement. URS, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but URS shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances. If Client requires: (1) URS agents or employees to sign such manifests; or (2) URS to hire, for Client, the Hazardous Substances transportation, treatment, or disposal contractor, then for these two purposes, URS shall be considered to act as Client's agent so that URS will not be considered to be a generator, transporter, or disposer of such substances or considered to be the arranger for disposal of Hazardous Substances, and Client shall indemnify URS against any claim or loss resulting from such signing.

**ARTICLE XVI - Venue.** In the event of any dispute between the parties to this Agreement, the venue for the dispute resolution shall be any state or federal court in the United States having jurisdiction over the parties. The foregoing notwithstanding, if the project is located outside the United States, the laws of the State of California shall govern and in such event, any dispute under the Agreement not resolved amicably shall be resolved under the binding rules of the American Arbitration Association.

**ARTICLE XVII - Integrated Writing and Enforceability.** This Agreement constitutes the final and complete repository of the agreements between Client and URS relating to the Services and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written. Modifications of this Agreement shall not be binding unless made in writing and signed by an Authorized Representative of each party. The provisions of this Agreement shall be enforced to the fullest extent permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision.

THE PARTIES ACKNOWLEDGE that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

CLIENT

*Ro Whitehead*  
Signature

City Manager  
Typed Name/Title

05-22-02  
Date of Signature

URS

*Emily Taylor*  
Signature

Emily Taylor, P.E. / Vice President  
Typed Name/Title

May 6, 2002  
Date of Signature

TIME AND MATERIALS WORK ORDER NO. 001

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated April 14, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD

Client Authorized Representative:

Address: Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010

Telephone No.: 972.450.2871

URS Authorized Representative:

Address: Emily Taylor, P.E.  
Prestonwood Tower, 5151 Bellline Road, Suite 700  
Dallas, TX 75254

Telephone No.: 972.980.4961

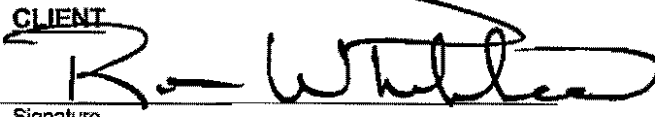
**SERVICES.** The Services shall be described in Attachment A to this Work Order.

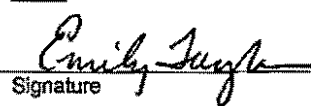
**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein.

**PAYMENT.** The estimated cost for these services are included in attachment C. URS charges shall be on a "time and materials" basis and shall be in accordance with the URS Schedule of Fees and Charges in effect at the time the Services are performed. Payment provisions and the URS current Schedule of Fees and Charges are attached to this Work Order as Attachment D.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

CLIENT  
  
Signature  
City Manager  
Typed Name/Title  
05-17-02  
Date of Signature

URS  
  
Signature  
Emily Taylor, P.E. / Vice President  
Typed Name/Title  
May 6, 2002  
Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER 001**

**ATTACHMENT A  
URS CORPORATION  
SCOPE OF SERVICES**

**PHASE I - CONCEPT REFINEMENT**

1. Update Powerpoint presentation and provide boards from design competition for the Mayor's presentation to the Town Council.
2. Local URS Team members attend Town Council meeting on May 14, 2002, 7:30 p.m.
3. All URS Team members attend design charette with Addison stakeholders.



# URS Corporation

Arapaho Road Bridge at Midway Road  
Phase I - Concept Refinement  
Work Order 001

## ATTACHMENT C

### Not to Exceed Amounts

URS Corporation (URS)	\$13,090.00
Brandston Partnership, Inc (BPI)	\$4,450.00
Corgan Associates, Inc. (CAI)	<u>\$2,260.00</u>
Total	\$19,800.00

### Estimated Fee Breakdown

	Description	Hours	Rate	Labor	Expenses*	Total
URS	Principal	16	\$ 185	\$ 2,960	\$ -	\$ 2,960
	Sr. Consultant	14	\$ 175	\$ 2,450	\$ 1,500	\$ 3,950
	Project Manager	20	\$ 142	\$ 2,840	\$ -	\$ 2,840
	Senior Engineer/Planner	16	\$ 140	\$ 2,240	\$ 1,100	\$ 3,340
	Subtotal	66		\$ 10,490	\$ 2,600	\$ 13,090
BPI	Partner	12	\$ 175	\$ 2,100	\$ 2,350	\$ 4,450
CAI	Principal	14	\$ 140	\$ 1,960	\$ 300	\$ 2,260
<b>TOTAL</b>						<b>\$ 19,800</b>

\* Expenses include travel expenses with the exception of CAI's expense to update the architectural boards.



**URS CORPORATION  
ATTACHMENT D  
2002 SCHEDULE OF FEES AND CHARGES  
TOWN OF ADDISON**

**Engineering/Environmental & Consulting Services**

The following describes the basis for compensation for services performed during the fiscal year 2002. This Schedule of Fees and Charges will be adjusted annually on November 1 of each subsequent year to reflect merit and economic salary increases, and changes in the expected level and mode of operations for the new year. The new Schedule of Fees and Charges will apply to existing and new assignments.

**PERSONNEL CHARGES**

The charge for all time required in the performance of the Scope of Services, including office, field and travel time, will be at the Unit Priced Hourly Rates set forth below for the labor classifications indicated.

<u>Labor Classification</u>	<u>Hourly Rate (\$)</u>
Technical Typist/Word Processor*	55
Senior Technician*	80
Assistant Project Engineer/Planner	78
Project Engineer/Planner	100
Senior Project Engineer/Planner	140
Project Manager	142
Senior Consulting Engineer	175
Principal Professional	185

Charges for contract personnel under URS supervision and using URS facilities will be made according to the hourly rate corresponding to their classification.

When staff are performing project fieldwork, a minimum daily charge of 4 hours will apply.

A maximum of eight (8) hours travel time per day will be charged for travel within the continental United States.

When URS staff appears as expert witnesses at court trials, arbitration hearings, mediation and depositions, their time will be charged at \$250.00 per hour.

Overtime (hours worked in excess of eight (8) hours per day) by exempt personnel will be charged at the above straight time hourly rate. Overtime by non-exempt personnel (classifications identified with an asterisk "\*" ) will be charged at 1.3 times the above hourly rate.

Special project accounting reporting and financial services, including submission of invoice support documentation, will be charged at the rate of a Technical Typist/Word Processor.

**OTHER PROJECT CHARGES**

Subcontracts and Equipment Rental

Other direct costs (excluding subconsultants) incurred by URS will be charged at cost plus 10%.

Communications

The cost of communications for office telephone, telex, facsimile, postage, and incidental copying costs will be charged at a flat rate of 2.5% of total gross labor charges.

Computer Generated Plots

There will be a charge of \$5.00 each for paper plot and \$15.00 each for mylar plot generated by the CADD and GIS systems.

Document Reproduction

In-house reproduction will be charged at \$.10 a page for black & white and \$1.50 a page for color for letter, legal, and 11 x 17 size copies. Other size document copying will be charged at \$2.75 a page.

Vehicles and Mileage

Field vehicles (pick-ups, vans, trucks, etc.) used on project assignments will be charged at \$50.00 per day. The mileage charge for personal autos will be the then current mileage rate established by the Internal Revenue Service.

Specialized Equipment

The use of specialized URS equipment will be the fixed rental rates set forth in the Schedule of URS Specialized Equipment Charges.

*This fee schedule contains confidential business information and is not to be copied or distributed for any purpose other than the use intended in this contract or proposal.*





# Facsimile

*Steve - for file -*

To:

JIM PIERCE

Firm:

TOWN OF ADDISON, PUBLIC WORKS

Facsimile:

972.450.2837

From:

CLIFF R HALL

Date:

5/6/02

Page 1 of :

3

*972-980-4961*

Subject:

ARAPAHO ROAD BRIDGE

Message:

ATTACHED IS THE INITIAL DRAFT OF THE PHASE I SCOPE.  
THE LEVEL OF EFFORT IS PROBABLY BEYOND  
WHAT YOU HAD ANTICIPATED. PLEASE REVIEW  
AND LET'S DISCUSS AT YOUR CONVENIENCE.

AS FOR REVISING THE DATE FOR THE DESIGN CHALETTE,  
PLEASE NOTE THAT SEVERAL TEAM MEMBERS, INCLUDING  
MYSELF, ~~WAS~~ ARE NOT AVAILABLE MAY 20 - 22.

cc:

URS/Dames & Moore  
Prestonwood Tower  
5151 Beltline Road, Suite 700  
Dallas, TX 75240  
Tel: 972.980.4961  
Fax: 972.991.7665

**CONFIDENTIALITY NOTICE**  
The information in this facsimile transmission is intended solely for the stated recipient of this transmission. If you have received this fax in error, please notify the sender immediately by telephone. If you are not the intended recipient, please be advised that dissemination, distribution, or copying of the information contained in this fax is strictly prohibited.

ARAPAHO ROAD BRIDGE AT MIDWAY ROAD

ATTACHMENT A  
URS CORPORATION  
SCOPE OF SERVICES

VOID

PHASE I - CONCEPT REFINEMENT

No

✓

- 1. Update Powerpoint presentation and boards for the Mayor's presentation to the Town Council.
- 2. Attend Town Council meeting on May 14, 2002, 7:30 p.m.
- 3. Prepare for and attend design charette on May 15, 2002 with Addison. Stakeholders
- 4. Refine the concept for one alternative (the Blue Bridge). Project Limits are approximately from Sta. 40+67 (start/end of west retaining wall) to Sta. 70+28 (start/end of east retaining wall).

X

A. Architectural Details

- 1. Refine and elaborate on architectural detailing for railings, thrust block, lighting integration and retaining walls.

X

B. Urban Design and Landscape Details

- 1. Resolve and integrate bicycle and pedestrian paths into the overall scheme of the bridge and its adjacencies. Create a plan with alternatives along the bridge from east to west that shows the general resolution of ped/bike ramp, sidewalks, parking, hardscape and plantings.
- 2. From the discussion of alternatives noted above, create the final overall plan for parking, plantings, hardscape, and ped/bike access to, over, under, and alongside the bridge.
- 3. Create up to 3 alternative ramp configurations to move bicyclists and pedestrians from grade to the bike/ped path that goes over the bridge and identify the implications of each scheme.
- 4. Once a preferred ramp alternative is selected, detail the dimensions, grade, rail, and other elements associated with the bridge and its attendant ramps.
- 5. Create two alternatives for the parking configuration and details. This includes parking placement and layout, access points, and an analysis of each scheme.
- 6. Develop up to 3 alternatives for railings, light fixtures, and other urban design elements that detail these elements as well as their placement within the overall project area.
- 7. Based on the parking schemes completed above and adjusted in final concept designs, create two renderings of the parking areas as well as the underside of the bridge complete with landscape and hardscape elements. These should include elements such as lighting that create a feeling of safety and security under the bridge.

8. Determine the final design of all urban design and landscape elements of the bridge and its accesses and create plans and appropriate sections to explain the design.
9. Determine the urban design treatment for Midway from Belt Line to the north of the bridge. This could include plantings, lights, rails, and other elements that connect the bridge to Belt Line.
10. Develop construction and design opinion of probable cost estimates for all elements of landscape, urban design, and hardscape detailed in the final drawings.

C. Lighting Concepts

1. Explore color-changing options
2. Develop lighting scheme(s) for underside of bridge
3. Develop preliminary mounting details for bridge mounted luminaries
4. In conjunction with the Urban Designer, develop lighting for parking areas and landscape
5. Develop concepts for roadway (functional) lighting
6. Prepare lighting fixture schedule including manufacturers names, catalog numbers and power allowances.
7. Prepare preliminary lighting layouts.

D. Engineering and Cost Estimates

1. Review engineering issues resulting from design charette
2. Review geotechnical boring log information for foundation size
3. Update cost estimate for bridge

Deliverables:

- Updated Powerpoint presentation.
  - Updated video – includes revising video to incorporate landscaping, parking and structure modifications as well as creating a view along Arapaho Road.
  - Updated architectural boards with three additional boards for details
  - Updated "nighttime" renderings and additional "nighttime" renderings for the underside of the bridge and color-changing options.
  - Preliminary lighting layouts and schedule
  - Updated urban design and landscaping boards
  - Preliminary urban plans and section details.
  - Construction and design cost estimates
5. Intermediate review of the refined concept with Addison Stakeholders (about June 11, 2002).
  6. Attend Town Council meeting (tentatively June 25, 2002).

March 7, 2002

Dear Committee Member,

First of all, I would like to express my appreciation on behalf of the Town of Addison. This is an exciting infrastructure project for the Town and I am pleased you have agreed to participate in our evaluation and recommendation process for the Bridge Competition. As you are all aware, the competition is scheduled for April 11<sup>th</sup> from 7:30am – 5:00pm at the Addison Conference Centre (see schedule below). I would also request that all committee members meet in the Board Room at 7:30 am to go over the upcoming days events. *There will be breakfast refreshments available.*

Just a very brief update on what events took place to get us to the point at which we are today. In February 2000, the Town of Addison conducted a bond election in which the town of Addison voters approved \$20.5 million to go toward the design and construction of the extension of Arapaho Road from Addison Road to Marsh Lane. A key and crucial element to the overall project is the design and construction of a bridge to cross over Midway Road.

In November of 2001, we initiated the process by requesting Statements of Qualifications from engineering and architectural firms. The Town received 12 proposals from a wide variety of firms with connections around the nation. These 12 proposals were evaluated by a selection committee and reduced to the three finalists for the competition (HNTB, URS-Griener and Freese & Nichols). The Town of Addison City Council, prior to Request for Qualifications, approved a \$10,000 stipend to be paid to each of the three finalists to assist in the costs associated with preparation of their proposed bridge designs.

The evaluation process will be conducted as follows:

- *Each firm will be given two hours to make their presentations and answer questions from the panel, with at least 30 minutes dedicated to question and answer.*
- *Panel will use evaluation criteria stated in information below, with each item having equal value to assist in ranking each firm.*
- *Each member will then individually grade each firm, in a similar manner, giving each item a grade from 1-10, with 10 being best.*
- *Each member based on the total score given will rank the firms in order of grade 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup>.*
- *All panel members will submit their rankings to establish initial order.*

- *Group will have open discussions about individual concerns and opinions.*
- *All panel members will review their initial rankings and re-submit for final order.*
- *Each firm will be given an overall grade based on rank submitted by each member. 1<sup>st</sup> place will be awarded one point, 2<sup>nd</sup> place will be awarded 2 points and 3<sup>rd</sup> place will be awarded 3 points. The firm with the fewest total points will be the competition winner.*

Please note that I have included a copy of each firm's original *Statement of Qualifications* submittal.

Thank you, and I look forward to seeing all of you on April 11<sup>th</sup>. Should you have any questions prior to April 11<sup>th</sup>, feel free to contact my office at 972-450-2871 and speak with me or the Assistant Director of Public Works, Jim Pierce.

Sincerely,

Michael E. Murphy/Director of Public Works

**Arapaho Road Bridge Pre-Competition Meeting  
Agenda  
February 14, 2002**

- I. Welcome and introductions: *Ron Whitehead, City Manager***
  
- II. Directions to Consultant: *Mike Murphy, Director of Public Works***
  - A. Announce tentative day and time of presentations**
    - 1. First Presentation 8:00am-10am**
    - 2. Second Presentation 10:30am-12: 30pm**
    - 3. Third Presentation 1:30pm-3: 30pm**
  
  - B. No more than two designs**
  
- III. Grading will be based on the following criteria**
  - A. Aesthetics – appearance day and night, should include lighting design plan**
  - B. Landscaping**
  - C. Acoustics (how will noise affect adjacent buildings)**
  - D. Vibrations (how will motion affect adjacent buildings)**
  - E. Estimated cost of construction of the bridge design**
  - F. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.)**
  - G. How does the bridge minimize obstruction to adjacent buildings from roadway**
  - H. Overall quality and creativity of presentation (vision, team plan / effort)**

## **Presentation Schedule:**

<u><i>Time (April 11<sup>th</sup>)</i></u>	<u><i>Firm</i></u>	<u><i>Conference Centre Location</i></u>
7:30am – 8:00am	Committee Members	Board Room
8:00am – 10:00am	URS Griener	Stone Cottage
10:30am – 12:30pm	Freese & Nichols	Board Room
12:30pm – 1:30pm	Lunch	Board Room
1:30pm – 3:30pm	HNTB	Stone Cottage
3:30pm – 5:00pm	Panel Discussion/Selection	Board Room

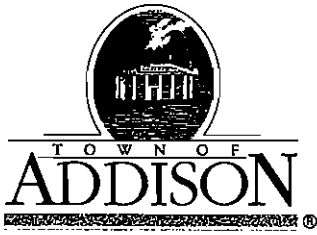


**EXAMPLE SCORE SHEET**

- 1. Aesthetics – appearance day and night, should include lighting design plan (1-10) 10 POINTS**
- 2. Landscaping (1-10) 7 POINTS**
- 3. Acoustics (how will noise affect adjacent buildings) (1-10) 5 POINTS**
- 4. Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS**
- 5. Estimated cost of construction of the bridge design (1-10) 6 POINTS**
- 6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 4 POINTS**
- 7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 10 POINTS**
- 8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 9 POINTS**

**TOTAL SCORE 59 POINTS**

COMMITTEE	1	2	3	4	5	6	7	TOTAL SCORE	
FIRM #1	3	1	3	2	1	3	3	16	#3
FIRM #2	2	2	2	1	2	1	2	12	#1
FIRM #3	1	3	1	3	3	2	1	14	#2



**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

12 March 2002

Mr. Bill Crepeau  
15101 Midway  
Addison, TX 75001

Dear Committee Member:

Please accept my apology for not including a list of the Arapaho Bridge Committee Members in the recent package which was sent to each Member.

The Committee Members are:

Art Lomenick  
Bill Crepeau  
Diane Mallory  
Scott Wheeler  
Ron Whitehead  
Chris Terry  
Mike Murphy

I look forward to working with you.

Very truly yours,

Mike Murphy, P.E.  
Director of Public Works

cc: Jim Pierce  
Steve Chutchian ✓  
Luke Jalbert

**ARAPAHO ROAD BRIDGE  
At MIDWAY ROAD**

**FACT SHEET**

**FEBRUARY 14, 2002**

- **Total length of bridge, including retaining walls and earthen fill areas is approximately 2,500 ft.**
- **Bridge length, from abutment to abutment is approximately 1,600 ft.**
- **Width of roadway at bridge section is 44 ft.**
- **Parking under bridge is a provision of this project.**
- **Lighting above and under bridge shall be included in design.**
- **Impact of bridge on visibility of adjacent commercial properties shall be considered in design.**
- **Elevated pedestrian crossing adjacent to roadway shall be included in bridge design.**
- **Design schedule is approximately 45 days (April 2, 2002).**
- **Drainage structures shall be considered in the design (double 10' x 7' box culverts).**

## Steve Chutchian

---

**From:** Michael Murphy  
**Sent:** Wednesday, February 06, 2002 2:32 PM  
**To:** Steve Chutchian  
**Cc:** Luke Jalbert; Jim Pierce; Sue Ellen Fairley; Chris Terry  
**Subject:** FW: BRIDGE SELECTION COMMITTEE - DRAFT

Steve,

Below is the list of People who will set on the Bridge design competition committee. *(if possible I would like to have the precompetition meeting next week)*

I want you and Luke to set up the meetings as we discussed. We need to check schedules and confirm everyone's availability approximately 60 days from the precompetition meeting. *Since Luke is out of Town use Sue Ellen to Assist.*

Also, once you have verified schedules we can set up a pre completion meeting. I want all of the meetings to be first class and have them at either the stone cottage or the town hall council chambers. preferably the Stone Cottage....Lets make it happen.

See me with any questions

Mike

Michael E. Murphy, P.E.  
Director of Public Works  
Town of Addison  
(972) 450-2878

-----Original Message-----

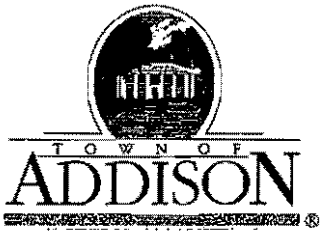
**From:** Chris Terry  
**Sent:** Tuesday, January 29, 2002 10:06 AM  
**To:** Michael Murphy  
**Subject:** BRIDGE SELECTION COMMITTEE - DRAFT

Mike,

Here is the composition of the committee as Ron and the Mayor discussed it. This is not absolutely final, but close. I will keep you posted as this is still in flux.

Committee Members:

Mayor Wheeler  
Councilmember Diane Mallory  
Ron Whitehead  
Art Lomoneck, developer  
Bill Crepeau, property owner along bridge ROW -Charter Fum. *I spoke with Bill Crepeau and he said he is 99% sure he will be the new owner.*  
Mike Murphy  
Chris Terry



**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

Mr. John Hunt  
GIS Manager  
North Central Texas Council of Governments  
616 Six Flags Drive  
P.O. Box 5888  
Arlington, TX 76005

Dear Mr. Hunt:

The Town of Addison has contracted with HNTB Corporation to provide engineering consulting services for the development of construction plans and documents for Arapaho Road from Surveyor Boulevard to Addison Road. In addition to this, HNTB has been shortlisted to compete in a bridge design competition located in the middle of the Arapaho Road project. HNTB has identified the NCTCOG GIS data as a source of base mapping information for a number of engineering tasks associated with this project. As a member of the NCTCOG, we are requesting that you release the GIS data and aerial photographs that are available to NCTCOG members to HNTB for use on this project. I have included the Contractor Licensing Agreement form and the Cooperative Purchase Instructions form. A representative of HNTB will be contacting you to request the files they need.

Thank you for your prompt attention to this matter.

Sincerely,

Steve Z. Chutchian, P.E.  
Assistant City Engineer  
Town of Addison

**COOPERATIVE PURCHASE INSTRUCTIONS**

**Commitments, Areas of Interest, and Products**

In some cases where Commitment Response Forms were submitted, the committed amount did not agree with the square miles indicated on the **enclosed map**. (1) If your figures do not match the information on your enclosed Commitment Response Form, (2) if you did not submit a Commitment Response Form, or (3) if your information does not agree with the area indicated on the enclosed map (see "Changes in Commitment..."), please complete the blank Commitment Response Form, and return it by the deadline.

If all your information is correct and there are no changes, please initial the copy of your original Commitment Response Form and return it by the deadline.

**Changes In Commitment Area of Interest and/or Products**

If your area of interest covers more or less than the area indicated on the enclosed map, please include your required boundaries as a shapefile or an ArcInfo export file when you return the enclosed forms. If you do not have a digital file, please draw the changes in red ink on the **enclosed map** and return to us. You may also enclose other paper maps showing your area of interest if you wish.

**File Formats**

Upon completion of the project, all files will be delivered on CD. Please specify the desired format:

**DIGITAL ORTHOPHOTOGRAPHS**

*(You may choose both formats if needed)*

- TIFF format
- Mr. SID (merged into a single file)

**DIGITAL CONTOURS**

*(Please specify only one format)*

- ArcView shapefiles
- ArcInfo cover
- AutoCAD DXF
- Microstation: DGN

**Payment**

Please indicate and enclose the required payment:

Agency Name: TOWN OF ADDISON

         Purchase Order #                                  *(NCTCOG members only. Private sector must pay with check.)*

         Check #                                 

Please direct any questions regarding this process to:

John Hunt  
Manager of GIS  
North Central Texas Council of Governments  
616 Six Flags Drive, Suite 200, Arlington, Texas 76011

Telephone: (817) 695-9163  
Fax: (817) 640-4228  
E-Mail: [jmhunt@dfwinfo.com](mailto:jmhunt@dfwinfo.com)

**CONTRACTOR LICENSING AGREEMENT**

**I. LICENSE AGREEMENT**

The following provisions are a license agreement with respect to orthos and/or 2' contours between:

HNTB Corporation and Town of Addison, TX  
Contractor's Name Entity Name

Unless otherwise agreed in writing, the NCTCOG data product will be used by the above stated authorized contractors only. A contractor shall be deemed authorized to use the data products by the Entity or NCTCOG if such use is incidental to a larger relationship between the contractor and the Entity, and is used for purposes no greater than reasonably needed to achieve the objectives of an actual project undertaken in connection with that relationship. The contractor must agree in writing to be bound by the provisions of this Agreement.

The contractor also agrees to return all NCTCOG data back to the Entity after completion of the project. This data may not be used for other projects or presentations unless written permission is obtained from either the Entity or NCTCOG.

Signing of this agreement states that the contractor understands the restrictions of use for the NCTCOG data, as well as the return of all said data upon completion of work for the Entity.

JERRY D. HOLDER, JR. [Signature] 02/18/02  
Printed Authorized Name Authorized Signature Date

**A CENTURY OF SERVICE**  
ENGINEERS • ENVIRONMENTAL SCIENTISTS • ARCHITECTS

**Trooper Smith, E.I.T.**  
Program Manager

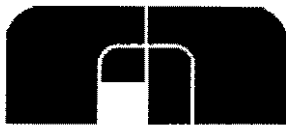


**FREESE • NICHOLS**

Freese and Nichols, Inc.

105 S. Tennessee • Suite 101 • McKinney, Texas 75069  
972-548-2400 • Fax 972-548-1055 • Email [tws@freese.com](mailto:tws@freese.com)





**FREESE • NICHOLS**

**LETTER OF TRANSMITTAL**

**TO:** Town of Addison  
16801 Westgrove Drive  
Addison, TX 75001

**DATE:** February 15, 2002  
**PROJECT:**  
**DESCR. :** Addison Bridge

**ATTN:** Steve Chutchin

We are sending the following items:       Attached       Under Separate Cover VIA \_\_\_\_\_

Plans                       Specifications               Shop Drawing  
    Reports                       Diskette(s)                   Other

COPIES	DESCRIPTION
1	Memo requesting additional information

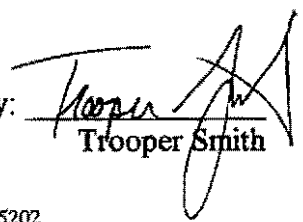
These are transmitted for your:

Use                               Review & Comment               Response  
 Approval                       Distribution to Parties  
 Record                           Other

**Remarks:**

None

Copies to:	
1	File
1	Jim Pierce, P.E., DEE

By:   
Trooper Smith



## MEMORANDUM

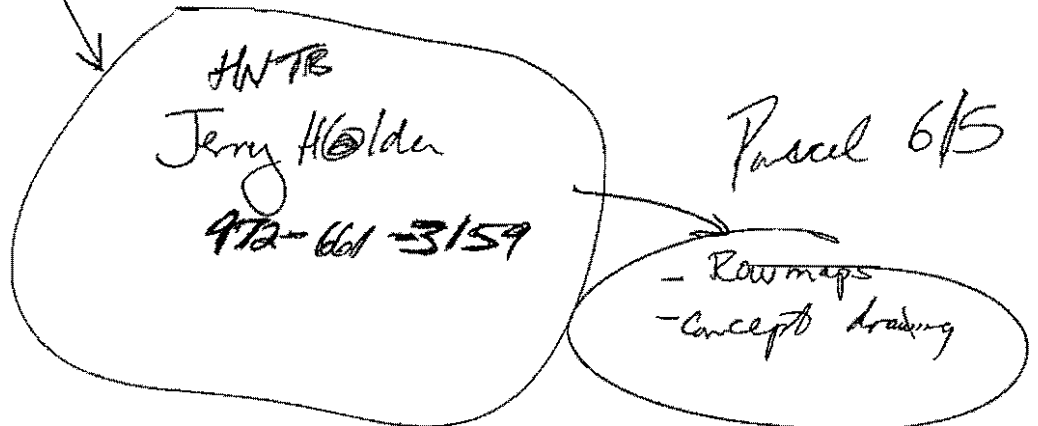
**TO:** Steve Chutchian  
**FROM:** Trooper Smith  
**SUBJECT:** Information Request for Arapaho Rd. Bridge at Midway Rd.  
**DATE:** February 15, 2002

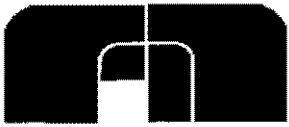
Freese and Nichols, Inc. requests additional information for the Arapaho Rd. Bridge Design. If possible, we prefer data in digital format.

1. Digital version of HNTB design
- ✓ 2. Soil borings in the area, if available ✓
- ✗ 3. Digital aerial maps/topo/planimetrics
- CA 4. Existing Future Land-Use Plan for the Town of Addison
- CA 5. Master Plan of Addison Circle *Transportation Plan*
- 6. Copy of Thoroughfare Plan for the Town of Addison
- ✗ 7. Copy of any Noise Studies conducted in this area
8. Copies of any other deliverables submitted to the Town of Addison by HNTB on this project (i.e. ROW maps, utility information, concept layouts, etc.) *→ culverts*
- ✓ CA 9. Any tax maps readily available from the Town of Addison. If none are available, we will obtain the necessary tax maps from Dallas County Central Appraisal District.
10. Copies of Utilities along Arapaho Rd. and Midway Rd. in this area.

We appreciate your effort to gather the requested information. Thank you.

Cc: Jim Pierce, File





**FREESE • NICHOLS**

**LETTER OF TRANSMITTAL**

**TO:** Town of Addison  
16801 Westgrove Drive  
Addison, TX 75001

**DATE:** February 15, 2002  
**PROJECT:**  
**DESCR. :** Addison Bridge

**ATTN:** Steve Chutchin

We are sending the following items:     Attached     Under Separate Cover VIA \_\_\_\_\_  
 Plans     Specifications     Shop Drawing  
 Reports     Diskette(s)     Other

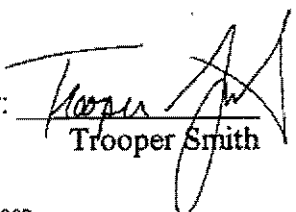
COPIES	DESCRIPTION
1	Memo requesting additional information

These are transmitted for your:  
 Use     Review & Comment     Response  
 Approval     Distribution to Parties  
 Record     Other

**Remarks:**

None

Copies to:	
1	File
1	Jim Pierce, P.E., DEE

By:   
Trooper Smith



## MEMORANDUM

---

**TO:** Steve Chutchian  
**FROM:** Trooper Smith  
**SUBJECT:** Information Request for Arapaho Rd. Bridge at Midway Rd.  
**DATE:** February 15, 2002

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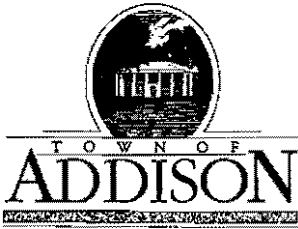
Freese and Nichols, Inc. requests additional information for the Arapaho Rd. Bridge Design. If possible, we prefer data in digital format.

1. Digital version of HNTB design
2. Soil borings in the area, if available
3. Digital aerial maps/topo/planimetrics
4. Existing Future Land-Use Plan for the Town of Addison
5. Master Plan of Addison Circle
6. Copy of Thoroughfare Plan for the Town of Addison
7. Copy of any Noise Studies conducted in this area
8. Copies of any other deliverables submitted to the Town of Addison by HNTB on this project (i.e. ROW maps, utility information, concept layouts, etc.)
9. Any tax maps readily available from the Town of Addison. If none are available, we will obtain the necessary tax maps from Dallas County Central Appraisal District.
10. Copies of Utilities along Arapaho Rd. and Midway Rd. in this area.

We appreciate your effort to gather the requested information. Thank you.

Cc: Jim Pierce, File

Contacts - URS - Dave Johnston  
F&N - Alan Greer  
HNTB - Mike Puston



**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

**Arapaho Road Bridge Pre-Competition Meeting  
Agenda  
February 14, 2002**

- ✓ **I. Welcome and opening comments: Ron Whitehead, City Manager**
- ✓ **II. Directions to Consultant: Mike Murphy, Director of Public Works**
  - ✓ **A. Announce Day and time of presentations - April 2, 2002**
    - ✓ **1. First Presentation 8:00am-10am (Stone Cottage)** URS
    - ✓ **2. Second Presentation 10:30am-12:30pm (Conference Centre Board Room)** F&N
    - ✓ **3. Third Presentation 1:30pm-3:30pm (Stone Cottage)** HNTB
  - ✓ **B. No more than 2 designs**
  - ✓ **C. Grading will be based on the following criteria**
    - 1. Aesthetics --day and night, should include lighting design/plan**

- 2. Landscaping**
- 3. Acoustics (how will noise affect adjacent buildings)**
- 4. Vibrations (how will motion affect adjacent buildings)**
- 5. Estimated cost of design**
- 6. Functionality (parking, pedestrian and bike users, safety, ADA etc.)**
- 7. How does the bridge minimize obstruction to adjacent buildings from roadway**
- 8. Team approach to design concept**

**III. Lottery drawing for presentation times**

**IV. Bridge technical information (see handout)**

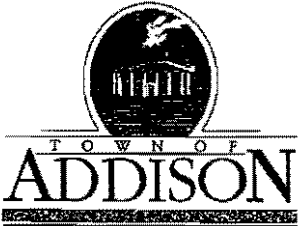
**V. Town of Addison contacts: Jim Pierce Asst. Director of Public Works 972-450-2879 or Steve Chutchian 972-450-2886.**

**ARAPAHO ROAD BRIDGE  
At MIDWAY ROAD**

**FACT SHEET**

**FEBRUARY 14, 2002**

- **Total length of bridge, including retaining walls and earthen fill areas is approximately 2,500 ft.**
- **Bridge length, from abutment to abutment is approximately 1,600 ft.**
- **Width of roadway at bridge section is 44 ft.**
- **Parking under bridge is a provision of this project.**
- **Lighting above and under bridge shall be included in design.**
- **Impact of bridge on visibility of adjacent commercial properties shall be considered in design.**
- **Elevated pedestrian crossing adjacent to roadway shall be included in bridge design.**
- **Design schedule is approximately 45 days (April 2, 2002).**
- **Drainage structures shall be considered in the design (double 10' x 7' box culverts).**



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Agenda  
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**ARAPAHO ROAD BRIDGE  
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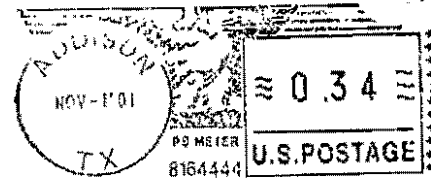
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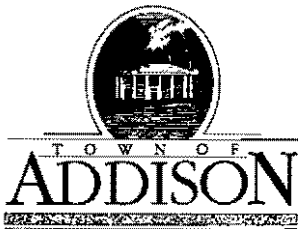
PUBLIC WORKS DEPARTMENT  
P.O. Box 9010  
Addison, Texas 75001-9010



**Return To Sender  
Not Kellogg Brown & Root**

Frank [redacted] gatti  
[redacted]  
Houston, TX [redacted]

Attached is a updated request for SOQ, and the evaluation criteria for the proposals. Please note the difference in dollar amount from \$7500 to \$10000, and the new # of firms to be used, now 3 instead of 2-4. Please disregard previous letter.



**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

## **REQUEST FOR STATEMENTS OF QUALIFICATIONS**

### **ARCHITECT/ENGINEERING SERVICES ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

#### **TOWN OF ADDISON**

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In order to accomplish this goal, The Town of Addison is undertaking a three-step architect/engineer selection process, to design the architectural and structural components of the bridge. The first step consists of a request for qualifications that is being sent to selected architecture and engineering firms. The submittals will be reviewed, and a short list of three A/E firms (finalists) will be selected to go to the second step. The finalists will enter a "design competition" and will be paid a stipend of \$10,000 to prepare a design concept for the bridge. The finalists will be asked to meet with the Town to receive vision and direction for the project from Town Management. Drawings, visual graphics, and/or a study model will describe the concept. The finalists will be asked to present their designs(s) for a selection committee made up of members of the governing body and staff. Lastly, the design competition winner will then prepare a proposal to complete the design, and a fee will be negotiated. The design contract will go to City Council for approval.

A mandatory pre-submittal meeting will be held at 3:00 p.m. November 13, 2001 at the Stone Cottage, 4901 Addison Circle Drive. Any firm not represented will not be eligible to submit a Statement of Qualifications.

The proposed bridge must be 4 lanes, and be able to accommodate pedestrian traffic. Midway road is 45' wide, back of curb to back of curb through the bridge section.

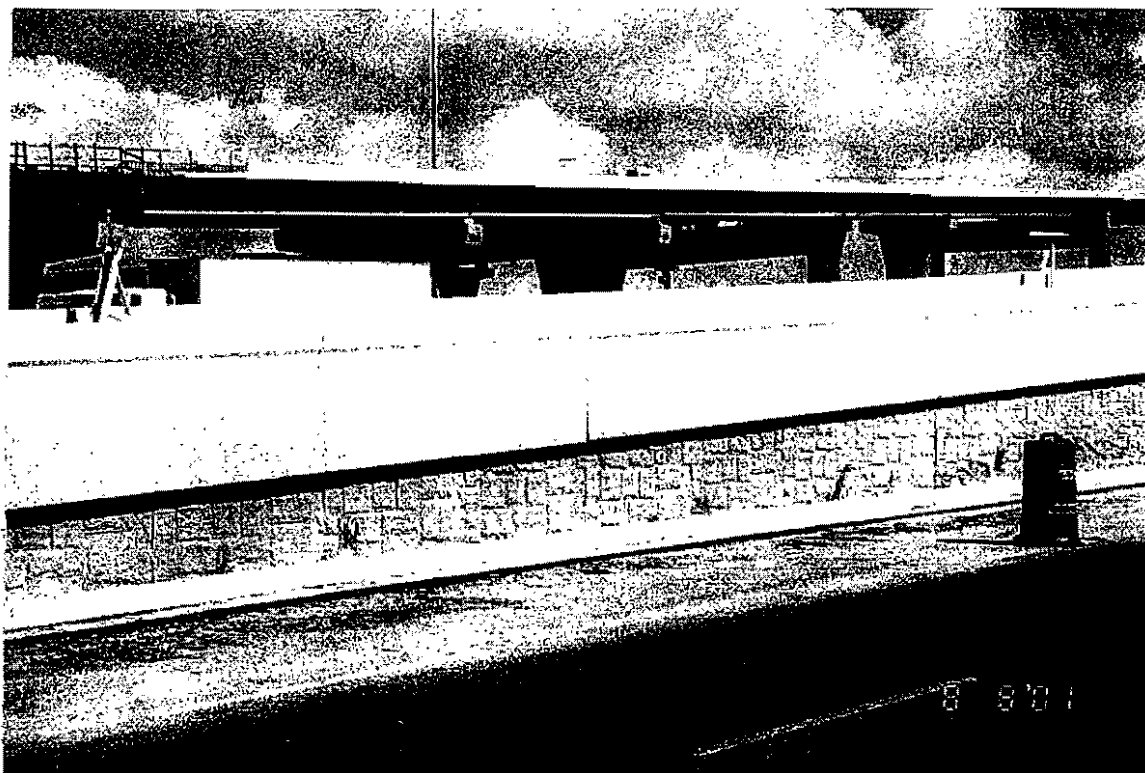
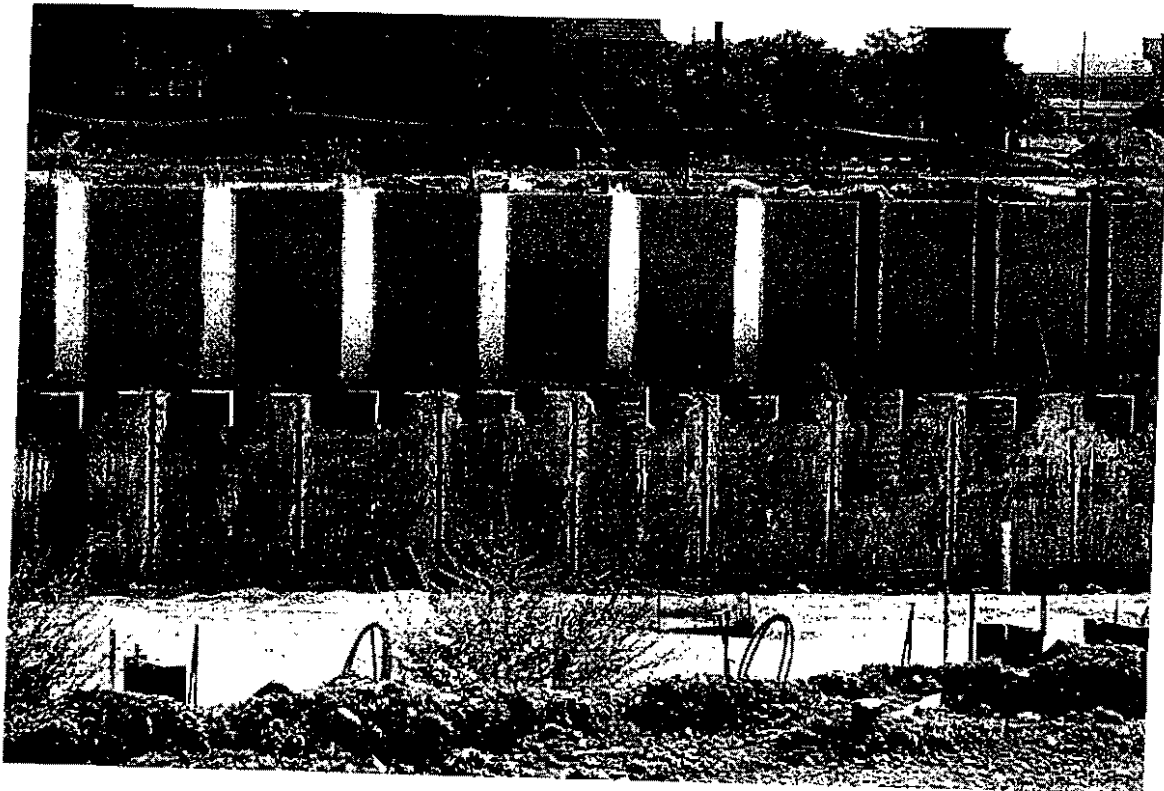
Copies of the preliminary plans for Arapaho road will be available at the pre-submittal meeting.

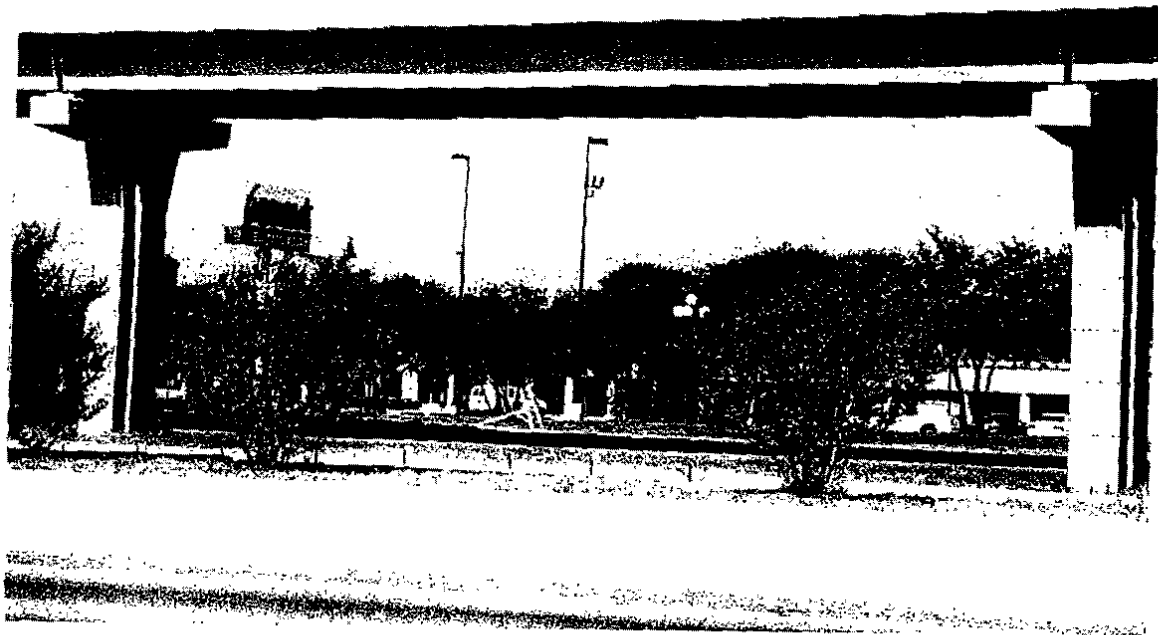
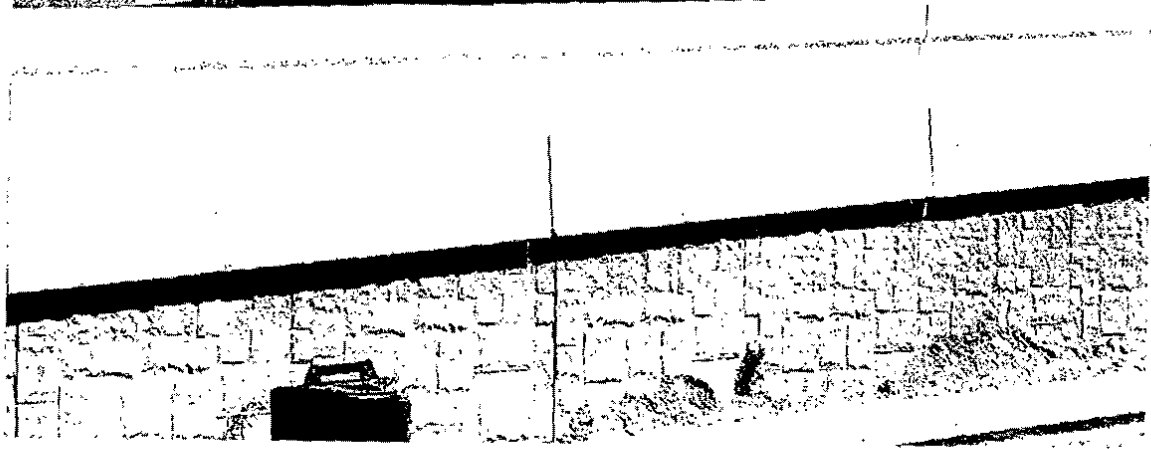
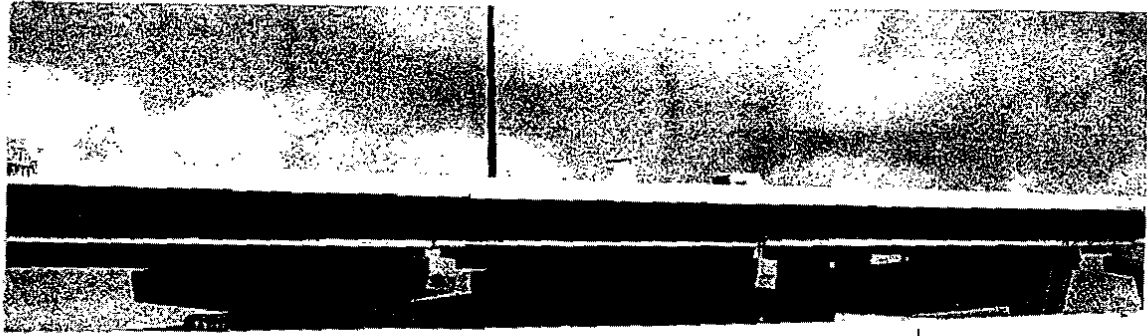
Addison will accept written Statements of Qualifications (SOQ) from Architecture/Engineering firms until November 26<sup>th</sup>, 2001. Four (4) copies of the SOQ shall be submitted. The SOQ should contain a maximum number of thirty (30) single sided pages on 8 ½" x 11" paper. The firm may also submit a power point presentation of past bridge design projects. The architecture/engineering firm should provide enough information to demonstrate the firm's ability to design the project. The SOQ shall designate the individuals who will be assigned to the project (Principal-in-charge, Project manager, Project Engineer, Project Architect etc.) with resumes for each individual. A list of similar projects in scope and size that the firm has recently completed in the last five (5) years shall be provided. A description for each project shall be provided along with project cost, completion date, names of proposed design team members involved in the project, name of the client, contact person, and phone number for contact person.

All written Statements of Qualifications and supporting material submitted shall be evaluated by the Selection Committee, which will be made up of Michael Murphy, P.E., Director of Public Works, James C. Pierce, P.E., Assistant Director of Public Works, Ron Whitehead, City Manager, and Bill Shipp, Assistant to the City Manager. The review of the SOQ's will be based on the selection criteria shown on the attached page. The SOQ should specifically address each criterion for evaluation.

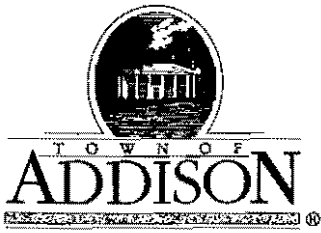
Interested consultants should direct questions and submit Statements of Qualifications to:

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Phone:	(972) 450-2886	Fax:	(972) 450-2837









**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

## **REQUEST FOR STATEMENTS OF QUALIFICATIONS**

### **ENGINEERING SERVICES ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

#### **TOWN OF ADDISON**

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The proposed bridge must be 4 lanes, and be able to accommodate pedestrian traffic. Midway road is 80' wide, back of curb to back of curb through the bridge section. Copies of the preliminary plans for Arapaho road will be available at the pre-submittal meeting.

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Phone:	(972) 450-2886	Fax:	(972) 450-2837

**Steve Chutchian**

---

**From:** Luke Jalbert  
**Sent:** Tuesday, November 20, 2001 1:14 PM  
**To:** Steve Chutchian; Jim Pierce; Michael Murphy  
**Subject:** A-road bridge cost....

I talked with Jerry Holder this morning about his estimate on the Arapaho road bridge. He told me how they came up with the original estimate and what they think of the budget now.

The original budget, done in 1998  
Had an 1160' bridge, 44' wide @ \$35 a sf  
which comes to 1.8 million

However, since then some things have changed, he just redid the estimate and comes to  
1600' bridge, 44' wide @ \$30 sf = 2.1 million

add 10' pedestrian walkway additional .5 million

Total cost of BASIC bridge today = 2.6 million.

1998 report 1.8 million  
1.8/\$35 = only 1160' long  
w/ inflation = 2.1  
now 1600\*44 they say \$30 s/f = 2.1 million  
ugly w/ pedestrian = 2.6 million

**REQUEST FOR STATEMENTS OF QUALIFICATIONS**

**RFQ 02-08**

**Architectural/Engineering Services**

**Arapaho Road Bridge**

The Town of Addison is accepting Statements of Qualifications from experienced Architectural/Engineering firms to provide services related to the design of Arapaho Road Bridge. A mandatory pre-submittal meeting will be held at 3:00pm, November 13, 2001 at the Stone Cottage, 4901 Addison Circle, Addison, TX 75001. Statements of Qualifications (SOQ) from firms will be accepted until 5:00 p.m. November 13, 2001 to Steven Chutchian, Assistant City Engineer, at 16801 Westgrove, Addison, TX 75001.

Specifications can be obtained at [www.demanstar.com](http://www.demanstar.com). If you are not a member of DemandStar.com and wish to obtain a free copy of the specifications, you may contact the Purchasing Division at 972-450-7091 or pick one up at 5350 Belt Line Road, Addison, TX 75240.

## **REQUEST FOR STATEMENTS OF QUALIFICATIONS**

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Phone:	(972) 450-2886	Fax:	(972) 450-2837

## Steve Chutchian

---

**From:** Ron Whitehead  
**Sent:** Thursday, October 04, 2001 11:16 AM  
**To:** Steve Chutchian  
**Subject:** RE: Arapaho Road Bridge-Engineering Firms

Steve, I would like to include HKS, RTKL and Mesa Design. Ron

-----Original Message-----

**From:** Steve Chutchian  
**Sent:** Tuesday, October 02, 2001 8:49 AM  
**To:** Ron Whitehead; Chris Terry; Carmen Moran  
**Cc:** Michael Murphy; Jim Pierce; Luke Jalbert; Slade Strickland  
**Subject:** Arapaho Road Bridge-Engineering Firms

A request for Statement of Qualifications (SOQ) from various firms has been prepared regarding the architectural and structural design of the Arapaho Road bridge over Midway Road. A pre-submittal meeting will be established prior to issuing the SOQ requests to the candidate firms. The tentative long list of firms for your review and consideration is shown below:

Halff Associates, Inc.  
Brown & Root  
Carter & Burgess, Inc.  
CH2M Hill  
Freese & Nichols  
HDR  
HOK  
Parsons Brinckerhoff  
HNTB

Upon receipt of the the SOQ's from the long list, the Town's review committee can begin the process of determining the firms that will participate in the concept design competition. Thanks.

Steve Chutchian  
Assistant City Engineer

---

Item #R3 - Presentation of results of the 2001 Addison Citizen Survey.

---

Item #R4 - Consideration of an Ordinance approving a meritorious exception to Ordinance No. 096-022 to allow for specific sign standards for attached tenant signs, located at 5100 Belt Line Road, Suite 840 on application from Dunhill Property Management.

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Item #R5 - Consideration of an Ordinance approving a meritorious exception to Chapter 62, Signs, Sections 62-163 Area, located at 4204 Lindbergh Drive, on application from Office Furniture Team.

---

Item #R6 - Consideration of a Resolution authorizing the expenditure of funds in an amount not to exceed \$5,000.00 for the reception and unveiling of the Town's Pegasus in the Galleria Mall.

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Item #R7 - Consideration of an approval of expenditure of funds for a stipend of \$10,000.00 each to three Architect/Engineering Firms for a "Design Competition" to prepare design concepts for the Arapaho Road/Midway Road Bridge.

---

Item #R8 - Consideration of a Resolution approving a final plan showing the property encompassed in Addison's Arts and Events District.

---

Item #R9 - Presentation on options for amendments to the Sign Ordinance.

---

### **EXECUTIVE SESSION**

---

Item #ES-1 - Pursuant to Section 551.071 of the Texas Government Code for closed session of the City Council, presentation and discussion of the possible purchase from Ms. Anne Cavin of 10,000 square feet of property located at 4831 Broadway Street in conjunction with the Addison Arts and Events District.

---



**URS**

*Steve  
interesting for file & later  
info Facsimile reference*

*Arapaho/midway  
Bridge*

To: Jim Pierce  
Firm: Town of Addison  
Facsimile: \_\_\_\_\_  
From: D. Johnston  
Date: 10-19-01  
Page 1 of: 9

Subject: EXPRESSION OF INTEREST FOR WOODROW WILSON BRIDGE

Message: hope this information is helpful

cc: \_\_\_\_\_

URS Corporation  
3010 LBJ Freeway, Suite 1320  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951  
www.urscorp.com

**CONFIDENTIALITY NOTICE**  
The information in this facsimile transmission is intended solely for the stated recipient of this transmission. If you have received this fax in error, please notify the sender immediately by telephone. If you are not the intended recipient, please be advised that dissemination, distribution, or copying of the information contained in this fax is strictly prohibited.

**MARYLAND DEPARTMENT OF TRANSPORTATION**

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**NOTICE TO ARCHITECTS AND ENGINEERS**

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**REQUEST FOR EXPRESSIONS OF INTEREST**

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**WOODROW WILSON MEMORIAL BRIDGE REPLACEMENT**

**A. INTRODUCTION**

The Woodrow Wilson Memorial Bridge replacement and the I-95/I-495 approach roadway and interchange projects associated therewith are being pursued by the Maryland Department of Transportation in partnership with the Virginia Department of Transportation, the District of Columbia Department of Public Works and the Federal Highway Administration (the sponsoring agencies).

For the Woodrow Wilson Memorial Bridge replacement project, the Secretary of the Maryland Department of Transportation has certified to the Transportation Professional Services Selection Board (TPSSB) the need to utilize the services of architects or engineers.

Final engineering design of the bridge replacement is expected to be programmed in the Maryland Department of Transportation Consolidated Transportation Program. The project will be fully funded for design using 100 percent federal funds. It is expected that funding for construction of the replacement bridge will be programmed within the next three years. **All prospective consultants are hereby notified that if 100 percent federal funds do not become available, this design consultant agreement could be terminated.**

To be considered for selection for this project, interested consulting engineering firms must submit their qualifications in a specified format in an Expression of Interest.

## B. DESCRIPTION OF THE PROJECT

The replacement bridge and the adjacent approach roadways and interchanges have been the subject of an extensive project planning study which included numerous opportunities for public involvement. A Final Environmental Impact Statement (FEIS) has been prepared and approved on September 5, 1997. A Record of Decision (ROD) was issued by FHWA on November 25, 1997. A copy of the ROD is included as Attachment 3.

The requirements and commitments described in the FEIS and ROD must be adhered to throughout the development of the design and during construction.

Attachment 3 contains a full description of Selected Alternative 4A, which resulted from the planning study. The information below summarizes some of the key points contained in Attachment 3, as they particularly relate to this notice.

- The replacement bridge is to be approximately 6300 ft. long. It will extend from Rosalie Island on the Maryland shore to a point east of Washington Street in Alexandria, Virginia. The replacement bridge is to be located just downstream of the existing bridge.
- The replacement bridge will have a movable span. The navigational channel will be at least 175 ft. wide centered along the existing navigational channel. The movable span shall provide a minimum of 70 feet of vertical clearance above mean high water in the closed position and at least 135 feet of vertical clearance above mean high water over the entire 175 ft. wide navigational channel in the open position. A major challenge in this project will be to incorporate a durable and reliable movable span into the overall structure in a manner which is structurally efficient, aesthetically pleasing, and logical and consistent with the approach spans. The type of movable span to be used has not been determined, except that a swing span type is generally considered to be undesirable.
- The replacement bridge will be designed to carry twelve lanes of traffic in an express/local configuration, plus shoulders and a pedestrian/bike way facility. The proposed typical section is shown in Attachment 3.
- The appearance and aesthetics of the replacement bridge and the visual impact on the adjacent communities, as well as up-river and down-river, are items of major concern.
- The arrangement of spans across the river and, in particular, over land on the ends of the bridge are extremely important.

- This project also includes the design of a bridge/deck structure to span over I-95/495 connecting the north and south ends of Rosalie Island in Maryland. This structure will facilitate use of Rosalie Island and Queen Anne's Park as a public recreational area and will serve as a gateway entrance to the State of Maryland. Its design must be both aesthetic and functional. The structure type and detailing must be closely coordinated with the design of the bridge replacement structure to provide a consistent theme and visual appearance.

- The existing bridge is to be completely removed. The existing bridge shall not be removed and must remain open to six lanes of traffic until such time that at least six lanes of traffic can be transferred to the new bridge and approach roadways.

- Six lanes of traffic on I-95 shall be maintained at all times during construction. Also, all existing traffic movements in the adjacent interchanges shall be maintained at all times. Constructability, construction sequencing, and maintenance of traffic will be important considerations in the development of this project.

- All known geotechnical and subfoundation conditions are described in a forthcoming report entitled "Synthesis Report - Woodrow Wilson Bridge Improvements Geotechnical Feasibility Study" This report will be made available to all firms selected for the Reduced Candidate List.

- Specific design criteria:

- Structure: AASHTO Standard Specifications for Highway Bridges, Sixteenth Edition, including all interim specifications. Load Factor Design shall be utilized. Design loading shall be HS-25. The bridge shall also be designed to accommodate future transit loadings. See Attachment 2 for details.

- Movable Span: AASHTO Standard Specifications for Movable Highway Bridges - 1988 Edition. Open grid decking shall not be used. A full depth, reinforced concrete deck is preferred. A significant goal of this project is to produce a movable span structure which is durable, reliable and easily maintainable. Emphasis should be on proven and reliable systems which have a high degree of redundancy and which include fail-safe features.

- Roadway: AASHTO Policy on Geometric Design of Highways and Streets. Design speed shall be 70 miles per hour.
- Ship Impact: AASHTO Guide Specifications and Commentary for Vessel Collision Design of Highway Bridges, 1991 Edition. Design loadings to be used are described in the report cited above, entitled "Synthesis Report - Woodrow Wilson Bridge Improvements Geotechnical Feasibility Study."
- All pertinent Maryland SHA and Virginia DOT design standards, policies, practices, criteria, etc. shall be followed as far as practicable. In the event these documents are found to be in conflict, resolutions will be determined on a case-by-case basis as they arise.
- For purposes of this selection process, all materials shall be developed and submitted using English units. Following the selection process, the sponsoring agencies may require that the contract documents be developed and submitted using metric units. This decision will be made following the selection of the winning firm.

A Memorandum of Agreement (MOA), included in Attachment 3, has been signed among the sponsoring agencies, National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), and the State Historic Preservation Officers (SHPO) of Maryland, Virginia and the District of Columbia regarding the Woodrow Wilson Bridge Project. The following items concerning the project design and review are contained in the MOA. Prospective consultants should be aware of these items and firms selected for the Reduced Candidate List will be expected to address and incorporate these items in their submittals. These items will be considered in the evaluation of the entries and the selected firm will be expected to abide by the requirements of the MOA throughout the design development process.

The following passage (*in italics*) is quoted directly from the MOA (see Attachment 3):

*"Design Goals:*

1. *The Bridge (Potomac River Crossing) shall be a structure designed with high aesthetic values, deriving its form in relation to the monumental core of Washington, D.C., and shall be an asset to the Nation's capital and the surrounding region.*

2. *The concepts for the bridge shall be based on arches in the tradition of notable Potomac River bridges (e.g., Key Bridge, Memorial Bridge).*
3. *The bridge design shall employ span lengths which minimize the number of piers occurring in the viewshed of the Alexandria Historic District and other historic properties. Every effort shall be made to minimize the footprint of the project without adversely affecting safety and operations.*
4. *The bridge design shall also include pier placement which maintains the park use areas in Jones Point Park and Rosalie Island Park, preserves views southward along Royal, Fairfax, and Lee Streets, and avoids terrestrial and underwater archeological areas to the maximum extent possible.*
5. *The bridge design should encourage the use of lands under the bridge in Jones Point Park. For example, the structure could approach this goal by introducing and/or reflecting light into the area under the bridge.*
6. *The bridge design should preserve or enhance views along the Potomac River toward the National Capital and Alexandria Historic District.*
7. *The design of the bridge and other project elements shall take into account the City of Alexandria's Design Guidelines of the Old and Alexandria Historic District and the Parker-Gray District (1993). The bridge design shall also respect the distinguishing historic characteristics of the Alexandria Historic District, as defined in the report prepared under Section I of this MOA.*
8. *The bridge design shall incorporate features appropriate to its status as a memorial to President Woodrow Wilson.*
9. *All practicable measures shall be taken to minimize the construction period of the Project.*
10. *Construction impacts to historic and archeological resources shall be avoided or minimized to the extent possible. If possible, construction-related traffic in the City of Alexandria will be routed away from residential areas via South Street to minimize construction-related traffic through the residential areas north of the Capital Beltway.*
11. *The design of the Bridge and other Project elements shall take into account the plan for the Mount Vernon Memorial Highway, the NPS General Management Plan for the facility, and the agreement between the NPS and the City of Alexandria for the management of Jones Point Park and the resources therein by the City, the agreement with the Daughters of the American Revolution for management of Jones Point Lighthouse, and effects on archaeological resources.*

12. *The project shall be designed to avoid all temporary and permanent impacts to the Freedmen's (Contraband) Cemetery.*

*Design Review Coordination:*

1. *A Design Review Working Group, consisting of one representative from the NPS, the ACHP, the District of Columbia SHPO, the Maryland SHPO, the Virginia SHPO, the Maryland National Capital Park and Planning Commission (MNCPPC), the Prince George's County Government, and the City of Alexandria shall be established prior to the initiation of the detailed design phase of the project to provide comments to ensure that the project design meets the stipulations outlined in the MOA.*

2. *The FHWA, and as appropriate, the DCDPW, the MSHA, the VDOT and the Project design consultants shall meet with the Design Review Working Group prior to beginning the preliminary design phase to review the general design goals for the project and specific treatment measures for adverse effects to historic resources. Subsequently, this Working Group will convene to review pertinent plans and specifications at the completion of preliminary design (30 percent), intermediate design (65 percent) and pre-final design (90/95 percent). This Working Group will be informed by the findings of the Historic Resources Identification and Evaluation Report and measures to minimize effects to historic resources will be incorporated into treatment plans, as appropriate. The FHWA will provide one set of plans and specifications to each member of the working group fifteen calendar days prior to each milestone review meeting. Copies of these plans will also be available for review at the Woodrow Wilson Bridge Project Office in Alexandria, Virginia. The FHWA shall announce their availability to all parties to this Agreement.*

3. *The Design Review Working Group shall provide one set of written comments to the FHWA within 45 calendar days of receiving the design plans and specification for each major milestone. Review comments from the working group will be incorporated into the design of specific project elements to the maximum extent possible. Individual representatives in the working group may submit separate review comments and the FHWA may consider such comments in addition to the consensus comments of the working group.*

4. *The FHWA shall continue consultations with the Design Review Working Group throughout the detailed design phase as necessary to address review comments and other elements of project design such as materials, finish, lighting, etc."*

NOTE: Potential consultants should be aware that the involvement of the Design Review Working Group during the design development will be in addition to the normal project review process used by the sponsoring agencies. The review comments from the Design Review Working Group shall be incorporated with the review comments provided by the sponsoring agencies.

### C. DESCRIPTION OF THE SELECTION PROCESS

The selection process will consist of the following general steps:

- Expressions of interest will be solicited from interested, qualified firms. The expressions of interest must contain required information as described herein. A selection committee composed of members from the sponsoring agencies will review and evaluate the expressions of interest. Based on qualifications, key staff experience, and similar project experience, a reduced candidate list (RCL) of three to five firms will be selected.
- A pre-proposal conference will be held with the firms on the reduced candidate list to discuss the remaining process and to answer questions.
- The firms will prepare and submit technical proposals and preliminary design plans for a proposed bridge concept which in their view best meets the conditions, requirements and design goals for the project. The materials to be submitted are generally described herein and will be more fully discussed in detail following the selection of the reduced candidate list and at the pre-proposal conference. The required information is to be submitted anonymously. A lump sum contract for a fixed fee in the amount of \$100,000 will be prepared for each of the firms selected for the reduced candidate list. This fee will be paid to each of the RCL firms who successfully present an acceptable submission by the required date.
- A Selection Panel will review and evaluate the submittals. The general makeup of the Selection Panel will be as follows:
  - representatives of the sponsoring agencies;
  - selected professionals from the ranks of bridge engineering, architecture, urban design, etc.;
  - community/agency representatives.

The exact make-up of the Selection Panel has not yet been finalized.

- The submissions will be reviewed by several Advisory Committees who will advise the Selection Panel regarding the design, constructability, cost and environmental sensitivity of the respective submittals. Four different Advisory



Committees are envisioned: 1) a Technical Advisory Committee, who will advise the Selection Panel on the technical feasibility and design merits of the submittals; 2) a Constructability Advisory Committee, who will advise the Selection Panel on the constructability aspects of the submittals and who will independently verify the construction cost estimates; 3) a Historic Advisory Committee, consisting of members comprising the Design Review Working Group as described in the MOA, who will advise the Selection Panel on the compliance of the submittals with the design goals stated in the MOA; and 4) a Citizen's Advisory Committee, who will advise the Selection Panel as to the relative merits of the submittals from the public viewpoint.

The Advisory Committees will prepare a brief report on each submission and will make a presentation to the Selection Panel when they meet to select the winning entry. The Advisory Committees will not rank the submittals, but will point out the advantages and disadvantages of each submittal.

The Advisory Committees will be made up of appropriate persons in each area and will include representatives from the General Engineering Consultant (GEC), supplemented as necessary with staff from the sponsoring agencies and others as required. The exact makeup of the Advisory Committees has not yet been finalized.

- The Selection Panel will meet to review, evaluate, deliberate and select the submission which best meets the requirements of the project. The committee will utilize the submitted materials, the advice of the Advisory Committees, and their own judgment based on their discussions and deliberations to select the winning entry.
- The firm submitting the selected entry will be asked to prepare a price proposal in accordance with State of Maryland procedures. If negotiations with the firm are timely and successful, a contract may be awarded to the firm.

## Steve Chutchian

---

**From:** Ron Lee  
**Sent:** Monday, October 22, 2001 12:18 PM  
**To:** Steve Chutchian  
**Cc:** Slade Strickland  
**Subject:** RE: Morris Rd. Change-orders

Jim Bowman is going to send over a written quote for the cabinet by this afternoon. As soon as I get this, I will bring it down to you. I will also discuss it with Chris Terry; I have a meeting with him at 2:00. Hopefully Bowman's quote will be here by then.

The (3) trees are to replace ones we have been holding here at the Service Center for the past year. One has died and (2) have such large portions that have died that they no longer are suitable specimens.

*Ron Lee  
Town of Addison  
Parks Operations Manager*

-----Original Message-----

**From:** Steve Chutchian  
**Sent:** Monday, October 22, 2001 7:54 AM  
**To:** Ron Lee  
**Subject:** RE: Morris Rd. Change-orders

Ron - Please give me a call this morning. I read a response from Dave Wilde also.

Steve Chutchian

-----Original Message-----

**From:** Ron Lee  
**Sent:** Friday, October 19, 2001 10:01 AM  
**To:** Steve Chutchian  
**Cc:** Dave Wilde; Slade Strickland  
**Subject:** Morris Rd. Change-orders

Steve, need to get with you first thing Monday morning to go over some changes that our dept. would like to implement on the project:

- 1) Add (3) more Live Oak trees as three of the ones we were holding for the past year have died
- 2) Install an electrical cabinet for the lighting controls instead of using the unistrut spelled out on the plans

*Ron Lee  
Town of Addison  
Parks Operations Manager*

**Steve Chutchian**

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**To:** Ron Whitehead; Chris Terry; Carmen Moran  
**Cc:** Michael Murphy; Jim Pierce; Luke Jalbert; Slade Strickland  
**Subject:** Arapaho Road Bridge-Engineering Firms

A request for Statement of Qualifications (SOQ) from various firms has been prepared regarding the architectural and structural design of the Arapaho Road bridge over Midway Road. A pre-submittal meeting will be established prior to issuing the SOQ requests to the candidate firms. The tentative long list of firms for your review and consideration is shown below:

Half Associates, Inc.  
Brown & Root  
Carter & Burgess, Inc.  
CH2M Hill  
Freese & Nichols  
HDR  
HOK  
Parsons Brinckerhoff  
HNTB

Upon receipt of the the SOQ's from the long list, the Town's review committee can begin the process of determining the firms that will participate in the concept design competition. Thanks.

Steve Chutchian  
Assistant City Engineer

# **REQUEST FOR STATEMENTS OF QUALIFICATIONS**

## **ENGINEERING SERVICES ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

### **TOWN OF ADDISON**

The Town of Addison is embarking on an exciting project to construct the portion of Arapaho Road, from Surveyor Blvd. to Addison Rd. Included in this significant roadway improvement to our community is a unique bridge section over Midway Road. This feature will serve as a gateway to The Town of Addison and its renowned amenities.

In order to accomplish this goal, The Town of Addison is undertaking an architect/engineer selection process, to design the architectural and structural components of the bridge. A Request for Qualifications is being sent to certain Architecture/Engineering firms, and after review of the submittals, a short list of three to four Architecture/Engineering firms will be made. These finalists will be paid a stipend of \$7500 to prepare a design concept for the space. The selection committee for implementation will select one concept. Drawings and a study model will describe the concept. Teams must be comprised of both architects and structural engineers.

A mandatory pre-submittal meeting will be held October 9, 2001 at 3:30 p.m. This meeting will be held at our Service Center, at 16801 Westgrove Drive. Any firm not represented will not be eligible to submit a Statement of Qualifications.

The proposed bridge must be 4 lanes, and be able to accommodate pedestrian traffic. Midway road is 80' wide, back of curb to back of curb through the bridge section. Copies of the preliminary plans for Arapahoe road will be available at the pre-submittal meeting.

Addison will accept written Statements of Qualifications (SOQ) from engineering consultants until 5:00 p.m., November 2, 2001. Four (4) copies of the SOQ shall be submitted. The SOQ should contain a maximum number of thirty (30) single sided pages on 8 1/2" x 11" paper. The firm should also submit a power point presentation of past bridge design projects. The engineering firm should provide enough information to demonstrate the firm's ability to design the project. The SOQ shall designate the individuals who will be assigned to the project (Principal-in-charge, Project manager, Project Engineer, etc.) with resumes for each individual. A list of similar projects in scope and size that the firm has recently completed in the last five (5) years shall be provided. For each project a description shall be provided along with project cost, completion date, names of proposed design team members involved in the project, name of the client, contact person, and phone number for contact person.

All written Statements of Qualifications submitted shall be evaluated by the Selection Committee, which will be made up of Michael Murphy, P.E., Director of Public Works, James C. Pierce, P.E., Assistant Director of Public Works, Steven Z. Chutchian, P.E., Assistant City Engineer, and Luke Jalbert, E.I.T., Project Manager. The review of the SOQ's will be based on the selection criteria shown on the attached page. The SOQ should specifically address each criterion for evaluation. The top three or four ranking firms will be asked to meet with the Town and make oral presentations. The firm the Town deems most qualified will then present a proposal to perform the work and a fee will be negotiated. The design contract will go to the City Council for approval.

Interested consultants should direct questions and submit Statements of Qualifications to:

Mailing:	Steven Z. Chutchian, P.E. Assistant City Engineer P.O. Box 9010 Addison, Texas 75001-9010	Street:	16801 Westgrove Addison, Texas
Phone:	(972) 450-2886	Fax:	(972) 450-2837

BRIDGE  
CANDIDATES

Company	Website	Architects	Bridges	
Albert Halff	<a href="http://www.Halff.com">www.Halff.com</a>	X	X	
Brown and Root	Frank Abugatti	x	x	
Carter-Burgess	<a href="http://www.carter-burgess.com">www.carter-burgess.com</a>	X	X	no bridge or architecture
CH2M Hill	<a href="http://www.ch2m.com">www.ch2m.com</a>	X	X	
Freese&Nichols	<a href="http://www.freese.com">www.freese.com</a>	X	x	
HDR	<a href="http://www.hdrinc.com">www.hdrinc.com</a>	X	X	not that many unusual bri
HNTB	<a href="http://www.hntb.com">www.hntb.com</a>	X	X	weak bridge section
HOK	<a href="http://www.hok.com">www.hok.com</a>	X	X	incredible incredible archi
Parsons Brinckerhoff	<a href="http://www.pbworld.com">www.pbworld.com</a>	X	X	
<del>Bridgefarmer &amp; Assoc</del>	<del><a href="http://www.bridgefarmer.com">www.bridgefarmer.com</a></del>		X	
<del>Chiang Patel &amp; Yerby</del>	<del><a href="http://www.cpyi.com">www.cpyi.com</a></del>		X	
<del>Kimley-Horn</del>	<del><a href="http://www.kimley-horn.com">www.kimley-horn.com</a></del>		X	
<del>PBSJ</del>	<del><a href="http://www.pbs&amp;j.com">www.pbs&amp;j.com</a></del>		X	
<del>Turner Collie Braden</del>	<del><a href="http://www.tcandb.com">www.tcandb.com</a></del>		X	
<del>Huitt-Zollars</del>	<del><a href="http://www.huitt-zollars.com">www.huitt-zollars.com</a></del>		X	

**Steve Chutchian**

---

**From:** Luke Jalbert  
**Sent:** Thursday, September 27, 2001 3:16 PM  
**To:** Steve Chutchian; Jim Pierce; Michael Murphy  
**Subject:** questions for Arapahoe road bridge pre-submittal meeting

Here are some questions I was thinking we need to have answers for before we meet with the firms, please add any that you have to this list so we can make sure we have all our bases covered before the meeting.

1. What kind of budget are they expected to work within?
2. What kind of yearly maintenance budget will be available, should we have this as a design criteria?
3. how much are we going to let them play with the alignment (vertical) and the limits of the bridge?
4. how much parking must we provide those business owners under the bridge?
5. What kind of timeframe, both design and construction, are we talking about?

attached is also the RFQ I have so far, I have questions about anything in RED.

# Arapaho Bridge

Meeting with R. Whitehead,

9-18-01

Issues:

1) Parking Under

2) Pedestrian Over

3) RR Over or Under

Steve -  
Set up a

4) Design =

a) make a Ste.

"Bridge" file  
Jim

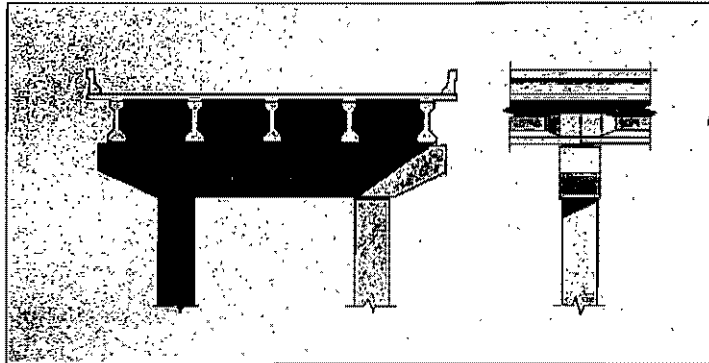
or  
b) a "non Bridge" -

5) Send out RFO ~~for~~ to qualify firms  
for a "design competition"

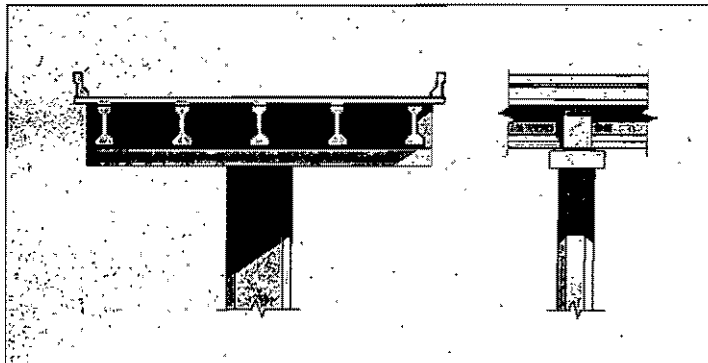
Select 3 or 4 firms to develop  
designs for the bridge from an  
artistic/architectural viewpoint  
(must be constructable) to fit into the  
surrounding and with some  
limited deviation from the town.  
Consider what changes may occur  
in the area in the future due  
to the road.



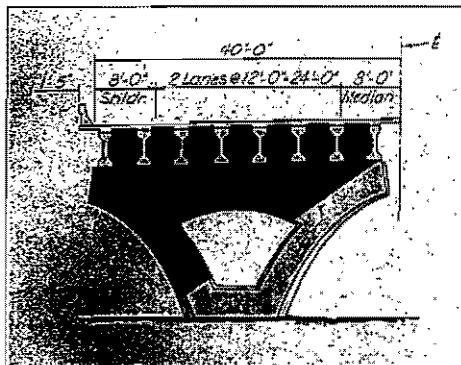
# CONCRETE TYPE IV I-BEAM



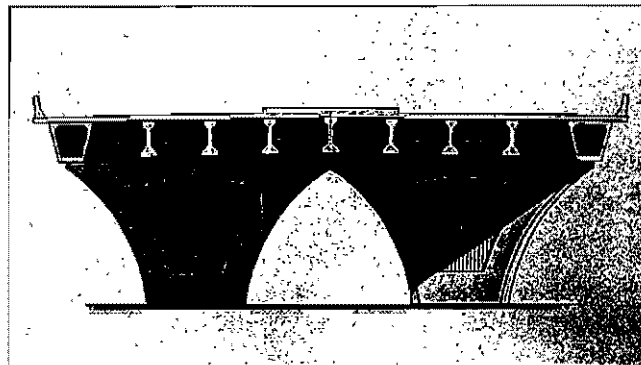
Typical 2-Column Pier



Pier with Inverted T-Cap



Flared Pier Concept



Section with Concrete Box Fascia Girder

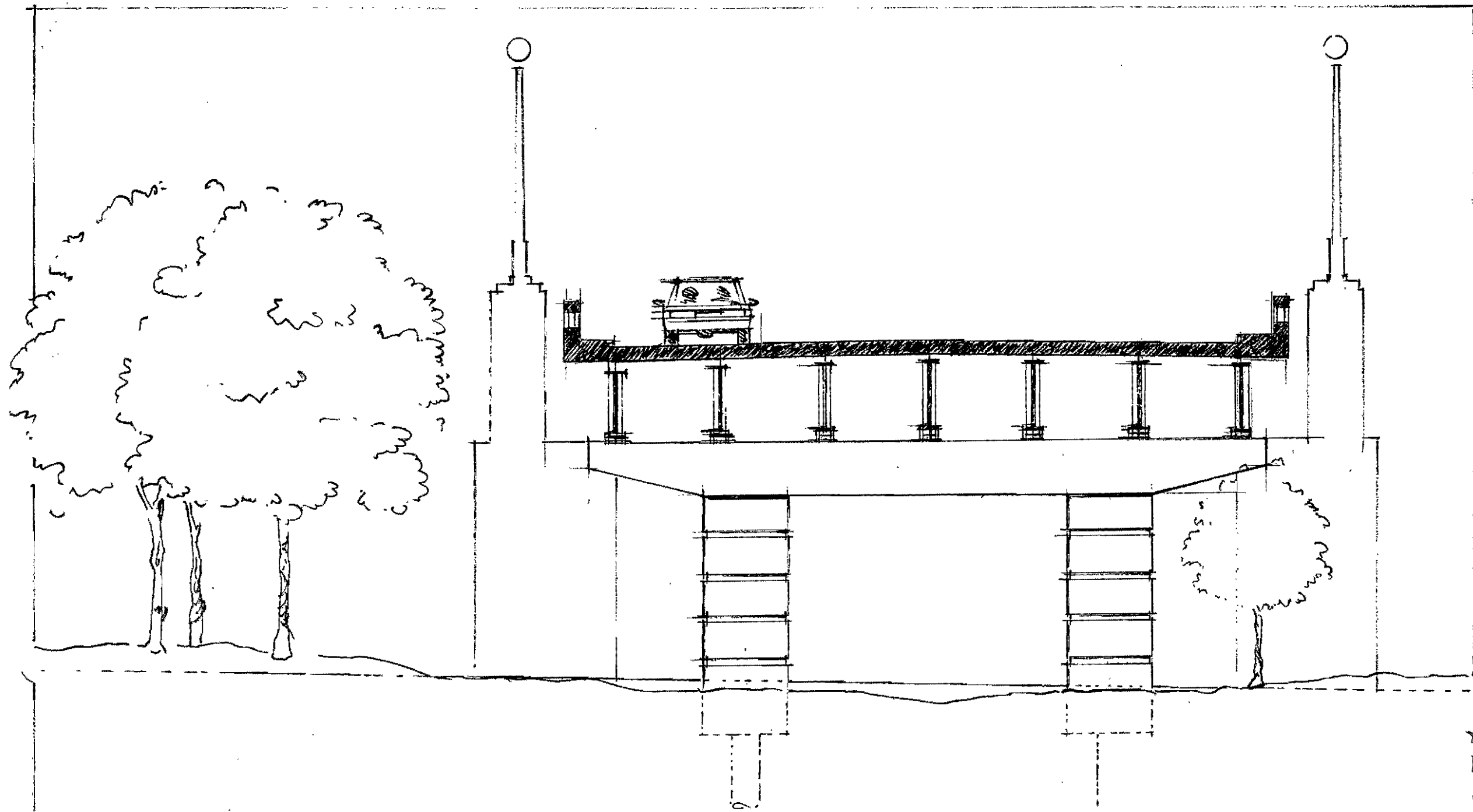
Addison!

STEVEN Z. CHUTCHIAN, P.E.  
Assistant City Engineer  
(972) 450-2886  
(972) 450-2837 FAX  
(214) 673-2518 Mobile  
schutchian@ci.addison.tx.us E-mail

Town of Addison 16801 Westgrove Dr. P.O. Box 9010, Addison, Texas 75001-9010

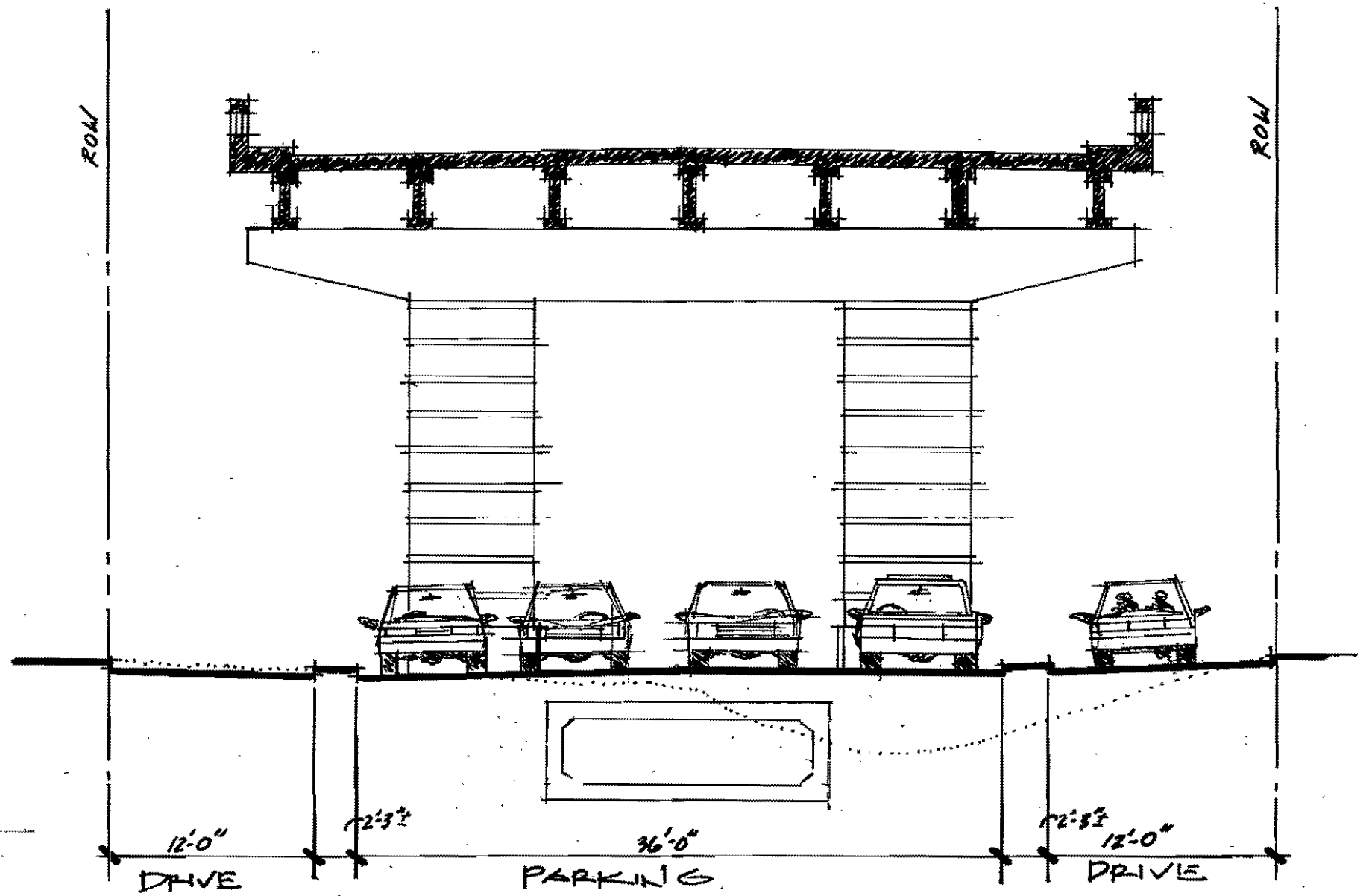
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PARKING AREA  
SCHEMATICS UNDER  
MIDWAY RD, BRIDGE.



BRIDGE SECTION - TYPICAL  
1/8" = 1'-0" HNTB CORP.

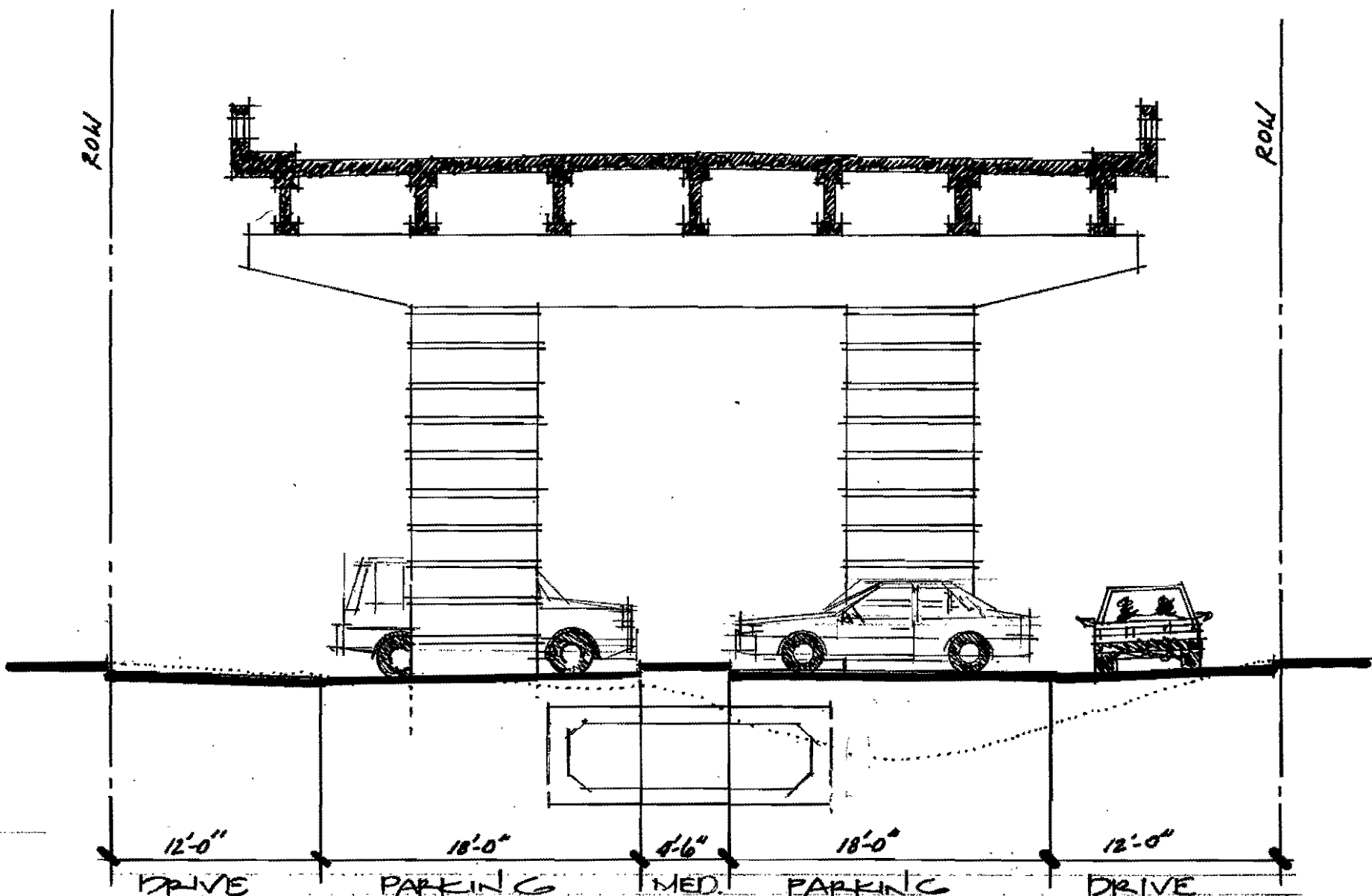
SCHEME 2



OPTION A  
HNTB 1/8" = 1'-0"

ROW

ROW



OPTION 'B'  
HNTB 1/8" = 1'-0"

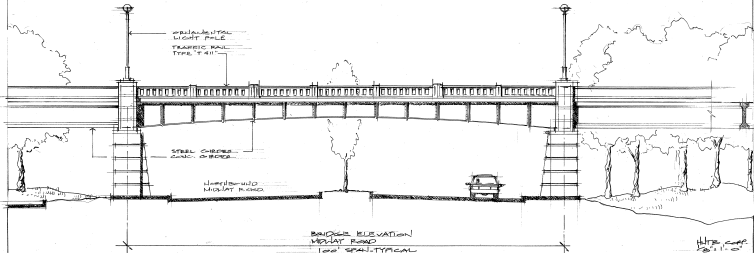
12'-0"  
DRIVE

18'-0"  
PARKING

4'-6"  
MED.

18'-0"  
PARKING

12'-0"  
DRIVE



SCHEME 2

OPTION 'A'  
HTB 11.50'

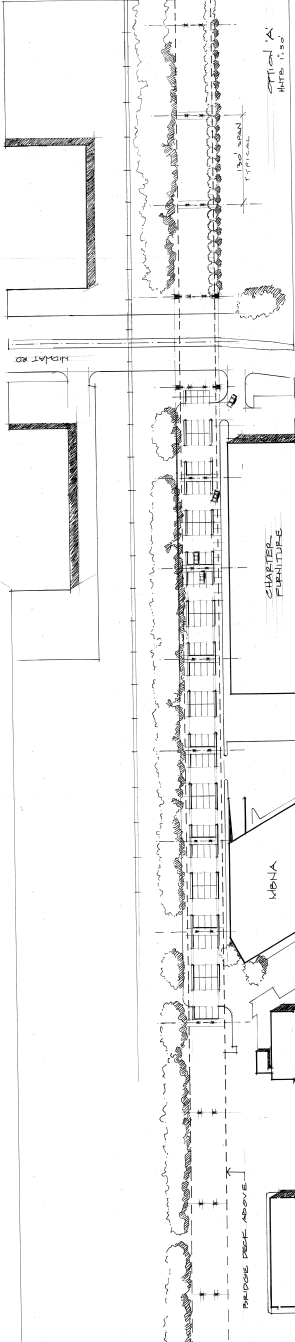
1300' SPAN  
TYPICAL

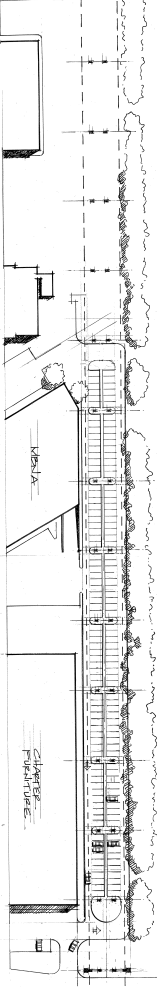
CHARTER  
FURNITURE

MBNA

BRIDGE DECK ABOVE

WICKIAT RD





VP&A

CHAPTER  
FURNITURE

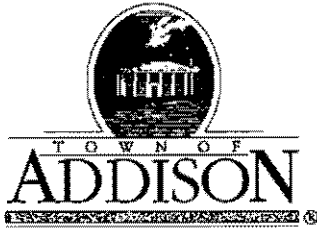
MIDWAY RD.

SPORTS  
B. 11/15/50

100' ROAD

Flower bed and tree symbols





## **REQUEST FOR STATEMENTS OF QUALIFICATIONS**

### **ARCHITECT/ENGINEERING SERVICES ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

#### **TOWN OF ADDISON**

The Town of Addison is embarking on an exciting project to construct the portion of Arapaho Road, from Surveyor Blvd. to Addison Rd. Included in this significant roadway improvement to our community is a unique bridge section over Midway Road. This feature will serve as a gateway to The Town of Addison and its renowned amenities.

In order to accomplish this goal, The Town of Addison is undertaking a three-step architect/engineer selection process, to design the architectural and structural components of the bridge. The first step consists of a request for qualifications that is being sent to selected architecture and engineering firms. The submittals will be reviewed, and a short list of three A/E firms (finalists) will be selected to go to the second step. The finalists will enter a "design competition" and will be paid a stipend of \$10,000 to prepare a design concept for the bridge. The finalists will be asked to meet with the Town to receive vision and direction for the project from Town Management. Drawings, visual graphics, and/or a study model will describe the concept. The finalists will be asked to present their designs(s) for a selection committee made up of members of the governing body and staff. Lastly, the design competition winner will then prepare a proposal to complete the design, and a fee will be negotiated. The design contract will go to City Council for approval.

A mandatory pre-submittal meeting will be held at 3:00 p.m. November 13, 2001 at the Stone Cottage, 4901 Addison Circle Drive. Any firm not represented will not be eligible to submit a Statement of Qualifications.

The proposed bridge must be 4 lanes, and be able to accommodate pedestrian traffic. Midway road is 45' wide, back of curb to back of curb through the bridge section:

Copies of the preliminary plans for Arapaho road will be available at the pre-submittal meeting.

Addison will accept written Statements of Qualifications (SOQ) from Architecture/Engineering firms until November 26<sup>th</sup>, 2001. Four (4) copies of the SOQ shall be submitted. The SOQ should contain a maximum number of thirty (30) single sided pages on 8 ½" x 11" paper. The firm may also submit a power point presentation of past bridge design projects. The architecture/engineering firm should provide enough information to demonstrate the firm's ability to design the project. The SOQ shall designate the individuals who will be assigned to the project (Principal-in-charge, Project manager, Project Engineer, Project Architect etc.) with resumes for each individual. A list of similar projects in scope and size that the firm has recently completed in the last five (5) years shall be provided. A description for each project shall be provided along with project cost, completion date, names of proposed design team members involved in the project, name of the client, contact person, and phone number for contact person.

All written Statements of Qualifications and supporting material submitted shall be evaluated by the Selection Committee, which will be made up of Michael Murphy, P.E., Director of Public Works, James C. Pierce, P.E., Assistant Director of Public Works, Ron Whitehead, City Manager, and Bill Shipp, Assistant to the City Manager. The review of the SOQ's will be based on the selection criteria shown on the attached page. The SOQ should specifically address each criterion for evaluation.

Interested consultants should direct questions and submit Statements of Qualifications to:

Mailing:	Steven Z. Chutchian, P.E. Assistant City Engineer P.O. Box 9010 Addison, Texas 75001-9010	Street:	16801 Westgrove Addison, Texas
Phone:	(972) 450-2886	Fax:	(972) 450-2837

## EVALUATION CRITERIA FOR QUALIFICATIONS

	<u>POINTS</u>	<u>MULTIPLIER</u>	<u>SCORE</u>
1. The firm's experience, as well as proposed subcontractors, in successfully performing similar assignments, in scope and size, for others within the last five (5) years, by personnel still on the firm's staff. Prime and Sub have worked together before.	0 - 10	4	_____
2. Professional background of key personnel and experience in environmental assessment and reporting. The firm's current staff, both in size and related experience, is qualified to provide the desired service. Indicate length of time key employees have been with the firm as well as their home office location.	0 - 10	4	_____
3. Location of main office and/or branch office that will provide services and experience in the local area.	0 - 10	1	_____
4. Management approach to this project. (Include QA/QC, schedule and budget programs).	0 - 10	1	_____
5. Technical approach to this project.	0 - 10	1	_____
6. Previous clients, for similar projects express satisfaction with the firm's work (Short listed firms only, if necessary).	0 - 10	2	_____
7. Oral presentation (short listed firms only, if necessary).	0 - 10	4	_____

what  
when  
Jim Pierce

where  
How  
why

From: Luke Jalbert  
Sent: Thursday, September 27, 2001 3:16 PM  
To: Steve Chutchian; Jim Pierce; Michael Murphy  
Subject: questions for Arapahoe road bridge pre-submittal meeting

Good Questions

Here are some questions I was thinking we need to have answers for before we meet with the firms, please add any that you have to this list so we can make sure we have all our bases covered before the meeting.

1. What kind of budget are they expected to work within?
2. What kind of yearly maintenance budget will be available, should we have this as a design criteria?
3. how much are we going to let them play with the alignment (vertical) and the limits of the bridge?
4. how much parking must we provide those business owners under the bridge?
5. What kind of timeframe, both design and construction, are we talking about?

attached is also the RFQ I have so far, I have questions about anything in RED.

1. Lets not put any budget #'s out at this stage. I suggest we just say cost must be reasonable.
2. Bridge should be as maintenance free as possible
3. Vertical should be ~~no more than necessary to~~ within reasonable limits ~~meet standards for clearance.~~
4. This was determined in the preliminary design, and its significant.
5. We should now develop a schedule along with HNTB that takes us to the end of this project, likewise we need to develop an expense budget to compare with funds available. The const. of Phase III must tie in with when the Bond money can be made available (Mike/Randy).

10/8/01

Jim

**ARAPAHO ROAD BRIDGE**  
**At MIDWAY ROAD**  
**FACT SHEET**  
**November 13, 2001**

- **Total length of bridge, including retaining walls and earthen fill areas is approx. 2,500 ft.**
- **Bridge length, from abutment to abutment is approx. 1,600 ft.**
- **Width of roadway at bridge section is 44 ft.**
- **Parking under bridge is a provision of this project.**
- **Lighting above and under bridge shall be included in design.**
- **Impact of bridge on visibility of adjacent commercial properties shall be considered in design.**
- **Elevated pedestrian crossing adjacent to roadway shall be included in bridge design.**
- **Project budget range is \$1.5 to \$3.0 million**
- **Design schedule is \_\_\_\_\_**
- **Construction schedule is \_\_\_\_\_**



April 22, 1999

Town of Addison  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, Texas 75001-9010

Attn: Mr. Jim Pierce, Jr., P.E., DEE  
Assistant City Engineer

### ARAPAHO ROAD ALIGNMENT REPORT

Dear Mr. Pierce:

The following issues were discussed, regarding this project, with city staff, HNTB Corporation, GBW, and several property owners on March 15, 1999, at Addison Town Center. Mr. Ron Whitehead, City Manager, requested that the team of consultants provide a brief report upon completion of an analysis of suggested alternatives discussed during the meeting. Listed below is a brief summary of the suggestions and concerns discussed during the meeting.

#### Lindberg Drive Alignment Alternative

One suggestion made by the property owners present at the meeting was to further study the Lindberg Drive alignment on the north side of the Dallas Area Rapid Transit (DART) owned railroad as the preferred location due to the dense industrial development present along this corridor. Lindberg Drive is primarily a two-lane roadway between Addison Road and Midway Road that terminates just west of Midway Road.

The project team identified several issues with the Lindberg Drive alignment. One concern is the number of at-grade skewed crossings required with the DART railroad. Typically, railroad crossings are required to intersect the tracks at a 90-degree angle whenever possible for safety purposes. Even slightly skewed crossings of a main track are not desirable or typically approved by the Railroad. The DART railroad is currently a highly utilized freight train track, between Kelly Boulevard and the Galleria retail shopping area, serving many commercial businesses in Carrollton, Farmers Branch, Addison, and Dallas. Should the existing Lindberg Drive right-of-way be utilized as the extension of Arapaho Road, two significantly skewed at-grade crossings of the main tracks are required.

The flight pattern of the runway at Addison Airport would also be impacted. Currently, Lindberg Drive is restricted from through trucks due to the height of the planes landing and departing from Addison Airport. The expansion of Lindberg Drive to four lanes could further decrease the available runway length. FAA approval could be required due to the impact to

#### *The HNTB Companies*

OFFICES: ALEXANDRIA, VA; ATLANTA, GA; AUSTIN, TX; BAYON BOULEVARD, LA; BOSTON, MA; CHARLESTON, WV; CHICAGO, IL; CLEVELAND, OH; DALLAS, TX; DENVER, CO; DETROIT, MI; FARGO, ND; FT. WORTH, TX; HARTFORD, CT; HOUSTON, TX; INDIANAPOLIS, IN; IRVINE, CA; KANSAS CITY, MO; LANSING, MI; LOS ANGELES, CA; LOUISVILLE, KY; MIAMI, FL; MINNEAPOLIS, MN; NASHVILLE, TN; NEW YORK, NY; OAKLAND, CA; ORLANDO, FL; OVERLAND PARK, KS; PHOENIX, AZ; PLYMOUTH HILLING, PA; PORTLAND, ME; RALEIGH, NC; SALT LAKE CITY, UT; SAN ANTONIO, TX; SEATTLE, WA; TAMPA, FL; TULSA, OK

Addison Airport. Also, a steep grade would be required on the Arapaho Road extension in order to match the at-grade intersection at Addison Road.

Prior to preparing plans for the Arapaho Road extension from the Dallas North Tollway (DNT) to Addison Road, the Town of Addison evaluated the Lindberg Drive alignment and selected a general corridor south of the railroad tracks. Consequently, right-of-way has already been acquired from several property owners south of the railroad. Changing the alignment to the north of the railroad would increase the project costs.

### Overpass at Midway Road

The height and location of the bridge structure in relation to the existing businesses was also discussed during the meeting. Several concerns expressed by the property owners included the horizontal location of the bridge structure in relation to Charter Furniture and MBNA. The current alignment places the edge of the bridge deck a minimum of 10 feet from the buildings.

Upon reviewing various other horizontal alignments with city staff after the meeting, the original alignment was still determined to be the desired horizontal alignment in relation to the buildings, due to the location of the Dallas Water Utilities (DWU) 60-inch water main. Moving the structure closer to the water main raises access concerns should DWU need to access their water main for maintenance or repair. City staff will meet with DWU to determine if the recommended location of the structure is acceptable, or other alignments could be considered that would further infringe on the DWU easement. Although final approval has yet to be received from DWU for the technically preferred alignment, the response to date has been positive.

Upon review of the vertical alignment of the proposed bridge near the MBNA and Charter Furniture buildings, it is anticipated that the height of the overpass structure will be lower than the existing buildings. The existing buildings are estimated to be a minimum of 5 to 15 feet higher than the bridge roadway surface elevation. Exhibits are attached for your clarification.

Another concern expressed by the property owners was the loss of property rights, should the buildings be destroyed due to hail or other catastrophic means. City staff and consultants concurred upon conclusion of the meeting that the City is able to allow the property owners to rebuild to the existing building set backs and not be considered "non-conforming".

Additional alignments recommended for further study by the property owners included constructing the bridge structure over the DWU water line. This alignment increases concern related to DWU access to the 60-inch water main along with the increased cost. It was determined not to be acceptable by DWU due to inability of maintenance and expansion of a major viaduct type structure.

### **Midway At-Grade Intersection**

The property owners present at the meeting also requested the city staff examine the potential of removing the traffic signal at Lindberg Drive and Midway Road and relocating it south to a new at-grade intersection at Arapaho Road in lieu of constructing an overpass. HNTB has reviewed this recommendation and determined that should Arapaho Road be constructed at-grade, the traffic signal at Lindberg Drive would still be required due to the volume of traffic and safety concerns.

### **Spanning the DART Alignment**

One option also discussed at the meeting was the potential to relocate Arapaho Road onto the existing DART right-of-way, either with a bridge structure or an at-grade roadway within the existing 100-foot railroad right-of-way. Mr. Ron Whitehead agreed to discuss this issue with DART officials. Upon further consideration, it was determined this option was not feasible. This was primarily due to federal guidelines regarding vertical clearance for electrification facilities, and the required horizontal clearance width to allow DART to maintain the existing freight traffic in the corridor and to allow for expansion of the service to include passenger rail in the future.

### **Overpass vs. Underpass**

The pros and cons of the underpass versus overpass were further reviewed to determine if the technically preferred alternative should remain the same. The overpass alternative provides improved mobility, minimum disruption of traffic during construction, less restrictive impact on DWU water line, and provides more convenient location for enclosure of the major drainage ditch to remain on the south side of the railroad. The negative aspects of an overpass include: less aesthetically pleasing to adjacent property owners; potential noise concerns; wall construction will be partially on DWU easement, above and 7.5 feet from water line; and restriction of the DWU easement width.

The underpass alternative provides improved mobility, minimizes noise impact, and eliminates most of the visual impacts. The negative aspects of the underpass include: the reduction of Midway Road traffic to two lanes; construction costs will be increased approximately \$1,500,000; a major drainage structure will be required to be constructed on the north side of the railroad to prevent flooding of depressed roadway; deep excavation for wall construction adjacent to DWU 60" water line is required; major utility relocations in Midway Road which would require temporary closure of the railroad; and restriction of the DWU easement width.

The Cottonbelt Railroad, owned by DART, is currently being considered as a future passenger rail line. Should this occur in the future, the intersection of Midway Road and the railroad is anticipated to be grade separated with an overpass due to the volume of traffic on Midway Road and safety of the motoring public. This further confirms the recommendation for an



Town of Addison  
Addison, Texas 75001-9010

- 4 -

Arapaho Road Extension  
April 22, 1999

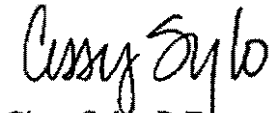
overpass versus underpass. Upon completion of additional review of the underpass and overpass alternatives, the technically preferred alternative remained the same as previously recommended in the technical report.

**Summary**

Upon completion of the analysis of the various issues from the city staff, property owners and other interested parties; the consulting team continues to recommend the "technically preferred alignment" (TPA) discussed in the technical report. This alignment is shown in the map pocket of the technical report as Option 5. We hope this technical memo resolves the majority of the questions raised at the meeting with the property owners. If you desire any future action regarding this specific issue or have any questions, please feel free to contact us.

Very truly yours,

HNTB CORPORATION

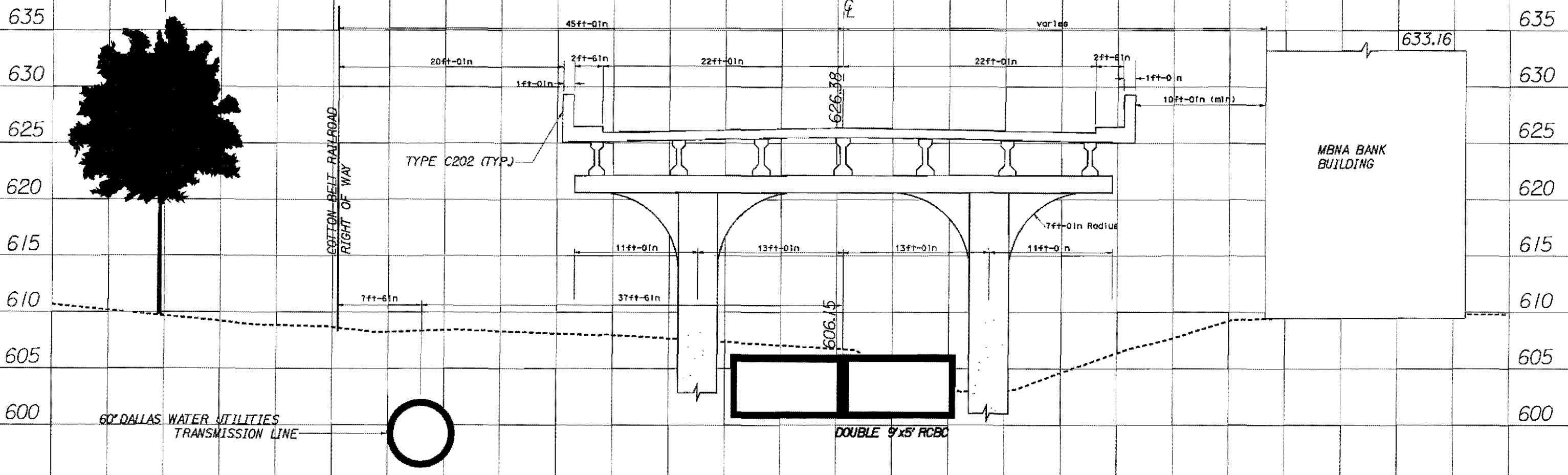


Cissy Sylo, P.E.

CES/lhb

Enclosures

TYPICAL SECTION  
 Elevated Structure - West of Midway  
 STA 52+50



635  
 630  
 625  
 620  
 615  
 610  
 605  
 600

635  
 630  
 625  
 620  
 615  
 610  
 605  
 600

COTTON BELL RAILROAD  
RIGHT OF WAY

TYPE C202 (TYP)

60" DALLAS WATER UTILITIES  
TRANSMISSION LINE

MBNA BANK  
BUILDING

DOUBLE 9x5' RCBC

633.16

606.15

626.38

varies

7ft-0in Radius

10ft-0in (min)

45ft-0in

20ft-0in

1ft-0in

2ft-6in

22ft-0in

22ft-0in

2ft-6in

1ft-0in

11ft-0in

13ft-0in

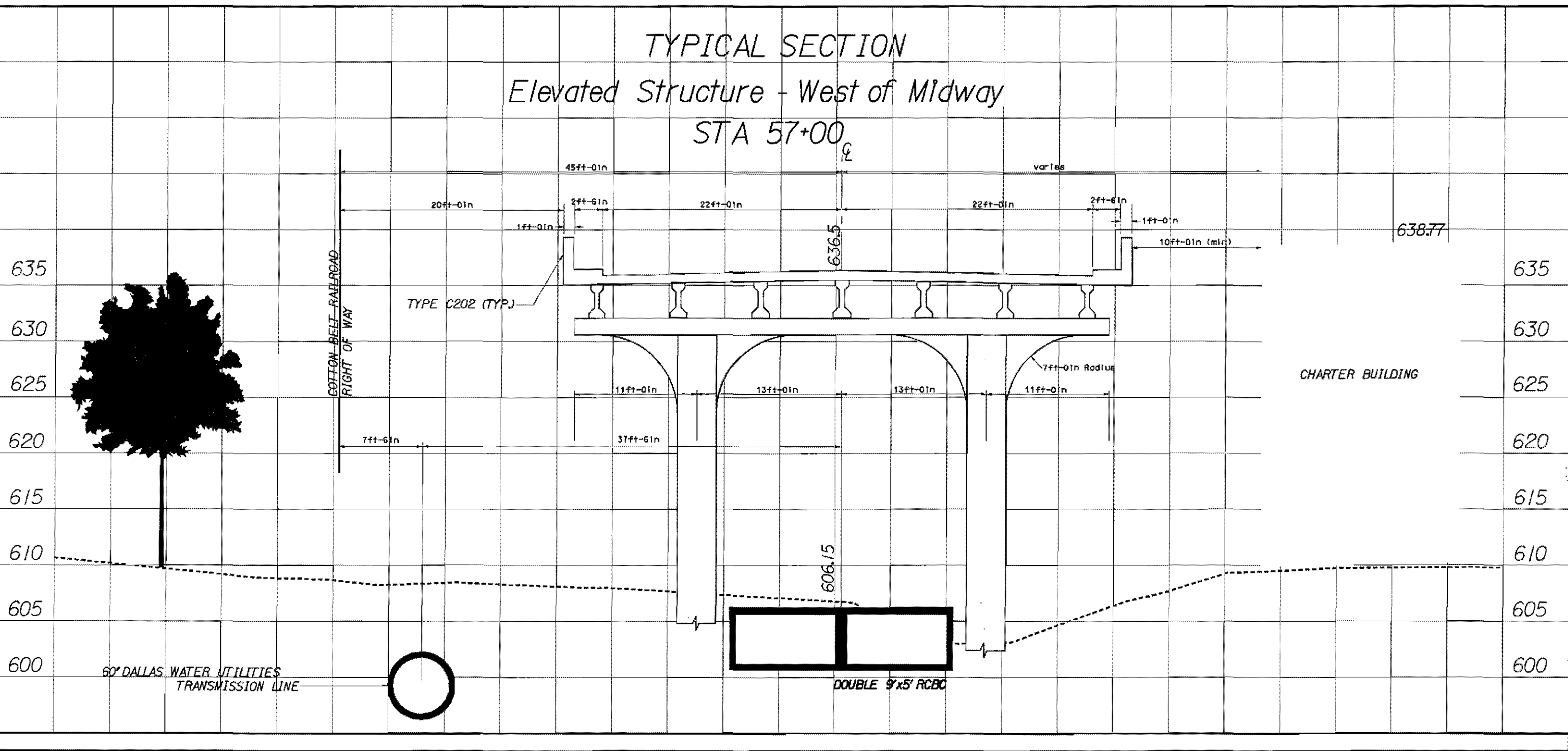
13ft-0in

11ft-0in

7ft-6in

37ft-6in

*TYPICAL SECTION*  
*Elevated Structure - West of Midway*  
*STA 57+00*



COTTON-BELT RAILROAD  
RIGHT OF WAY

TYPE C202 (TYP.)

varies

638.77

CHARTER BUILDING

60' DALLAS WATER UTILITIES  
TRANSMISSION LINE

DOUBLE 9x5' RCBC

606.15

45ft-0in

20ft-0in

2ft-6in

22ft-0in

22ft-0in

2ft-6in

1ft-0in

1ft-0in

10ft-0in (min)

11ft-0in

13ft-0in

13ft-0in

11ft-0in

7ft-0in Radius

7ft-6in

37ft-6in

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✓ JERRY QUICK FROESE & NICHOLS 817.735.7293

✓ STAN CALDWELL HALFF ASSOCIATES 214.346-6280

✓ Charles Webb Halliburton - KBR 214-659-8405

Fred Balfour Brinkley & Banfield 214-369-3610

Andrew Combs BRIDGE FARMER & ASSOC 972-231-8800

Ray Barber Halliburton - KBR 214-752-8300

**CHUCK ARMSTRONG CORGAN 214.748.2000**

CLIFF HALL URS 972-980-4961

MIKE MORAN HDR ~~972-960-4120~~

✓ VICTOR KIMM HDR 972-960-4408

✓ J. RICHARD PERKINS TWP 972-254-1765

Robert Marks Brown & Root 214-659-8406

DAVE JANKSTEN URS 972-406-6950

Joe Letter MK Engineers 972-271-4987

KIRK MILLICAN HOK 214-920-6000

Sandra Bolain MESA 214-871-0568

Muhammad Khan MK ENGS 972-271-4987

Michael Tinsup TBG PARTNERS 214.744.0757

PAT N. SHAW RTKL 214 871-9877

JOHN DEWAR FROESE & NICHOLS 817-735-7431

Monica McCain Bloom Consulting 972-991-0229 x227

Thang Tran PARSONS BRINCKERHOFF 214-638-2888

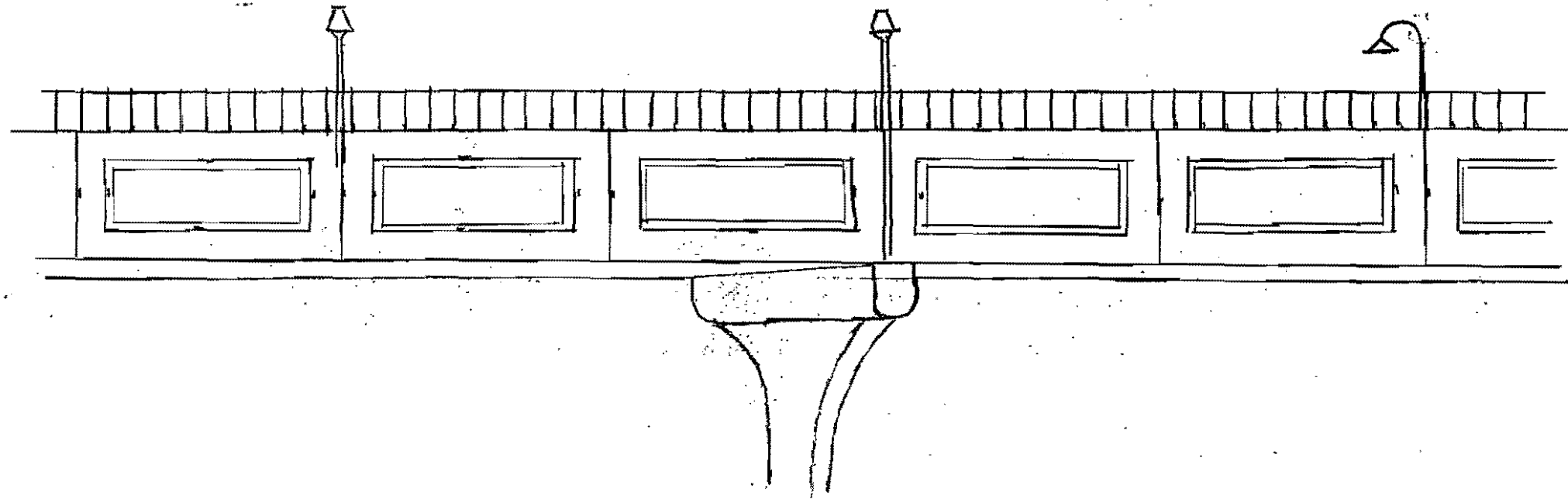
RON HOBBS REN HOBBS ARCHITECTS 972-494-0174

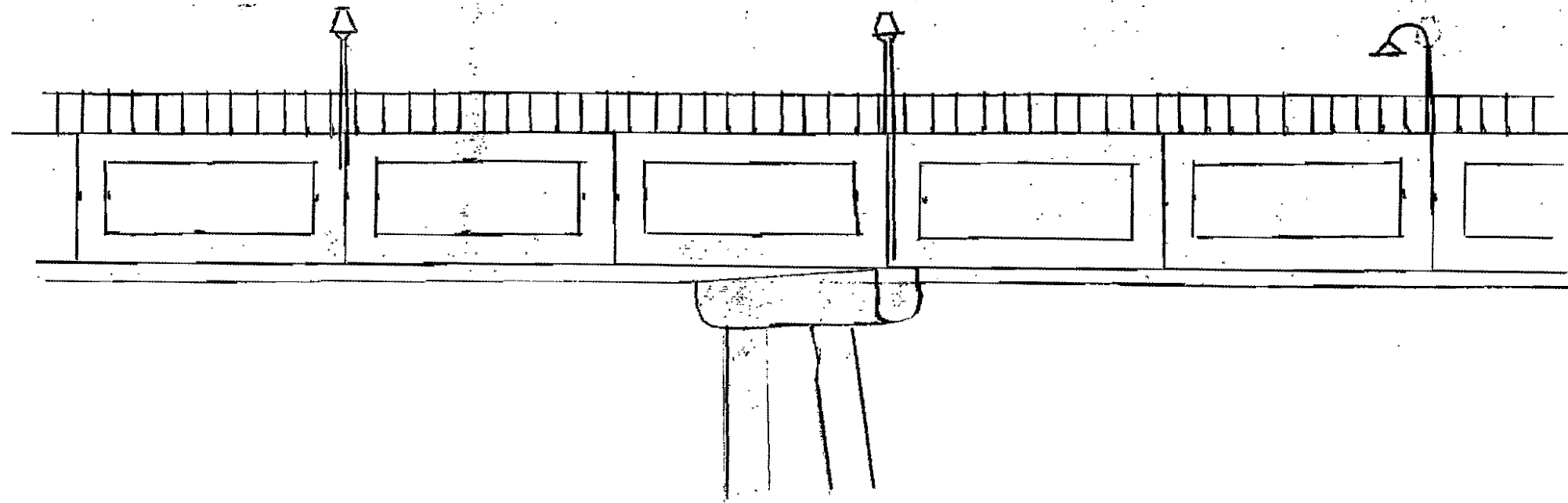
ANDY FREDERICK R-DELTA ENGINEERS 972-999-5031

Nolan Becker HNTB CORPORATION 972-661-5626

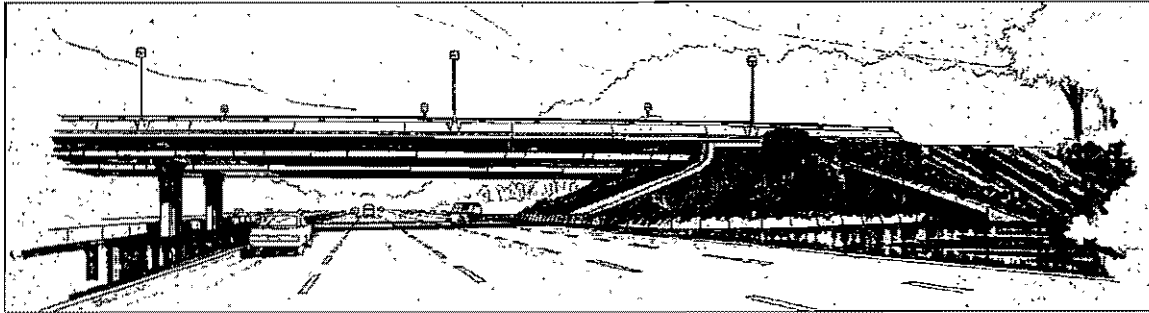
Jerry Holder " " " " "

DAVID KOUHS	FUGRO SOUTH	972 484-8301 TEL
SAAD HINEIDI	"	" " "
BOB REACH	TURNER COLLIER & BRADEN	972-735-3070
JENNIFER LILLY	CARTER & BURGESS	214-920-8035
Lorie Jenkins	Halt Associates	214-346-6257
Edan Reed	Reedcon Inc.	972-596-2852
David Refsch	Carter & Burgess	214-638-0145
Bruce Russell	" "	" "
Paul Padilla	TRANSYSTEMS	972 280-9300
Mike Preston	HNTB	<del>214</del> 214 784 8400
JAMES PRYCE	HNTB	214 748 8400
Bill Petrelli	PETRELLI *associates inc.	817-633-6370
Alan Greer	Freese-Nichols	214-920-2500
DAVID McCullah	McCullah Surveying	972-713-9777
Kanti Wani	William-Bruce & Johnson	214-638-2665

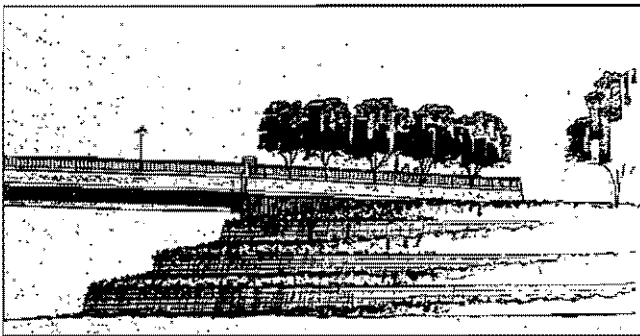




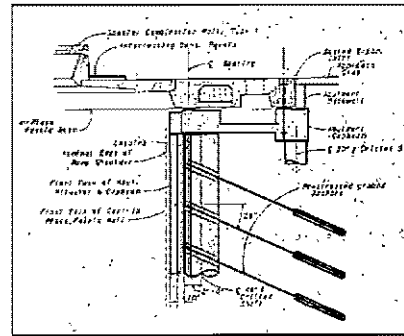
# ABUTMENT CONCEPTS



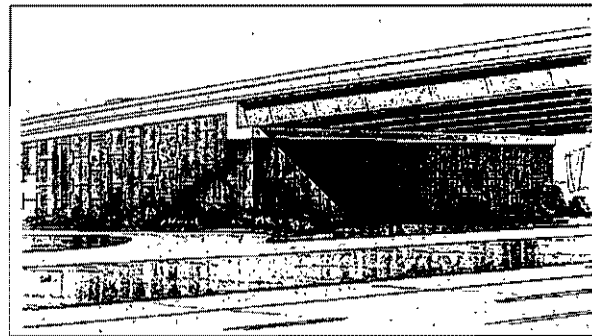
Abutment with Landscape Feature



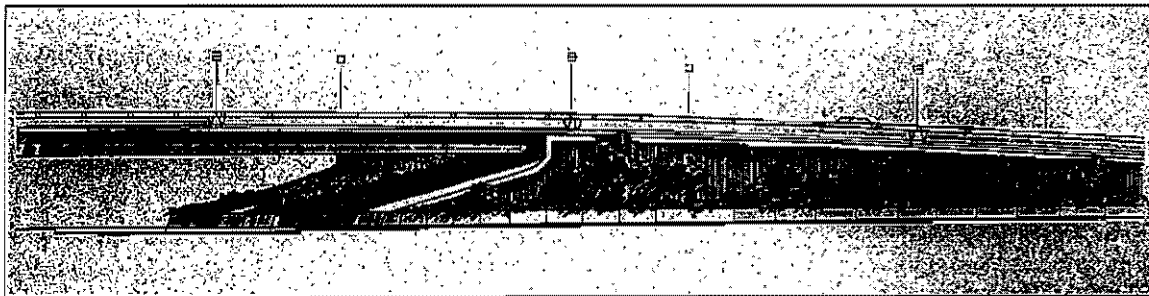
Stone Abutment with Terraced Curved Unit Masonry Wall



Tie-Back Wall Detail



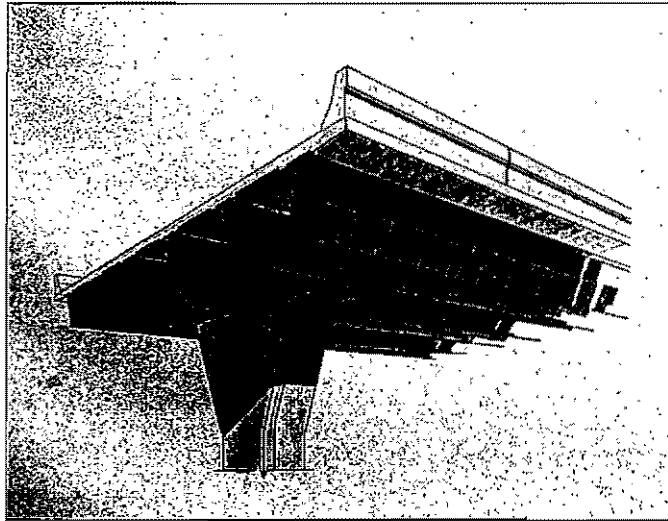
Retained Earth Abutment with Fractured Fin Surface



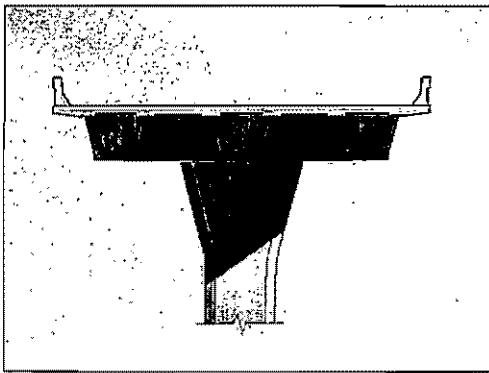
Abutment with Landscaped Wall



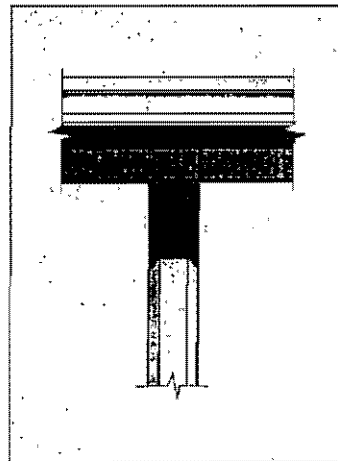
# CURVED STEEL TRAPEZOIDAL BOX



Perspective View of Framed-In Connection

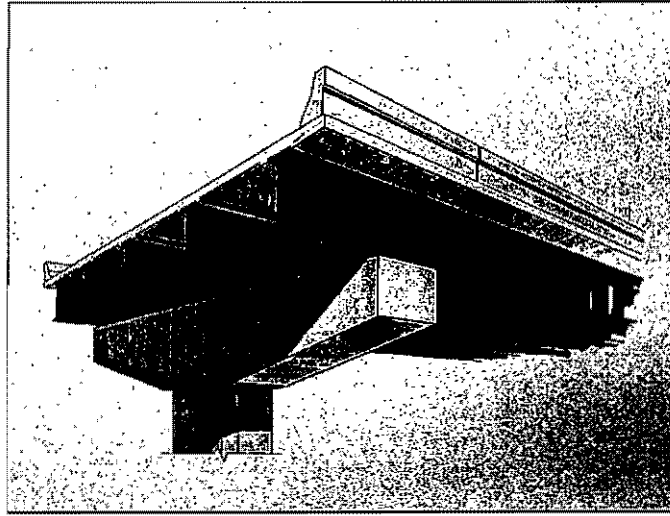


Typical Section

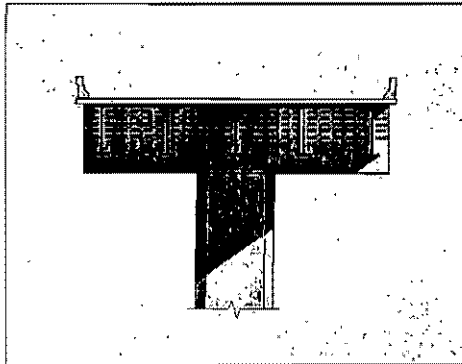


Side View

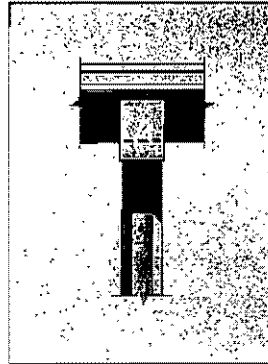
# CURVED STEEL I-GIRDERS



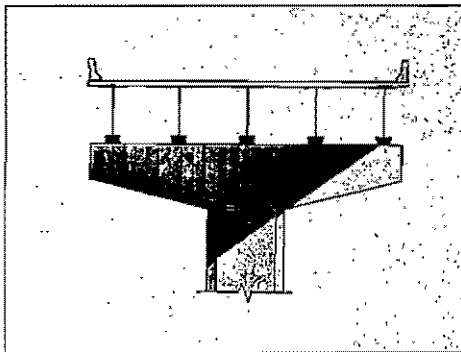
Perspective View of Typical T-Pier



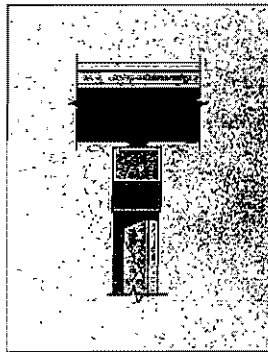
Post-Tensioned Framed-In Cap



Side View

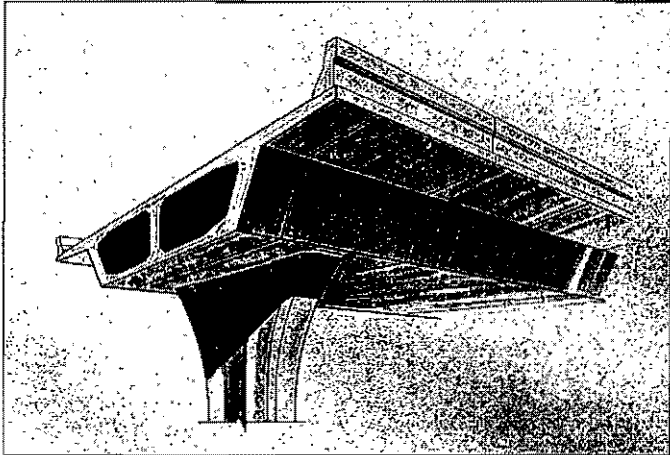


Conventional T-Pier Elevation



Side View

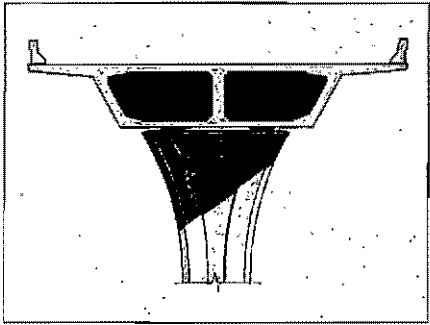
# SEGMENTAL CONCRETE BOX



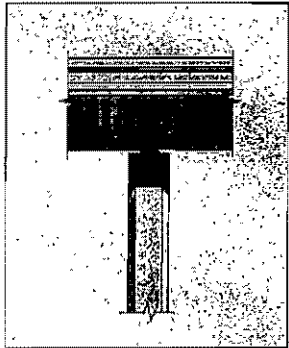
Perspective View



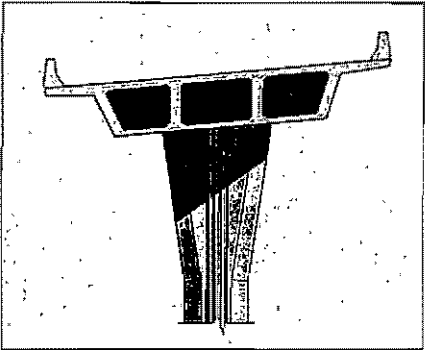
Single Cell Box



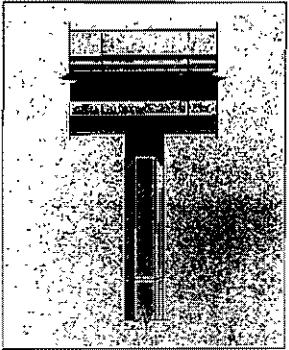
Double Cell Box with Flare Pier



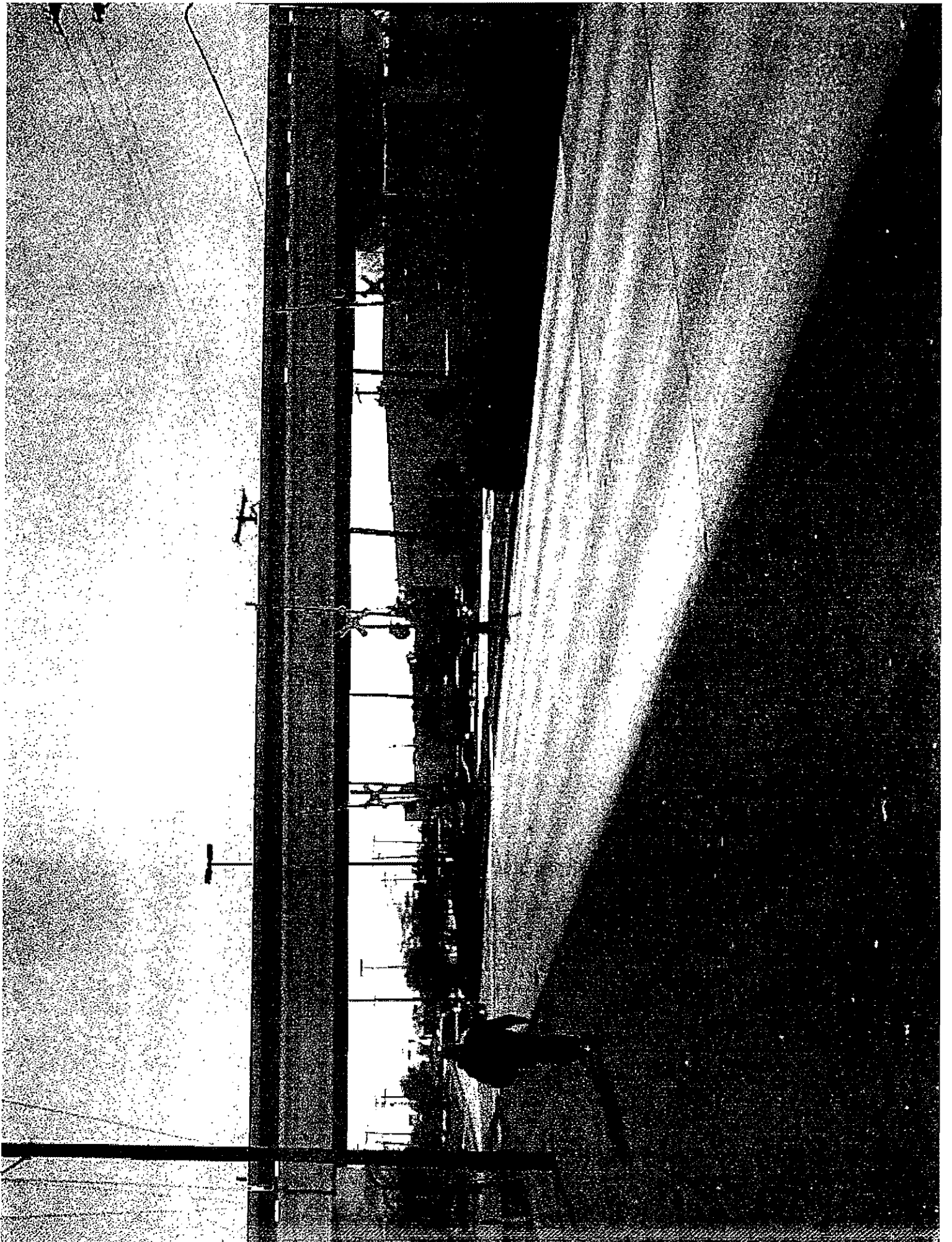
Side View

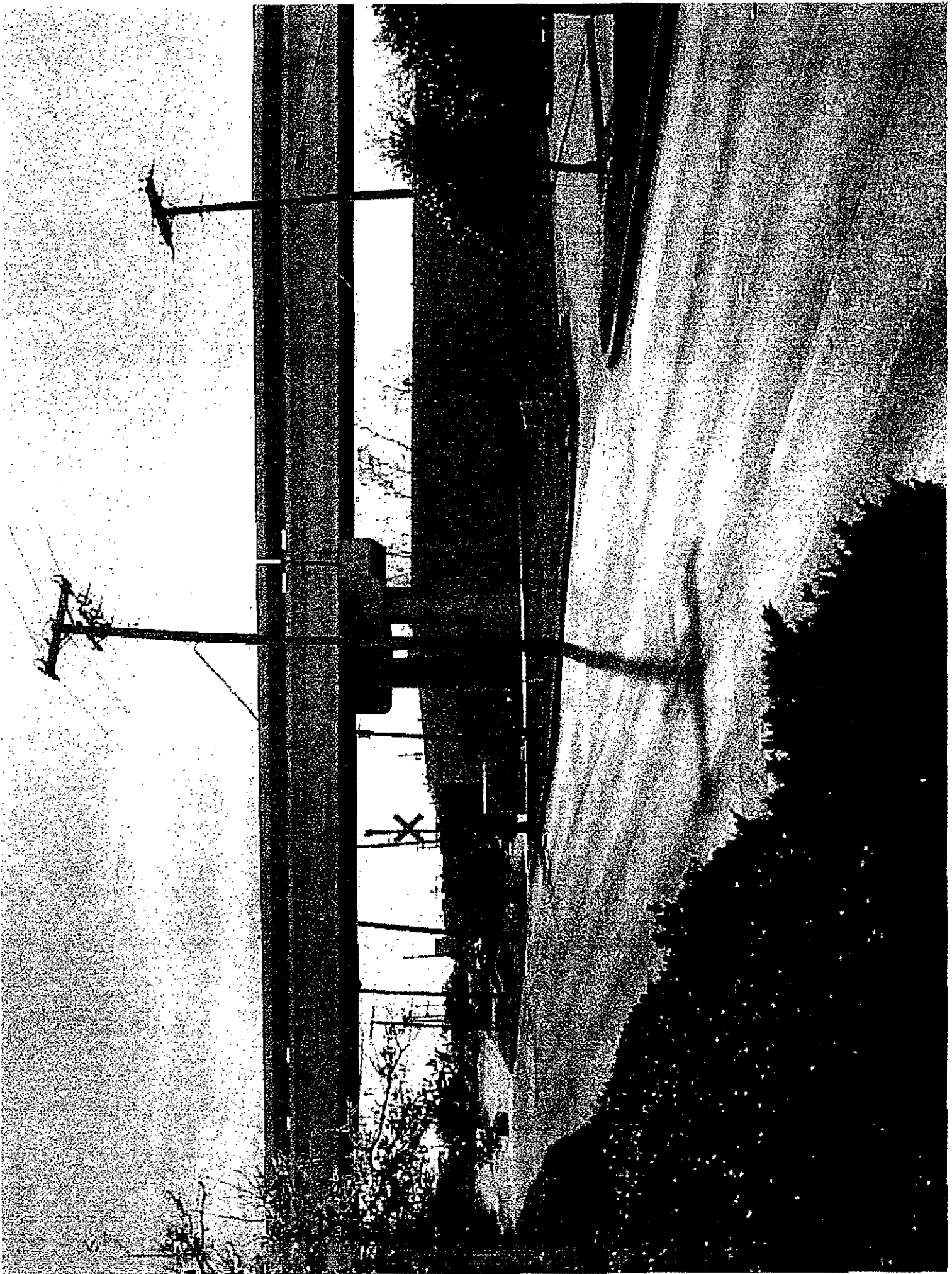


Multi-Cell Box with Beveled Pier



Side View





ARAPAHO BRIDGE

ARAPAHO BRIDGE

TOTAL PHASE III FUNDS AVAILABLE - \$ 20.5 m.

ANOTHER \$3 m FROM THE SPUTI, MIDWAY RD, #2 m

PH. III BUDGET - \$20M

DATE SUBMITTED: November 13, 2003  
FOR COUNCIL MEETING: November 25, 2003

**Council Agenda Item**

**SUMMARY:**

This item is for the approval of an amendment to the Professional Services Agreement with URS Corporation, in the amount of \$49,470.00, for the design of the Arapaho Road Bridge at Midway Road.

**FINANCIAL IMPACT:**

Budgeted Amount:	Not specifically budgeted
Cost:	\$49,470.00 (Engineering)
Source of Funds:	Funds are available from the FY 2004 General Obligation Bond Program.

ORIGINAL % IS 12% + IS SPECIALIZED

**BACKGROUND:**

The third phase of the proposed Arapaho Road extension project extends from Surveyor Blvd. to Addison Road. Construction of this section of Arapaho Road will complete an east-west minor arterial roadway that is necessary to relieve traffic congestion on Belt Line Road. It is anticipated that the new street will initially absorb approximately 11,000 vehicles per day, with a maximum future count of 25,000 vehicles per day. A proposed bridge over Midway Road is also proposed as an integral component of the roadway section in the third phase. The firm of URS Corporation was selected by the Town's Bridge Selection Committee to perform the design of this bridge. A Professional Services Agreement was approved in September 2002, in the amount of \$550,965.00, for design services related to the construction of the proposed Midway Road Bridge. The anticipated construction cost of the bridge is approximately \$4,600,000. URS's scope of work is as follows:

- a. Bridge Design, including Civil & Electrical
- b. Architectural Design
- c. Lighting Design
- d. Noise Study, including Modeling & Analyses
- e. Project Management

TOTAL CONTRACT COST ↓

ORIGINAL CONTRACT PLUS 3 CHANGE ORDERS IS \$ 642,560

THIS IS A 16.62% INCREASE IN FEE

SCHEDULE CHANGED  
FROM June 1st to  
END OF  
MAY 26H

However, the design features for the bridge have changed due to review and evaluation by Council, staff, and Dallas Water Utilities. These changes include revised layout and structural design of the bridge, traffic railings, re-initiating the structural "stingers" onto the arch sections, developing color and mounting alternatives for lighting the arch, and participating in additional project meeting with various entities. These additional project features resulted in the Engineer's request for a contract amendment (shown as Change Order No. 03 in the attachment), in the amount not to exceed \$49,470.00. Change Order No. 1, in the amount of \$18,715.00, was previously approved and consisted of development of a bridge noise and vibration analysis that was used in testimony for two different condemnation cases. ~~Change Order No. 2~~ in the amount of \$23,410.00, was also previously approved and consisted of ~~conceptual bridge layout and typical section modifications~~. In addition, it included ~~preparation and presentations at numerous Dallas Water Utilities meetings and discussions pertaining to the bridge alignment in relation to the existing 60" water transmission main.~~

✓ MBNA -  
ABSOLUTE  
SYSTEMS  
\$  
MOTEL 6

The design of the proposed bridge by URS Corporation shall be performed concurrently with the design efforts on the roadway by HNTB Corporation.

**RECOMMENDATION:**

It is recommended that Council authorize the City Manager to enter into a contract amendment with URS Corporation, in the amount not to exceed \$49,470.00, for Professional Services associated with the design of the Arapaho Road Bridge at Midway Road.



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 03 to WORK ORDER NO. 001**

**ATTACHMENT K  
ADDITIONAL SCOPE OF SERVICES**

**ADDITIONAL DESIGN DEVELOPMENT AND CONTRACT  
DOCUMENTS FOR THE ARAPAHO ROAD BRIDGE**

In addition to the design services provided for in the original Scope of Services and Change Orders No. 1 & 2, URS will provide conceptual design development, preliminary and final engineering and modifications to the plans, as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 to incorporate the following changes and as listed below in the Additional Itemized Scope of Services. These changes as presented to the Town Council on August 26, 2003 include developing a colored lighting concept for the arch, adding the "stingers" on to the structure and revising the rail to a more open traffic rail. URS shall modify the preliminary bridge design, bridge layouts and typical sections as necessary, attend additional meetings with the Town of Addison, prepare an additional presentation to the Town Council and prepare a lighting mock-up for the Town to see the colored lighting on the blue structure.

**Changes to Itemized Scope of Services Provided by URS For the Arapaho Road Bridge**

**TASK I - ENGINEERING**

**B. Bridges**

1. Preliminary Bridge Design (~30% submittal)
  - Revise Preliminary Bridge Layout (Finalize Bridge Location)
  - Revise Preliminary Typical Section
  - Refine Arch Shape
  - Re-size Diaphragms
  - Revise Traffic Railing Members
  - Develop Stingers
  - Revise Quantities and Cost Estimate
2. Final Bridge Design, & PS&E (65%, 95%, 100% submittals)
  - Prestressed Concrete Beam Unit – Add Deck Plan for Widened Deck
  - Bridge Stinger Details
  - Additional coordination with Town

**TASK II - ARCHITECTURAL**

**A. Design Development**

1. Architectural Studies & Details
  - Develop revised rail option and the architectural options to realize the triangular pattern in the rail.
  - Develop bridge mounted "stingers"
  - Attend Additional Meetings with the Town and the Town Council.

**TASK III – LIGHTING DESIGN**

**A. Design Development (includes one meeting in Addison)**

1. Develop color alternative for lighting of arch.
2. Develop mounting concepts for bridge structure lighting and stingers.
3. Prepare a mock-up of potential color changing effects on existing Addison Circle sculpture.
3. Present final lighting design development to the Town Council.

**TASK V - PROJECT MANAGEMENT**

**B. Coordination**

1. Prepare for and Attend Town Council or other Town Meetings (1 total).
2. Prepare for and attend project meetings with Addison Public Works (2 total)

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 03 TO WORK ORDER NO. 001**

**ATTACHMENT L**

**ADDITIONAL FIXED PRICE FEE BREAKDOWN  
URS CORPORATION**

	<b>Total Cost</b>
<b>TASK I – Engineering</b>	
<b>B. Bridges</b>	<b>\$ 23,830.00</b>
1. Preliminary Bridge Design	
2. Final Bridge Design, PS&E	
<b>TASK II – Architecture (Corgan)</b>	
<b>A. Design Development</b>	<b>\$ 10,280.00</b>
<b>TASK III – Lighting Design (Brandston)</b>	
<b>A. Design Development</b>	<b>\$ 14,280.00</b>
<b>TASK V – Project Management</b>	
<b>B. Preparation &amp; Attendance of Meetings W/ Addison</b>	<b>\$ 1,080.00</b>
<hr/>	
<b>TOTAL</b>	<b>\$ 49,470.00</b>

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 03 - ARAPAHO ROAD BRIDGE  
MAN-HOUR & EXPENSE COST ESTIMATE  
URS CORPORATION**

**ATTACHMENT L**

CONSULTANT: **URS Corporation**

	No. of Sheets	Principal	Senior Consult.	Project Mngnr	Sr Project	Project Eng/Plan	Staff Eng/Plan	Sr. Tech	Tech	Clerical WP	Total Hours	Total Labor Cost	Direct Expenses	Total Cost
<b>TASK I - ENGINEERING</b>	0	0	32	60	66	18	0	58	4	0	238	\$ 23,830.00	\$ -	\$ 23,830.00
<b>B. Bridges</b>	0	0	32	60	66	18	0	58	4	0	238	\$ 23,830.00	\$ -	\$ 23,830.00
1. Revise Preliminary Bridge Design (~30% submittal)	0	0	4	28	32	12	0	34	0	0	120	\$ 11,700.00	\$ -	\$ 11,700.00
Revise Preliminary Bridge Layout (Finalize Bridge Location)					8	4		8			20	\$ 540.00	\$ -	\$ 540.00
Revise Preliminary Typical Section			2	8	4			8			22	\$ 250.00	\$ -	\$ 250.00
Refine Arch Shape			4	8	4			8			24	\$ 520.00	\$ -	\$ 520.00
Re-Size Diaphragms			2	8	4			8			14	\$ 730.00	\$ -	\$ 730.00
Re-develop Traffic Railing Members					4			5			10	\$ 770.00	\$ -	\$ 770.00
Develop Singers			4		8	4		4			20	\$ 820.00	\$ -	\$ 820.00
Coordinate Culvert Layout											0	\$ -	\$ -	\$ -
Revise Quantities and Cost Estimate			2	4		4					10	\$ 1,070.00	\$ -	\$ 1,070.00
2. Final Bridge Design, PS&E (85%, 95%, 100% submittals)	0	0	16	32	34	6	0	24	4	0	118	\$ 12,330.00	\$ -	\$ 12,330.00
Prestressed Concrete Beam Unit - Add Deck Plan for Widened Deck					12	6		12			30	\$ 2,310.00	\$ -	\$ 2,310.00
Bridge Slinger Details			8	32	16			12			66	\$ 1,430.00	\$ -	\$ 1,430.00
Additional Coordination with Town					6				4		22	\$ 2,390.00	\$ -	\$ 2,390.00
<b>CORGAN RATES</b>														
				\$140.00	\$126.00	\$60.00		\$36.00						
<b>TASK II - ARCHITECTURAL</b>	0	0	0	48	0	36	0	40	0	0	124	\$ 10,280.00	\$ -	\$ 10,280.00
<b>A. Design Development</b>	0	0	0	48	0	36	0	40	0	0	124	\$ 10,280.00	\$ -	\$ 10,280.00
1. Architectural Studies & Details														
Develop revised traffic rail option and the Architectural option to realize the proposed triangular pattern.				12		24					36	\$ 1,120.00	\$ -	\$ 1,120.00
Develop Bridge Mounted "Slingers"				24		12		40			76	\$ 480.00	\$ -	\$ 480.00
Attend Additional Meetings to coordinate the architectural aspects of the design.				12							12	\$ 680.00	\$ -	\$ 680.00
<b>BRANDSTON RATES</b>														
		\$176.00		\$140.00	\$106.00		\$90.00							
<b>TASK III - LIGHTING DESIGN</b>	0	40	0	8	16	0	22	0	0	0	66	\$ 11,780.00	\$ 2,500.00	\$ 14,280.00
<b>A. Design Development</b>	0	40	0	8	16	0	22	0	0	0	66	\$ 11,780.00	\$ 2,500.00	\$ 14,280.00
1. Develop color alternatives for lighting of arch.											0			
2. Develop mounting concepts for bridge structure and slinger lighting											0			
3. Attend Additional Meeting with Town and perform lighting mock-up											0			
<b>TASK IV - PROJECT MANAGEMENT</b>														
<b>B. Coordination</b>	0	0	8	0	0	0	0	0	0	0	8	\$ 1,080.00	\$ -	\$ 1,080.00
4. Council or other Town Meetings (1)			4								4	\$ 640.00	\$ -	\$ 640.00
6. Project Meetings with Addison Public Works (2)			4								4	\$ 440.00	\$ -	\$ 440.00
<b>Grand Total</b>														
	0	40	40	116	82	54	22	98	4	456	\$ 47,290.00	\$ 2,500.00	\$ 49,790.00	

**CHANGE ORDER NO. 03**

In accordance with the Agreement between the Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation dated November 11, 2002 (for Work Order No. 001) this Change Order describes the agreed upon changes to the Services, Schedule, and Payment for the Services.

Project: Arapaho Road Bridge at Midway Road URS Project No. 25334401 Date: \_\_\_\_\_

REFERENCE: Drawing No. N/A Specification No. N/A Other N/A

---

**The Agreement is hereby changed as follows:**

See Attachment K, "ADDITIONAL SCOPE OF SERVICES"

**Justification for Change:**

The need for additional unforeseen coordination with the Addison Town Council and subsequent requested modifications to the bridge renderings, lighting, traffic rail and layout plans.

---

**CHANGE TO ESTIMATED CONTRACT PRICE (See Attachment L)**

Original Estimated Contract Price:	\$ <u>550,965.00</u>
Current estimated contract price, including previous change orders:	\$ <u>593,090.00</u>
The estimated Contract Price due to this Change Order will be increased by:	\$ <u>49,470.00</u>
The new estimated Contract Price due to this Change Order will be:	\$ <u>642,560.00</u>

**CHANGE TO THE ESTIMATED SCHEDULE (See Attachment M)**

The Contract Time will be increased by 151 calendar days.  
The date for completion of all work under the contract will be: June 30, 2004

---

**EXCEPT AS PROVIDED IN THIS CHANGE ORDER, ALL TERMS AND CONDITIONS OF THE CONTRACT REMAIN UNCHANGED**

---

Acceptance of the terms of this Change Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

\_\_\_\_\_  
Signature

Michael E. Murphy, P.E. / Director of Public Works  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

cc: Accounting

**URS**

  
\_\_\_\_\_  
Signature

Emily Taylor, P.E. / Vice President  
Typed Name/Title

11/03/03  
Date of Signature



May 7, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development & Contract Documents  
Change Order No 01 & Change Order No. 02 to Work Order No 001**

Dear Mr. Chutchian:

Enclosed please find two original Change Orders to Work Order No. 001 of the Agreement for Professional Services for the Arapaho Road Bridge at Midway Road for the Town of Addison's execution. Change Order No. 01 covers the additional services provided to prepare expert witness testimony for the noise and vibration and includes Attachment D – Additional Scope of Services, Attachment E – Additional Fixed Price Fee Breakdown, and Attachment F - Revised Estimated Schedule. Change Order No. 02 covers the additional services to satisfy the requirements of DWU and includes Attachment G - Additional Scope of Services, Attachment H – Additional Fixed Price Fee Breakdown, and Attachment J – Revised Estimated Schedule.

Please have all originals of the Change Orders executed, and return one executed original of each Change Order to us.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

CHANGE ORDER NO. 01

In accordance with the Agreement between the Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation dated November 11, 2002 (for Work Order No. 001) this Change Order describes the agreed upon changes to the Services, Schedule, and Payment for the Services.

Project: Arapaho Road Bridge at Midway Road URS Project No. 25334401 Date: \_\_\_\_\_

REFERENCE: Drawing No. N/A Specification No. N/A Other N/A

**The Agreement is hereby changed as follows:**

See Attachment D, "ADDITIONAL SCOPE OF SERVICES"

**Justification for Change:**

The need for a noise and vibration expert witness to testify in the condemnation hearings for the Crouch and Motel 6 properties.

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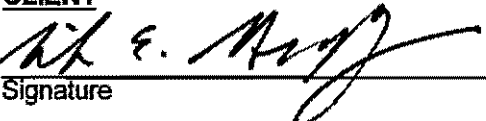
**CHANGE TO ESTIMATED CONTRACT PRICE (See Attachment E)**

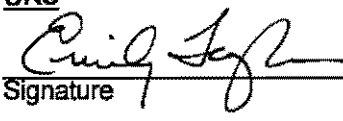
Original Estimated Contract Price:	\$ <u>550,965.00</u>
Current estimated contract price, including previous change orders:	\$ <u>550,965.00</u>
The estimated Contract Price due to this Change Order will be increased by:	\$ <u>18,715.00</u>
The new estimated Contract Price due to this Change Order will be:	\$ <u>569,680.00</u>

**CHANGE TO THE ESTIMATED SCHEDULE (See Attachment F)**  
The Contract Time will be increased by 150 calendar days.  
The date for completion of all work under the contract will be: January 31, 2004

EXCEPT AS PROVIDED IN THIS CHANGE ORDER, ALL TERMS AND CONDITIONS OF THE CONTRACT REMAIN UNCHANGED

Acceptance of the terms of this Change Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**  
  
Signature  
Michael E. Murphy, P.E. / Director of Public Works  
Typed Name/Title  
5/8/03  
Date of Signature

**URS**  
  
Signature  
Emily Taylor, P.E. / Vice President  
Typed Name/Title  
May 07, 2003  
Date of Signature

cc: Accounting

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 01 to WORK ORDER NO. 001**

**ATTACHMENT D  
ADDITIONAL SCOPE OF SERVICES**

**EXPERT TESTIMONY OF NOISE AND VIBRATION RESULTS FOR PROPERTY CONDEMNATION**

In addition to the noise analyses provided for in the original Scope of Services, URS will provide expert witness testimony for the condemnation hearings relating to the construction and use of Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) on a tangent alignment.

This task includes preparation and participation of staff qualified in airborne and groundborne noise analysis in the upcoming condemnation hearings (currently scheduled for April 16 and April 23, 2003) for the sites known as The Crouch Property (old MBNA Building) and the Motel 6 Property.

In addition to the airborne noise analysis conducted for the project, a groundborne noise (i.e., vibration) study will be conducted. Potential vibration impacts would be analyzed for 2 cases - a "close-in" case (the Crouch) property wherein the bridge pier is approximately 27 feet from the building of interest; the second for the Motel 6 property, in which the bridge/roadway is approximately 100 feet from the building of interest. Vibration from construction equipment and operations will also be addressed. This study will be a "screening" level of analysis as vibration is not expected to have an adverse impact.

URS' Michael Greene, INCE Bd. Cert. # 97008 and Project Manager, Cliff Hall, P.E., will attend a preparation meeting on April 7, 2003 in Dallas, Texas with Town of Addison legal representatives and other URS staff. Noise analysis results to-date will be reviewed and preparations/strategies for the condemnation hearings will be discussed. Following the preparation meeting, relevant presentation material will be prepared and presented to Town of Addison legal representatives for review. Because of the limited time available between the preparation meeting and the condemnation hearing, one (1) round of review and revision per hearing is anticipated. Additional review cycles will be considered out-of-scope work requiring additional budget authorization.

Michael Greene and Cliff Hall will attend one condemnation hearing for the Crouch Property and one condemnation hearing for the Motel 6 property and will present the results of the noise and vibration analyses as they pertain to the subject properties. They will be available for questions as necessary. When URS staff appear as expert witnesses at court trials, mediation, arbitration hearings and depositions, their time is charged at 2.0 times the standard rate. All time spent preparing for such trials, hearings and depositions is charged at the standard labor rate.

**Changes to the Itemized Scope of Services Provided by URS**

**TASK IV – Noise Study**

**C. Expert Witness Testimony of Noise & Vibration Crouch Property**

1. Preparation for Strategy Meeting
2. Strategy Meeting
3. Preparation for Condemnation Hearing - Crouch
4. Vibration Screening (Construction & Operations)
5. Crouch Condemnation Hearing and Debrief

**D. Expert Witness Testimony of Noise & Vibration Motel 6 Property**

1. Preparation for Condemnation Hearing - Motel 6
2. Vibration Screening (Construction & Operations)
3. Motel 6 Condemnation Hearing and Debrief



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 01 TO WORK ORDER NO. 001**

**ATTACHMENT E**

**ADDITIONAL FIXED PRICE FEE BREAKDOWN  
URS CORPORATION**

**Total Cost**

**TASK IV – Noise Study**

**C. Expert Testimony of Noise & Vibration Crouch Property** **\$ 13,270.00**

- 1. Preparation for Strategy Meeting
- 2. Strategy Meeting
- 3. Preparation for Condemnation Hearing - Crouch
- 4. Vibration Screening (Construction & Operations)
- 5. Crouch Condemnation Hearing and Debrief

**D. Expert Testimony of Noise & Vibration Motel 6 Property** **\$ 5,445.00**

- 1. Preparation for Condemnation Hearing - Motel 6
- 2. Vibration Screening (Construction & Operations)
- 3. Motel 6 Condemnation Hearing and Debrief

---

**TOTAL**

**\$ 18,715.00**

# URS Corporation

Arapaho Road Bridge at Midway Road  
 Design Development and Contract Documents  
 Change Order No. 01 to Work Order No. 001

## ATTACHMENT F Revised Estimated Schedule

TASK DESCRIPTION	October 2 0 0 2	November 2 0 0 2	December 2 0 0 2	January 2 0 0 3	February 2 0 0 3	March 2 0 0 3	April 2 0 0 3	May 2 0 0 3	June 2 0 0 3	July 2 0 0 3	August 2 0 0 3	September 2 0 0 3	October 2 0 0 3	November 2 0 0 3	December 2 0 0 3	January 2 0 0 3
Notice to Proceed (NTP)		◆														
DWU Coordination Issues		◆														
NTP For Prelim. Design		◆														
Preliminary Design Development																
Preliminary Geotech																
Preliminary Grading at Arch																
Finalize Bridge Layouts																
Final Concepts (~30% Plans)																
Addison Review																
Lighting Concepts																
Final Geotechnical Report																
Final Grading Plans																
Final Design																
Intermediate Design Submittal (60% Plans)																
Addison Review																
Bridge Drainage Requirements																
Final Design & Construction Documents																
Final Design Submittal (95% Plans)																
Addison Review																
Incorporate Comments, Final PS&E																
Signed and Sealed PS&E (100%)																

- ◆ NTP
- ◆ REQ'D INFORMATION FROM TOWN'S CONSULTANT
- ◆ SUBMITTAL

CHANGE ORDER NO. 02

In accordance with the Agreement between the Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation dated November 11, 2002 (for Work Order No. 001) this Change Order describes the agreed upon changes to the Services, Schedule, and Payment for the Services.

Project: Arapaho Road Bridge at Midway Road URS Project No. 25334401 Date: \_\_\_\_\_

REFERENCE: Drawing No. N/A Specification No. N/A Other N/A

**The Agreement is hereby changed as follows:**

See Attachment G, "ADDITIONAL SCOPE OF SERVICES"

**Justification for Change:**

The need for additional unforeseen coordination with the City of Dallas Water Utilities and subsequent modifications to the conceptual bridge typical sections, and layouts.

**CHANGE TO ESTIMATED CONTRACT PRICE (See Attachment H)**

Original Estimated Contract Price:	\$ <u>550,965.00</u>
Current estimated contract price, including previous change orders:	\$ <u>569,680.00</u>
The estimated Contract Price due to this Change Order will be increased by:	\$ <u>23,410.00</u>
The new estimated Contract Price due to this Change Order will be:	\$ <u>593,090.00</u>

**CHANGE TO THE ESTIMATED SCHEDULE (See Attachment J)**

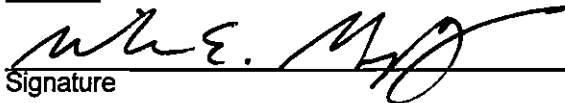
The Contract Time will be increased by 0 calendar days.

The date for completion of all work under the contract will be: January 31, 2004

**EXCEPT AS PROVIDED IN THIS CHANGE ORDER, ALL TERMS AND CONDITIONS OF THE CONTRACT REMAIN UNCHANGED**

Acceptance of the terms of this Change Order is acknowledged by the following signatures of the Authorized Representatives.

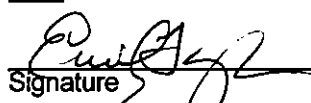
**CLIENT**

  
Signature

Michael E. Murphy, P.E. / Director of Public Works  
Typed Name/Title

5/08/03  
Date of Signature

**URS**

  
Signature

Emily Taylor, P.E. / Vice President  
Typed Name/Title

May 07, 2003  
Date of Signature

cc: Accounting

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 02 to WORK ORDER NO. 001**

**ATTACHMENT G  
ADDITIONAL SCOPE OF SERVICES**

**RESOLUTION OF DALLAS WATER UTILITIES (DWU) ISSUES**

In addition to the design services provided for in the original Scope of Services, URS will provide conceptual engineering and modifications to the conceptual plans, as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 to resolve the DWU concerns related to the 60" water main inside the proposed Arapaho Road right-of-way (ROW). URS shall modify the conceptual bridge layouts and typical sections as necessary to obtain approval from DWU for the construction of Arapaho Road. URS will attend meetings with the Town of Addison, DWU and the Town's consultant as necessary. URS will coordinate the alignment, profile, width and other issues related to Arapaho Road with the Town's consultant as necessary.

**Changes to the Itemized Scope of Services Provided by URS**

**TASK I – Engineering**

**D. Conceptual Plan Modifications (DWU Issues)**

1. Modifications of Conceptual Bridge Layouts
2. Modifications of Conceptual Typical Sections

**TASK III – Architecture**

**C. Attendance of Meetings With Addison (DWU Issues)**

**TASK V – Project Management**

**C. Preparation for and Attendance of Meetings With Addison (DWU Issues)**

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
CHANGE ORDER NO. 02 TO WORK ORDER NO. 001**

**ATTACHMENT H**

**ADDITIONAL FIXED PRICE FEE BREAKDOWN  
URS CORPORATION**

**Total Cost**

**TASK I – Engineering**

**D. Conceptual Plan Modifications (DWU Issues)**

**\$ 14,470.00**

- 1. Modifications of Conceptual Bridge Layouts
- 2. Modifications of Conceptual Typical Sections

**TASK III – Architecture (Corgan)**

**C. Attendance of Meetings With Addison (DWU Issues)**

**\$ 980.00**

**TASK V – Project Management**

**C. Preparation & Attendance of Meetings W/ Addison (DWU Issues) \$ 7,960.00**

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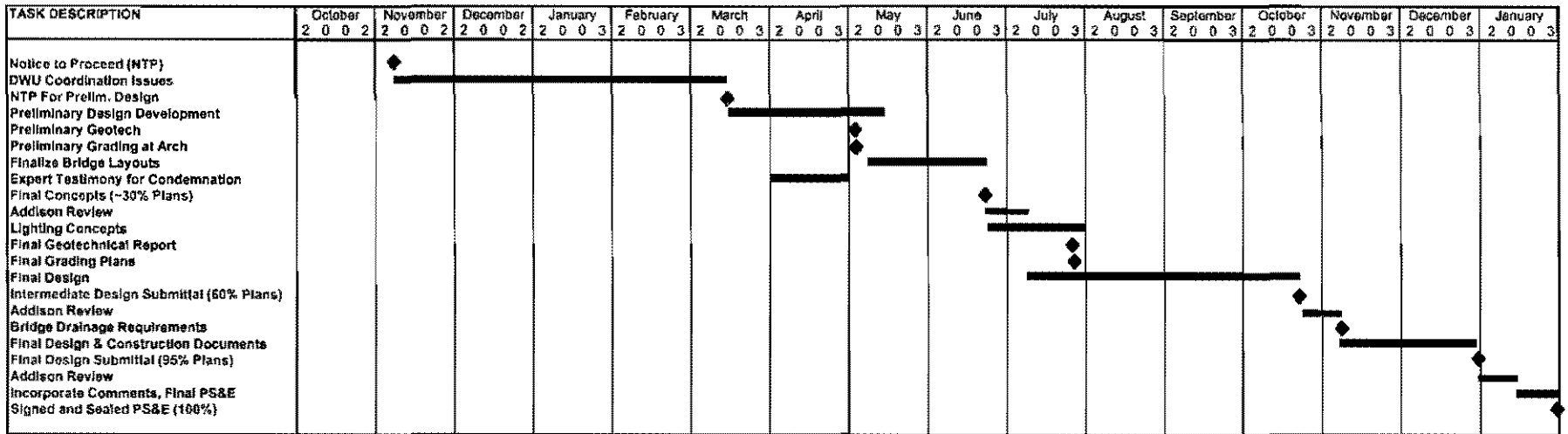
**TOTAL**

**\$ 23,410.00**

# URS Corporation

Arapaho Road Bridge at Midway Road  
 Design Development and Contract Documents  
 Change Order No. 02 to Work Order No. 001

## ATTACHMENT J Revised Estimated Schedule



- ◆ NTP
- ◆ REQ'D INFORMATION FROM TOWN'S CONSULTANT
- ◆ SUBMITTAL

TOWN OF ADDISON  
PAYMENT AUTHORIZATION MEMO

DATE: 7/21/03

Claim # \_\_\_\_\_

Check \$ 22,448.30

Vendor No. \_\_\_\_\_

Vendor Name

URS CORPORATION

Address

GRAYSTONE CENTER

Address

3010 LBJ FREEWAY, SUITE 1300

Address

DALLAS, TEXAS 75234

Zip Code \_\_\_\_\_

INVOICE # OR DESCRIPTION	FUND	DEPT	OBJ	PROJ	SAC	AMOUNT
	(00)	(000)	(00000)	(00000)	(000)	(\$000,000.00)
	44	00	5650	8330		22,448.30

TOTAL \$ 22,448.30

EXPLANATION

ARAPAHO RD BRIDGE DESIGN

Steve Chute  
Authorized Signature

Finance



Remittance Page

Invoice Date 07/14/03  
Invoice 623699  
Project 25334400  
Page 1

For: Design of the Arapaho Road  
Bridge over Midway Road

Professional Services for Period Ending 06/20/03

Town Of Addison  
Attn: Steven Z. Chutchain, PE  
16801 Westgrove Dr  
Addison TX 75001-5190

**Total Due: \$ 22,448.30**  
Terms: Due upon Receipt

- \* Make checks payable to: URS Corporation
- \* Please indicate invoice number and/or project number on check
- \* Please include this stub with payment

**Regular Mail (USPS):** URS Corporation  
Dept. 1028  
P.O. Box 121028  
Dallas TX 75312-1028  
US

**Overnight Courier:** URS Corporation  
Lock Box No. 891028  
888 South Greenville Ave., Suite 200  
Richardson, TX 75081  
Attn: Wholesale Lock Box Processing  
(972) 680-1900

**Electronic Funds Transfer:**

Account: URS Corporation  
Bank: Wells Fargo Bank  
Account No.: 4520-086471  
ABA Routing No.: 121-000-248  
Swift Code: WFBIUS6S

Remittance information can be sent to:

Email: RemitTo@URSCorp.com  
Fax: (512) 419-6937 Attn: Cash Applications

Please contact Emilio S Ramirez at 512 419-6786 or via email at Emilio\_Ramirez@urscorp.com if you have any questions regarding this invoice.





Invoice Date 07/14/03  
 Invoice 623699  
 Project 25334400  
 Page 2

Town Of Addison  
 Attn: Steven Z. Chutchain, PE  
 16801 Westgrove Dr  
 Addison TX 75001-5190

For: Design of the Arapaho Road  
 Bridge over Midway Road

Professional Services for Period Ending 06/20/03

This is a Firm Fixed Price Project  
 Total Project Budget is \$593,090.00

PHASE	FEE	PERCENT COMPLETE	FEE EARNED	PREVIOUS BILLING	CURRENT BILLING
10010-ENG-Civil Site Work	19,370.00	0.00%	0.00	0.00	0.00
10021-ENG-Prelim Bridge Design	71,350.00	40.00%	28,540.00	13,556.50	14,983.50
10022-ENG-Final Bridge Design	313,330.00	0.00%	0.00	0.00	0.00
10030-ENG-Electrical Eng.	30,350.00	2.00%	607.00	607.00	0.00
20000 ARCHITECTURE	40,200.00	42.20%	16,964.40	13,587.60	3,376.80
30000 LIGHTING DESIGN	39,580.00	2.50%	989.50	989.50	0.00
40000 NOISE STUDY	32,760.00	90.00%	29,484.00	26,208.00	3,276.00
50000 PROJECT MANAGEMENT	31,680.00	40.00%	12,672.00	11,860.00	812.00
10040-ENG-Conceptual Plan Mod.	14,470.00	95.00%	13,746.50	13,746.50	0.00
<b>TOTALS</b>	<b>593,090.00</b>		<b>103,003.40</b>	<b>80,555.10</b>	<b>22,448.30</b>
			<b>TOTAL THIS INVOICE</b>		<b>\$ 22,448.30</b>

*O.K. to PAY  
 5/22  
 7/21/03*

Please contact Emilio S Ramirez at 512 419-6786 or via email at Emilio\_Ramirez@urscorp.com if you have any questions regarding this invoice.

# Monthly Progress Report

## Design of the Arapaho Road Bridge Over Midway Road

URS Project No. 25334400

Period: May 24, 2003 to June 20, 2003

---

### 1. General Accomplishments

- 1.1 Prepared presentation for the Town Council.
- 1.2 Continued preparation of bridge layouts and typical sections for submittal to Town's consultant for inclusion in the June submittal.

### 2. Progress This Period

- 2.1 Revised "Blue Bridge" renderings and prepare a "White Bridge" rendering incorporating colored lighting schemes.
- 2.2 Prepared presentation for the Town Council and met with Public Works to discuss the presentation.
- 2.3 Continued preliminary bridge design and preparation of bridge layouts and typical sections.
- 2.4 Continued architectural concept development
- 2.5 Attended coordination meeting with roadway consultant.
- 2.6 Continued architectural considerations for retaining wall panels, piers and traffic rails.

### 3. Anticipated Next Period

- 3.1 Finalize the preliminary design of the bridge looking at the arch and substructure.
- 3.2 Submit 30% plans and cost estimate.
- 3.3 Present to Town Council at workshop and get agreement on bridge color and architectural features.

### 4. Schedule Status

- 4.1 Currently on schedule but need feedback on color of bridge and lighting and architectural features.

### 5. Issues / Impacts

- 5.1 Placing sidewalk exterior to the arch is creating a more difficult structure to design and construct. This may increase the cost of the bridge.
- 5.2 Sidewalk exterior to the arch may affect the ability to light the arch efficiently and increase the lighting costs.
- 5.3 Town is considering using a sidewalk greater than 4-ft. Changes to the sidewalk can affect the preliminary design work prepared to date and delay the design completion.
- 5.4 Town is considering changes to the color and lighting of the bridge.



July 14, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development & Contract Documents  
Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our invoice for Professional Services for the Arapaho Road Bridge at Midway Road for the period between May 24, 2003 and June 20, 2003. Also included is our Progress Report for this period outlining the services provided.

Sincerely,

**URS Corporation**

A handwritten signature in black ink, appearing to read "Cliff R. Hall".

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

**TOWN OF ADDISON**  
**Review of Funding Related to Addison Circle Phase IIb Development**

<b>SOURCE OF FUNDS FOR STREETS</b>	
2000 Spectrum Bond Proceeds (remaining balance)	\$ 55,900
2002 Spectrum Bond Proceeds	2,300,000
2002 Bond Fund Unallocated Interest Earnings	100,000
South Quorum/Landmark Project (remaining balance)	500,000
Addison Road Widening (remaining balance)	251,050
Street Capital Project Fund Unallocated Interest Earnings	200,000
Total	<u>3,406,950</u>
<b>APPLICATION OF FUNDS FOR STREETS</b>	
Spectrum Construction (Estimated)	3,067,800
Quorum Improvements	339,150
Total	<u>3,406,950</u>
<b>DIFFERENCE STREETS</b>	<u>\$ -</u>
<b>SOURCE OF FUNDS FOR PARKS</b>	
General Fund Transfer to Street Capital Project Fund	<u>\$ 707,770</u>
<b>APPLICATION OF FUNDS FOR PARKS</b>	
Quorum North Park	290,000
Maws Park	650,000
Total	<u>940,000</u>
<b>DIFFERENCE PARKS</b>	<u>\$ (232,230)</u>
<b>TOTAL DIFFERENCE IN FUNDING</b>	<u>\$ (232,230)</u>

**TOWN OF ADDISON**  
**Review of Funding Related to Addison Circle Phase IIb Development**

<b>SOURCE OF FUNDS FOR STREETS</b>	
2000 Spectrum Bond Proceeds (remaining balance)	\$ 55,900
2002 Spectrum Bond Proceeds	2,300,000
2002 Bond Fund Unallocated Interest Earnings	100,000
South Quorum/Landmark Project (remaining balance)	<del>600,000</del>
Street Capital Project Fund Unallocated Interest Earnings	200,000
Total	<u>3,255,900</u>

*500,000*

<b>APPLICATION OF FUNDS FOR STREETS</b>	
Spectrum Construction (Estimated)	3,067,800
Quorum Improvements	339,150
Total	<u>3,406,950</u>

**DIFFERENCE STREETS** \$ (151,050)

*251,000*

<b>SOURCE OF FUNDS FOR PARKS</b>	
General Fund Transfer to Street Capital Project Fund	<u>\$ 707,770</u>

<b>APPLICATION OF FUNDS FOR PARKS</b>	
Quorum North Park	290,000
Mews Park	650,000
Total	<u>940,000</u>

**DIFFERENCE PARKS** \$ (232,230)

**TOTAL DIFFERENCE IN FUNDING** \$ (383,280)

*↑  
ADDISON  
ROAD*



November 3, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road**  
**Phase II – Design Development & Contract Documents**  
**Change Order No 03 to Work Order No 001**

Dear Mr. Chutchian:

Enclosed please find two original Change Orders to Work Order No. 001 of the Agreement for Professional Services for the Arapaho Road Bridge at Midway Road for the Town of Addison's execution. Change Order No. 03 covers the additional services required to make the changes requested by the Town Council, including adding colored lighting, adding the "stingers", revising the traffic rail and revising the preliminary design and includes Attachment K – Additional Scope of Services, Attachment L – Additional Fixed Price Fee Breakdown, and Attachment M - Revised Estimated Schedule.

Please have all originals of the Change Orders executed, and return one executed original of each Change Order to us.

Sincerely,

URS Corporation

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

ASK JOHN HICE  
WHEN HE WILL  
FORWARD HIS  
COMMENTS!

JOHN SAID  
COMMENTS TO  
BE FORWARDED  
BY 9/18/02

*Passed  
Subject to  
City Attorney &  
City Manager  
Approval*

*9-10-02*

*#R8-1*

Council Agenda Item *#R8*

**SUMMARY:**

This item is for the approval of a Professional Services Agreement for the design of the Arapaho Road Bridge at Midway Road.

**FINANCIAL IMPACT:**

Budgeted Amount: \$10.00 Million

Cost: \$550,965.00 (Engineering)

Source of Funds: Funds are available from the FY 2002 General Obligation Bond Program.

**BACKGROUND:**

The third phase of the proposed Arapaho Road extension project extends from Surveyor Blvd. to Addison Road. Construction of this section of Arapaho Road will complete an east-west minor arterial roadway that is necessary to relieve traffic congestion on Belt Line Road. It is anticipated that the new street will initially absorb approximately 11,000 vehicles per day, with a maximum future count of 25,000 vehicles per day. A proposed bridge over Midway Road is also proposed as an integral component of the roadway section in the third phase. The firm of URS Corporation was selected by the Town's Bridge Selection Committee to perform the design of this bridge. Attached is a Professional Services Agreement, in the amount not to exceed \$550,965.00, for design services related to the construction of the proposed Midway Road Bridge. This agreement provides for coordination of the bridge design by URS Corporation with the design of the roadway by HNTB Corporation. The anticipated construction cost of the bridge is approximately \$4,600,000. The proposed scope of work that this firm will provide is as follows:

- a. Bridge Design, including Civil & Electrical
- b. Architectural Design
- c. Lighting Design
- d. Noise Study, including Modeling & Analyses
- e. Project Management

The design of the proposed bridge by URS Corporation shall be performed concurrently with the design efforts on the roadway by HNTB Corporation.



**RECOMMENDATION:**

It is recommended that Council authorize the City Manager to enter into a contract with URS Corporation, in the amount not to exceed \$550,965.00, for Professional Services associated with the design of the Arapaho Road Bridge at Midway Road.

#R8-2

**AGREEMENT FOR PROFESSIONAL SERVICES  
("Agreement")**

This Agreement between Town of Addison ("Client") and URS Corporation ("URS"), a Nevada corporation; Graystone Centre, 3010 LBJ Freeway, Suite 1300 75234; 972.406.6950 ("URS"), is effective as of September 11, 2002. The parties agree as follows:

It is the expressed intent of the parties that this Agreement shall be made available to the subsidiaries and affiliated companies of URS. For the purposes of this Agreement, as it applies to each Work Order, the term "URS" shall mean either, URS Corporation, or the affiliated company identified in the Work Order. The applicable Work Order shall clearly identify the legal name of the affiliate or subsidiary accepting the Work Order.

**ARTICLE I - Work Orders.** The Scope of Services ("Services"), the Time Schedule and the Charges are to be set forth in a written Work Order to this Agreement. The terms and conditions of this Agreement shall apply to each Work Order, except to the extent expressly modified by the Work Order. Where charges are "not to exceed" a specified sum, URS shall notify Client before such sum is exceeded and shall not continue to provide the Services beyond such sum unless Client authorizes an increase in the sum. If a "not to exceed" sum is broken down into budgets for specific tasks, the task budget may be exceeded without Client authorization as long as the total sum is not exceeded. Changes in conditions, including, without limitation, changes in laws or regulations occurring after the budget is established or other circumstances beyond URS control shall be a basis for equitable adjustments in the budget and schedule.

**ARTICLE II - Payment.** Unless otherwise stated in an Work Order, payment shall be on a time and materials basis under the Schedule of Fees and Charges in effect when the Services are performed. Client shall pay undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, URS may suspend further performance until payments are current. Client shall notify URS of any disputed amount within fifteen (15) days from date of the invoice, give reasons for the objection, and promptly pay the undisputed amount. Client shall pay an additional charge of one and one-half percent (1½%) per month or the maximum percentage allowed by law, whichever is the lesser, for any past due amount. In the event of a legal action for invoice amounts not paid, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party.

**ARTICLE III - Professional Responsibility.** URS is obligated to comply with applicable standards of professional care in the performance of the Services. Client recognizes that opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where the data are obtained, despite the use of due professional care.

**ARTICLE IV - Responsibility for Others.** URS shall be responsible to Client for URS Services and the services of URS subcontractors. URS shall not be responsible for the acts or omissions of other parties engaged by Client nor for their construction means, methods, techniques, sequences, or procedures, or their health and safety precautions and programs.

**ARTICLE V - Risk Allocation.** The liability of URS, its employees, agents and subcontractors (referred to collectively in this Article as "URS"), for Client's claims of loss, injury, death, damage, or expense, including, without limitation, Client's claims of contribution and indemnification, express or implied, with respect to third party claims relating to services rendered or obligations imposed under this Agreement, including all Work Orders, shall not exceed in the aggregate:

(1) The total sum of \$250,000 for claims arising out of professional negligence, including errors, omissions, or other professional acts, and including unintentional breach of contract; and any actual or potential environmental pollution or contamination, including, without limitation, any actual or threatened release of toxic, irritant, pollutant, or waste gases, liquids, or solid materials, or failure to detect or properly evaluate the presence of such substances, except to the extent such release, threatened release, or failure to detect or evaluate is caused by the willful misconduct of URS; or

(2) The total sum of \$1,000,000 for claims arising out of negligence, breach of contract, or other causes for which URS has any legal liability, other than as limited by (1) above.

**ARTICLE VI - Insurance.** URS agrees to maintain during the performance of the Services: (1) statutory Workers' Compensation coverage; (2) Employer's Liability; (3) General Liability; and (4) Automobile Liability insurance coverage each in the sum of \$1,000,000.

**ARTICLE VII - Consequential Damages.** Neither Party shall be liable to the other for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by breach of contract, willful misconduct, negligent act or omission, or other wrongful act of either of them.

**ARTICLE VIII - Client Responsibility.** Client shall: (1) provide URS, in writing, all information relating to Client's requirements for the project; (2) correctly identify to URS, the location of subsurface structures, such as pipes, tanks, cables and utilities; (3) notify URS of any potential hazardous substances or other health and safety hazard or condition known to Client existing on or near the project site; (4) give URS prompt written notice of any suspected deficiency in the Services; and (5) with reasonable promptness, provide required approvals and decisions. In the event that URS is requested by Client or is required by subpoena to produce documents or give testimony in any action or proceeding to which Client is a party and URS is not a party, Client shall pay URS for any time and expenses required in connection therewith, including reasonable attorney's fees.

Client shall reimburse URS for all taxes, duties and levies such as Sales, Use, Value Added Taxes, Deerried Profits Taxes, and other similar taxes which are added to or deducted from the value of URS Services. For the purpose of this Article such taxes shall not include taxes imposed on URS net income, and employer or employee payroll taxes levied by any United States taxing authority, or the taxing authorities of the countries or any agency or subdivision thereof in which URS subsidiaries, affiliates, or divisions are permanently domiciled. It is agreed and understood that these net income, employer or employee payroll taxes are included in the unit prices or lump sum to be paid URS under the respective Work Order.

**ARTICLE IX - Force Majeure.** An event of "Force Majeure" occurs when an event beyond the control of the Party claiming Force Majeure prevents such Party from fulfilling its obligations. An event of Force Majeure includes, without limitation, acts of God (including floods, hurricanes and other adverse weather), war, riot, civil disorder, acts of terrorism, disease, epidemic, strikes and labor disputes, actions or inactions of government or other authorities, law enforcement actions, curfews, closure of transportation systems or other unusual travel difficulties, or inability to provide a safe working environment for employees.

In the event of Force Majeure, the obligations of URS to perform the Services shall be suspended for the duration of the event of Force Majeure. In such event, URS shall be equitably compensated for time expended and expenses incurred during the event of Force Majeure and the schedule shall be extended by a like number of days as the event of Force Majeure. If Services are suspended for thirty (30) days or more, URS may, in its sole discretion, upon 5 days prior written notice, terminate this Agreement or the affected Work Order, or both. In the case of such termination, in addition to the compensation and time extension set forth above, URS shall be compensated for all reasonable termination expenses.

**ARTICLE X - Right of Entry.** Client grants to URS, and, if the project site is not owned by Client, warrants that permission has been granted for, a right of entry from time to time by URS, its employees, agents and subcontractors, upon the project site for the purpose of providing the Services. Client recognizes that the use of investigative equipment and practices may unavoidably alter the existing site conditions and affect the environment in the area being studied, despite the use of reasonable care.

**ARTICLE XI - Documents.** Provided that URS has been paid for the Services, Client shall have the right to use the documents, maps, photographs, drawings and specifications resulting from URS efforts on the project. Reuse of any such materials by Client on any extension of this project or any other project without the written authorization of URS shall be at Client's sole risk. URS shall have the right to retain copies of all such materials. URS retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

**ARTICLE XII - Termination.** Client may terminate all or any portion of the Services for convenience, at its option, by sending a written Notice to URS. Either party can terminate this Agreement or a Work Order for cause if the other commits a material, uncured breach of this Agreement or becomes insolvent. Termination for cause shall be effective twenty (20) days after receipt of a Notice of Termination, unless a later date is specified in the Notice. The Notice of Termination for cause shall contain specific reasons for termination and both parties shall cooperate in good faith to cure the causes for termination stated in the Notice. Termination shall not be effective if reasonable action to cure the breach has been taken before the effective date of the termination. Client shall pay URS upon invoice for Services performed and charges incurred prior to termination, plus reasonable termination charges. In the event of termination for cause, the parties shall have their remedies at law as to any other rights and obligations between them, subject to the other terms and conditions of this Agreement.

**ARTICLE XIII - No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS. No third party shall have the right to rely on URS opinions rendered in connection with the Services without the written consent of URS and the third party's agreement to be bound to the same conditions and limitations as Client.

**ARTICLE XIV - Assignments.** Neither party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other party.

**ARTICLE XV - Hazardous Substances.** All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by URS in accordance with applicable law; provided, however, that any and all such materials, including wastes, that cannot be introduced back into the environment under existing law without additional treatment, and all hazardous wastes, radioactive wastes, or hazardous substances ("Hazardous Substances") related to the Services, shall be packaged in accordance with the applicable law by URS and turned over to Client for appropriate disposal. URS shall not arrange or otherwise dispose of Hazardous Substances under this Agreement. URS, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but URS shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances. If Client requires: (1) URS agents or employees to sign such manifests; or (2) URS to hire, for Client, the Hazardous Substances transportation, treatment, or disposal contractor, then for these two purposes, URS shall be considered to act as Client's agent so that URS will not be considered to be a generator, transporter, or disposer of such substances or considered to be the arranger for disposal of Hazardous Substances, and Client shall indemnify URS against any claim or loss resulting from such signing.

**ARTICLE XVI - Venue.** In the event of any dispute between the parties to this Agreement, the venue for the dispute resolution shall be any state or federal court in the United States having jurisdiction over the parties. The foregoing notwithstanding, if the project is located outside the United States, the laws of the State of California shall govern and in such event, any dispute under the Agreement not resolved amicably shall be resolved under the binding rules of the American Arbitration Association.

**ARTICLE XVII - Integrated Writing and Enforceability.** This Agreement constitutes the final and complete repository of the agreements between Client and URS relating to the Services and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written. Modifications of this Agreement shall not be binding unless made in writing and signed by an Authorized Representative of each party. The provisions of this Agreement shall be enforced to the fullest extent

permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision.

**THE PARTIES ACKNOWLEDGE** that there has been an opportunity to negotiate the terms and conditions of this Agreement and agree to be bound accordingly.

**CLIENT**

**URS**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

**Ron Whitehead / City Manager**

**Emily Taylor, P.E. / Vice President**

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Typed Name/Title

\_\_\_\_\_  
Date of Signature

\_\_\_\_\_  
Date of Signature

LUIMP SUM WORK ORDER NO. 001

In accordance with the Agreement for Professional Services between Town of Addison ("Client"), and URS Corporation ("URS"), a Nevada corporation, dated September 11, 2002, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**  
**DESIGN DEVELOPMENT & CONTRACT DOCUMENTS**

**Client Authorized**

**Representative:**

**Address:** Public Works Department, P.O. Box 9010  
Addison, TX 75001-9010

**Telephone No.:** 972.450.2871

**URS Authorized**

**Representative:**

**Address:** Emily Taylor, P.E.  
Graystone Centre, 3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234

**Telephone No.:** 972.406.6950

**SERVICES.** The Services shall be described in Attachment A to this Work Order.

**SCHEDULE.** The Estimated Schedule shall be set forth in Attachment B to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein.

**PAYMENT.** The Services described in Attachment A will be performed for a "lump sum" amount of **\$550,965.00**. A breakdown of this "lump sum" cost is included in Attachment C. URS charges shall be on a percent complete basis and payment shall be made monthly based upon statements submitted to the Client for the work performed.

**TERMS AND CONDITIONS.** The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

**ACCEPTANCE** of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

**CLIENT**

\_\_\_\_\_  
Signature

Ron Whitehead / City Manager

Typed Name/Title

\_\_\_\_\_  
Date of Signature

**URS**

\_\_\_\_\_  
Signature

Emily Taylor, P.E. / Vice President

Typed Name/Title

\_\_\_\_\_  
Date of Signature

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001**

**ATTACHMENT A  
SCOPE OF SERVICES**

**DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS  
FOR THE ARAPAHO ROAD BRIDGE**

URS will provide the engineering, architectural, lighting design and noise study services including plans, specifications and estimates as it relates to Arapaho Road from approximate Station 40+67 to approximate Station 70+28 and as provided in the itemized scope. The construction will consist of an elevated four-lane roadway with sidewalk located within the proposed Arapaho Road right-of-way (ROW) on a tangent alignment. URS shall prepare plans, details and compute quantities for a steel arch bridge, the "blue-bridge concept", over Midway Road, with prestressed concrete beam approaches. Design and details will include all bridge details including any soundwalls located on the bridge. URS will also provide all bridge drainage details to accommodate the drainage in accordance with the Town's Consultant's drainage requirements. URS will also prepare plans, details and compute quantities for any lighting & illumination, and traffic control for the areas under and immediately adjacent to the bridge and retained wall portion of Arapaho Road with the exception of those portions to be prepared by the Town of Addison's Consultant. URS will also prepare architectural details for the bridge, the mechanically stabilized earth (MSE) retaining walls and the sound walls. Additionally, URS will prepare a noise study including ambient noise measurements, modeling and noise analyses. URS will prepare and submit technical memorandums, preliminary plans and preliminary construction cost estimates at the end of the Design Development phase for the Town's review. After resolution of one set of comments, URS will prepare all final detail plans, specifications, and estimates as previously described, to be included into one final construction package prepared by the Town's Consultant. URS will submit four sets of plans for review to the Town for 65% review and 95% review and will incorporate the Town's comments (one set per submittal) in the next submittals. URS will also provide signed and sealed mylar plans, electronic copies of drawing files, and specifications related to the bridge structure at the 100% final submittal.

URS will coordinate with the Town of Addison and/or the Town's Consultant for all interface design issues as well as coordinate the format and consolidation of construction plans, specification and estimate into one final construction package. URS will coordinate with the Town and/or the Town's Consultant for revising the horizontal alignment and vertical profile of Arapaho Road to accommodate the proposed bridge structure. URS will coordinate with the Town and/or the Town's Consultant for the revised alignment of the proposed box-culvert under Arapaho Road as well as bridge drainage and bridge drain tie-ins. URS will coordinate with the Town and/or the Town's Consultant for all geotechnical information required for the foundation design for the bridge and retaining walls.

The Town of Addison will provide to URS all available Arapaho Road geometrics, including but not limited to electronic files for horizontal alignment, vertical profile, typical sections, topography survey, field survey, and utility information. The Town will also provide boring logs, soil parameters and foundation design recommendations (allowable bearing capacities, lateral load analysis, etc.) required for the bridge foundation designs. The Town of Addison will provide to URS a field location survey of the existing 60-in. diameter water main, locating the water main precisely, both vertically and horizontally, along the project limits and specifically in the vicinity of the arch-bridge's main foundations. Additionally the Town will provide any applicable noise regulations or ordinance

information, obtain right of entry, and provide all traffic data including but not limited to, peak hourly volumes, average daily traffic, percentages of trucks, and design and posted speeds that may be required for the noise study. The Town will provide all landscape ordinances and guidelines as well as provide a copy of the Town's Consultant's schematic landscape masterplan and the streetscape design development package.

All ROW documentation and plans, Arapaho Road geometrics and roadway design, drainage, parking lot layout and design, retaining wall layout and design, survey, geotechnical engineering, design and details for soundwalls on retaining walls or at grade, landscaping, hardscaping and irrigation for landscaping, permitting, and construction administration, inspection and record drawings are outside the scope of this agreement and will be performed by others.



## **Itemized Scope of Services Provided by URS for the Arapaho Road Bridge**

### **TASK I - ENGINEERING**

#### **A. Civil Site Works**

1. Final Civil Design & PS&E (65%, 95%, 100% submittal)
  - Midway Road Traffic Control Plan
  - Coordinate Relocation of Overhead Utilities (Along Midway Road)
  - Retaining Wall Architectural Details
  - Soundwall Architectural Details
  - QA/QC
  - Cost Estimate
  - Special Provisions & Specifications
  - Coordination with Town's Consultants

#### **B. Bridges**

1. Preliminary Bridge Design (~30% submittal)
  - Develop Design Criteria
  - Preliminary Bridge Layout (Finalize Bridge Location)
  - Preliminary Typical Section
  - Refine Arch Shape
  - Size Thrust Block & Refine Shape
  - Size Foundation
  - Size Diaphragms
  - Size Traffic Railing Members
  - Develop Soundwall
  - Coordinate Culvert Layout
  - Quantities and Cost Estimate
  - QA/QC
2. Final Bridge Design, & PS&E (65%, 95%, 100% submittals)
  - Final Bridge Layout
  - Final Typical Section
  - General Notes
  - Quantities and Bearing Seats
  - Foundation Layout
  - Drilled Shaft Details
  - Abutment Plan & Elevation
  - Abutment Details
  - Bent Plan & Elevation
  - Bent Details
  - Thrust Block Plan & Elevation
  - Thrust Block Details
  - Prestressed Concrete Beam Unit – Deck Plan
  - Prestressed Concrete Beam Unit – Deck Sections
  - Bridge Soundwall Details
  - Miscellaneous Superstructure Details (drains, lighting)
  - Diaphragm Details
  - Closure Pour Details
  - Suspension Hanger Details
  - Steel Arch Design and Details
  - Steel Arch Camber Details
  - Bearing Details
  - Drainage Details
  - Railing Details
  - Architectural Details

- Erection Sequencing
- Prestressed Beam Tables
- Compile, Verify & Modify TxDOT Standard Drawings
- QA/QC
- Coordination with Town's Consultants
- Bridge Total Quantities & Cost Estimate
- Bridge Special Provisions & Specifications

### **C. Electrical Engineering**

1. Design Development
  - Prepare a preliminary cost estimate
2. Final Electrical Design & PS&E (65%, 95%, 100% submittals)
  - Develop and finalize a load study for each electrical service source.
  - Prepare Lighting Calculations for under-deck lighting above the parking lot.
  - Illumination Layout (2961', 1200'/sht + 1 sheet under the bridge)
  - Electric Service / Pole Summary
  - Conduit Runs / Contents Summary
  - Insert Lighting Consultant Special Details
  - Insert Latest Town or TxDOT Standards
  - Quantity Summary
  - Develop Final Cost Estimate (Using Estimator)
  - QA ON 95% PLANS
  - Update Drawings per City Review

## **TASK II - ARCHITECTURAL**

### **A. Design Development**

1. Architectural Studies & Details
  - Develop one rail option addressing the issues of hiker/biker separation from the vehicular traffic and the architectural options to realize the proposed triangular pattern in the rail.
  - Coordinate with the engineering team to refine the curvature and size of the steel. Produce drawings representing a viable option
  - Develop option for the final material and form of the thrust block. Provide CADD drawings of preferred scheme.
  - Develop a panel scheme for precast concrete retaining walls at approaches.
  - Develop center pier support shape.
  - Develop bridge mounted soundwalls
  - Attend Team Meetings and Conference Calls to coordinate the architectural aspects of the design with structural and lighting Consultants.

### **B. Final Design**

1. Coordination
2. Review
3. Specifications

## **TASK III – LIGHTING DESIGN**

### **A. Design Development (includes two meetings in Addison)**

1. Develop one alternative for lighting of elevated roadway.
2. Develop mounting concepts for bridge structure lighting.
3. Develop one alternative for lighting of outboard railings.
4. Develop one alternative for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.

### **B. Final Design (includes one meeting in Addison)**

1. Final details of fixtures and mounting for bridge structure illumination.
2. Final details of fixtures and mounting for elevated roadway lighting.
3. Final details of fixtures and mounting for outboard railing illumination.

4. Final details of fixtures and mounting for lighting of underside of bridge, roadway under bridge and any adjacent parking areas under bridge.
5. Provide control concept diagrams and other information suitable for use by electrical engineer describing control intent.

#### **TASK IV – NOISE STUDY**

##### **A. Noise Measurements**

1. Review existing noise ordinance and criteria documents
2. Coordinate with the Town of Addison to discuss noise issues and objectives
3. Perform noise measurement survey. Take initial noise readings, both long term (24 hours or longer) and short term (less than one hour) noise readings, at adjacent properties.
4. Observe adjacent building construction type to aid in estimating the potential noise effects inside the buildings

##### **B. Noise Modeling and Analyses**

1. Create a noise model to predict future noise emissions from the proposed roadway and bridge
2. Evaluate noise levels at areas of concern for compliance with applicable noise regulations and standards
3. Develop a range of sound wall heights and noise levels where noise impacts require mitigation.
4. Prepare report and respond to one round of comments.

#### **TASK V - PROJECT MANAGEMENT**

##### **A. Reports and Invoices**

1. Prepare Project Management Plan
2. Prepare Progress Reports
3. Prepare Invoices and Billings

##### **B. Coordination**

1. Coordinate/Administer the Project
2. Manage Subconsultants
3. Implement Quality Assurance/Quality Control Program
4. Prepare for and Attend Town Council or other Town Meetings (1 total)
5. Prepare for and run internal project coordination meetings (8 total)
6. Prepare for and attend project meetings with Addison Public Works (3 total)



**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD  
WORK ORDER NO. 001 – ARAPAHO ROAD BRIDGE  
ATTACHMENT C**

**LUMP SUM FEE BREAKDOWN  
URS CORPORATION**

	<b>Total Cost</b>
<b>TASK I - ENGINEERING</b>	<b>\$ 434,400.00</b>
A. Civil Site Works	\$ 19,370.00
B. Bridges	\$ 384,680.00
C. Electrical Engineering	\$ 30,350.00
<b>TASK II – ARCHITECTURAL (Corgan)</b>	<b>\$ 39,220.00</b>
A. Design Development	\$ 33,920.00
B. Final Design	\$ 5,300.00
<b>TASK III – LIGHTING DESIGN (Brandston)</b>	<b>\$ 39,580.00</b>
A. Design Development	\$ 20,620.00
B. Final Design	\$ 18,960.00
<b>TASK IV – NOISE STUDY</b>	<b>\$ 14,045.00</b>
A. Noise Measurements	\$ 5,540.00
B. Noise Modeling and Analyses	\$ 8,505.00
<b>TASK V - PROJECT MANAGEMENT</b>	<b>\$ 20,920.00</b>
A. Reports and Invoices	\$ 8,080.00
B. Coordination	\$ 12,840.00
<b>Printing &amp; Copying Expenses</b>	<b>\$ 2800.00</b>
<b>GRAND TOTAL</b>	<b>\$ 550,965.00</b>



**ATTACHMENT J**  
 Revised Estimated Schedule

YEAR	DESCRIPTION	October 2002	November 2002	December 2002	January 2003	February 2003	March 2003	April 2003	May 2003	June 2003	July 2003	August 2003	September 2003	October 2003	November 2003	December 2003	January 2004	February 2004	March 2004	April 2004	May 2004		
	Notice to Proceed (NTP)																						
	DWf Construction Issues																						
	NTP For Prelim. Design																						
	Preliminary Design Development																						
	Preliminary Geotech																						
	Preliminary Grading at Arch																						
	Final Bridge Layouts																						
	Expert Testimony for Construction																						
	Final Concepts (~30% Plans)																						
	Additional Review																						
	Presentation to Town Council																						
	Revises Concepts																						
	Presentation to Town Council																						
	Revises Preliminary Design																						
	Lighting Concepts																						
	Final geotechnical Report																						
	Final Grading Plans																						
	Final Design																						
	Interim Design Submittal (00% Plans)																						
	Additional Review																						
	Presentation to Town Council																						
	Revises Design for Deck Overlays																						
	Final Design Submittal (85% Plans)																						
	Additional Review																						
	Interim Design Submittal (100% Plans)																						
	Signoff and Scaled PS&E (100%)																						

- ◆ NTP
- ◆ RECD INFORMATION FROM TOWN'S CONSULTANT
- ◆ SUBMITTAL

DATE SUBMITTED: August 19, 2003  
FOR COUNCIL MEETING: August 26, 2003

**Council Agenda Item:**

**SUMMARY:**

This item is intended to brief the Council regarding the status of the Midway Road Bridge design by URS Corporation.

**FINANCIAL IMPACT:** N/A

**BACKGROUND:**

The third phase of the proposed Arapaho Road extension project extends from Surveyor Blvd. to Addison Road. Included as an integral component of the roadway section of this project is a bridge over Midway Road. URS Corporation is currently under design of the bridge.

**RECOMMENDATION:**

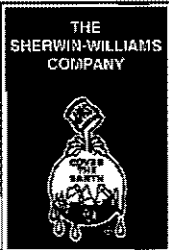
This item is for Council information only.



Addison "Circle  
Blueprints"  
Paint Specs

CARMEN MORAN  
TOWN OF ADDISON

5.23



Industrial  
and  
Marine  
Coatings

**POLY-LON® 1900**  
**POLYESTER POLYURETHANE**

PART A B65-500  
PART B B65V500

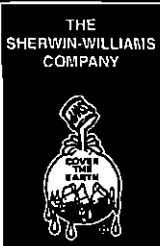
SERIES  
HARDENER

INDUSTRIAL  
& MARINE  
COATINGS

**PRODUCT INFORMATION**

Revised 1/02

PRODUCT DESCRIPTION		RECOMMENDED USES																													
<p><b>POLY-LON 1900 POLYESTER POLYURETHANE</b> is a heavy duty, high performance, two component, exterior/interior, VOC compliant, high solids, polyester-aliphatic urethane. When properly cured, this dries to a super tough, "wet look", high gloss, flexible finish with maximum gloss retention, color retention, and chalk resistance. Designed to withstand aggressive industrial environments and provide excellent durability against severe weather conditions, prolonged exterior exposure, abrasion, impact, and general chemical attack.</p> <ul style="list-style-type: none"> <li>• Suitable for use in USDA inspected facilities.</li> <li>• Retains its exterior appearance over a wide range of chemical, weather, and mechanical conditions.</li> <li>• Superior exterior color and gloss retention.</li> </ul>		<p>For use over prepared metal and masonry surfaces in industrial environments such as:</p> <ul style="list-style-type: none"> <li>• Tank exteriors</li> <li>• Pipelines</li> <li>• Structural steel</li> <li>• Bridges</li> <li>• Marine vessels</li> <li>• Rolling stock</li> <li>• Conveyors</li> <li>• Refineries</li> <li>• Walls</li> <li>• Floors</li> </ul> <p>Conforms to AWWA D102-97 Outside Coating Systems #5 &amp; #6.</p>																													
PRODUCT CHARACTERISTICS		PERFORMANCE CHARACTERISTICS																													
<p><b>Finish:</b> High Gloss</p> <p><b>Color:</b> Wide range of colors available</p> <p><b>Volume Solids:</b> 65% ± 2%, mixed, may vary by color Ultra White</p> <p><b>Weight Solids:</b> 76% ± 2%, mixed, may vary by color Ultra White</p> <p><b>VOC (EPA Method 24):</b> Unreduced: 330 g/L; 2.75 lb/gal Pure White, mixed Reduced 10%: 388 g/L; 3.23 lb/gal</p> <p><b>Mix Ratio:</b> 3:1 by volume, 4 gallon mix</p> <p><b>Recommended Spreading Rate per coat:</b> Wet mils: 3.0 - 4.5 Dry mils: 2.0 - 3.0 Coverage: 360 - 545 sq ft/gal approximate</p> <p><b>NOTE:</b> Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.</p> <p><b>Drying Schedule @ 3.0 mils wet @ 50% RH:</b></p> <table border="1"> <thead> <tr> <th></th> <th>@50°F</th> <th>@77°F</th> <th>@100°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td>16 hours</td> <td>2 hours</td> <td>30 minutes</td> </tr> <tr> <td>To handle:</td> <td>24 hours</td> <td>10 hours</td> <td>2 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>  minimum:</td> <td>24 hours</td> <td>12 hours</td> <td>2 hours</td> </tr> <tr> <td>  maximum:</td> <td>3 days</td> <td>48 hours</td> <td>24 hours</td> </tr> <tr> <td>To cure:</td> <td>7 days</td> <td>7 days</td> <td>5 days</td> </tr> </tbody> </table> <p>If maximum recoat time is exceeded, abrades surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</p> <p><b>Pot Life:</b> 5 hours 4 hours 45 minutes</p> <p><b>Sweat-in-Time:</b> none required</p> <p><b>Shelf Life:</b> 12 months, unopened, at 77°F</p> <p><b>Flash Point:</b> 102°F TCC, mixed</p> <p><b>Reducer/Clean Up:</b> Reducer #132, R7K132</p>			@50°F	@77°F	@100°F	To touch:	16 hours	2 hours	30 minutes	To handle:	24 hours	10 hours	2 hours	To recoat:				minimum:	24 hours	12 hours	2 hours	maximum:	3 days	48 hours	24 hours	To cure:	7 days	7 days	5 days	<p><b>System Tested:</b> (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP10 2 cts. Epolon II Primer @ 2.5 mils dft/ct 1 ct. Poly-Lon 1900 @ 2.0 mils dft</p> <p><b>Abrasion Resistance:</b> Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 76 mg loss (average of 5 trials)</p> <p><b>Adhesion:</b> Method: ASTM D3359 Method B Result: 5B, 100% Retention Method: ASTM D4541 Result: 1200 psi</p> <p><b>Accelerated Weathering, with Diamond-Clad Clear Coat:</b> Method: ASTM D4587, QUV-A, 10,000 hours Results: 100% gloss retention</p> <p><b>Direct Impact Resistance:</b> Method: ASTM D2794 Result: 100 in. lb.</p> <p><b>Dry Heat Resistance:</b> Method: ASTM D2485 Result: 200°F, 250°F intermittent</p> <p><b>Exterior Durability:</b> Method: 2 years at 45° South Result: Excellent, 87% gloss retention</p> <p><b>Flexibility: (urethane only)</b> Method: ASTM D522, 180° bend, 1/4" mandrel Result: Passes</p> <p><b>Humidity Resistance:</b> Method: ASTM D4585, 100°F, 2000 hours Result: No blistering, cracking, softening or delamination</p> <p><b>Pencil Hardness:</b> Method: ASTM D3363 Result: 6H</p> <p><b>Salt Fog Resistance:</b> Method: ASTM B117, 1000 hours Result: Rating 10 per ASTM D610 for rusting, less than 1/16" creepage at scribe. No blistering, cracking, softening, or delamination of the film.</p> <p>Meets the requirements of SSPC Paint No. 36, Levels 2 &amp; 3</p>	
	@50°F	@77°F	@100°F																												
To touch:	16 hours	2 hours	30 minutes																												
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*Industrial  
and  
Marine  
Coatings*

5.23

# POLY-LON® 1900 POLYESTER POLYURETHANE

PART A B65-500  
PART B B65V500

SERIES  
HARDENER

INDUSTRIAL  
& MARINE  
COATINGS

## PRODUCT INFORMATION

### RECOMMENDED SYSTEMS

- Steel:**  
1-2 cts. Epolon II Epoxy Primer @ 2.0 - 4.0 mils dft/ct  
1-2 cts. Poly-Lon 1900 Polyester Polyurethane @ 2.0 - 3.0 mils dft/ct
- Steel:**  
1 ct. Zinc Clad II HS @ 3.0 - 5.0 mils dft  
1 ct. Epolon II Epoxy Primer @ 2.0 - 4.0 mils dft  
1-2 cts. Poly-Lon 1900 Polyester Polyurethane @ 2.0 - 3.0 mils dft/ct
- Steel:**  
1 ct. Epoxy Mastic Aluminum II @ 6.0 mils dft  
1-2 cts. Poly-Lon 1900 Polyester Polyurethane @ 2.0 - 3.0 mils dft/ct
- Galvanizing:**  
1-2 cts. Epolon II Epoxy Primer @ 2.0 - 4.0 mils dft/ct  
1-2 cts. Poly-Lon 1900 Polyester Polyurethane @ 2.0 - 3.0 mils dft/ct
- Concrete/Masonry:**  
1 ct. Kem Cati-Coat HS Epoxy Filler/Sealer @ 10.0 - 20.0 mils dft  
1-2 cts. Poly-Lon 1900 Polyester Polyurethane @ 2.0 - 3.0 mils dft/ct

### SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

- \* Iron & Steel: SSPC-SP6, 1-2 mils profile
- \* Galvanizing: SSPC-SP1
- \* Concrete & Masonry: SSPC-SP13/NACE 6

\* Primer required

### TINTING

Tint with 844 Colorant at 200% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

### APPLICATION CONDITIONS

Temperature: 40°F minimum, 100°F maximum  
(air, surface, and material)  
At least 5°F above dew point

Relative humidity: 75% maximum

Refer to product Application Bulletin for detailed application information.

### ORDERING INFORMATION

Packaging:	<u>1 gallon mix:</u>	<u>4 gallon mix:</u>
Part A:	.75 gallons	3 gallons
Part B:	1 quart	1 gallon
	(premeasured components)	

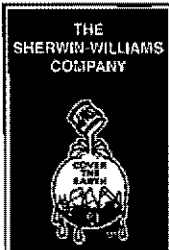
Weight per gallon: 11.4 ± 0.2 lb  
mixed, may vary with color

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

The systems listed above are representative of the product's use. Other systems may be appropriate.



*Industrial  
and  
Marine  
Coatings*

5.23A

**POLY-LON® 1900  
POLYESTER POLYURETHANE**

PART A B65-500  
PART B B65V500

SERIES  
HARDENER

INDUSTRIAL  
& MARINE  
COATINGS

**APPLICATION BULLETIN**

Revised 1/02

**SURFACE PREPARATION**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

**Iron & Steel**

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (1-2 mils). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

**Galvanized Steel**

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned or before flash rusting occurs.

**Poured Concrete**

**New**

For surface preparation, refer to SSPC-SP13/NACE 6. Surfaces must be clean, dry, sound and offer sufficient profile to achieve adequate adhesion. Minimum substrate cure is 28 days at 75°F. Remove all form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. Refer to ASTM D4260. Rinse thoroughly to achieve a final pH between 6.0 and 10.0. Allow to dry thoroughly prior to coating.

**Old**

Surface preparation is done in much the same manner as new concrete, however, if the concrete is contaminated with oils, grease, chemicals, etc., they must be removed by cleaning with a strong detergent. Refer to ASTM D4258. Form release agents, hardeners, etc. must be removed by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. If surface deterioration presents an unacceptably rough surface, Kem Cati-Coat HS Epoxy Filler/Sealer is recommended to patch and resurface damaged concrete. Fill all cracks, voids and bugholes with ArmorSeal Crack Filler.

**Always follow the ASTM methods listed below:**

- ASTM D4258 Standard Practice for Cleaning Concrete.
- ASTM D4259 Standard Practice for Abrading Concrete.
- ASTM D4260 Standard Practice for Etching Concrete.
- ASTM D4263 Plastic Sheet Method for Checking Moisture in Concrete.
- SSPC-SP 13/Nace 6 Surface Preparation of Concrete.

**APPLICATION CONDITIONS**

Temperature: 40°F minimum, 100°F maximum (air, surface, and material)  
At least 5°F above dew point

Relative humidity: 75% maximum

**APPLICATION EQUIPMENT**

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compatible with the existing environmental and application conditions.

**Reducer/Clean Up** ..... Reducer #132, R7K132

**Airless Spray**

Pressure ..... 2400 - 3000 psi  
Hose ..... 3/8" ID  
Tip ..... .013" - .017"  
Filter ..... 60 mesh  
Reduction ..... As needed up to 10% by volume

**Conventional Spray**

Gun ..... Binks 95  
Cap ..... 63P  
Tip ..... 66  
Atomization Pressure ... 50 - 60 psi  
Fluid Pressure ..... 20 - 30 psi  
Reduction ..... As needed up to 10% by volume

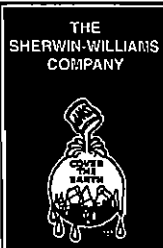
**Brush**

Brush ..... Natural Bristle  
Reduction ..... Not recommended

**Roller**

Cover ..... 1/4" woven with phenolic core  
Reduction ..... Not recommended

If specific application equipment is listed above, equivalent equipment may be substituted.



*Industrial  
and  
Marine  
Coatings*

5.23A

**POLY-LON® 1900  
POLYESTER POLYURETHANE**

**PART A  
PART B**

**B65-500  
B65V500**

**SERIES  
HARDENER**

**INDUSTRIAL  
& MARINE  
COATINGS**

**APPLICATION BULLETIN**

**APPLICATION PROCEDURES**

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with power agitation. Make certain no pigment remains on the bottom of the can. Then combine three parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated. Re-stir before using.

If reducer is used, add only after both components have been thoroughly mixed, after sweat-in.

Apply paint at the recommended film thickness and spreading rate as indicated below:

**Recommended Spreading Rate per coat:**  
 Wet mils: 3.0 - 4.5  
 Dry mils: 2.0 - 3.0  
 Coverage: 360 - 545 sq ft/gal approximate

**NOTE:** Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

**Drying Schedule @ 3.0 mils wet @ 50% RH:**

	@ 50°F	@ 77°F	@ 100°F
To touch:	16 hours	2 hours	30 minutes
To handle:	24 hours	10 hours	2 hours
To recoat:			
minimum:	24 hours	12 hours	2 hours
maximum:	3 days	48 hours	24 hours
To cure:	7 days	7 days	5 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

**Pot Life:** 5 hours 4 hours 45 minutes

**Sweat-In-Time:** none required

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

**PERFORMANCE TIPS**

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #132, R7K132.

Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.

Quik-Thane Urethane Accelerator is acceptable for use. See data page 5.97 for details.

Refer to Product Information sheet for additional performance characteristics and properties.

**CLEAN UP INSTRUCTIONS**

Clean spills and spatters immediately with Reducer #132, R7K132. Clean tools immediately after use with Reducer #132, R7K132. Follow manufacturer's safety recommendations when using any solvent.

**SAFETY PRECAUTIONS**

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

MATERIAL SAFETY DATA SHEET

B65T504  
05 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	HMIS CODES
B65T504	Health 2 Flammability 2 Reactivity 0

PRODUCT NAME	
POLY-LON* 1900 Polyester Polyurethane (Part A), Ultradeep Base	
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
THE SHERWIN-WILLIAMS COMPANY	(216) 566-2917
101 Prospect Avenue N.W.	
Cleveland, OH 44115	
DATE OF PREPARATION	INFORMATION TELEPHONE NO.
20-JUN-03	(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
11	110-43-0	Methyl n-Amyl Ketone		
		ACGIH TLV	50 ppm	2.14 mm
		OSHA PEL	100 ppm	
20	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
16	7727-43-7	Barium Sulfate		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

Irritation of eyes, skin and upper respiratory system.  
May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.  
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

=====  
 Section 4 -- FIRST AID MEASURES  
 -----

If INHALED: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

If on SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: Do not induce vomiting. Get medical attention immediately.

 =====  
 Section 5 -- FIRE FIGHTING MEASURES  
 -----

FLASH POINT	LEL	UEL
102 F PMCC	1.1	13.1

## FLAMMABILITY CLASSIFICATION

Combustible, Flash above 99 and below 200 F

## EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

## SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

 =====  
 Section 6 -- ACCIDENTAL RELEASE MEASURES  
 -----

## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

 =====  
 Section 7 -- HANDLING AND STORAGE  
 -----

## STORAGE CATEGORY

DOL Storage Class II

## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

=====  
Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION  
=====

## PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

## VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

## RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

## PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

## EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

## OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

## OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

=====  
 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES  
 =====

PRODUCT WEIGHT 11.08 lb/gal 1327 g/l  
 SPECIFIC GRAVITY 1.33  
 BOILING POINT 284 - 308 F 140 - 153 C  
 MELTING POINT Not Available  
 VOLATILE VOLUME 48 %  
 EVAPORATION RATE Slower than ether  
 VAPOR DENSITY Heavier than air  
 SOLUBILITY IN WATER N.A.  
 VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)  
 3.68 lb/gal 441 g/l Less Water and Federally Exempt Solvents  
 3.68 lb/gal 441 g/l Emitted VOC

 =====  
 Section 10 -- STABILITY AND REACTIVITY  
 =====

STABILITY -- Stable  
 CONDITIONS TO AVOID  
 None known.  
 INCOMPATIBILITY  
 None known.  
 HAZARDOUS DECOMPOSITION PRODUCTS  
 By fire: Carbon Dioxide, Carbon Monoxide  
 HAZARDOUS POLYMERIZATION  
 Will not occur

 =====  
 Section 11 -- TOXICOLOGICAL INFORMATION  
 =====

CHRONIC HEALTH HAZARDS  
 No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.  
 Prolonged overexposure to solvent ingredients in Section 2 may cause  
 adverse effects to the liver, urinary and blood forming systems.  
 Persons sensitive to isocyanates will experience increased allergic  
 reaction on repeated exposure.  
 Reports have associated repeated and prolonged overexposure to solvents  
 with permanent brain and nervous system damage.

 =====  
 TOXICOLOGY DATA

CAS No.	Ingredient Name				
110-43-0	Methyl n-Amyl Ketone	LC50	RAT	4HR	Not Available
		LD50	RAT		1670 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		8500 mg/kg
7727-43-7	Barium Sulfate	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available



Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

No data available.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
---------	-------------------	---------	-----------

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



June 11, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

**Re: Arapaho Road Bridge at Midway Road  
Phase II – Design Development & Contract Documents  
Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our invoice for Professional Services for the Arapaho Road Bridge at Midway Road for the period between April 18, 2003 and May 23, 2003. Also included is our Progress Report for this period outlining the services provided.

Sincerely,

**URS Corporation**

A handwritten signature in black ink, appearing to read "Cliff R. Hall".

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

# **Monthly Progress Report**

## **Design of the Arapaho Road Bridge Over Midway Road**

URS Project No. 25334400

Period: April 18, 2003 to May 23, 2003

---

### **1. General Accomplishments**

- 1.1 Submitted final report for the noise and vibration analysis.
- 1.2 Reviewed architectural concepts with City Manager
- 1.3 Continued preliminary bridge design and continued architectural concept development

### **2. Progress This Period**

- 2.1 Completed the noise modeling and analysis, and the vibration analysis.
- 2.2 Submitted draft and final reports for the noise and vibration study.
- 2.3 Prepared exhibits and attended the hearing for the condemnation of the Motel 6 property.
- 2.4 Attended coordination meeting with roadway consultant.
- 2.5 Continued the preliminary design of the bridge looking at the pedestrian and traffic rails, and the arch bridge diaphragms and beams.
- 2.6 Continued architectural considerations for retaining wall panels, piers and traffic rails.
- 2.7 Met with the Town of Addison to discuss the latest architectural features.

### **3. Anticipated Next Period**

- 3.1 Prepare presentation for the Town Council.
- 3.2 Revise "Blue Bridge" renderings and prepare a "White Bridge" rendering incorporating colored lighting schemes.
- 3.3 Continued the preliminary design of the bridge looking at the arch and substructure.
- 3.4 Submit bridge layouts and typical sections to Town's consultant for inclusion in the June submittal.

### **4. Schedule Status**

- 4.1 Revised schedule submitted with Change Orders.

### **5. Issues / Impacts**

- 5.1 Placing sidewalk exterior to the arch is creating a more difficult structure to design and construct. This may increase the cost of the bridge.
- 5.2 Sidewalk exterior to the arch may affect the ability to light the arch efficiently and increase the lighting costs.
- 5.3 Town is considering using a sidewalk greater than 4-ft. Changes to the sidewalk can affect the preliminary design work prepared to date and delay the design completion.
- 5.4 Town is considering changes to the color and lighting of the bridge.



Remittance Page

Invoice Date	06/11/03
Invoice	565579
Project	25334400
Page	1

For: Design of the Arapaho Road  
Bridge over Midway Road

Professional Services for Period Ending 05/30/03

Town Of Addison  
Attn: Steven Z. Chutchain, PE  
16801 Westgrove Dr  
Addison TX 75001-5190

<b>Total Due:</b>	<b>\$ 34,816.24</b>
Terms:	Due upon Receipt

- \* Make checks payable to: URS Corporation
- \* Please indicate invoice number and/or project number on check
- \* Please include this stub with payment

**Regular Mail (USPS):** URS Corporation  
Dept. 1028  
P.O. Box 121028  
Dallas TX 75312-1028  
US

**Overnight Courier:** URS Corporation  
Lock Box No. 891028  
888 South Greenville Ave., Suite 200  
Richardson, TX 75081  
Attn: Wholesale Lock Box Processing  
(972) 680-1900

**Electronic Funds Transfer:**

Account:	URS Corporation
Bank:	Wells Fargo Bank
Account No.:	4520-086471
ABA Routing No.:	121-000-248
Swift Code:	WFBIUS6S

Remittance Information can be sent to:

Email:	RemitTo@URSCorp.com
Fax:	(512) 419-6937 Attn: Cash Applications

Please contact Emilio S Ramirez at 512 419-6786 or via email at [Emilio\\_Ramirez@urscorp.com](mailto:Emilio_Ramirez@urscorp.com)  
if you have any questions regarding this invoice.

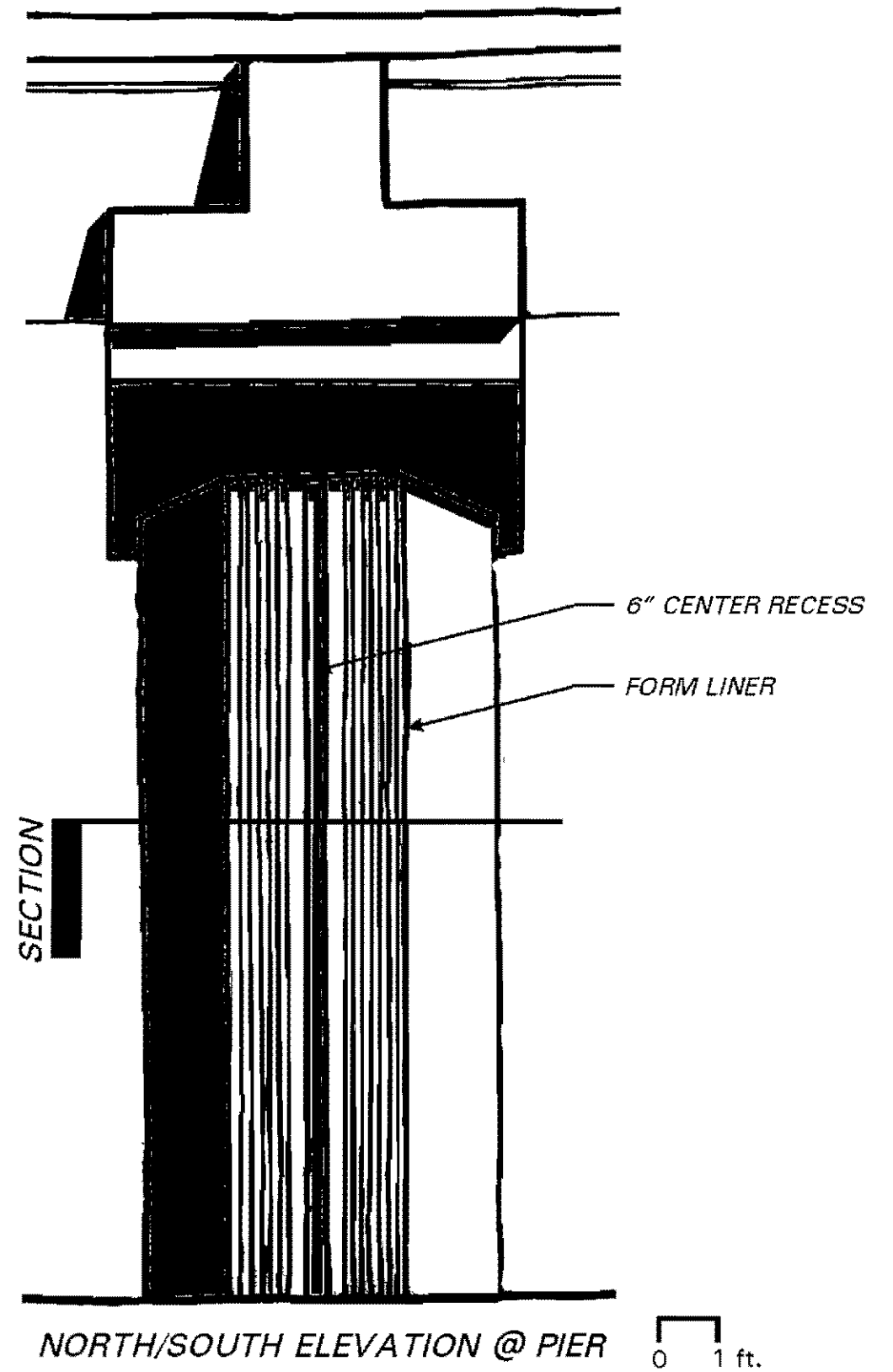
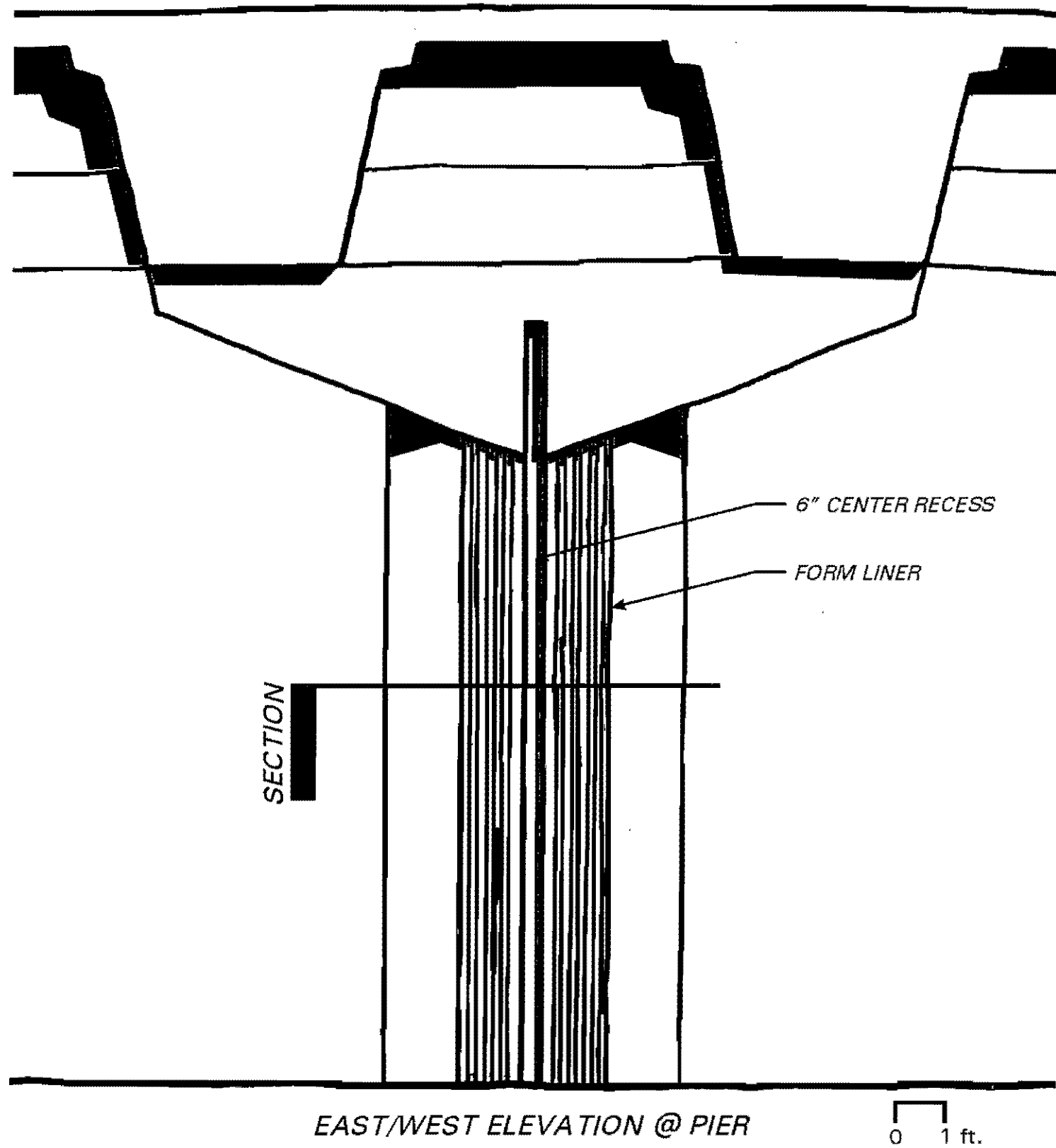
# URS Corporation

Arapaho Road Bridge at Midway Road  
 Design Development and Contract Documents  
Change Order No. 03 to Work Order No. 001

## ATTACHMENT M Revised Estimated Schedule

TASK DESCRIPTION	October 2 0 0 2	November 2 0 0 2	December 2 0 0 2	January 2 0 0 3	February 2 0 0 3	March 2 0 0 3	April 2 0 0 3	May 2 0 0 3	June 2 0 0 3
Notice to Proceed (NTP)		◆							
DWU Coordination Issues		—————							
NTP For Prelim. Design						◆			
Preliminary Design Development						—————			
Preliminary Geotech								◆	
Preliminary Grading at Arch								◆	
Finalize Bridge Layouts								—————	
Expert Testimony for Condemnation							—————		
Final Concepts (~30% Plans)									◆
Addison Review									
Presentation to Town Council									
Revise Concepts									
Presentation to Town Council									
Revise Preliminary Design									
Lighting Concepts									
Final Geotechnical Report									
Final Grading Plans									
Final Design									
Intermediate Design Submittal (60% Plans)									
Addison Review									
Presentation to Town Council									
Bridge Drainage Requirements									
Final Design & Construction Documents									
Final Design Submittal (95% Plans)									
Addison Review									
Incorporate Comments, Final PS&E									
Signed and Sealed PS&E (100%)									

- ◆ NTP
- ◆ REQ'D INFORMATION FROM TOWN'S CONSULTANT
- ◆ SUBMITTAL

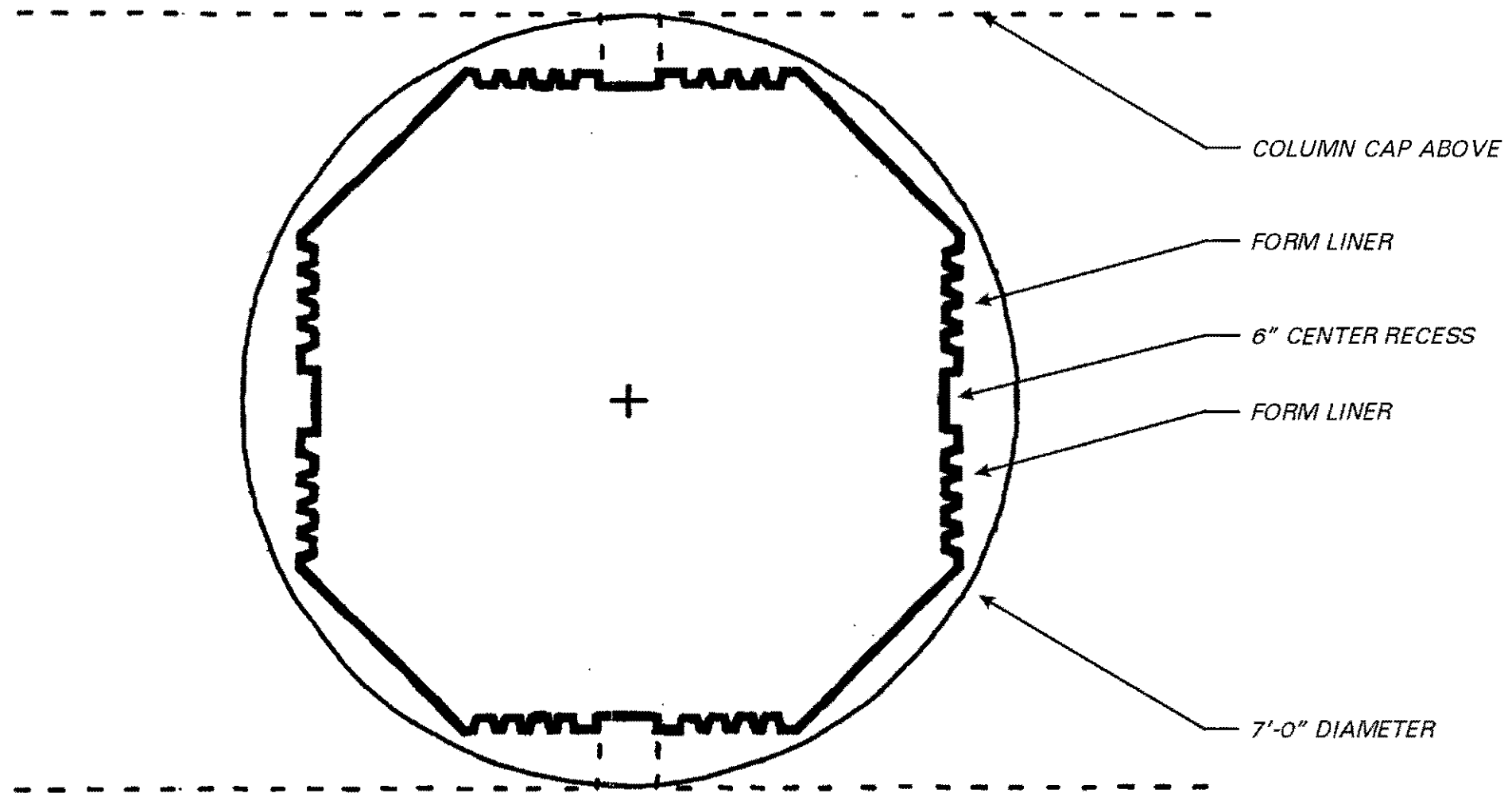


**ARAPAHO BRIDGE**

22 MAY 2003

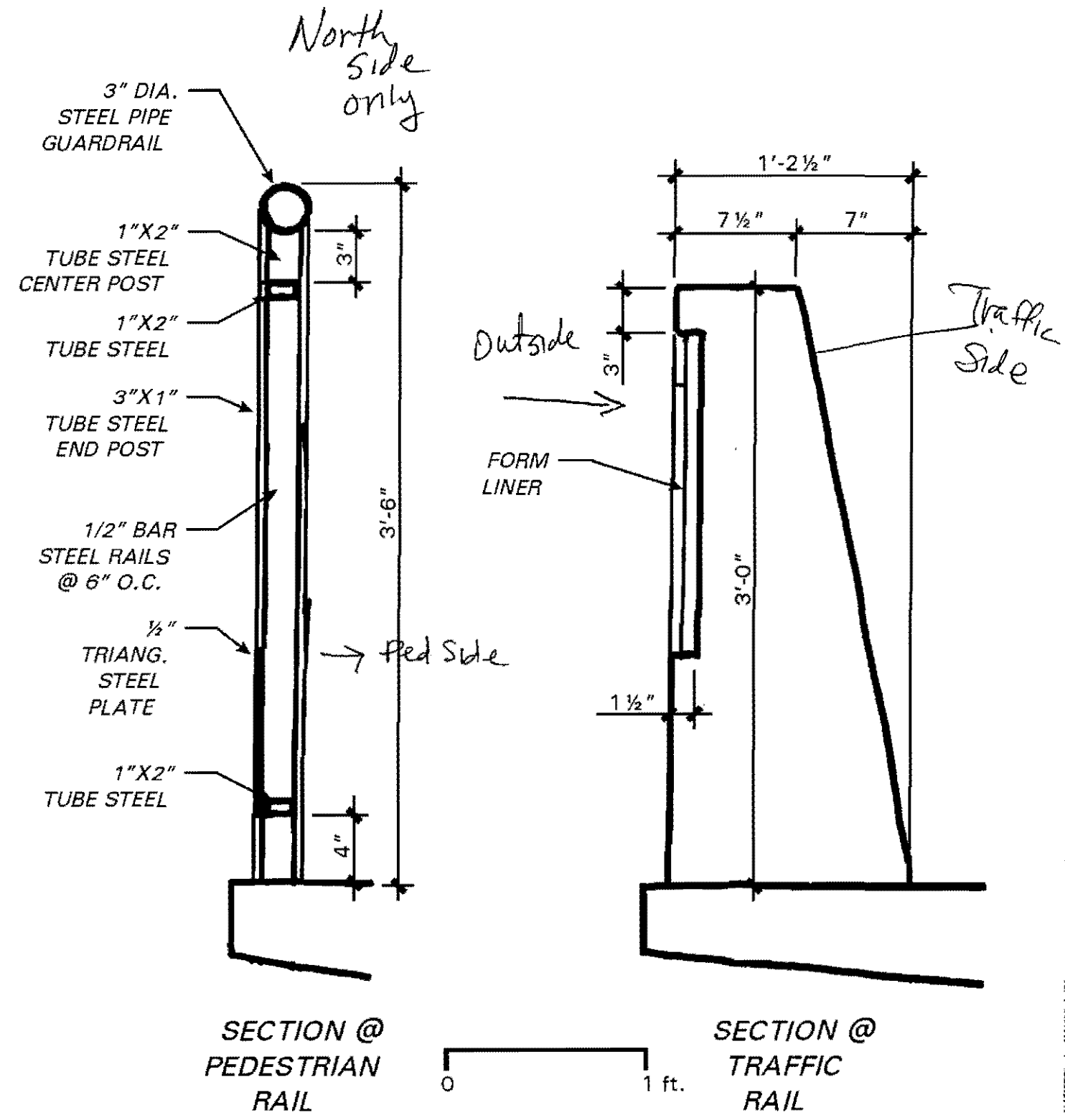
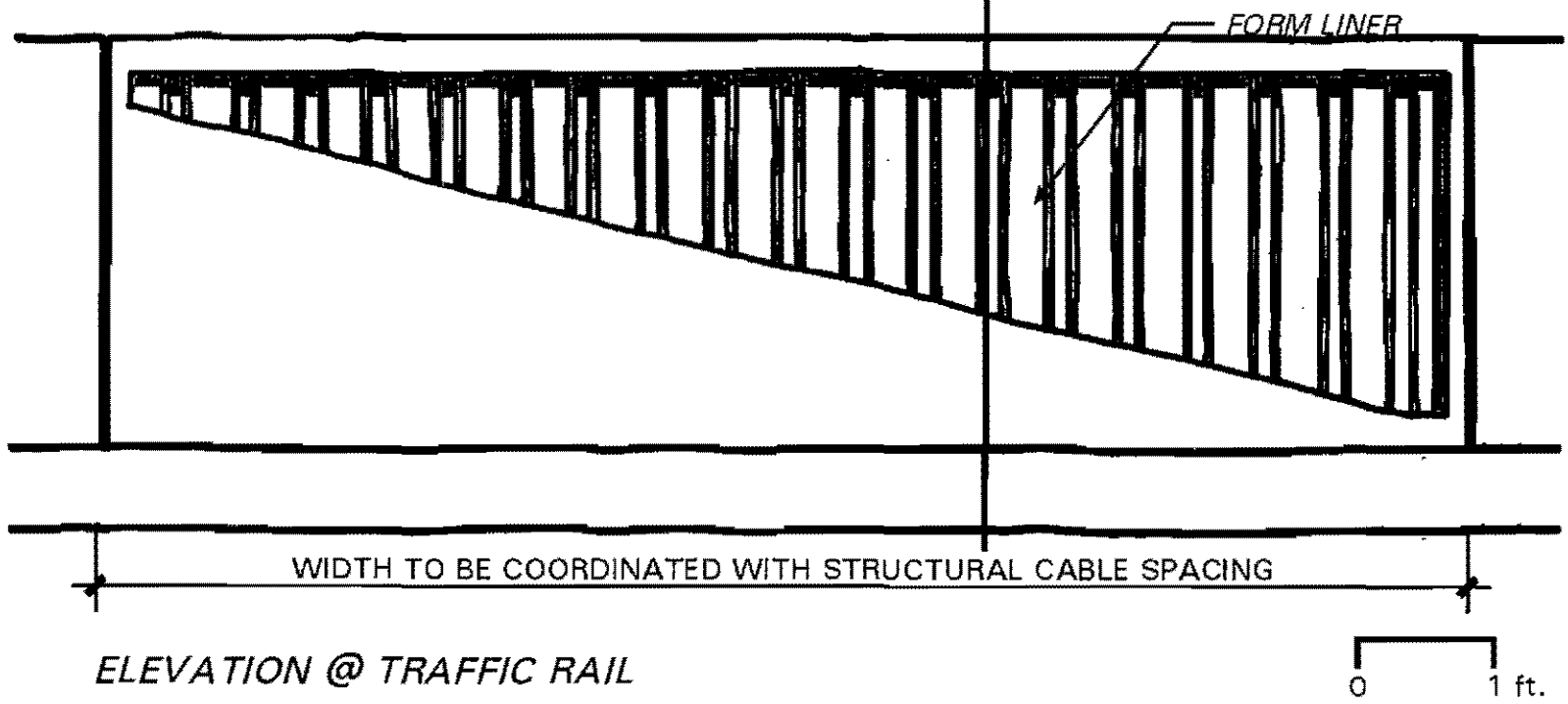
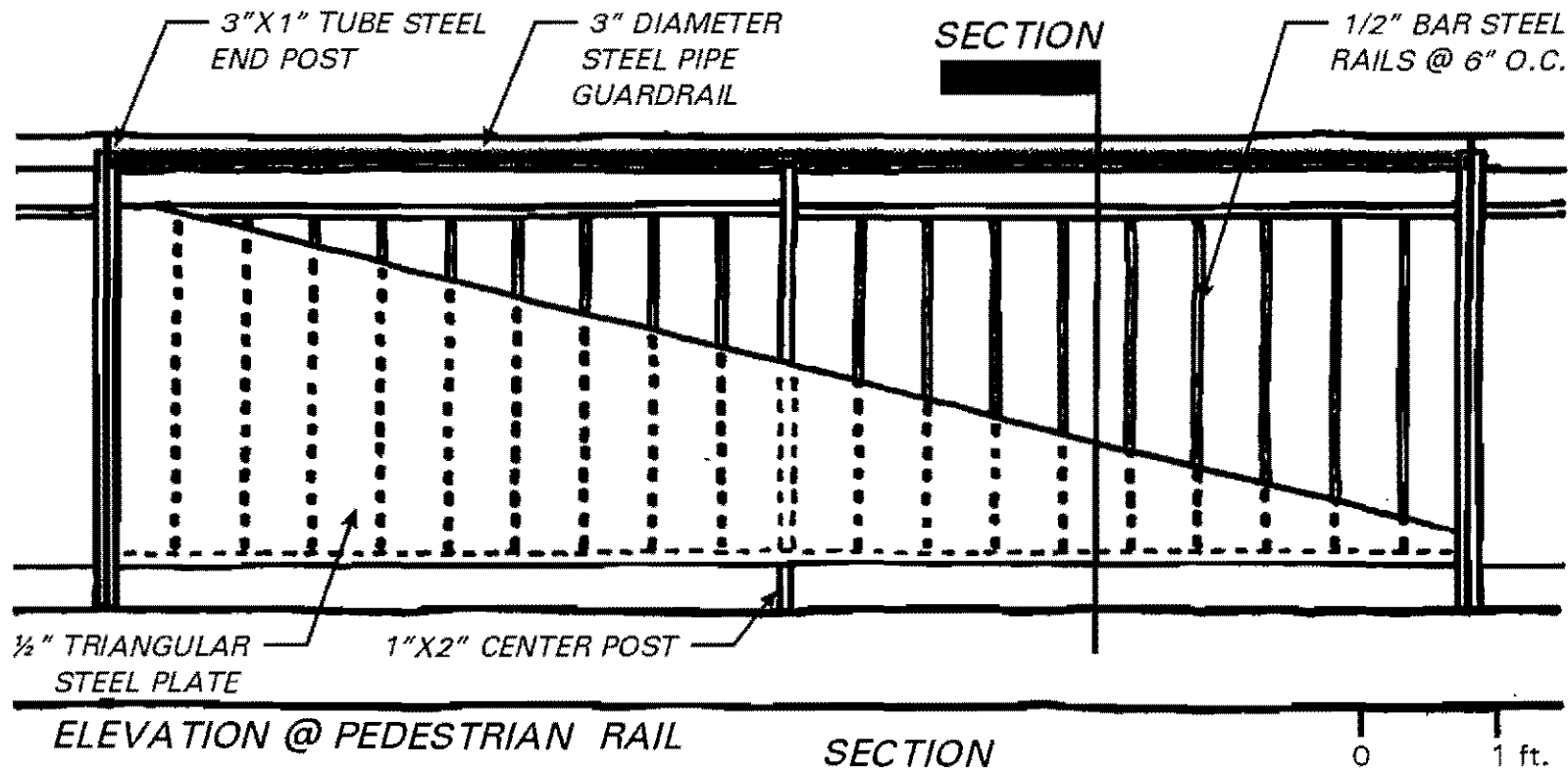
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PLAN SECTION @ PIER





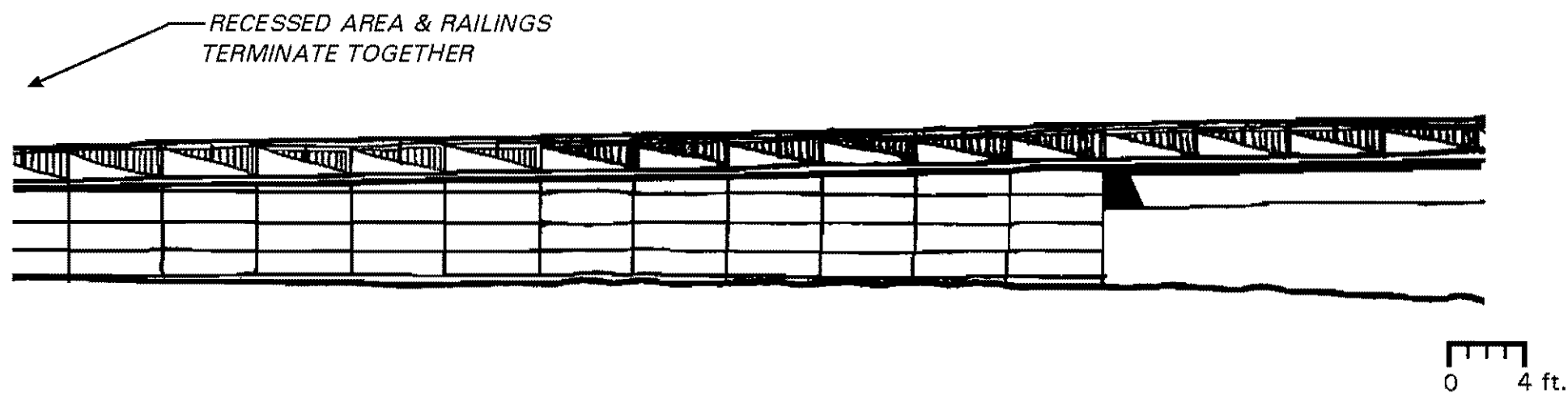
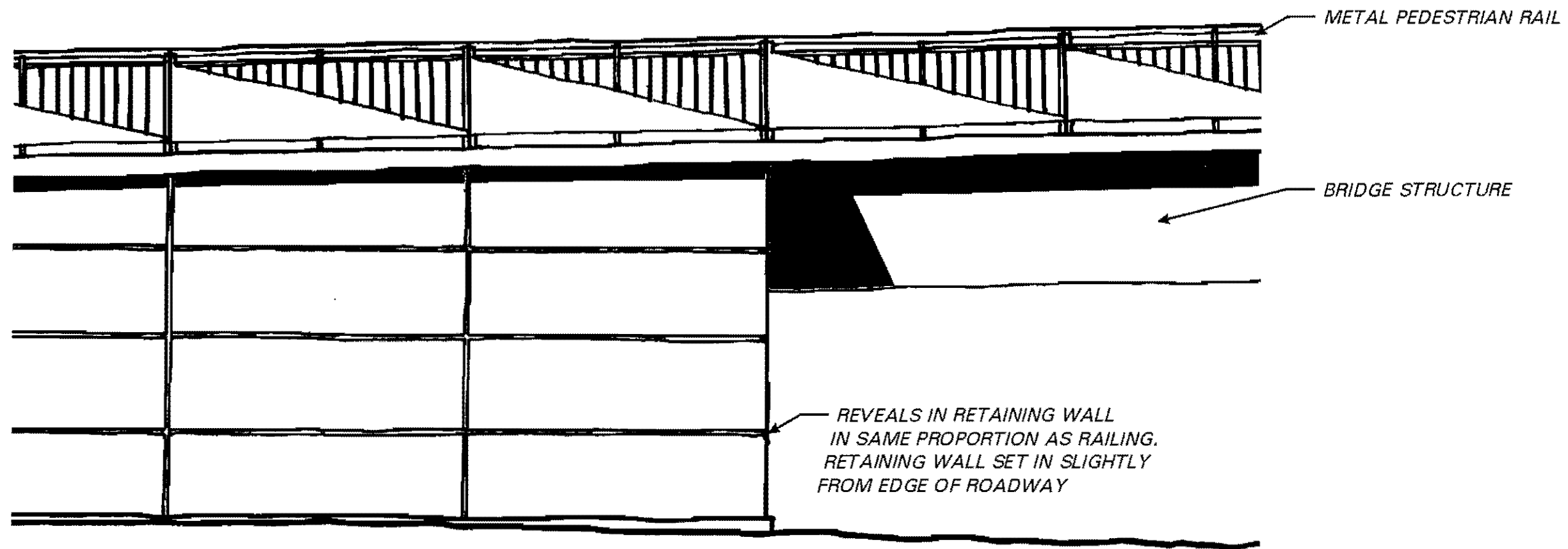
ARAPAHO BRIDGE

22 MAY 2003



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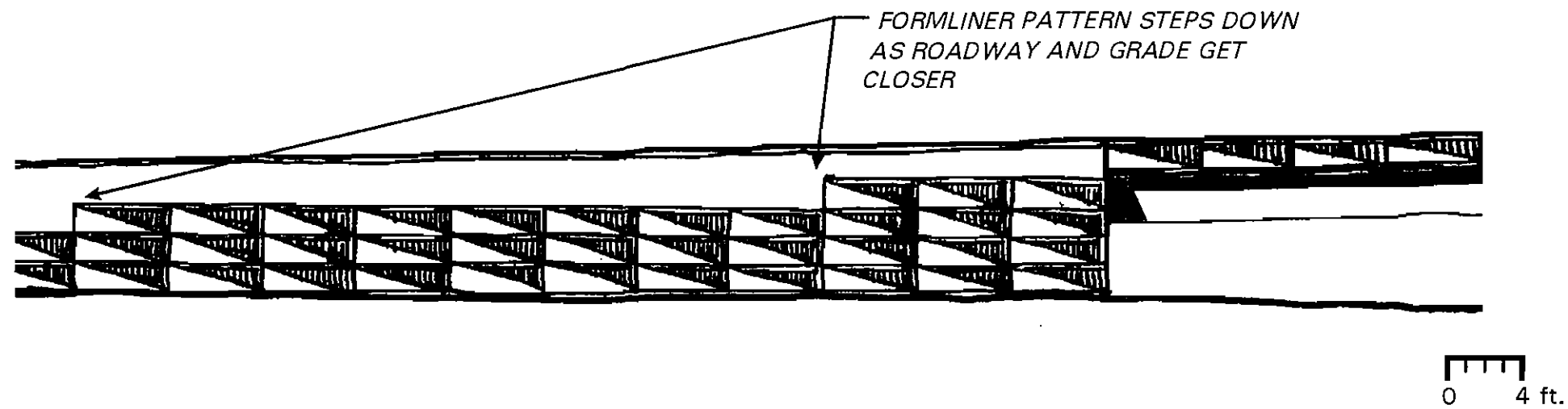
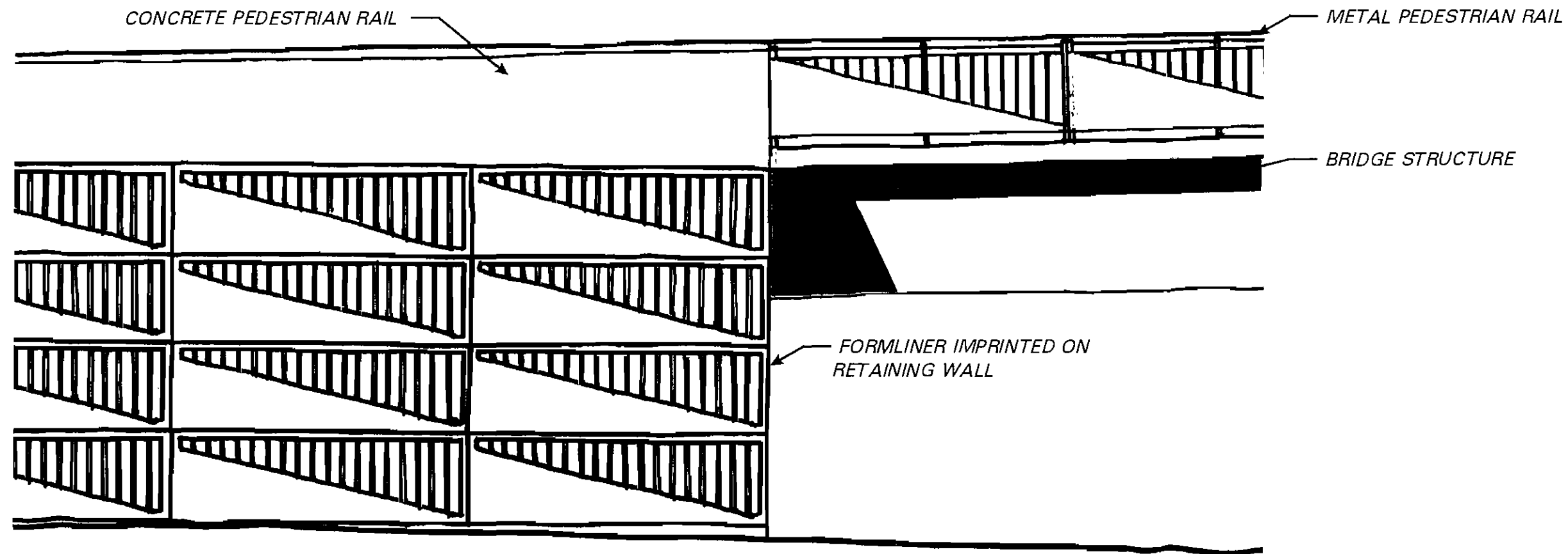
PRELIMINARY RETAINING WALL STUDIES - NORTH ELEVATION - FLAT RECESSED OPTION

# ARAPAHO BRIDGE

22 MAY 2003

**URS**

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PRELIMINARY RETAINING WALL STUDIES - NORTH ELEVATION - STEPPED OPTION

ARAPAHO BRIDGE

22 MAY 2003



CORGAN

May-08-03 03:51pm From:URS Corporation

9728882042

T-212 P.001/004 F-348

**URS****Facsimile**

To: STEVE CHUTCHIAN  
Firm: TOWN OF ADDISON  
Facsimile: 972.450.2837  
From: CLIFF HALL  
Date: 5/8/03  
Page 1 of : 5/8/03

Subject: ARAPAHO ROAD

Message: STEVE,

SEE ATTACHED SKETCHES OF POTENTIAL:

- 1.) STEEL PEDESTRIAN RAIL
- 2.) CONCRETE TRAFFIC RAIL
- 3.) CONCRETE BRIDGE TIERS

PLEASE REVIEW AND LETS DISCUSS AT  
YOUR EARLIEST CONVENIENCE.

Cliff

P.S. I WILL BE OUT OF TOWN FROM  
TUESDAY MAY 13 - MONDAY MAY 19.

cc: \_\_\_\_\_

URS Corporation  
3010 LBJ Freeway, Suite 1320  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.8851  
www.urscorp.com

**CONFIDENTIALITY NOTICE**

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May 1, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road**  
**Phase II – Design Development & Contract Documents**  
**Invoice for Professional Services**

Dear Mr. Chutchian:

Enclosed please find our invoice for Professional Services for the Arapaho Road Bridge at Midway Road for the period between March 22, 2003 and April 18, 2003. Also included is our Progress Report for this period, outlining the services provided.

Some of the effort related to the condemnation hearing is included in this invoice but is outside our original scope of work. We have previously submitted a separate Work Order for your approval for this effort.

Sincerely,

**URS Corporation**

Cliff R. Hall, PE  
Project Manager

Enclosure

URS Corporation  
Graystone Center  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
Fax: 972.406.6951

# Monthly Progress Report

## Design of the Arapaho Road Bridge Over Midway Road

URS Project No. 25334400

Period: March 22, 2003 to April 18, 2003

---

### 1. General Accomplishments

- 1.1 Began noise analysis, vibration analysis, and prepared exhibits for and attended condemnation hearing.
- 1.2 Began preliminary bridge design and continued architectural concept development

### 2. Progress This Period

- 2.1 Began the noise modeling and analysis and a vibration analysis.
- 2.2 Attended preparation meeting, prepared exhibits and attended the hearing for the condemnation of the Crouch property.
- 2.3 Attended coordination meeting with roadway consultant.
- 2.4 Began the preliminary design of the bridge looking at the pedestrian and traffic rails, and the arch bridge diaphragms and beams.
- 2.5 Continued architectural considerations for retaining wall panels, piers and traffic rails.

### 3. Anticipated Next Period

- 3.1 Prepare exhibits and attend the hearing for the condemnation of the Motel 6 property.
- 3.2 Complete the draft noise report and submit for comments.
- 3.3 Discuss preliminary architectural concepts for retaining walls, bridge piers and bridge railings with the Town and finalize concepts.
- 3.4 Continue preliminary design of the bridge, including thrust blocks and span configurations.
- 3.5 Begin architectural considerations for thrust blocks.

### 4. Schedule Status

- 4.1 Preliminary and final engineering phase delayed due to the approval process of the bridge location and configuration by DWU. Revised schedule to be submitted.

### 5. Issues / Impacts

- 5.1 DWU coordination has delayed the preliminary engineering phase, which will delay the completion of the design. Revised schedule to be submitted.
- 5.2 Work Order No. 002 and 003 have been submitted for the meetings and concept plan revisions to resolve DWU's concerns, and for the condemnation hearings.
- 5.3 Preliminary Geotechnical information and grading plan are needed in the vicinity of the bridge by early May 2003.



May 13, 2003

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
16801 Westgrove Drive  
P.O. Box 9010  
Addison, TX 75001-9010

Re: **Arapaho Road Bridge at Midway Road**  
**Phase II – Design Development & Contract Documents**  
**Final Noise Report**

Dear Mr. Chutchian:

The URS Corporation is pleased to present you with five copies of the Final Report for the Arapaho Road Bridge Noise and Vibration Analysis. Also included in this transmittal is one CD-ROM containing electronic versions of the submitted information. Should you have any questions or concerns regarding the content of this submittal package, please do not hesitate to contact us.

Sincerely,

**URS Corporation**

A handwritten signature in black ink that reads "Arthur Champlin".

Arthur Champlin, PE  
Project Engineer

Enclosure

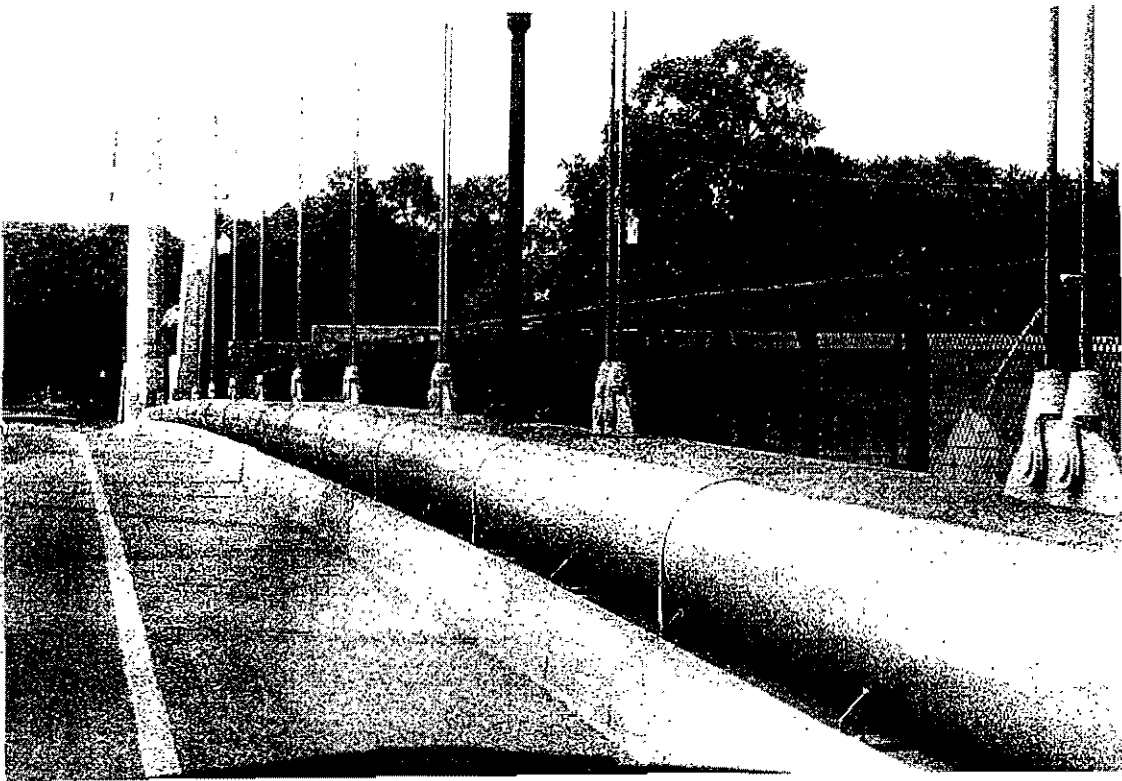
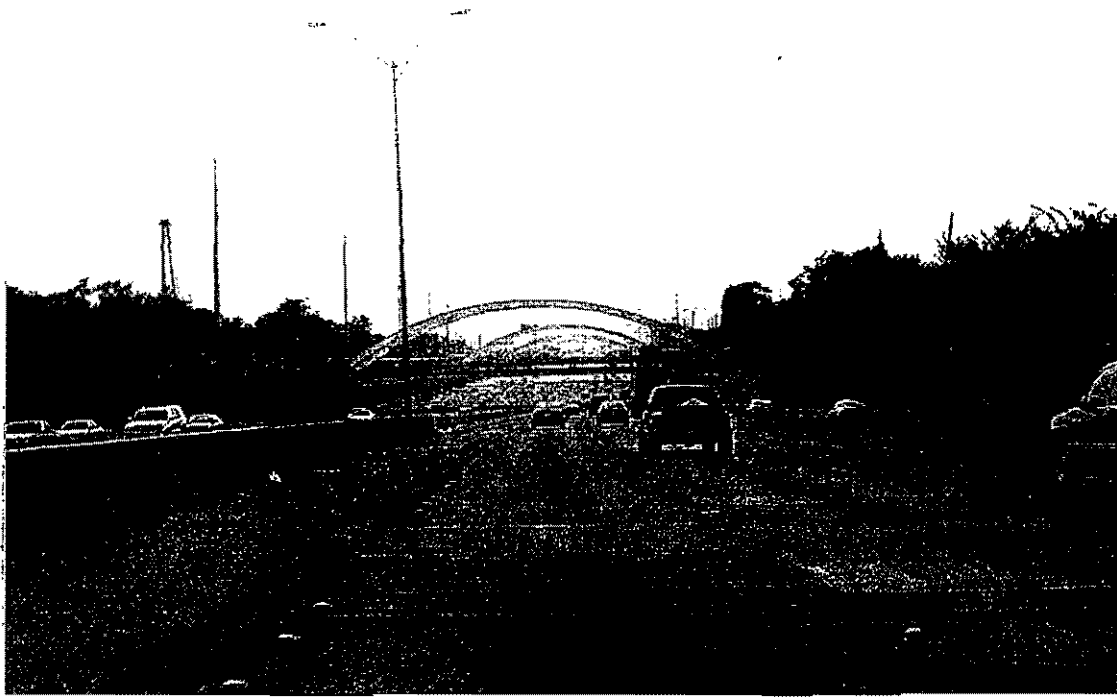
URS Corporation  
Graystone Centre  
3010 LBJ Freeway, Suite 1300  
Dallas, TX 75234  
Tel: 972.406.6950  
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Mike,

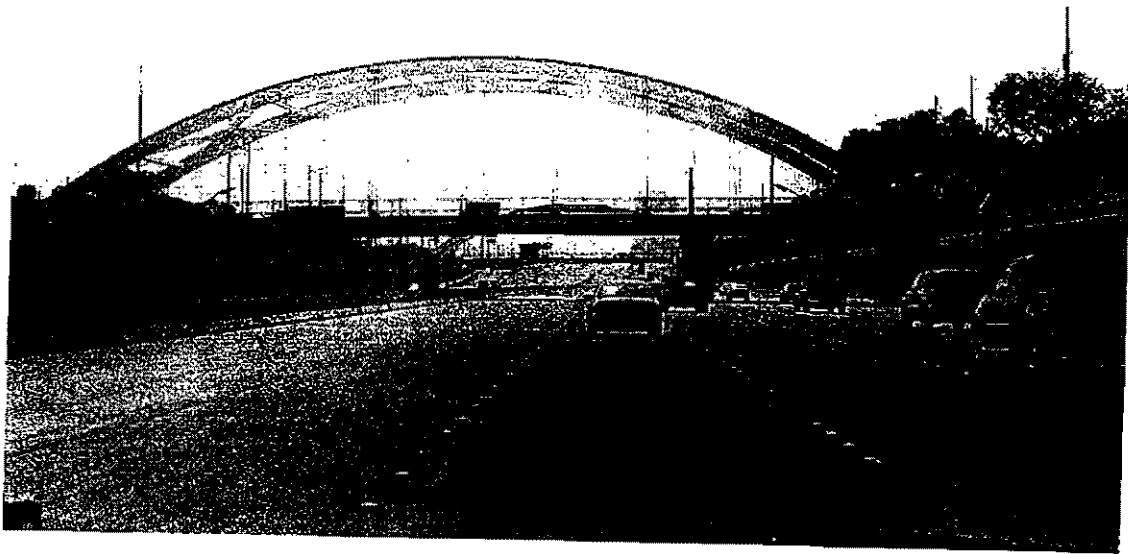
These are Pictures of the bridges  
in Houston. Ron wanted me to  
pass them along to you.

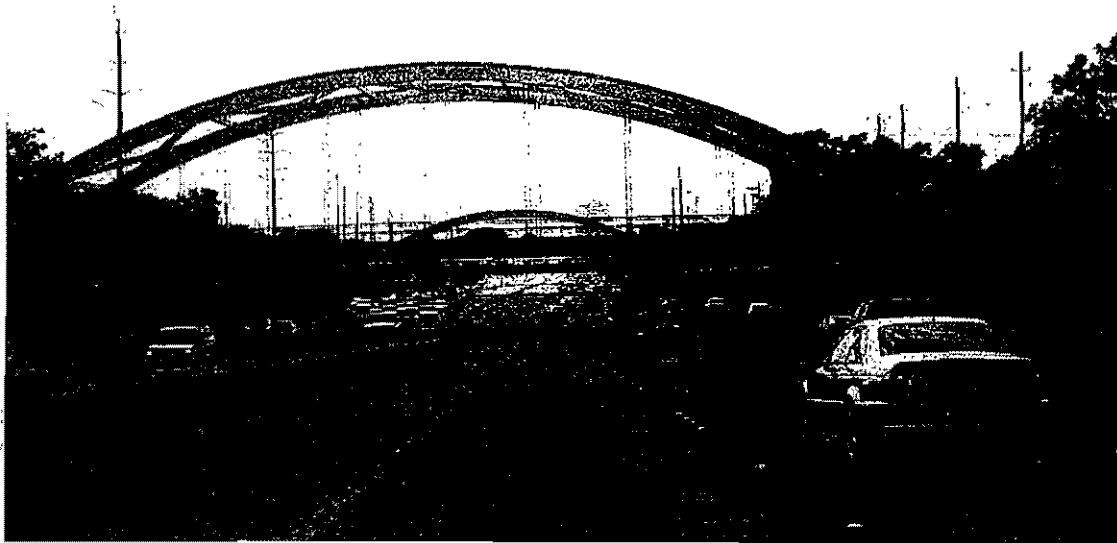
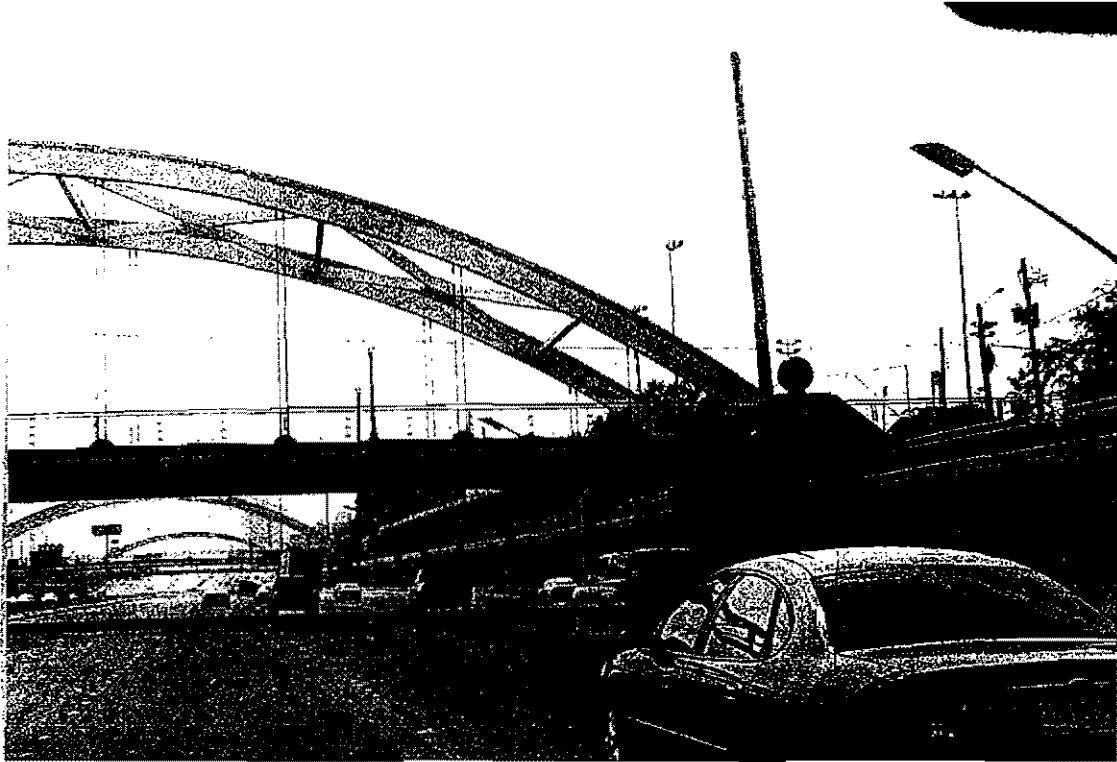
Stephen

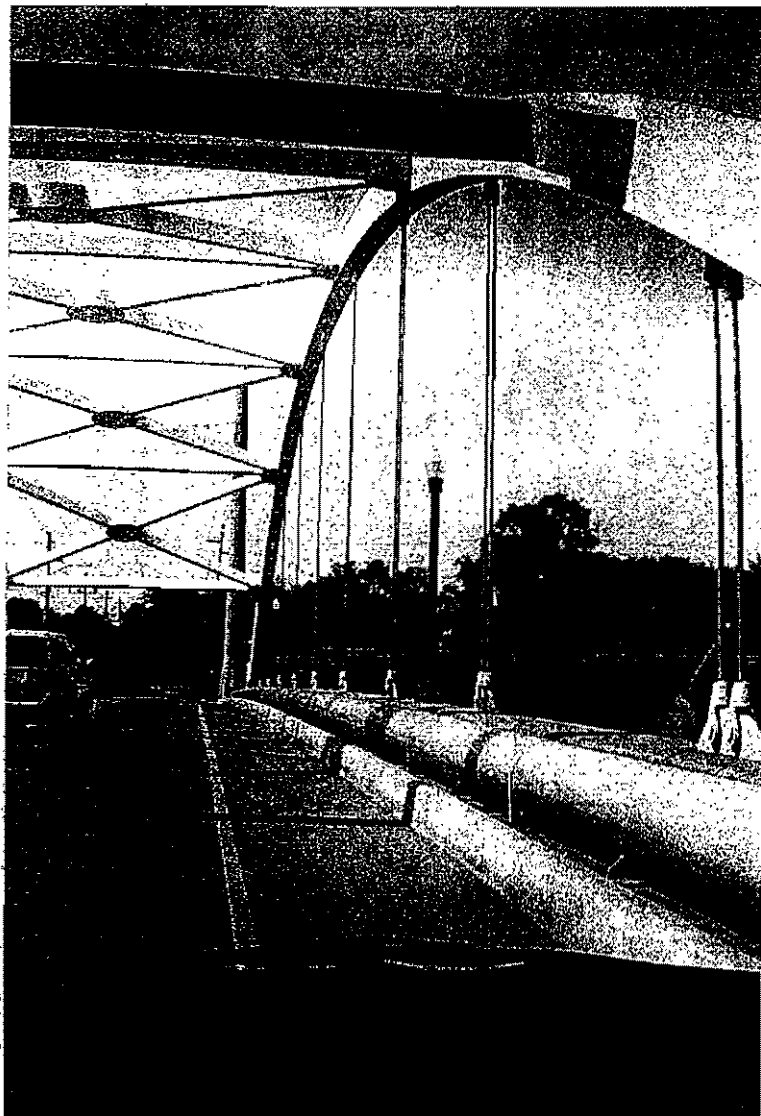
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LUKE TO  
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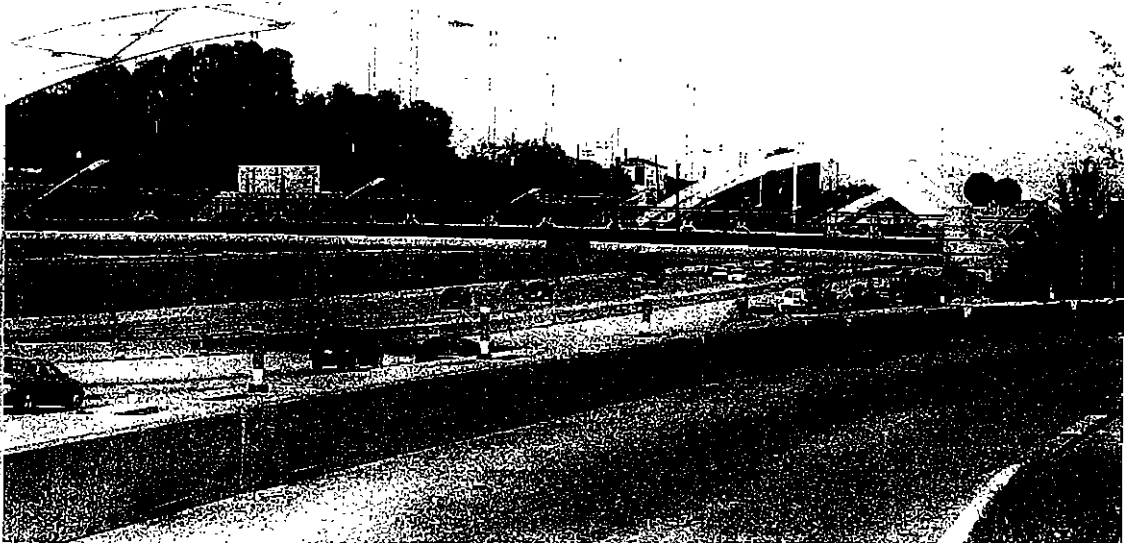
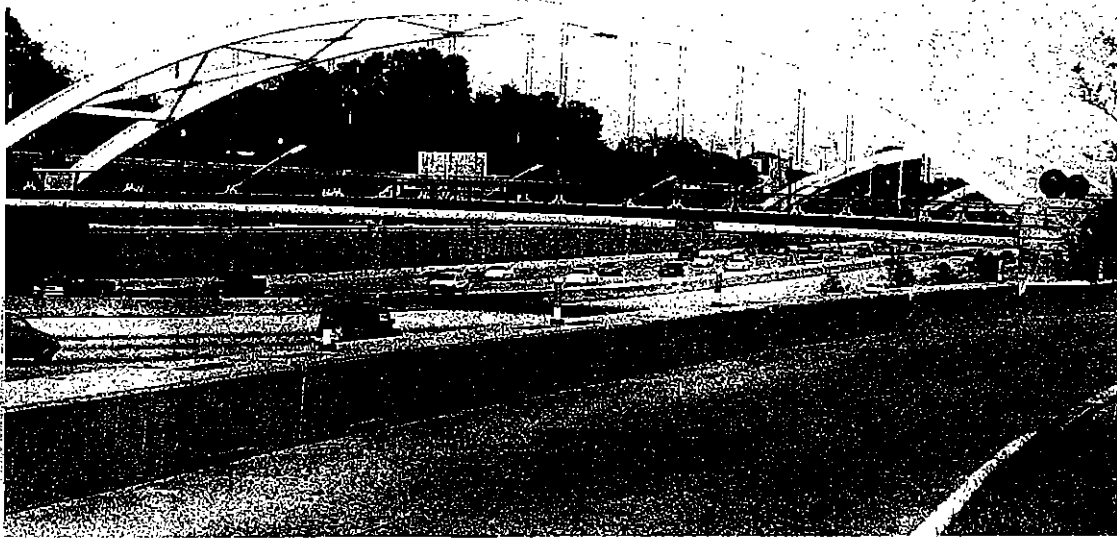












# Critics: Bridge party a waste of funds

**Addison:** Invitation-only event to mark road's opening cost \$50,000

By ELIZABETH LANGTON  
Staff Writer

The town of Addison threw a party Thursday night celebrating the extension of Arapaho Road, but some residents objected to the \$50,000 soiree.

"Having a ribbon cutting for the bridge is not the issue," Addison resident Bob Jacoby said. "Clearly this is a big project for the town, but spending taxpayer money in this fashion is unacceptable."

Addison leaders wanted to celebrate the completion of the town's largest-ever public works project, which took nine years to finish.

The town spent \$29 million to extend Arapaho by two miles from the Dallas North Tollway to Marsh Lane and build a bridge over Midway Road.

The final stretch of Arapaho between Addison Road and Surveyor Boulevard opens at 6 a.m. Monday.

"We wanted to make an announcement and market it to the region. ... This is now a major artery that is being opened," Deputy City Manager Lea Dunn said.

"Rather than buying an ad, we felt like this was a better way of getting a lot of information out."

The Town Council unanimously approved the party's budget. The largest expense was a \$19,722



DARON DEAN/Staff Photographer

Instead of a standard ribbon cutting to mark the bridge's opening, Town Council members pulled apart a neon orange fiber-optic cable.

laser show by Excitement Technology Group.

Other expenses included \$5,700 for invitations, \$5,075 for promotional items, \$2,500 for catering and \$2,422 for equipment rentals.

Funding for the three-phase Arapaho project came from a \$23 million bond issue, the town's capital projects fund and contributions from Dallas Area Rapid Transit and Dallas County. Ac-

cording to a town document, an incentive payment that was not needed for the project paid for the party.

The town invited about 500 people to the event, including people associated with the project and officials from DART and neighboring cities.

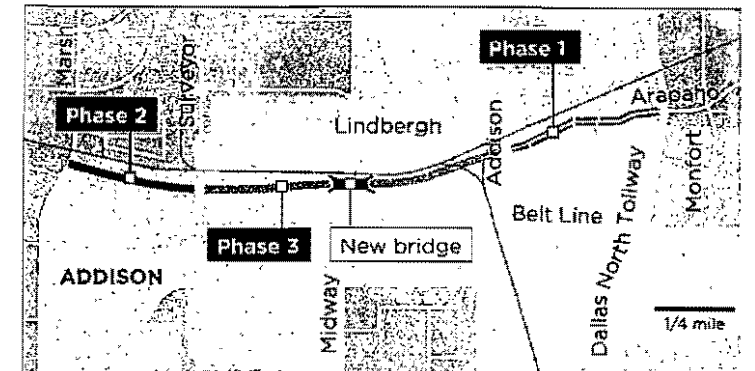
The event was not advertised to the public, though town leaders said no one would be turned away.

"The citizens paid for it, and the

citizens are not invited," Addison resident Bill Signs said. "I have heartburn over that."

Mr. Signs suggested using the \$50,000 for maintenance on the road or to make a payment on the project's bond debt. Comparatively, \$50,000 was budgeted this year for roof repairs at Addison's Fire Station No. 2.

At the party, guests ate appetizers in a heated tent on top of the bridge.



LAYNE SMITH/Staff Artist

Instead of a standard ribbon cutting, Town Council members pulled apart a neon orange fiber-optic cable that stretched across the width of the bridge. A green laser was beamed at the cable to simulate it being severed.

A video depicting the bridge's construction and a five-minute laser show followed.

"I think after eight years' construction and all the hard work, it's a statement to the public," Mayor Joe Chow said.

Mr. Chow said the council considered whether the party's \$50,000 price tag was too high.

"I really don't feel that way, but I did raise the question for discussion," he said.

"I want to make sure that every penny of taxpayer money is spent responsibly."

About 20 years ago, Addison officials came under fire for questionable spending practices. The Dallas Morning News reported in April 1987 that town officials had spent hundreds of thousands of

dollars to support a civic choir and pay for a series of trips to the Far East, Canada and a Texas resort.

Mayor Jerry Redding committed suicide during a subsequent investigation. The Dallas County district attorney's office found no criminal wrongdoing in the case.

Mr. Jacoby said the bridge issue has prompted him to consider starting a watchdog group to monitor the town government.

"We all love our town, and the town management generally does a decent job," he said.

"But when they overspend, someone needs to hold them accountable."

For the past four years, town officials used surplus funds intended for capital projects to cover deficits in the operating budget.

But because property values have increased and the town last year retired a bond debt issued in 1985, Addison's financial picture has improved.

E-mail elangton@dallasnews.com

## OBITUARIES

memorials, burials, cords of thanks.

Sign the Online Guestbook at legacy.com. For information call the obituary desk at (214) 977-8672.

### TOUPS, MIRANDA ANN

58 passed away at her home in Dallas on Monday, January 2, 2006.

A true practitioner of the healing arts, Miranda was a gifted caretaker in life and in her chosen profession.



## OBITUARY

### SANDRA CONWAY

# City employee who helped the homeless

By KIM HORNER  
Staff Writer

Sandra Conway, a longtime city of Dallas employee dedicated to helping the homeless on and off the job, died Sunday after a brief



**Super Bowl Blowout**

Place your Classified ad to run Friday, January 27th through Monday, January 30th.

**5-line ad\* for only**

**FINAL REPORT**

**ARAPAHO ROAD BRIDGE  
NOISE AND VIBRATION ANALYSIS**

*Prepared for*

Town of Addison  
16801 Westgrove Drive  
Addison, Texas

May 13, 2003

**URS**

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## **EXECUTIVE SUMMARY**

A noise analysis was conducted to determine the effects of the construction of a roadway extension of Arapaho Road. Noise and vibration effects at adjacent commercial and transient lodging land uses were investigated as part of this project.

The analysis indicates that the noise and vibration resulting from construction and subsequent operation of the proposed roadway would be below State and federal noise and vibration impact standards. No significant noise or vibration impacts are anticipated from this project.



## **1.0 INTRODUCTION**

This report presents the analysis of potential noise and vibration effects from construction and operation of the proposed project. The project would extend Arapaho Road from Surveyor Boulevard to Addison Road, in the Town of Addison, Texas. The roadway extension will consist of a 4-lane roadway and includes a bridge/elevated roadway, spanning over Midway Road. The extension will be approximately 5,400 feet in length.

The noise analysis consisted of the following: measuring the existing noise environment at representative noise-sensitive locations in the area; modeling the future traffic noise from the project; comparing project-related noise effects to applicable standards to determine if the difference would be a significant change; and determining if noise mitigation should be considered. Additionally, vibration from project construction and operations (i.e., from traffic using the new roadway) was analyzed.

## **2.0 NOISE FUNDAMENTALS**

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and which interferes with or disrupts normal activities. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, perceived importance and suitability of the noise in a setting, time of day and type of activity during which the noise occurs, and sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations, which travel through a medium such as air and are sensed by the human ear. Sound is generally characterized by a number of variables including frequency and intensity. Frequency describes the sound's pitch and is measured in Hertz (Hz), while intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above approximately 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels. The minimum change in the sound level of individual events that an average human ear can detect in a community environment is approximately 3 dB. A change in sound level of 10 dB is perceived by the average person as a doubling (or halving) of the sound's loudness; this relation holds true for loud sounds and for quieter sounds. Sound levels of typical noise sources and environments are provided in Table 1 to provide a frame of reference.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. For example, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example: 60 dB plus 60 dB equals 63 dB, and 80 dB plus 80 dB equals 83 dB.

Sound frequency is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates at a certain number of times per second. A particular tone that makes the drum skin vibrate 100 times per second generates a sound pressure wave that is oscillating at 100 Hz, and this pressure oscillation is perceived as a tonal pitch of 100 Hz. Sound frequencies between 20 Hz and 20,000 Hz are within the range of sensitivity of the best human ear.

Sound from a tuning fork (a pure tone) contains one single frequency; however, most sounds heard in the environment do not consist of a single frequency, but rather a broad band of frequencies differing in sound level. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound according to a weighting system that reflects that human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This is called A-weighting, and the decibel level measured is called the A-weighted sound level (dBA). In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. A single descriptor called the  $L_{eq}$  (equivalent sound level) is used.  $L_{eq}$  is the energy-mean A-weighted sound level during a measured time interval. It is the "equivalent" constant sound level that a given source would need to produce to equal the fluctuating level measured. In addition, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the  $L_{max}$  and  $L_{min}$  noise descriptors. They represent the root-mean-square maximum and minimum obtainable noise levels during the monitoring interval. The  $L_{min}$  value obtained for a particular monitoring location is often called the "acoustic floor" for that location.

Other descriptors of noise are commonly used to predict noise/land use compatibility, as well as community reaction to daytime and nighttime environmental noise. These descriptors include the Day-Night Average Sound Level (abbreviated  $L_{dn}$  or DNL). The  $L_{dn}$  represents a 24-hour period, and applies a penalty to noise events that occur during nighttime hours when relaxation and sleep disturbance is usually of more concern. Noise occurring from 10:00 p.m. to 7:00 a.m. (nighttime) is penalized by adding 10 dB to the measured level.  $L_{dn}$  is the predominant metric used by local governments to describe noise environments within their jurisdictions and for land use compatibility planning purposes. The U.S. Environmental Protection Agency (USEPA) recommends the use of  $L_{dn}$ .

**Table 1. Sound Levels Of Typical Noise Sources And Noise Environments  
(A-Weighted Sound Levels)**

Noise Source (at a Given Distance)	Scale of A-Weighted Sound Level in Decibels	Noise Environment	Human Judgment of Noise Loudness (Relative to a Reference Loudness of 70 Decibels*)
Military Jet Take-off with After-burner (50 ft) Civil Defense Siren (100 ft)	140 130	Carrier Flight Deck	
Commercial Jet Take-off (200 ft)	120		Threshold of Pain *32 times as loud
Pile Driver (50 ft)	110	Rock Music Concert	*16 times as loud
Ambulance Siren (100 ft) Newspaper Press (5 ft) Power Lawn Mower (3 ft)	100		Very Loud *8 times as loud
Motorcycle (25 ft) Propeller Plane Flyover (1,000 ft) Diesel Truck, 40 mph (50 ft)	90	Boiler Room Printing Press Plant	*4 times as loud
Garbage Disposal (3 ft)	80	High Urban Ambient Sound	*2 times as loud
Passenger Car, 65 mph (25 ft) Vacuum Cleaner (10 ft)	70		Moderately Loud *70 decibels (Reference Loudness)
Normal Conversation (5 ft) Air Conditioning Unit (100 ft)	60	Data Processing Center Department Store	*1/2 as loud
Light Traffic (100 ft)	50	Private Business Office	*1/4 as loud
Bird Calls (distant)	40	Lower Limit of Urban Ambient Sound	Quiet *1/8 as loud
Soft Whisper (5 ft)	30	Quiet Bedroom	
	20	Recording Studio	Just Audible
	10		
	0		Threshold of Hearing

Source: Compiled by URS Corporation

### **3.0 LAND USE**

The project is located within the Town of Addison, Texas and consists of the extension of Arapaho Road from Surveyor Boulevard on the west to Addison Road on the east. The extension would be elevated above the existing grade to accommodate a bridge over Midway Road. The current land uses adjacent to the project alignment consist of commercial, light industrial and transient residential (i.e., motels).

## 4.0 NOISE REGULATIONS

Federal, State and local agencies have established policies and regulations concerning the generation and control of noise that could adversely affect citizens and associated noise-sensitive land uses. The various policies and laws established to control adverse noise recognize both the desirability of peace and quiet and the necessity and inevitability of noise associated with an urbanized technological society.

The Texas Department of Transportation (TxDOT) in conjunction with the Federal Highway Administration (FHWA) has established specific sound levels, or Noise Abatement Criteria (NAC), which should not be approached or exceeded. TxDOT defines “approach” as being within 1 decibel of the NAC in Table 2. Thus, a peak-noise-hour sound level of 71 dBA  $L_{eq}$  for an Activity Category C land use type would be considered as approaching the TxDOT/FHWA Noise Abatement Criteria. Although this project is not subject to TxDOT or FHWA review, these standards will be used in the absence of local noise standards for transportation noise. The NAC are stated in terms of one-hour average sound levels (i.e., 1-hour  $L_{eq}$ 's) for various land uses (Table 1). The appropriate NAC for the land uses pertaining to this project are 71 dBA  $L_{eq}$  exterior for commercial and light industrial uses and 66 dBA  $L_{eq}$  exterior transient residential uses (i.e., hotel/motel). The interior NAC for residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums is 51 dBA  $L_{eq}$ . Additionally, TxDOT's Noise Policy defines increases in noise levels as “substantial” and therefore an impact when the predicted traffic noise levels exceed the existing noise levels by ten (10) dBA or more.

**Table 2. FHWA / TxDOT Noise Abatement Criteria**

Activity Category	$L_{eq(h)}$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	—	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools Churches, libraries, hospitals, and auditoriums.

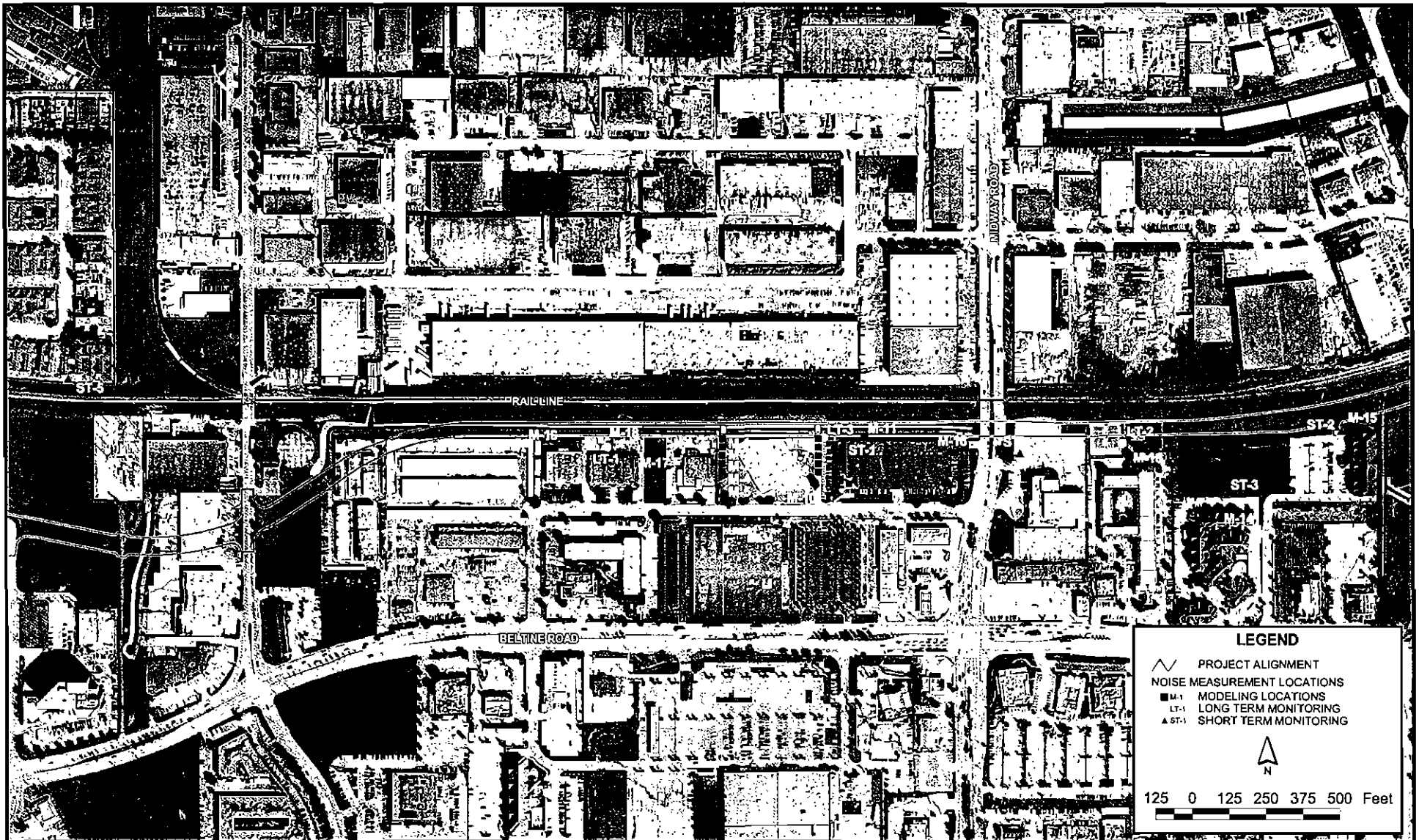
Hourly A-Weighted Sound Level – Decibels (dBA)  
 Federal-Aid Highway Program Manual Vol.7, Chapter 7  
 Transmittal 348, August 9, 1982 Sec. 3, Attachment

The Town of Addison has noise control restrictions on construction noise. Section 70-140 (Noise, Dust and Debris) of the Town's Code of Ordinances (adopted April 9, 2002) specifies that "...The permittee shall take appropriate measures to reduce to the fullest extent practicable in the performance of the excavation work, noise, dust and unsightly debris and during the hours of 10:00 p.m. and 7:00 a.m. shall not use, except with the permission of the city manager, or in case of an emergency as herein otherwise

provided, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.”

#### **4.1 EXISTING NOISE ENVIRONMENT**

Baseline noise measurements were conducted within the project study area from January 29 to January 30, 2003. The noise measurement locations are shown in Figure 1. The purpose of these measurements was to assess the existing noise levels and for comparison with the results of predicted future-with-project traffic noise modeling. The ambient noise was measured at 9 locations in the vicinity of the proposed project. Short-term (15 minutes to 1 hour in duration) noise measurements were conducted at six locations, and long-term (over 24 hours in duration) noise measurements were conducted at three locations. Table 3 presents the results of the short-term noise measurements. Table 4 presents the results of the long-term noise measurements. Long-term noise measurements are used to assess the noise levels in the project area throughout a typical day-night cycle.



**URS**

May 2003

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Arapaho Road Bridge Noise Analysis

Noise Measurement & Modeling Locations

Figure 1



The short-term noise measurements were conducted using a tripod-mounted Type 1 (Precision grade) Larson Davis Model 820 Sound Level Meter (SLM) with statistical analyzer. Long-term noise monitoring was conducted using three Metrosonics db-308 community noise analyzers (CNAs). The SLM and the CNAs were set on Slow time response mode, and used the "A" weighting filter network that most closely approximates the hearing characteristics of the human ear. To ensure accuracy, the laboratory calibration of the noise instruments was field checked before and after each measurement period using an acoustical calibrator. The accuracy of the acoustical calibrator is maintained through a program established by the manufacturer, and is traceable to the National Institute of Standards and Technology. The sound measurement instruments meet the requirements of the American National Standard S 1.4-1983 and the International Electrotechnical Commission Publications 804 and 651. In all cases, the microphone heights were five feet above the ground and the microphones were equipped with windscreens.

Meteorological conditions were conducive to reliable and accurate noise measurements, with clear to partly cloudy skies (no precipitation), calm to light winds (0 – 6 miles per hour), temperatures between 45 and 54 degrees Fahrenheit and relative humidity ranging from 53 to 70 percent.

As shown in Table 3, noise levels in the project area during the short-term noise measurements varied from 51 dBA  $L_{eq}$  (at ST-5, adjacent to the residential area northwest of the project alignment) to 66 dBA  $L_{eq}$  (at ST-4, near The Rink). Predominant noise sources in the project area were traffic along Midway Road and other roadways such as Beltline Road and Addison Road, aircraft operations from the nearby Addison Airport, nearby and distant industrial noises, birds and distant trains.

Long-term noise data, as summarized in Table 4, indicates that 24 hour average noise levels vary from approximately 59 dBA  $L_{eq}$  to approximately 66 dBA  $L_{eq}$ . In terms of the  $L_{dn}$ , the noise levels vary from approximately 65 dBA  $L_{dn}$  to 70 dBA  $L_{dn}$ . The hourly  $L_{eq}$  noise levels are presented graphically in Figure 2. Figure 2 shows that all three of the long-term noise measurements display similar diurnal noise patterns, although maximum and minimum levels and times of day vary somewhat. Hourly noise levels for LT-1 ranged from approximately 43 dBA  $L_{eq}$  (during the 3:00 a.m. hour) to approximately 67 dBA  $L_{eq}$  (during the 6:00 a.m. hour). Hourly noise levels for LT-2 ranged from approximately 46 dBA  $L_{eq}$  (during the 2:00 a.m. to 3:00 a.m. hours) to approximately 77 dBA  $L_{eq}$  (during the 1:00 p.m. hour). Hourly noise levels for LT-3 ranged from approximately 48 dBA  $L_{eq}$  (during the 1:00 a.m. hour) to approximately 72 dBA  $L_{eq}$  (during the 7:00 p.m. hour).

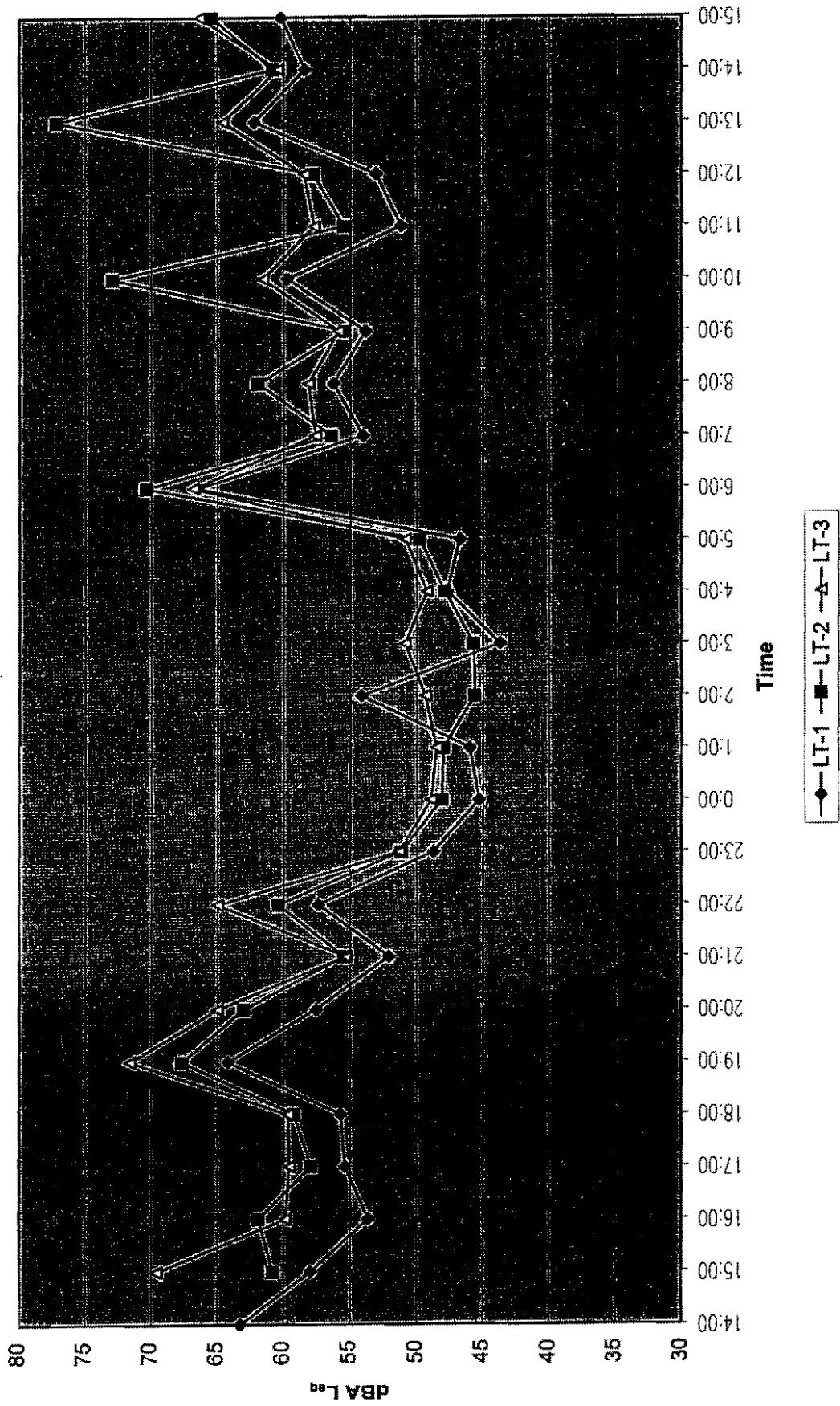
Table 3 - Short-Term Noise Measurement Data (dBA)

Location	Measurement Date	Measurement Start Time	Duration (Hr:Min)	Description	L <sub>eq</sub>	L <sub>Max</sub>	L <sub>Min</sub>	Primary Noise Sources
ST-1	1/29/03	16:50	1:00	Behind Mapseo (Next to Charter Furniture) near picnic table (employee break area).	58.8	76.9	51.1	Traffic (Midway Road), aircraft, occasional exhaust valve (distant industrial)
ST-2	1/30/03	10:00	1:00	Comfort Suites NE corner	56.7	80.9	44.1	Aircraft, birds, distant traffic, distant industrial exhaust
ST-3	1/30/03	11:10	1:00	Homewood Suites, Beltline Road behind hedge at rear of building.	58.8	79.6	48.2	Aircraft, birds, distant traffic, hotel HVAC system
ST-4	1/30/03	12:40	0:30	The Rink, 15100 Midway Rd., 100' from Midway e.l.	65.6	80.4	51.5	Traffic (Midway Road), aircraft, birds
ST-5	1/30/03	14:25	0:15	Behind 3228 San Sebastian Dr. (residential area near the northwest side of project).	50.2	60.9	46.8	Industrial (Generator, HVAC at nearby industrial buildings), birds, distant aircraft
ST-6	1/30/03	15:05	0:40	Intervest Companies, 4131 Centurion Wy	57.9	78.1	44	Aircraft, birds, distant traffic, distant trains

Table 4.-Long-Term Noise Measurements

Site ID	Measurement Date	Location	24 hr L <sub>eq</sub> (dBA)	24 hr L <sub>dn</sub> (dBA)	24 hr Average L <sub>50</sub> (dBA)	24 hr Average L <sub>90</sub> (dBA)
LT-1	1/29/03-1/30/03	4125 Centurion Way	58.5	64.5	49.5	47.5
LT-2	1/29/03-1/30/03	Behind Motel 6 Property, on fence of tennis courts	66.4	69.6	53.5	50.5
LT-3	1/29/03-1/30/03	Behind Absolute Systems Property, on fence post	63.3	67.3	54.2	51.3

Figure 2 - Long-Term Hourly Noise Measurement Data  
Jan 29-30, 2003



## 5.0 ENVIRONMENTAL IMPACT ASSESSMENT AND MITIGATION MEASURES

### 5.1 THRESHOLDS OF SIGNIFICANCE

The project would be considered to produce a noise impact if FHWA/TxDOT NAC are approached or exceeded. Specifically, if the noise from the project equals or exceeds the NAC for Activity Category B or C of 66 dBA  $L_{eq}$  and 71 dBA  $L_{eq}$  respectively, or if predicted traffic noise levels exceed existing noise levels by more than 10 dBA, the project would be considered to have a significant noise effect and mitigation should be considered.

### 5.2 IMPACTS ANALYSIS AND MITIGATION MEASURES

#### 5.2.1 Traffic Noise Modeling

After ambient noise data were collected, the potential noise impacts to representative noise-sensitive receivers were modeled using the FHWA Traffic Noise Model (TNM<sup>®</sup>). TNM<sup>®</sup> is FHWA's most recent computer-based noise model for highway traffic noise prediction and analysis. TxDOT has approved the noise model for use in the analysis of their highway projects. TNM<sup>®</sup> incorporates features that make it a very good choice for accurate assessment of noise from the proposed project; specifically, the model allows the analyst to very accurately input and model the geometry of the proposed roadway, surrounding structures and receivers in three dimensions.

Site-specific data used to model future noise impacts included:

- ◆ Design year traffic data (traffic volumes, mix, direction, and speed)
- ◆ Roadway design data (plan and profile)
- ◆ Topographic data
- ◆ Aerial photographs

The site-specific data were used to create a digital model of the proposed project alternative in TNM<sup>®</sup>. The TNM<sup>®</sup> runs used the same locations as those where measurements were conducted. Additionally, supplemental model locations were used in the TNM<sup>®</sup> model to more fully represent potential changes to the local noise environment. The model receiver locations are shown in Figure 1 and listed in Table 5.

Year 2020 traffic volumes for the grade-separated alternative (13,000 ADT) were utilized for the noise modeling, as supplied by traffic and design information supplied by HNTB and Terra Mar, Inc. Modeled speed for the project was 40 miles per hour. Traffic mix (the percentages of autos, light, medium and heavy trucks) was used as supplied by the traffic study.

As shown in Table 5 (exterior noise impacts), the TNM<sup>®</sup> results were combined with the existing, ambient noise levels to obtain predicted future-with-project peak-noise-hour levels. The future-with-project noise levels were then compared with the FHWA/TxDOT NAC to identify any representative

noise-sensitive receivers that would have a noise impact from the proposed project. Interior noise levels were also predicted, using the results for the exterior noise modeling and then subtracting a 25 decibel exterior/interior noise reduction factor for shielding provided by the building structure. The 25 dB reduction factor is based upon guidance provided by TxDOT, as well as other agencies. This factor assumes a masonry structure of modern construction, with single glazing, with doors and windows closed. Most modern commercial structures would provide well over 25 dB of noise reduction with doors and windows closed; thus, the 25 dB assumption is conservative. The predicted interior noise levels were then compared to the FHWA/TxDOT NAC for noise-sensitive interior spaces, as shown in Table 6.

**Table 5 - Predicted Exterior Noise Levels**

Receptor #	Receptor Location	Existing Ambient Level (based upon Noise Measurements) (dBA Leq)	Estimated <sup>1</sup> Future Noise Level (from Arapaho Bridge) (dBA Leq)	Combined Future Noise Level (Ambient plus Project) (dBA Leq)	Estimated Increase Over Existing Noise Level (dBA Leq)	Criterion Noise Level <sup>2</sup> (dBA Leq)	Future Noise Level Exceeds Criterion Noise Level ?	Substantial Increase Criterion (Greater than 10 dBA) Exceeded ?
1	W of Crouch Property - 10' fm bridge	58	57	61	3	71	No	No
2	W of Crouch Property - 35' fm bridge	58	58	61	3	71	No	No
3	W of Crouch Property - 60' fm bridge	58	57	61	3	71	No	No
4	W of Crouch Property - 85' fm bridge	58	56	60	2	71	No	No
5	W of Crouch Property - 110' fm bridge	58	54	59	1	71	No	No
6	E of Crouch Property - 10' fm bridge	58	55	60	2	71	No	No
7	E of Crouch Property - 35' fm bridge	58	56	60	2	71	No	No
8	E of Crouch Property - 60' fm bridge	58	56	60	2	71	No	No
9	E of Crouch Property - 85' fm bridge	58	56	60	2	71	No	No
10	E of Crouch Property - 110' fm bridge	58	55	60	2	71	No	No
11	Outdoor Break Area - Furniture Store	59	54	60	1	66	No	No
12	Ice Rink in Parking Lot	66	56	66	0	71	No	No
13	Adj to Motel 6	63	58	64	1	66	No	No
14	Adj to Homewood Suites	59	57	61	2	66	No	No
15	Adj to Comfort Suites	57	65	65	8	66	No	No
16	Adj to E side of Furniture Store	66	54	66	0	71	No	No
17	Adj to Intervest	58	60	62	4	71	No	No
18	Adj to Satori/The Harbor Group	58	62	63	5	71	No	No
19	Adj. to Building near W side of Project	58	62	63	5	71	No	No

1 - Future noise level from proposed project, derived from the FHWA's TNM® noise model.

2- Criterion noise levels based upon TxDOT / FHWA exterior "approach or exceed" Noise Abatement Criteria for Activity Category C (which includes commercial land uses) and Activity Category B (which includes hotel/motel land uses).

**Table 6 - Predicted Interior Noise Levels**

Receptor #	Receptor Location	Estimated Future Exterior Noise Level (Ambient plus Project) (dBA L <sub>eq</sub> )	Estimated Future Interior Noise Level <sup>1</sup> (Ambient plus Project) (dBA L <sub>eq</sub> )	Criterion Interior Noise Level <sup>2</sup> (dBA L <sub>eq</sub> )	Future Noise Level Exceeds Criterion Noise Level ?
1-10	Crouch Property	61	36	51	No
12	Ice Rink	66	41	51	No
13	Motel 6	64	39	51	No
14	Homewood Suites	61	36	51	No
15	Comfort Suites	65	40	51	No
16	Furniture Store	66	41	51	No
17	Interwest	62	37	51	No
18	Satori/The Harbor Group	63	38	51	No
19	Building near W Side of Project	63	38	51	No

1 - Assuming a conservative interior/exterior noise reduction factor of 25 dBA, based upon TXDOT guidance, as well as corroborating guidance from other state and federal agencies. Assumes a masonry structure with single-glazing, doors and windows closed.

2- Criterion noise levels based upon TxDOT / FHWA interior Noise Abatement Criteria for residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.



### **5.2.2 Operational Noise Impacts**

As shown in Table 5, none of the 19 modeled representative receivers would have exterior noise impacts from the proposed project. Similarly, Table 6 shows that none of the modeled receivers would have interior noise impacts from the proposed project.

### **5.2.3 Construction Noise Impacts**

Construction phase noise would result from the use of motorized construction equipment. Other short-term impacts from construction noise could result from construction traffic including materials delivery. Noise levels would vary depending on the type of equipment used, how it is operated, how well it is maintained, and its proximity to noise-sensitive uses. Standard excavation and installation equipment, such as graders, backhoes, loaders, tractors, drill rigs, welders, and heavy trucks would be used for construction of project facilities. Although construction would increase local noise levels, construction noise at any one location would be of brief duration because of the linear nature of the project and because of the cyclical nature of construction activities. With implementation of recommended good practice measures (listed below), project construction noise would not result in significant noise effects.

### **5.2.4 Vibration**

Groundborne vibration from heavy equipment operations during project construction and from traffic using the proposed bridge was evaluated and compared with relevant vibration impact criteria. The Federal Transit Authority's (FTA's) Transit Noise and Vibration Impact Assessment Manual (1995) provides vibration impact criteria and recommended methodologies and guidance for assessment of vibration effects.

Ground-borne vibration is a small, rapidly fluctuating motion transmitted through the ground. Ground-borne vibration diminishes (or "attenuates") fairly rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily "sandy" soils) do not. There are several basic measurement units commonly used to describe the intensity of ground vibration. The descriptor used by FTA is the velocity decibel, abbreviated VdB. The velocity parameter best correlates with human perception of vibration. Thus, the response of humans, buildings and sensitive equipment to vibration is described in this section in terms of the root-mean square (RMS) velocity level in VdB units. As a point of reference, the average person can just barely perceive vibration velocity levels below 70 VdB (typically in the vertical direction).

For this project, FTA's more detailed, second-tier General Vibration Assessment was performed. In this analysis, adjustments to the impact criteria (level vs. distance) are used to account for vehicle speed, soil type, building/foundation type and roadway structural characteristics (i.e., roadway on bridge structure).

For the General Vibration Assessment, the land-use-dependent criteria listed in Table 7 would apply. The most stringent vibration criteria is 65 VdB for land use Category 1 receptors. Project-specific variables included vehicle speed, soil type and building/foundation type. Vehicle speed used for the analysis was 40 miles per hour. The limestone sub-soil underlying the project site was accounted for by assuming

highly efficient vibration propagation. The elevated roadway structure would act to diminish direct vehicle vibration. In contrast, potential amplification of vibration within the nearby buildings due to sympathetic resonance was assumed, as a conservative measure. Two cases were analyzed for this project: Case 1 was for the nearest building (The Crouch Property) which would be as near as 27 feet from the bridge piers following project construction; Case 2 was for the Motel 6 building which would be located approximately 100 feet from the roadway following project construction. For Case 1, the predicted vibration level within the building would be approximately 59 VdB. For Case 2, the predicted vibration level would be approximately 55.5 VdB. Both vibration levels would be below the most stringent of the FTA vibration criteria for land uses in which low vibration levels are “essential”. Both levels would also be below the human threshold of perceptibility.

**Table 7- Criteria for Impact for Human Annoyance and Interference to Use of Vibration-Sensitive Equipment\***

		Ground-borne Vibration (VdB re 1 micro in/sec)	
		Events*	
Land Use Category	Category Comment	Frequent	Infrequent
1	Low interior ambient is essential	65	65
2	Residential & sleep	72	80
3	Institutional & daytime	75	83
4	Concert hall, TV/Recording Studio **	65	65
5	Auditorium **	72	80
6	Theatre **	72	80

\* Frequent is defined as greater than or equal to 70 events per day

\*\* See section 12.2.2 of FTA Manual re potential for structural damage to fragile structures if operational during transit events

Source: FTA, 1995

Potential vibration effects from construction operations were also assessed using the FTA methodology contained in the Transit Noise and Vibration Impact Assessment Manual. For Case 1 (the Crouch Property), in which project construction operations would take place within 25 feet of the building, drilling and other activities would be well below FTA criteria levels for potential damage to structures, even using the most stringent “extremely fragile historic buildings” category. The damage criterion for such structures is 0.12 inches per second, whereas the worst-case vibration level is predicted to be 0.09 inches per second. For Case 2 (the Motel 6 building), the construction vibration level would be substantially reduced by the additional distance between the project site and the building. The vibration level at the motel would be approximately 0.01 inches per second. Vibration from construction activities would be clearly perceptible at the Crouch Property when construction is underway near the building, but would not be damaging. Vibration from construction activities at the Motel 6 building is expected to be barely perceptible when construction is underway adjacent to the property.

In summary, no significant impact would result from operational or construction activities associated with the proposed project.

### 5.2.5 Good Practices for Construction Noise Reduction

Implementation of the following recommended practices prior to project construction would ensure that potential construction noise effects are less-than-significant:

- ◆ The hours of construction including noisy maintenance activities and all spoils and material transport shall be restricted to the periods and days permitted by the local noise or other applicable ordinance. Noise-producing project activity shall comply with local noise control regulations affecting construction activity or obtain exemptions therefrom.
- ◆ All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with mufflers, and air-inlet silencers where appropriate, in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- ◆ All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a local, state, or federal agency, shall comply with such regulation while conducting project-related activities.
- ◆ Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- ◆ The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.
- ◆ No project-related public address loudspeaker, two-way radio, or music system shall be audible at any adjacent noise-sensitive receptor.
- ◆ The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the appropriate Town of Addison staff shall be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

### 5.2.6 Good Practices for Operational Noise and Vibration Reduction

To assure that vibration and noise is not created by vehicles traversing gaps and/or unnecessary breaks in vertical or horizontal alignment, the bridge shall be designed and constructed with particular care to avoid any such unnecessary gaps or breaks, to the extent allowable under the current state of the practice. Expansion joints and changes in grade shall be designed to minimize gaps or sudden vertical "steps" in the roadway surface.

## **6.0 LIMITATIONS**

The opinions and recommendations presented herein are based in part upon field measurements and observations of what is believed to be typical and representative conditions of normal motor vehicle and community activity and URS's understanding of the project as presented in this report. The noise and vibration measurements and analyses were conducted using the professional standard of care as practiced in the industry and are representative of the activity being measured during the environmental conditions existing during the measurement periods. Because of the variability of factors not within the control of the investigators, no warranty can be made that the exact noise, vibration, traffic, or activity levels would be obtained by subsequent field measurements. However, for similar climatic and seasonal conditions, and intensity of community activity, the noise, vibration, and traffic levels measured would be similar to those reported herein.

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- U.S. Department of Transportation, Federal Highway Administration, Office of Environmental Policy, Noise and Air Analysis Division, June, 1995. *Highway Traffic Noise Guidance and Policies*. Washington, D.C.
- U.S. Environmental Protection Agency, 1971. *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, Prepared under contract by Bolt, Beranek, and Newman, Inc., Boston, MA.



**STATEMENT OF QUALIFICATIONS  
FOR PROFESSIONAL ARCHITECT,  
ENGINEERING SERVICES FOR:**

---

**ARAPAHO ROAD BRIDGE  
at  
at MIDWAY ROAD**

---

NOVEMBER 2001



**TEAGUE NALL AND PERKINS**  
CONSULTING ENGINEERS

IRVING \* FORT WORTH \* DENTON

IN ASSOCIATION WITH

**ED CARPENTER**

RFQ 02-08

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**MAYOR**

R. SCOTT WHEELER

---

**CITY COUNCIL**

GLYNDA TURNER, MAYOR PRO TEM  
CATHY WAYS, DEP. MAYOR PRO TEM  
BOB BARRETT  
DIANE MALLORY  
FRANK R. KLEIN  
FREDRIC M. SILVER

---

**CITY MANAGER**

RON WHITEHEAD

---

**DIRECTOR OF PUBLIC WORKS**

MICHAEL MURPHY, P.E.

**STATEMENT OF QUALIFICATIONS**

for

**PROFESSIONAL ARCHITECT / ENGINEERING SERVICES**

for

**ARAPAHO ROAD BRIDGE AT MIDWAY ROAD**

for the

**TOWN OF ADDISON, TEXAS**

November, 2001

**MAYOR**

R. Scott Wheeler

**CITY COUNCIL**

Glynda Turner, Mayor Pro -Tem  
Cathy Ways, Deputy Mayor Pro -Tem  
Bob Barrett  
Diane Mallory  
Frank R. Klein  
Fredric M. Silver

**CITY MANAGER**

Ron Whitehead

**ASSISTANT CITY MANAGER**

Chris Terry

**DIRECTOR OF PUBLIC WORKS**

Michael Murphy, P.E.

**ASSISTANT DIRECTOR OF PUBLIC WORKS**

James C. Pierce, P.E.

**ASSISTANT CITY ENGINEER**

Steven Z. Chutchian, P.E.

December 3, 2001

Mr. Steven Z. Chutchian, P.E., Assistant City Engineer  
Town of Addison  
P.O. Box 9010  
Addison, Texas 75001-9010

**Re: Statement of Qualifications for Professional  
Architect/Engineering Services for Arapaho Road  
Bridge at Midway Road**

Dear Mr. Chutchian:

We appreciate the opportunity to submit the enclosed Statement of Qualifications (SOQ) for professional architect/engineering services to the Town of Addison for the subject project. Our team has and is currently providing similar services as required for this project to numerous municipal and governmental clients. We are confident that our experience in the areas of bridge, paving, drainage, hydraulics/hydrology, and water and wastewater system engineering projects qualifies us to be utilized to provide the services required to properly design all aspects of this project.

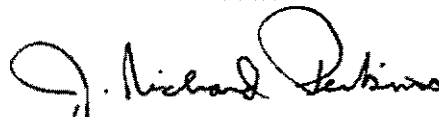
Teague Nall and Perkins, Inc. (TNP) is a general civil engineering firm offering bridge, paving, storm drainage, water, and sewer design services to over forty (40) municipal and governmental agencies. The firm has been in business in Fort Worth for 25 years and continues to enjoy a good working relationship with its municipal clients in the provision of consulting engineering services either on a project-by-project basis (such as this project) or in the role of City Engineer in which we handle all engineering responsibilities for the client. TNP opened an office in Irving during 1990, and their Denton office in July, 2000, and we are developing client relationships with several Dallas and Denton County cities as we continue to do in Tarrant County.

The TNP track record of providing quality design along with neat, readable, and detailed construction plans is well recognized by our clients. We would urge you to contact any of our references for similar projects we have noted in the SOQ, regarding our qualifications, our timeliness in meeting deadlines, our personal client contact, and our responsiveness to client needs.

It is a sincere privilege to submit this SOQ to the Town of Addison. We look forward to further discussions with you regarding our employment as the Town's consultant on this important bridge design project. Should you have any questions regarding our firm, our project team members, or any of the other information enclosed in this SOQ, please do not hesitate to call.

Very truly yours,

**TEAGUE NALL AND PERKINS, INC.**

  
J. Richard Perkins, P.E.






**ADDENDUM No. 1**  
**REQUEST FOR STATEMENTS OF QUALIFICATIONS**  
**RFQ 02-08**  
**ARCHITECT/ENGINEERING SERVICES**  
**ARAPAHO ROAD BRIDGE**  
**AT MIDWAY ROAD**

1. Replace original RFQ with attachment from addendum 1.
2. Due date changed of RFQ from November 26, 2001 to December 3, 2001.

**END OF ADDENDUM**

The undersigned bidder hereby certifies the Addendum No. 1 has been incorporated into the contract and if accepted becomes part of the contract.

BY:       DATE: 11/20/01

**REQUEST FOR STATEMENTS OF QUALIFICATIONS  
RFQ 02-08  
ARCHITECT/ENGINEERING SERVICES  
ARAPAHO ROAD BRIDGE  
AT MIDWAY ROAD**

**TOWN OF ADDISON**

The Town of Addison is embarking on an exciting project to construct the portion of Arapaho Road, from Surveyor Blvd. to Addison Rd. Included in this significant roadway improvement to our community is a unique bridge section over Midway Road. This feature will serve as a gateway to The Town of Addison and its renowned amenities.

In order to accomplish this goal, The Town of Addison is undertaking a three-step architect/engineer selection process, to design the architectural and structural components of the bridge. The first step consists of a request for qualifications that is being sent to selected architecture and engineering firms. The submittals will be reviewed, and a short list of three A/E firms (finalists) will be selected to go to the second step. The finalists will enter a "design competition" and will be paid a stipend of \$10,000 to prepare a design concept for the bridge. The finalists will be asked to meet with the Town to receive vision and direction for the project from Town Management. Drawings, visual graphics, and/or a study model will describe the concept. The finalists will be asked to present their designs(s) for a selection committee made up of members of the governing body and staff. Lastly, the design competition winner will then prepare a proposal to complete the design, and a fee will be negotiated. The design contract will go to City Council for approval.

ADDENDUM No.1  
RFQ 02-08 Architect/Engineering Services Arapaho Rd Bridge at Midway

A mandatory pre-submittal meeting will be held at 3:00 p.m. November 13, 2001 at the Stone Cottage, 4901 Addison Circle Drive. Any firm not represented will not be eligible to submit a Statement of Qualifications.

The proposed bridge must be 4 lanes, and be able to accommodate pedestrian traffic. Midway road is 45' wide, back of curb to back of curb through the bridge section. Copies of the preliminary plans for Arapaho road will be available at the pre-submittal meeting.

Addison will accept written Statements of Qualifications (SOQ) from Architecture/Engineering firms until December 3, 2001. Four (4) copies of the SOQ shall be submitted. The SOQ should contain a maximum number of thirty (30) single sided pages on 8 1/2" x 11" paper. The firm may also submit a power point presentation of past bridge design projects. The architecture/engineering firm should provide enough information to demonstrate the firm's ability to design the project. The SOQ shall designate the individuals who will be assigned to the project (Principal-in-charge, Project manager, Project Engineer, Project Architect etc.) with resumes for each individual. A list of similar projects in scope and size that the firm has recently completed in the last five (5) years shall be provided. A description for each project shall be provided along with project cost, completion date, names of proposed design team members involved in the project, name of the client, contact person, and phone number for contact person.

All written Statements of Qualifications and supporting material submitted shall be evaluated by the Selection Committee, which will be made up of Michael Murphy, P.E., Director of Public Works, James C. Pierce, P.E., Assistant Director of Public Works, Ron Whitehead, City Manager, and Bill Shipp, Assistant to the City Manager. The review of the SOQ's will be based on the selection criteria shown on the attached page. The SOQ should specifically address each criterion for evaluation.

Interested consultants should direct questions and submit Statements of Qualifications to:

Mailing:	Steven Z. Chutchian, P.E. Assistant City Engineer P.O. Box 9010 Addison, Texas 75001-9010	Street:	16801 Westgrove Addison, Texas
Phone:	(972) 450-2886	Fax:	(972) 450-2837

## EVALUATION CRITERIA FOR QUALIFICATIONS

	<u>POINTS</u>	<u>MULTIPLIER</u>	<u>SCORE</u>
1. The firm's experience, as well as proposed team members, in successfully performing similar assignments, in scope and size, for others within the last five (5) years, by personnel still on the firm's staff. Prime and team members have worked together before.	0 -10	4	_____
2. Professional background of key personnel and experience similar projects. The firm's current staff, both in size and related experience, is qualified to provide the desired service. Indicate length of time key employees have been with the firm as well as their home office location.	0 - 10	4	_____
3. Location of main office and/or branch office that will provide services and experience in the local area.	0 - 10	1	_____
4. Management approach to this project. (Include QA/QC, schedule and budget programs).	0 -10	1	_____
5. Technical approach to this project.	0 - 10	1	_____
6. Previous clients, for similar projects express satisfaction with the firm's work (Short listed firms only, if necessary).	0 - 10	2	_____
7. Oral presentation (short listed firms only, if necessary).	0 - 10	4	_____

## **TABLE OF CONTENTS**

<b><u>SECTION</u></b>	<b><u>DESCRIPTION</u></b>
A.	Background and Description of the Team
B.	Experience and Successful Performance of the Team in Similar Assignments, Scope, and Size
C.	Professional Background of Key Personnel
D.	Management Approach to Project
E.	Technical Approach to Project
F.	List of Client References
G.	General Qualifications Related to the Design of Public Works Projects

## **SECTION A - BACKGROUND AND DESCRIPTION OF THE TEAM**

**Teague Nall and Perkins, Inc. (TNP)** is a general civil engineering firm that was incorporated in November, 1976, by Gary Teague and John Nall. Both men brought strong municipal/governmental civil engineering backgrounds into the firm. In 1979, Dick Perkins joined the firm having worked for a consulting firm which worked exclusively for municipal/governmental clients. During 1990, in an effort to further expand their base of municipal/governmental clients, TNP opened an office in Irving, and in July, 2000 the firm opened a third office in Denton. Following the death of founding partner, John Nall, Mark Berry joined the TNP staff as a principal in July, 1993. Also a previous TNP employee, Mike Jones, joined the firm as a principal in April, 1995.

TNP is fully staffed with seventeen (17) registered professional engineers, and with the team of professionals from and their world renowned architectural subconsultant, Ed Carpenter, is equipped to provide all the services required for this important bridge project. All of the design, project management, and CADD work for these projects will be completed or managed by the firm's Irving office. Design field surveys and right-of-way parcel preparation will be provided by the firm's in-house survey crews. These crews will employ company-owned state-of-the-art robotics and G.P.S. equipment for this project.

**The TNP staff is comprised of 85 persons** including registered engineers, designer/project engineers, CAD technicians, registered surveyors, survey field parties, field representatives, and clerical personnel. Each of these people has significant experience in the design and development of construction plans for all types of public works bridge, paving, drainage, water, and sewer projects. The resumes of the key personnel on the TNP team that will be assigned to the Arapaho Road Bridge project are found in Section C of this SOQ. **Although the firm is presently providing engineering services for several municipalities, many of the present projects are not currently design intensive, especially for the team assembled for the Arapaho Road Bridge project. Therefore, TNP is now in a position to commence on several new projects and to complete same in a very timely and responsive manner.**

In recent years TNP has provided consulting engineering services to the cities of Fort Worth, Irving, Euless, Carrollton, Plano, Grand Prairie, Addison, Hurst, Bedford, Lewisville, Waco, Denton, DeSoto, Coppell, Colleyville, North Richland Hills, Highland Village, Benbrook, Mansfield, The Colony, Lewisville, Richland Hills, Keller, Pantego, Decatur, Burleson, Trophy Club, Weatherford, Springtown, Dalworthington Gardens, Forest Hill, Grapevine, Blue Mound, Lake Worth, Crowley, White Settlement, Willow Park, Ponder, Westover Hills, Hudson Oaks, Denton County, and to Tarrant County and

Dallas County (CDBG projects); [TNP has provided its consulting services to the Town of Addison for an intersection improvement project. The design was completed in 1999. J. Richard Perkins (principal) and Delvin Black (project manager) were directly in charge of this project, and both are on the project design team for the Town's Arapaho Road Bridge project]. The firm has a reputation of providing quality and timely engineering services to its clients as evidenced by the fact that the above mentioned municipalities and governmental agencies continue to employ the firm on a regular basis.

The firm's municipal base has been growing steadily as a result of their reputation with some of their first clients which employed them after the firm was founded in 1976 (Fort Worth, Hurst, and Pantego). Fort Worth has retained TNP on over sixty (60) separate engineering contracts for designing municipal bridge, paving, drainage, water, and sewer improvements.

TNP serves in the capacity of City Engineer for the Town of Pantego, Benbrook, Bedford, Forest Hill, Crowley, Weatherford, White Settlement, Springtown, Dalworthington Gardens, Blue Mound, Hudson Oaks, Westover Hills, and Trophy Club, and they handle all the engineering assignments of those cities. For their other municipal/governmental clients, the firm provides required engineering services on a project-by-project basis.

In summary, TNP is committed to serving municipalities and governmental agencies. The firm has built its reputation on five (5) basic major commitments to its clients:

- **PRINCIPAL OF FIRM DIRECTLY IN CHARGE OF EACH MUNICIPAL/GOVERNMENTAL PROJECT**
- **QUALITY ENGINEERING DESIGN**
- **RESPONSIVENESS TO CLIENT NEEDS**
- **TIMELINESS IN MEETING DEADLINES \***
- **CLOSE PERSONAL CONTACT WITH CLIENT DURING DESIGN AND CONSTRUCTION**

\* Prime example of this was completion from start-to-finish of the \$8.0 million Alliance Blvd./I.H. 35W project in 10 months. All intermediate and the final completion deadlines were met.



**SECTION B - EXPERIENCE AND SUCCESSFUL PERFORMANCE OF THE TEAM IN  
SIMILAR ASSIGNMENTS, SCOPE, AND SIZE**

TNP has provided general consulting engineering services to municipal and governmental clients for 25 years. The quality and timely service provided by the firm is partly evidenced by the fact that the firm continues to enjoy repeat business from its clients.

On the following pages we have included descriptions of some of the municipal/governmental projects completed by the TNP team that are very similar in nature to the scope of work outlined for the Arapaho Road Bridge project for the Town of Addison. **The proposed design team for this bridge project have had major design/management responsibility for each of the projects described.**

The TNP team is fully staffed to provide quality architect/engineering services for this project. Our six (6) survey crews service all three (3) offices (Irving, Fort Worth, and Denton), and these crews are supervised by Steve Roberson, an R.P.L.S. with 26 years of surveying experience. The team's architectural associate, Ed Carpenter, has provided similar services for numerous bridge projects. He has a large repertoire of bridge projects for which he has been directly involved in the aesthetic/artistic and design aspects of these bridges. He won a design excellence award in 1999 from the Federal Highway Administration for his design of the "Grasshopper Bridge" in Arizona, (see description below).

**REPRESENTATIVE MUNICIPAL & GOVERNMENTAL  
BRIDGE DESIGN EXPERIENCE**

(This is only a sample of the projects actually completed by TNP)

**Roadway Bridge Projects**

**City of Keller**

**Project Name: Bear Creek Parkway Bridge at Bear Creek**

**Project Description:**

330-foot long, 5-span prestressed concrete girder bridge, horizontal and vertical curvature, skewed to the waterway, four-lane divided roadway, designed and constructed in two separate contracts.

**Contact Person:** Ed Ilshner, P.E., Dir. of Public Works  
(817) 431-1055

**Date of Project:** Construction completed November, 1998.

**Construction Cost:** \$1,100,000

\*\*\*\*\*

**Project Name: Town Center Blvd. Bridge at Bear Creek**

**Project Description:**

52-foot single span prestressed concrete box beam bridge, extensive architectural treatment, decorative railing.

**Contact Person:** Ed Ilshner, P.E., Dir. of Public Works  
(817) 431-1055

**Date of Project:** Construction completed May, 1999.

**Construction Cost:** \$300,000

\*\*\*\*\*

**City of Denton**

**Project Name: Ruddell Street Bridge at Pecan Creek**

**Project Description:**

210-foot long, 3-span prestressed concrete box beam bridge, skewed to the waterway, 2-lane street, provision for expansion to a four-lane undivided roadway, sidewalks each side.

**Contact Person:** Jerry Clark, P.E., Dir. of Eng. and Trans.  
(940) 349-8358

**Date of Project:** Construction completed November, 1999.

**Construction Cost:** \$525,000

\*\*\*\*\*

**City of Crowley**

Project Name: **Industrial Blvd. Over Burlington Northern Railroad**

Project Description:

93-foot single span prestressed concrete box beam overpass for a four-lane divided roadway to be constructed in 2 phases, MSE retaining wall parallel to railroad right-of-way and a multiple box culvert (10-barrel 10' x 10') with extensive headwall modifications.

Contact Person: Jim McDonald, Dir. of Public Works  
(817) 297-2320

Date of Project: Design completed July, 1999.

Construction Cost (Est.): \$500,000

\*\*\*\*\*

**Parsons Transportation Group**

Project Name: **Mustang Drive over S.H. 121**

Project Description:

Widening of an existing 4-span, two-lane bridge to 5 lanes (4 traffic lanes and a left-turn lane.

Contact Person: John Chase, P.E.  
Bridge Section, Fort Worth District  
(817) 370-6580

Date of Project: Construction completed 2001.

Construction Cost: \$650,000

\*\*\*\*\*

Project Name: **Ramp H Access Bridge from William Tate Avenue to S.H. 121**

Project Description:

Widening of an existing 3-span freeway access ramp bridge to accommodate an additional lane of traffic (one lane existing to two lanes).

The ramp was constructed on a horizontal curve with the bents and abutments skewed approximately 60°.

Contact Person: John Chase, P.E.  
Bridge Section, Fort Worth District  
(817) 370-6580

Date of Project: Construction completed in 1999.

Construction Cost: \$260,000

\*\*\*\*\*

**VLK Architects**

**Project Name: American Airlines Priority Service Facility**

**Project Description:**

Design of a single span bridge and retaining walls as part of the site improvements required to construct this facility between the north bound and south bound lanes of International Parkway at DFW Airport. The retaining walls varied in height up to 20 feet and were located as close as 20 feet to the pavement of International Parkway.

**Contact Person:** John Wallis, AIA, VLK Architects 817-633-1600  
Larry E. Telkamp, Architect, Senior Project Manager

**Date of Project:** Project is under construction.

**Construction Cost:** \$1,200,000 - Bridge and retaining wall portion only

\*\*\*\*\*

**ED CARPENTER  
"Signature" Bridges**

**City of Phoenix, Arizona**

**Project Name: Cave Creek Pedestrian Bridge**

**Project Description:** Stainless steel: 220' x 10' x 36', "Grasshopper"; received Federal Highway Administration Excellence in Highway Design Award for this bridge.

**Contact Person:** Greg Esser - (602) 262-4637  
**Date of Project:** Construction completed December, 1997.  
**Construction Cost:** \$550,000

\*\*\*\*\*

**City of Dallas, Texas**

**Project Name: Trinity River Bridge**

**Project Description:** 7-lane freeway bridge, 3 proposed schemes. Steel and concrete, 2000' x 110'

**Contact Person:** Margaret Robinett - (214) 670-3284  
**Date of Project:** Design currently on hold.  
**Construction Cost:** \$48,000,000

\*\*\*\*\*

**City of Ellensburg, Washington**

**Project Name: Central Washington University**

**Project Description:** Atrium suspension bridge sculpture, 40' x 20' x 20'. Steel, cables and dichroic glass.

**Contact Person:** Steve Thompson - (360) 586-5352  
**Date of Project:** Construction completed September, 1998.  
**Construction Cost:** \$114,000

\*\*\*\*\*

**City of Ontario, Oregon**

Project Name: **Welcome to Oregon, I-84 Freeway Bridge**

Project Description: Competition computer modeled schematic design,  
300' x 100' x 50'

Contact Person: Joe Paiva - (503) 986-3528/Oregon Dept. of Trans.  
Date of Project: Competition entry.  
Construction Cost: N/A

\*\*\*\*\*

**City of San Antonio, Texas**

Project Name: **Convention Center Pedestrian Bridge**

Project Description: Computer model, 12' x 160', concrete and steel

Contact Person: Felix Padron - (210) 207-4433  
Date of Project: Project not yet built.  
Construction Cost: \$650,000

\*\*\*\*\*

**City of Portland, Oregon**

Project Name: **Light Rail Pedestrian Bridge**

Project Description: "Fishbird", steel and concrete, 155' L x 14' W x 22' H

Contact Person: Mary Priester - (503) 962-2291  
Date of Project: Construction completed August, 2000.  
Construction Cost: \$650,000

\*\*\*\*\*

**SECTION C - PROFESSIONAL BACKGROUND OF KEY PERSONNEL**

The resume of one (1) of the four (4) principals of TNP, which manages the Irving office-Perkins (Principal-in-Charge), is included in this Section of the SOQ. We have also enclosed resumes of other key staff personnel including our in-house surveyor. TNP has its own surveying crews to offer an even more responsive and controlled level of service to our municipal clients. TNP utilizes state-of-the-art G.P.S. and robotics equipment on all of our municipal engineering/surveying projects. We no longer have to wait to get in the production line for other surveying firms. Our utilization and scheduling of our crews is directly based on the needs of our clients.

We have enclosed an organization chart at the end of this Section of the SOQ which depicts the TNP team personnel whose resumes are enclosed and their area(s) of expertise. This chart also includes the subconsultants we have chosen to utilize on the design team for this project.

Ed Carpenter has been selected for the TNP team to provide the aesthetic/artistic design elements for the project. His resume of only his bridge projects is included in this section of the SOQ.

**The attached Power Point presentation includes some of the "signature" bridge projects in which Ed Carpenter has provided aesthetic/artistic design. This presentation also includes pictures of some of the bridge design projects TNP has completed within the last five (5) years. A separate video tape taken by the TNP staff on a recent aerial flight over the project area has also been attached with this SOQ.**

## RESUMES

### TNP PRINCIPALS

Gary J. Teague, P.E. (FTW) (Not Included) [25]

J. Richard Perkins, P.E. (Principal-in-Charge) (Irving) [22]

Mark R. Berry, P.E. (FTW) (Not Included) [8]

Michael A. Jones, P.E. (FTW) (Not Included) [16]

### PROJECT MANAGER

#### *BRIDGE DESIGN*

Delvin E. Black, P.E. [8]

### PROJECT ENGINEERS

#### *STORM DRAINAGE DESIGN*

Gary L. Vickery, P.E. [5]

#### *WATER/SEWER DESIGN & UTILITY RELOCATIONS*

C. Ty Hilton, P.E. [6]

### AESTHETIC/ARTISTIC DESIGN

Ed Carpenter [25]

### SURVEYOR

Stephen H. Roberson, R.P.L.S. [6]

### GEOTECHNICAL SURVEYS

CMJ Engineering, Inc. (Resume not included)

\* The figures in [ ] indicate the tenure of employee in years with his respective firm.



# **TEAGUE NALL AND PERKINS, INC.**

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**J. Richard Perkins, P.E.**

Principal-in-Charge

## ***Education***

1963 - B.S., Civil Engineering, Texas Tech University

1966 - M.S., Engineering Administration, Southern Methodist University

## ***Registrations***

Professional Engineer - 31434

Public Surveyor - 2677

## ***Professional Experience***

Principal, Project Manager and Client Development Manager - responsible for design and management of various municipal projects (paving, drainage, water, and sewer improvements). Client Manager for cities of Hurst, DeSoto, Addison, Grand Prairie, Irving, Euless, Mansfield, The Colony, Richland Hills, Carrollton, Pantego, Dalworthington Gardens, Cedar Hill, and Blue Mound. Representative projects that are similar in nature to the Addison Bridge project in which Perkins has provided project management and/or design responsibilities include, but are not limited to:

### **Roadway/Bridge Reconstruction Projects:**

Grauwyler Road (Story to Pearson) – City of Irving – \$13,800,000 (3 Phases)

Walnut Hill Lane (Tophill to Story) – City of Irving -- \$1,500,000

Nursery Road Bridge (Delaware Creek) – City of Irving – \$900,000

Westpark Way (ISTEA) (S.H. 10 to S.H. 183) – City of Euless – \$4,300,000

Rochelle/S.H. 114 and O'Connor/Spur 348 – City of Irving – \$660,000

E. Broad Street Reconstruction (U.S. 287 to Main St.) – City of Mansfield – \$3,800,000

Precinct Line Road (Redbud to S.H. 10) – City of Hurst – \$600,000

Handley-Ederville Rd. (ISTEA) (S.H. 121 to Baker Blvd.) – City of Richland Hills – \$1,875,000

Bowen Road/Spur 303 (ISTEA) – Town of Pantego – \$2,800,000

### **Storm Drainage Projects:**

PEC-4 Channel Improvements – City of Denton – \$3,423,000

Darr/Grauwyler (Loop 12 to Grauwyler) – City of Irving – \$350,000

Shulze/Anderson/Hawthorne Storm Drainage Impr. – City of Irving – \$325,000

Precinct Line Road (Pipeline Road to Redbud) – City of Hurst – \$785,000

Pipeline Road Drainage Improvements - City of Hurst – \$320,000

Storm Drainage Improvements at Eight Locations – City of DeSoto – \$750,000

Cresthaven/Winewood/Oakridge/Robin Storm Drainage Impr. – Town of Pantego – \$303,000

Peachtree/Silverleaf/Kidd Storm Drainage Impr. – Town of Pantego – \$495,000

Smith-Barry Road Culvert Impr. – Town of Pantego – \$247,000

# **TEAGUE NALL AND PERKINS, INC.**

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**Delvin Black, P.E.**  
Project Manager

## ***Education***

B.S. and M.S., Civil Engineering, Oklahoma State University  
Ph.D., Structural Engineering, Oklahoma State University

## ***Experience Summary***

Extensive experience in design and management of projects for various governmental agencies and private entities for over 28 years. Very strong design and analysis skills. Experienced in utilizing computerized analysis and design methods. Ability to maintain project schedules and budgets. Successful in meeting client's needs for a variety of civil/structural engineering projects.

## ***Partial Listing of Recent Bridge Experience***

- Bear Creek Parkway Bridge Bear over Bear Creek (Two Phases) - City of Keller - \$1,100,000
- Ruddell Street Bridge over Pecan Creek - City of Denton - \$525,000
- Ramp H Bridge to West Bound S.H. 114 - Parsons Transportation Group/ City of Grapevine - \$285,000
- Mustang Drive Bridge over S.H. 121 - Parsons Transportation Group/ City of Grapevine - \$648,000
- Town Center Entrance Bridge - City of Keller - \$300,000
- Industrial Blvd. over Burlington Northern Railroad - City of Crowley - \$575,000
- Trinity Boulevard over Trinity Railway Express - Seefried Properties / City of Fort Worth - \$980,000
- Priority Parcel Service Facility - VLK Architects/ American Airlines - DFW Airport - Bridge & Retaining Wall Portion - \$1,000,000
- West Sandy Lake Road over Cottonwood Branch - City of Coppell - \$920,000
- Hickory Creek Road over Fletcher Branch - City of Denton - \$200,000

## ***Partial Listing of Recent Transportation Project Experience***

- Rochelle Boulevard/S.H. 114 Paving Improvements - City of Irving - \$475,000
- Walnut Hill Lane Paving, Drainage, Water & Sanitary Sewer Improvements (Top Hill to Story) - City of Irving - \$1,480,000
- Grauwylar Road Paving, Drainage, Water & Sanitary Sewer Improvements (Story Road to Pearson Street - 3 Phases) - City of Irving - \$11,400,000
- North Central Expressway Tunnel for Light Rail System - Dallas Area Rapid Transit - \$110,000,000
- Prototypical Light Rail Stations (20 Locations) - Dallas Area Rapid Transit - ~\$25,000,000
- Handley-Ederville Road, S.H. 183 to S.H. 121 - City of Richland Hills - \$2,400,000
- Woodall Rodgers Storm Drain Tunnel, North Central Expressway to Woodall Rodgers & Fairmont - City of Dallas - \$7,000,000

## ***Professional Registrations/Associations***

Professional Engineer - 31640, Texas  
Professional Engineer - 8981, Oklahoma

# **TEAGUE NALL AND PERKINS, INC.**

---

**Ed Carpenter**  
Architectural Consultant

## ***Education***

1965 -1966 Architectural Design - University of California, Santa Barbara  
1968 -1971 University of California, Berkeley

## ***Grants***

Founder, Public Art Advisory Committee

## ***Awards***

1989 - Governor's Commendation "The Making of Mainstreet"  
1994 - Design Citation, American Institute of Architects, Rochester, MN  
1999 - Federal Highway Admin. Excellence in Highway Design, Phoenix , AZ

## ***Professional Experience***

Designer Consultant - works internationally from his studio in Portland, Oregon, collaborating with a variety of expert architects, engineers, sub-contractors, and studio assistants. Specializes in large-scale public installations ranging from architectural sculpture to infrastructure (bridge) design. Manages each commission, and installs them himself with a crew of long-time helpers, except in the case of the largest objects, such as bridges. Projects Mr. Carpenter has provided design management and/or responsibilities includes, but are not limited to:

### **Bridge/Exterior Reconstruction Projects:**

Ballona Creek Pedestrian Bridge - Culver City, California, 12' x 220' (in progress)  
Trinity River Bridge - Dallas, Texas, 7-lane - freeway bridge (in progress)  
Fishbird Pedestrian Bridge (airport light rail station) - Portland, Oregon, 155' x 14' x 22'  
Cave Creek Pedestrian Bridge - Phoenix, Arizona - 220' x 10' x 36'  
San Antonio Convention Center Pedestrian Bridge - San Antonio, Texas - 12' x 140'  
Broadway Viaduct - Denver, Colorado - 75' x 40' x 12'  
Dean Science Bldg. - Central Washington Univ. at Ellensburg - Atrium Bridge Sculpture

### **Interior Reconstruction Projects:**

George Bush International Airport - Houston, Texas - North concourse sculpture  
Dallas Convention Center - Dallas, Texas - Lobby light sculpture, 60' x 800' ( in progress)  
Federal Building - Oakland, California - Rotunda glazing  
Performing Arts Center - Eugene, Oregon - Bridge glazing  
Sterling Commerce Building - Dallas, Texas - Lobby windows  
Aberdeen Office Tower, Dallas, Texas - Skylight & mirrored sculptures  
First Community Church - Dallas, Texas - Twelve sanctuary windows

# **TEAGUE NALL AND PERKINS, INC.**

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**Gary L. Vickery, P.E.**

Project Engineer (Storm Drainage Design)

## **Education**

1978 - Olivet Nazarene College, Kankakee, IL, B.A. Religious Education

## **Registrations**

Professional Engineer - 72626, Texas

Professional Engineer - 17658, Oklahoma

## **Professional Experience**

Responsible for hydrology and hydraulics department, including drainage studies, FEMA map revisions, and flood control construction projects. Responsible for completion of a wide variety of projects, including contract negotiation, design, construction administration, and management of the project team. Projects have included private development and municipal projects including paving, drainage, detention, water and sewer improvements as well as floodplain reclamation and major channel improvements, obtaining both Letters of Map Revision (LOMR) and Conditional Letters of Map Revision (CLOMR) from FEMA.

### **Drainage Projects:**

DeSoto, Texas Storm Drainage Master Plan - Plan included study of all twelve (12) major watersheds in City (creeks and pipe systems); established proposed bond program for storm drainage improvements.

Creekside Plaza, Arlington, Texas - Commercial development including local storm drainage and gabion channel improvements to Fish Creek - \$ 850,000

PEC - 4 Channel Improvements, Denton, Texas - \$ 3,423,000

Pecan Creek, Denton, Texas - Master Drainage Plan that included two major channel sections and 27 bridges and culverts.

Walnut Creek, Mansfield, Texas - Storm Drainage Master Plan that included seven miles of major stream and eight bridges.

Park Forest, Forest Hill, Texas - Channel improvements and CLOMR for North Fork of South Creek.

South Lakes Park, Denton, Texas - Design of retention lake which is second of a proposed series of three.

### **Roadway Reconstruction Projects:**

Bennington Road, Houston, Texas - \$ 1,200,000

Beach Street, Fort Worth, Texas - \$ 185,000

# **TEAGUE NALL AND PERKINS, INC.**

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**C. Ty Hilton, P.E.**

Project Engineer (Water/Sewer Design & Utility Relocations)

## **Education**

1989 - B.S., Civil Engineering, Texas A&M University

1996 - M.E., Civil Engineering, University of Texas at Arlington

## **Professional Registrations/Associations**

Professional Engineer - 80209

Director-at-Large, Texas Section ASCE

## **Experience Summary**

Project Manager and Project Engineer responsible for management and design of projects in the areas of water and sanitary sewer design, major thoroughfare and street design, and storm drain design. Projects with which Mr. Hilton has been closely involved include:

## **Partial Listing of Recent Water/Sanitary Sewer Project Experience**

- Basin 183 & 333 Sewer Evaluation & Improvements (Part 2) - City of Ft. Worth - \$2,200,000
- Basin 183 & 333 Sewer Evaluation & Improvements (Part 1) - City of Ft. Worth - \$1,200,000
- Basin 204, 205 & 259 Sewer Improvements - City of Ft. Worth - \$3,700,000
- Basin 36S, 166 & 195 Sewer Improvements - City of Ft. Worth - \$2,150,000
- Glenview Drive Sewer Replacement - City of Haltom City - \$155,000
- Eden Drive Sewer Replacement - City of Haltom City - \$120,000
- Fossil Drive Sewer Replacement - City of Haltom City - \$235,000
- Layton Avenue Sewer Replacement - City of Haltom City - \$215,000
- Jones Street 20" Water Transmission Main and Mill Street 12" Water Line - City of Lewisville - \$1,125,000
- Cowan Avenue 12" Water and 8" Sanitary Sewer Replacement - City of Lewisville - \$960,000 (estimated)
- Glenview Drive 12" Water Line Replacement - City of Haltom City - \$180,000
- Fossil Drive 12" Water Line Replacement - City of Haltom City - \$281,000
- Layton Avenue 12" Water Line Replacement - City of Haltom City - \$184,000

# **TEAGUE NALL AND PERKINS, INC.**

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**Stephen H. Roberson, R.P.L.S.**  
Surveying Manager

## ***Education***

Tarrant County Junior College  
University of Texas at Arlington  
Texas A&M University, Advanced Surveying Technicians Short Course  
8 Hour CEU per annum required by Texas Board of Land Surveyors

## ***Registrations***

Registered Professional Land Surveyor - 4090

## ***Professional Experience***

Survey Department Manager - responsible for management of 6 field crews performing surveying for various municipal and private projects. Equipment utilized includes Trimble Real-Time Kinematic Global Positioning system, three (3) Geodimeter Robotic Total Stations and other electronic total stations. Mr. Roberson is responsible for the preparation of descriptions used for easements, right-of-way acquisitions, and boundary conveyances. He has been a Registered Professional Land Surveyor since 1982, involved in various boundary and engineering related projects.

### **Boundary Surveys:**

Mira Vista Golf Course and Subdivision - City of Fort Worth  
Diamond Oaks Country Club - City of Haltom City  
Hidden Lakes Development - City of Keller

### **Right-of-Way:**

Kelly-Elliott Road - City of Arlington  
Westpark Way - City of Euless  
TRA Sanitary Sewer - City of Roanoke  
Sanitary Sewer Rehab Projects - City of Fort Worth  
Bear Creek Parkway - City of Keller

### **Storm Drainage**

PEC 4 - City of Denton  
Precinct Line Road - City of Hurst  
Storm Drain Improvements at Eight (8) Locations - City of DeSoto

### **Special**

TxDOT Open-end Surveying Contract - District 2  
Open-end Survey Department Contract - City of Fort Worth

# PROJECT ORGANIZATION CHART

## *ARAPAHO ROAD BRIDGE AT MIDWAY ROAD*

**TOWN OF  
ADDISON**



PRINCIPAL-IN-CHARGE  
J. RICHARD PERKINS, P.E.  
Experience: 38 Years

PROJECT MANAGER  
DELVIN E. BLACK, P.E.  
Experience: 33 Years

PROJ. ENGR./STORM DRAINAGE DESIGN  
GARY L. VICKERY, P.E.  
Experience: 16 Years

ARCHITECTURAL ASSOCIATE  
ED CARPENTER  
Experience: 25 Years

PROJ. ENGR./UTIL. SYSTEMS DESIGN  
C. TY HILTON, P.E.  
Experience: 13 Years

FIELD SURVEYS/ROW & ESMT. PARCELS  
STEVE ROBERSON, R.P.L.S.  
Experience: 26 Years

CADD SUPPORT  
LARRY COLVIN, CHRIS EDWARDS  
& CAROL SHUGART  
Total Experience: Over 50 Years

STORM WATER POL. PREVENTION PLAN  
MARK HOLLIDAY  
Experience: 7 Years

GEOTECHNICAL INVESTIGATIONS  
CMJ ENGINEERING, INC.

LANDSCAPE ARCHITECTURE  
NEWMAN, JACKSON & BIEBERSTEIN

CLERICAL SUPPORT  
PAULA CREAR  
Experience: 12 Years



**TEAGUE NALL AND PERKINS**  
CONSULTING ENGINEERS

**SECTION D - MANAGEMENT APPROACH TO PROJECT  
(QA/QC, SCHEDULE AND BUDGET PROGRAMS)**

TNP has developed several methods/programs for assisting in the day-to-day management of its municipal projects.

**1. Project Manager System**

The size of our company dictates the need for a project management system of operation. The designated principal (usually the client contact) is assigned as the principal-in-charge (PIC) of a project, and the most qualified and available staff project manager for that project is then assigned and briefed on the project scope, contract limit, and scheduled project completion date. The PIC then works with the project manager to select one or more project engineers based on various factors relating to the project. Finally, the PIC selects the CADD technician(s) that are to be assigned to the project. In the case of the Arapaho Bridge at Midway Road project, it is such a specialized project, that the TNP team has already been selected. The team is noted in the Organizational Chart at the end of Section C of this SOQ.

During the course of the project, the PIC maintains contact with the client and provides overall project coordination efforts.

**2. Project Staffing Needs**

The project managers provide weekly personnel needs forms for their projects to Mike Jones and Mark Berry, and together they coordinate and schedule work assignments for the Irving, Denton, and Fort Worth offices for the next week, mediate work load conflicts, and evaluate the practicality and efficiency of CADD staff reassignments to meet contract completion requirements.



**3. Weekly Staff Meetings**

The project managers then hold weekly staff meetings, after input from Jones and Berry and line out the week's assignment for the project engineers, CADD technicians, and survey crews.

**4. Budget Control**

Currently monthly billing reports identify the budget status for each project as well as tracking project budgets in relation to the respective contract completion dates. Our current budgetary control computer program allows us to obtain a specific budget status at any time during the month, as time charges are directly input into computers by all employees at the end of each day's work. This program was developed by our in-house computer/software staff.

**5. Principal Meetings**

As a further means by which to maintain strict control over production, budgets, and workload changes, the four (4) TNP principals meet at least twice each month to discuss project progress, schedules, and personnel needs. This provides excellent coordination between the firm's three (3) offices.

**6. Work Load vs. Staff Projections**

In order to maintain accurate projections of workload in relation to staff capabilities, each principal maintains a 3-month workload vs. budget projection data base for each of his client's projects. This management tool is extremely useful in making early identification of employment needs so as to hire and train new personnel properly in advance of time/budget conflicts.

**7. Design Quality Control**

Part of any effective project management plan is the degree of quality control maintained during the course of the project. TNP's Design Quality Control Plan is implemented by the firm on all major projects. This plan has been a valuable tool in the firm's ability to provide quality professional engineering design and construction plans which are recognized by all of TNP's municipal clients as well as contractors for their clarity, accuracy, and completeness. Due to the limited space in this SOQ, the details of this plan are not included; however, the plan is available for review by the Town.

## SECTION E - TECHNICAL APPROACH TO PROJECT

TNP typically provides engineering services on its projects in four (4) major work phases which cover the basic "Scope of Work" for public works projects. The methodology to be used by TNP to properly study, design, and administer the Arapaho Road Bridge project for the Town of Addison will include five (5) work phases, and descriptions of each phase, which would be included in the engineering services contract, is shown in detail with the following outline:

### A. Conceptual Design (Phase 1)

1. Initiate a concept design conference for the purpose of introducing team members to the Town staff and establishing points of contact between the TNP principal-in-charge, project manager, and Town staff personnel responsible for the various aspects of the project design and review.

The meeting will also be held for the purpose of confirming design intent and scope, design parameters, special attributes of the Town that will be used in developing the **theme** for the bridge design, and to establish times during the design which would serve as interim review/check points. **In addition, franchised utility companies will be requested to mark all underground facilities in the field prior to commencing design surveys for the project.** TNP may also schedule additional meetings during the course of the design if it offers a means to resolve an issue or to keep the project on schedule.

2. Provide sufficient field surveys to locate all related property corners, and provide field design surveys to tie down all topographic features along the proposed project route for preparation of construction plans. **It is hoped that the TNP team could utilize part or all of any design surveys previously provided to the Town by HNTB in their alignment study for this portion of their project in order to reduce the surveying costs to the Town for the bridge project.** (Field surveys should be made beyond limits of normal surveys to account for possible route realignments due to possible difficulties in obtaining specific right-of-way calculated in preliminary design).
3. Confirm preliminary route alignment of bridge layout based upon available field data, known physical and political constraints, Town design criteria, and alignment plan previously prepared by HNTB for the Town.
4. Research property ownership and prepare a proposed right-of-way/easement map and superimpose same into digital files of topographic design and property surveys.
5. Provide re-evaluation of initial alignment layout including possible design/route alignment alternatives and related effect of proposed improvements on adjacent property owners. This effort would be done in conjunction and in coordination with the HNTB staff relative to their proposed alignment of Arapaho Road east and west of the bridge location.
6. Submit layout and bridge design concept(s) to Town staff for intermediate reviews and obtain concept approval of route alignment and bridge design. A partial listing of some (but not all) of the issues that will be carefully considered in the conceptual bridge design and alignment are as follows; (these are issues that were enumerated in the meeting held on November 13, 2001 regarding this project):

- a. The Town wants this facility to be a "signature" bridge; part of our job is to "create a vision to the Council".
  - b. The bridge needs to provide a solution to the visual and aesthetics problems encountered in this location.
  - c. The bridge will be in close proximity to the roofs of certain adjacent businesses, and the accompanying noise and the manner in which to handle pedestrian traffic are big issues.
  - d. Addison has a great sensitivity to each of its projects, and the value of adjacent land must be a key element in the project design.
  - e. The Town is concerned about pedestrians throwing objects from the bridge onto the adjacent buildings and people. This issue is very important in the design of the pedestrian walkway area along and/or on the bridge structure.
  - f. The transition from the at-grade (below bridge) sidewalk to the sidewalk area that parallels traffic across Midway Road.
  - g. Proper and frequent coordination with Addison Airport staff regarding effects of bridge facility on their operations and the security issues of survey personnel on airport property.
  - h. Replacement of open channel along project route with box culvert and replacement of lost parking spaces under new bridge structure within respective property owners' property.
  - i. Provision of geo-technical services for core borings for bridge and approach structure.
  - j. Collection of surface drainage on bridge structure rather than allowing it to run off (fall) on adjacent properties.
  - k. Provision of landscaping under bridge and lighting above and under bridge.
  - l. Bidding of all elements of project under one general contract if determined feasible and cost-effective.
  - m. Other design parameters: (1) our total scope is approx. 2,500 feet including bridge, retaining walls, and earthen fill areas; (2) bridge length (abutment to abutment) is approx. 1,600 feet; and (3) width of bridge section roadway is 44 feet excluding pedestrian walk.
7. Prepare color exhibit (1"=20' scale) of digital topographical data with proposed route alignment.
  8. Hold public meeting, if required, to obtain citizen/business owner input regarding proposed route alignment.
  9. Revise alignment if needed from public meeting input and obtain Town approval prior to commencing preliminary design.

**B. Preliminary Design (Phase 2)**

1. Initiate pre-design conference with Town staff and all potentially affected utility companies to facilitate the design and any corresponding utility adjustments for the project. (Same as A.1 above).

**It is strongly recommended that all affected utility companies be required to attend this meeting for the purpose of providing early notification of the Town's intent to construct the project. Each utility representative will be requested to furnish system maps at the meeting which depict the general location of their facilities within the project area.**

2. Gather all available information (including existing utilities/rights-of-way/easements/deeds and construction plans of existing facilities and preliminary plans of Arapaho Road from

HNTB) and assimilate the data and design criteria for the project.

3. Make evaluation, with assistance from Town staff, of existing water, sewer, and drainage master plans to ascertain any need for additional facilities (utilities) along the route of the project, and/or the need for utility relocations related to the project.
4. Prepare architect/engineering study to include preliminary layouts, cost estimates, design alternatives, and report with design recommendations. Meet with Town officials for review and authorization to commence final design.
5. After Town review, meet with citizen groups if necessary to present preliminary plans and seek their comments and input prior to commencing final design.

### C. Final Design (Phase 3)

1. Prepare final design and complete construction drawings (Scale: 1"=20'). We believe the client is best served on municipal construction projects with plans prepared at a scale of 1"=20'. Often plans for a project in a developed area can look cluttered and certain items overlooked by the Contractor during construction when plans are drawn at a smaller scale, (i.e. 1"=40' or smaller).

In addition to specific items addressed in the preliminary phase, the TNP team will prepare the final design, if needed, with particular attention being paid to providing for water, sewer, and/or drainage stubouts/extensions of adequate size to service areas of future development and/or reconstruction. The design activities will also include an erosion control plan.

Also design efforts will center around the need to minimize traffic interruption to businesses in the construction area, and a traffic control plan will be included in the construction plans for the project.

2. Prepare all right-of-way and drainage/utility/slope easement documents in accordance with Town format and design criteria.
3. Prepare complete construction specifications and contract documents in accordance with Town format and design criteria.
4. In-house review of plans and specifications and right-of-way/easement documents.
5. Prepare final quantity takeoffs and opinions of probable cost.
6. Submit construction plans to all franchised utility companies which have facilities within the project area to make final evaluation of any potential conflicts with their facilities and the proposed construction. **Initiate project schedule for coordination of all utility relocations required.**
7. Submit plans to Town for final review.
8. Meet again with Town staff for final input and obtain approval of construction plans, specifications, and contract documents.

### B. Bidding (Phase 4)

1. Prepare all necessary Town forms required for bid package including general conditions, supplementary conditions, bid invitation, instructions to bidders, and all other necessary

forms required for complete Town compliance.

2. Assist Town in the advertisement for bids—required newspaper advertising—and contact plan rooms for notification of bidding process.
3. Provide all necessary copies of plans and specifications for prospective bidders and provide opportunity for a pre-bid meeting if deemed necessary by the Town.
4. Assist the Town in opening, tabulating, and analyzing the bids, and make recommendation of contract award to Town after making check of equipment on hand, financial status, and previous work references of Contractor.
5. Review status of any proposed subcontractors to the general contractor with Town staff and come to agreement as to acceptable subcontractors.
6. After selection of Contractor and award of contract, assist in the preparation of contract documents, including contract, performance, payment, and maintenance bonds and all other related Town forms required to initiate construction on the project.
7. Prepare Notice of Intent (NOI) for submittal to EPA for the NPDES permit, if required.
8. Issue "Notice to Proceed" to the Contractor after execution of contract documents.

**E. Construction (Phase 5)**

1. Arrange pre-construction conference with Town staff, engineer, Contractor, and all affected franchised utility companies.
2. Review construction schedules prepared by the Contractor; review and prepare monthly estimates of cash requirements for work completed by the Contractor.
3. Provide all required construction control staking for project.
4. Provide periodic field representation and monitoring of construction progress.
5. Consult and advise the Town regarding the need for any contract change orders, and prepare change orders as required for Town approval.
6. Be available for interpretation of plans and specifications as may be required by Contractor in the field. This will be accomplished by either the Project Manager, Project Engineer, or Field Representative of the TNP office.
7. Prepare and process monthly and final pay requests from Contractor to the Town.
8. Provide, in conjunction with the Town, a final inspection of the project.
9. Revise construction drawings as necessary to adequately reflect any revisions in the construction from that which was represented on the plans and/or specifications.
10. Provide Town with one (1) set of mylar reproducible "Record Drawings", and also provide revised drawings on 3-1/2" floppy disks in AutoCAD 2000i format for Town records, within 30 days after completion of the project.

**SECTION F - LIST OF CLIENT REFERENCES**

We offer the following names and phone numbers of some of TNP's current active municipal/governmental clients. We would urge you to call any or all of these people regarding the level of quality and timely service we are providing.

<u>Name/Title</u>	<u>Client</u>	<u>Phone</u>
<b>Ron Sullivan</b> Asst. City Engineer	City of Bedford	(817) 952-2246
<b>David Gattis</b> Asst. City Manager	City of Benbrook	(817) 249-3000
<b>Frances Johnson</b> City Secretary	City of Blue Mound	(817) 232-0661
<b>Keith Fisher</b> Project Manager	City of Colleyville	(817) 577-7587
<b>Ken Griffin</b> Dir. of Engr. & Public Works	City of Coppell	(972) 304-3679
<b>Jim McDonald</b> Dir. of Public Works	City of Crowley	(817) 297-1851
<b>Greg Shugart</b> City Administrator	City of Dalworth- ington Gardens	(817) 274-7368
<b>Jerry Clark</b> Dir. Engr. & Trans. Dept.	City of Denton	(940) 566-8358
<b>Tom Johnson</b> City Engineer	City of DeSoto	(972) 230-9614
<b>Ron Young</b> Ass't. Dir. of Public Works	City of Euless	(817) 685-1646
<b>Randy Walhood</b> Project Manager	City of Farmers Branch	(972) 919-2588

<u>Name/Title</u>	<u>Client</u>	<u>Phone</u>
<b>Michael Duehring</b> Dir. of Public Works	City of Forest Hill	(817) 534-3591
<b>Rick Trice</b> Manager Consultant Services	City of Fort Worth	(817) 871-7959
<b>Robert Price</b> Admin. Engineer	City of Grapevine	(817) 481-0371
<b>Greg Van Nieuwenhuize</b> City Engineer	City of Haltom City	(817) 222-7750
<b>Ron Haynes</b> Dir. of Public Works	City of Hurst	(817) 788-7075
<b>Bob Chapman/Deputy</b> Dir. of Public Works	City of Irving	(972) 721-2611
<b>Ed Ilchner</b> Dir. of Public Works	City of Keller	(817) 431-1055
<b>Steve Freeman</b> Dir. of Public Works	City of Mansfield	(817) 473-9371 (Ext. 266)
<b>Larry Smith</b> City Manager	Town of Pantego	(817) 274-1381
<b>John Cherry</b> Dir. of Public Works	City of Richland Hills	(817) 299-1835
<b>Don Day</b> Program Coordinator	Tarrant County	(817) 338-9129
<b>Bill LeGrand</b> Public Works Director	Town of Trophy Club	(817) 430-1911 (Ext. 163)

The chart references and phone numbers for Ed Carpenter's bridge projects are found in his project descriptions which are in Section B of this SOQ.

**SECTION G - GENERAL QUALIFICATIONS RELATED TO THE DESIGN OF PUBLIC WORKS PROJECTS**

Teague Nall and Perkins, Inc. (TNP) has had the privilege of providing design and construction administration services for various types of public works projects for numerous municipal/governmental clients with varying levels of sophistication. We have provided a representative list and description of these projects at the end of Section B of this SOQ. We are confident that the TNP team can offer a thorough, comprehensive design of the Arapaho Road Bridge project for a fair and reasonable price.

We offer for your consideration a list of other general qualifications which we believe make the TNP team an excellent consultant to provide the services required for this project.

1. TNP always has a principal of the firm directly involved with, and in charge of each municipal project.
2. TNP has an excellent reputation in the provision of design services for public works projects. **We have chosen to make service to municipalities our market niche.** This results from a strong commitment to making thorough evaluations of all aspects of the problem areas detected during the preliminary design phase of each project as well as offering a "listening ear" to the municipality to be especially sensitive to the various aspects of the project with which they are already familiar.

In the case of this bridge project, City Manager Whitehead has indicated that the Town wants this bridge to be a "signature" facility. Therefore, TNP's goal throughout the design will be to listen very carefully to the desires of the Town Council and staff regarding their input relative to both the aesthetic and design aspects of this bridge.

Our team will then formulate those ideas into a bridge design concept and then obtain additional feedback from the Town Council and staff regarding the final design aspects of the project. You will find that our team will not try to cram our ideas down the throat of the Town of Addison, but we will rather let your desires and wishes be very instrumental in bringing about a "signature" bridge design that will encompass those same desires and wishes.



3. We are very aware of the fact that in the design and construction of any public works project, close coordination with the Town and affected utility companies is essential in order to meet deadlines and provide for minimal delays and conflicts during the construction process. TNP has built its reputation on a commitment to being **available** and **responsive** to its clients in order to insure such a level of coordination effort. **We believe these qualities truly set us apart from our competition.**
  
4. TNP has developed an in-house design quality control (DQC) plan which has proved to be very valuable in the production of readable, accurate, and consistent construction plans. A copy of this plan is found in Section D of this SOQ. We have been complimented by many contractors regarding the quality of our plans.

TOWN OF  
**ADDISON**

 **TEAGUE NALL AND PERKINS**  
CONSULTING ENGINEERS  
1100 Macon St. 2001 West Irving Blvd.  
Fort Worth, Texas 76102 Irving, Texas 75061  
(817) 386-5773 (972) 254-1765

*Creative Engineering Solutions for Our Communities*





Town of  
*Addison*

Arapaho Bridge  
at  
Midway Road

R-DELTA ENGINEERS, INC.

*In Association With*

RON HOBBS ARCHITECTS

# R-DELTA ENGINEERS, INC.

J. FRANK POLMA, P.E.  
PRESIDENT

December 3, 2001

Mr. Steven Z. Chutchian, PE  
Assistant City Engineer  
P.O. Box 9010  
Addison, Texas 75001-9010

Re: RFQ - Arapaho Road Bridge at Midway Road

Dear Steve:

Thank you for this opportunity to submit our qualifications to the City of Addison to design the architectural and structural components of your Arapaho Road Bridge at Midway Road project. We are extremely interested in working with you and the city on this project.

Over the past 23 years, our firms have established an outstanding reputation with local cities. We have worked together as team on many projects, including the "award winning" Grove Street Bridge in Richardson and are currently working together as a team on the Addison Athletic Club.

We sincerely appreciate your taking the time to review our qualifications. Thank you again for your consideration to be a part of this exciting project. Please call me if you have any questions or need additional information.

Sincerely,



J. Frank Polma, P.E.  
R-DELTA ENGINEERS, INC.

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*Cover Sheet*  
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- Similar Experience Last 5 Years
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# Project Understanding

*Scope of Work:* We propose to assist the City of Addison in the planning and design of a state-of-the-art bridge. We expect the completed bridge to be a source of pride to the staff and the citizens of Addison. We want this project to bring recognition to the city.

We believe that we can best serve the City during the early phases of the Project by working closely with the Staff, interested citizens, and business owners to identify needs and define expectations; by developing responsive designs; by preparing presentation materials (drawings, renderings, architectural, and other art work); by preparing costs estimates for the entire Project; and by making presentations to businesses, civic groups, and other organizations. Upon completion and approval of design work we will prepare thorough construction documents; represent the City during contractor bidding; and represent the City during the construction process.

*Project Approach:* We believe that good design and carefully site planning can make a difference in peoples lives. Our project are designed to respect their sites and are scaled to fit perfectly in their environments. We try to express the "spirit" of the community in our designs.

Our approach to each project is unique, with no set solutions, or single style. We do not attempt to design projects without our clients. We seek out our client's goals and the community goals. Our design strategy involves our clients. They participate, comment, critique, advise and direct every step of the way. Our methods include conducting a series of meetings with the client as well as citizen groups to solicit input and ideas. Together we will create an optimal design that will respond to the needs of the City.

*Work plan:* A detailed work-plan will be developed which identifies the steps we will follow for developing solutions for the new Addison Bridge. The work plan will include specific tasks, products, schedules, and reviews by task, discipline, and team member interaction. The major components of our work-plan will address the following:

- Project Schedule
- Architectural Programming
- Site Analysis
- Site Planning
- Design
- Project Cost Estimates
- Bidding and Negotiation
- Construction Administration

# Cost Control Methods

Cost control is an on-going process. It begins with the preparation of initial Project cost model and continues with the development of a series of cost statements for each phase of work. Cost statements are refined and updated as each phase of work progresses and more information is developed.

*Initial Cost Model:* A preliminary cost model for the entire project will be established at the beginning of the planning/design process. This initial cost model will be used to establish budget for various portions/pieces of the project.

*Design Phases:* As planning and the design phases proceed, more refined project cost statements will be developed. Cost statements will be updated to reflect actual design solutions. Furthermore, cost statements will be developed for each potential alternative design solution.

*Construction Documents:* Cost statements will be expanded and updated as construction documents are developed. Materials and construction systems are continually evaluated to determine their impact on the Project's budget. Cost statements during this phase of work will be based upon actual quantities of materials and unit prices for each material and building system. The unit prices we use in our cost statements come from the following sources:

- Recent R-Delta Projects
- Published historical cost data
- Cost information supplied by local contractors

*Value Engineering:* Throughout the project we will consist of review decisions from a view point of Value Engineering. Value Engineering (VE) is an organized and systematic method of comparing various alternative materials and construction systems. The purpose of VE is to identify and delete unnecessary costs. The VE process improves overall project value by identifying:

- The most suitable materials and construction systems.
- The most cost effective materials and construction systems.
- Alternative systems to perform same functions for lesser cost while maintaining quality.
- Maintenance issues

## Management & Technical Approach - QA/QC

*Management Approach:* R-Delta has developed a project management process to insure our projects focus on client satisfaction by providing high quality work on time and within budget. We begin by establishing clear communication with the client, sub-consultants and in-house personnel. This allows us to ascertain the scope of the project and understand client's expectations. Our emphasis is placed on the prevention of problems before they begin. Broad conceptual goals are divided into manageable tasks that can be understood by team members and accomplished in a relatively short period of time. Proper planning provides the Project Manager with an accurate means of measuring progress toward project goals, anticipating possible problems, and avoiding crises.

Once the project has been subdivided into assignable tasks, milestones have been identified, and a detailed schedule has been established, the design and production of drawings may begin. This project will include preliminary development and approval of aesthetic treatments via architectural sketches and renderings before detailed design may begin. Close coordination with the Town of Addison will be required to understand the aesthetic requirements, tastes, and the construction budget for the project.

The Project Manager will closely monitor the status of design, document production, the schedule, invoicing, and most importantly client satisfaction. Through our project management process we have proven success in providing complete, accurate, and quality contract documents in a timely manner with a high degree of client satisfaction.

The quality assurance and control program at R-Delta ensures high quality service from inception through construction. The steps we have taken to ensure quality in our work are as follows:

- Placement of emphasis on individual responsibility and authority
- Continuing staff education and in-house training
- Corporate standard processes and standards of care
- Internal Quality Control process including detailed checking of all work and peer review
- Construction administration services performed by project design engineers familiar with the detailed project design

*Scheduling:* Project scheduling will be developed using Microsoft "Project" software. The schedule will be continually monitored and updated as required.



## Management & Technical Approach - QA/QC

*Technical Approach:* The technical approach to this project is two-fold. The project basically divides into development of aesthetic bridge structure alternatives and the detailed structural engineering design of the bridge structure.

The technical approach for development of the aesthetic bridge structure alternatives includes the following:

- Preliminary conceptual design meetings between Architect and Engineer.
- Design charette meeting with Town of Addison Personnel, Architect, and Engineer to identify elements of key importance for the project, i.e. "gateway to Addison", construction budget, style of bridge, emphasis on roadway views and/or elevation view, landscaping, maintenance, roadway section, overall bridge widths, rail performance criteria, etc. Input from all departments as specified by the Addison project manager. Charettes with past clients have included input from Planning, Parks, Transportation, Traffic, and Engineering Department personnel. Preliminary architectural sketches are presented to establish a starting point for client input.
- Preparation of sketches and renderings of final aesthetic alternatives with opinions of probable construction cost for selection by the client. The final aesthetic alternatives are a combination of the Architect's aesthetic design elements, Client preferences, engineering analysis for constructability and serviceability, and budgetary analysis.
- Upon selection of the preferred aesthetic alternative, detailed bridge layout and structural design may begin.

The technical approach for detailed structural design includes the following:

- Geotechnical investigation for foundation design parameters
- Structural analysis of foundation, substructure and superstructure. The substructure and superstructure type will be driven by project aesthetics and budgetary considerations, i.e. the best looking elements that fit within the project budget. Structural analysis will be by standard techniques and the design loading is assumed to be AASHTO HS20-44.
- Structural detailing of bridge components will be in accordance with the TxDOT Bridge Detailing Manual. This manual is the most widely used guide for bridge detailing in the state and most bridge Contractors are familiar with the plan designations and nomenclature specified by this manual.

## Management & Technical Approach - QA/QC

- ❑ Architectural details for all non-structural bridge aesthetic treatments will be prepared. All elements will be checked by the bridge structural engineer to ensure long term performance and serviceability.
- ❑ Detailed plans will be submitted to Town of Addison personnel for review at 50% and 95% complete and as directed by the client. Close coordination with the client will be maintained throughout the project design and any unusual conditions or design requirements will be brought to the client's attention immediately.

## The R-Delta/RHA Project Team

R-DELTA and RON HOBBS ARCHITECTS (RHA) have assembled an outstanding design team for the Town of Addison Arapaho Bridge project. The firms and roles comprising the R-DELTA/RHA Team are:

*Civil Engineering:* **R-DELTA ENGINEERS, INC.**  
618 W. Main St  
Garland, Texas 75040  
972-494-5031 972-487-2270 Fax  
*Contact Person:* **Frank Polma, Jr., PE**  
fapolma@rdelta.com

*Architecture:* **RON HOBBS ARCHITECTS**  
614 West Main Street, Suite 200  
Garland, Texas 75040  
972-494-0174 972-494-0722 Fax  
*Contact Person:* **Ron Hobbs, AIA**  
rhobbs@ronhobbsarchitects.net

*Acoustics:* **ACOUSTIC DESIGN ASSOCIATES, INC.**  
2520 Electronic Lane, Suite 813  
Dallas, Texas 75220  
214-350-4546 214-350-4586 Fax  
*Contact Person:* **Bill Johnson, PE**  
acousdsn@flash.net

*Noise & Vibration Control:* **MIKE FANN & ASSOCIATES**  
1701 W. Northwest Highway  
Grapevine Texas 76051  
817-442-8485 817-488-7616 Fax  
*Contact Person:* **Mike Fann, PE**  
m.fann@verizon.net

*Landscape Architect:* **DAVID C. BALDWIN, INC.**  
5744 Richmond Ave  
Dallas, Texas 75206  
214-821-8100 214-824-5562 Fax  
*Contact Name:* **Dave Baldwin, ASLA**  
dave@davidcbaldwin.net

# R-Delta Engineers, Inc.

*Firm Background:* **R-DELTA ENGINEERING, INC.** is a privately held consulting firm offering services in four disciplines: Civil Engineering, Electrical Engineering, Structural Engineering, Electrical Engineering and Surveying. Founded in 1970, the firm's clients are from the public and private sectors, including: Town of Addison, City of Dallas, City of Garland, City of Richardson, City of Rowlett, City of Rockwall, City of Waxahachie, Rockwall and Collin Counties, Rockwell International U.S. Naval Facilities Engineering Command, Raytheon, General Motors, Ingersoll-Rand Corporation, U.S. Corps of Engineers and Texas Department of Transportation.

*Services:* R-DELTA provides a broad range of services, including:

**Civil Engineering:**

Bridge Design, Route Studies, Schematic Designs, Land Development, Roadway Design, Hydraulics and Hydrology, Storm Sewer Design, River and Flood Plain Hydraulics, Letters of Map Revision and Amendment, Utility Design, Pavement Analysis and Design, Environmental Assessments, Geotechnical Investigations.

**Structural Engineering:**

Bridge Design, Bridge Inspections and Load Rating, Foundation Design, Radio and Antenna Towers, Power Transmission Structures, Earth Retaining Structures, Levee Systems and various Concrete, Steel and Timber Structures.

**Electrical Engineering:**

High Voltage Transmission Lines, Aerial and Underground Electrical Distribution and Service Lines, Electrical Substations, Commercial Building Electrical Design.

**Surveying:**

Boundary, Topographic, GPS, Right-of-Way Surveys and Mapping, Property Abstracting, Legal Descriptions, Title Surveys, Platting

*Mission Statement:* To work together with our clients to produce the best possible designs for their needs.

## Frank Polma, P.E.

Principal-in-Charge



Mr. Polma obtained his bachelors degree with honors in Civil Engineering from Southern Methodist University. He won the Blum Award for design excellence at SMU and belongs to the Chi Epsilon and Tau Beta Pi engineering honorary fraternities. He is a Professional Engineer licensed in the State of Texas.

As Vice President of Operations for R-DELTA, he is responsible for management of all civil and structural engineering projects, including roadway, bridge, private development, public sector facility development as well as electrical transmission and substation facilities.

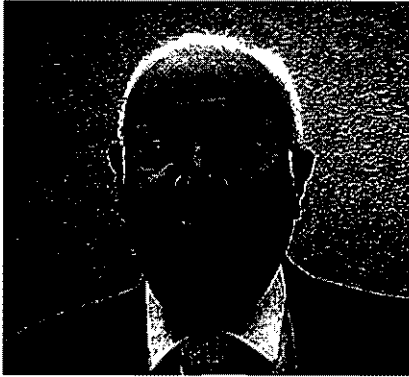
His project management responsibilities have included the Big Spring Road and Bridge over Spring Creek, State Highway 78 and Avenue F bridges over Duck Creek, South First Street and Kingsley Road and Bridge over Duck Creek, Shiloh Road Bridge over Spring Creek, Apollo Road Paving and Drainage Improvements, 6th Street water utilities, three Centerville Road Bridges (including levee design); the Wynn Joyce-La Prada Bridge over Duck Creek, Brand Road Bridge over Rowlett Creek, Renner Road Bridge over Prairie Creek, KCS Railway Bridge over Grove Road, Waxahachie Civic Center, Gale Fields Recreation Center, Rockwall City Hall, Hurst Civic Service Center, numerous flood plain studies and drainage facility improvements, approximately 35 miles of high voltage transmission lines, and miscellaneous forensic investigations, all for Dallas area municipalities.

He has managed several Texas Department of Transportation highway design projects, including design of six replacement bridges in Collin County, the Loop 348 bridge over Elm Fork of Trinity River and US80 bridge over Mountain Creek and Masch Branch, and Old Orchard Road Bridge project in Denton County.

He has participated in the TxDOT BRINSAP Bridge Inspection program, as inspector's helper in 1979, 1985, and 1987, and as a bridge inspector in 1989, 1992 and 1994. Mr. Polma holds the Basic and Advanced TxDOT Bridge Inspector Certificates, and TxDOT Certificate of Fracture and Critical Bridge Inspection, and has completed the Federal Highway Administration course in bridge scour and sediment transport.

## J. Frank Polma, P.E., R.P.L.S.

Project Manager



Mr. Polma is President of R-DELTA. He obtained his B.S., Civil Engineering, from Carnegie Institute of Technology, Carnegie Mellon University and attended the graduate School of Engineering at Southern Methodist University (SMU), Dallas, Texas, where he did work in the area of advanced structures, structural dynamics and non-linear and random dynamics. He is a Registered Professional Engineer (Texas) and Registered Professional Land Surveyor (Texas) and holds a National Council of Engineering Examiners certificate. Mr. Polma is a member of the American Society of Civil Engineers and the Texas Good Roads Association.

Mr. Polma has over forty years of varied structural and civil engineering experience. He is experienced in design of public works such as roads, bridges, and utilities. He also has experience in the design of various industrial and military buildings and facilities. A portion of his practice is devoted to forensic engineering and analysis structural failures.

As a principal with R-DELTA, Mr. Polma has performed many engineering tasks ranging from design of bridges, highways, buildings and utilities, to advanced stress and structural dynamics calculations in the aerospace industry, and analysis and investigation of structural failures.

Mr. Polma holds an advanced bridge inspector certificate and has been responsible for inspection of major U.S. Interstate Highway bridges in urban environments through TxDOT's selection of R-DELTA for participation in the BRINSAP (Bridge Inspection and Approval) program since its inception in 1979.

Mr. Polma has performed numerous bridge designs for the Texas Department of Transportation. Among these are the Masch Branch and Timber Creek bridges in Denton County, the East Relief Loop 348 bridge for Elm Fork of Trinity, the No.2 Relief for Mountain Creek bridge on U.S.80, the West Bound main span at Loop 348 Elm Fork of Trinity, six off-system and on-system bridges in Collin County.

## Andy Fredrick, P.E.

Project Engineer



Mr. Fredrick attended University of Texas at Arlington: where he received a B.S., Civil Engineering, 1994 and the University of New Mexico where he received a B.S., University Studies, 1977. He is a registered Professional Engineer State of Texas, 2001

His professional history includes: R-Delta Engineers, Inc. Consulting Engineers, 1994 to date, as well as, Merrill, Lynch, Pierce, Fenner & Smith, Financial Consultant. Prior to joining R-Delta Engineers, Mr. Fredrick played professional football with the following teams: Chicago Bears (1988-1990), Cleveland Browns (1982), Dallas Cowboys (1977-1981)

Mr. Fredrick has over seven years of experience in civil and structural engineering consulting practice. His responsibilities have included engineering design for bridge, highway, and utility projects.

Specific project experience includes:

- Design Engineer for the KCS Railway Bridge over Grove Road in Richardson, Texas which received the APWA Project of the Year award in 1999.
- Participated in the TxDOT BRINSAP Bridge Inspection program. Mr. Fredrick has inspected over 800 bridges and was certified for safety inspection for in-service bridges in 1996.
- Performed design tasks for several Texas Department of Transportation and municipal highway and bridge projects, including design of Duck Creek bridge channel improvements and Ben Davis bridge over Rowlett Creek for the City of Garland and the Grove Road railroad bridge for the City of Richardson, Texas.
- Design Engineer responsible for drainage study and storm sewer hydraulic calculations for the Chandler Heights residential development in Garland, Texas.

# Ron Hobbs Architects

*Firm Background:* RON HOBBS ARCHITECTS is a highly regarded, service oriented architectural firm that has been providing high quality and innovative design solutions to Texas communities for over 24 years. Winner of numerous Design Awards, the firm was founded by Ron Hobbs in 1977 on traditional values of honesty, loyalty, commitment, and hard work. An excellent word of mouth reputation has resulted in over 160 municipal projects for 39 cities and numerous private projects around the metroplex and Texas. Our experience is wide and varied.

The most important factor in the success of RHA has been our ability to develop long-term professional relationships with our clients. We believe in responsiveness. We Listen. We maintain a rigorous personal commitment to each of our clients and their interests. Our concern for our clients is illustrated with over eighty percent of our work for repeat clients. We realize the importance of exceeding expectations and delivering projects on time and budget!

*Organization:* RHA is a firm that is committed to a true team approach to project design and delivery. Each team of architects and technical support staff is led by Ron Hobbs who actively leads and manages each phase of work and reports directly to the client. This team approach ensures that each project is thoroughly developed and the critical architectural, interior, and special technical aspects are given rigorous attention and a total firm commitment.

The same team of individuals who are involved in programming studies also produce the design, and ultimately the actual construction drawings for the project. Ron and the rest of the team are also responsible for the construction administration of the project. This continuity ensures that all detailed program requirements are incorporated seamlessly into the finished project.

This close-knit team approach, is unique in our industry and is at the center of our enhanced client responsiveness and personal client service. It is also key to the outstanding quality of our work and the extremely low change order occurrence on our projects.

*CAD Capabilities:* Our office is fully automated and all drawings are produced on our complete AutoCAD operating system with full in-house computer capabilities. The drawings for our projects are produced in CAD from early schematic design through construction documents. In ad-



# Ron Hobbs Architects

dition, 3-D modeling can be generated, if required for review sessions. Our office is fully networked with Internet access for transfer of drawings to team members and e-mail.

*Services:* RHA provides a full range of professional services, including the following:

## **Architecture**

- Feasibility Studies
- Programming
- Site Analysis
- Architectural Design
- CAD Design and Documentation
- Contractor Qualification
- Bidding and Negotiation
- Construction Administration
- Post Construction Services
- Building Evaluation Surveys
- ADA Accessibility Services

## **Planning**

- Strategic Planning
- Master Planning
- Land Use Planning

## **Interior Design**

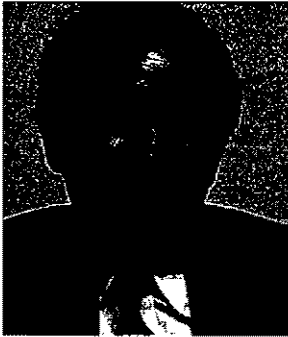
- Programming
- CAD Design and Documentation
- Furniture Specification, Bidding, and Installation
- Space Planning

*Philosophy:* The core belief of integrating design excellence with client needs is based on a philosophy to create environments that go beyond pure function, to enhance the quality of life for those who live and work in them. Each RHA project is approached individually, without preconceptions and designed to serve the needs of the particular client, always with the goal of achieving design excellence.

*Mission Statement:* To consistently provide innovative solutions that best accommodate both the current and future needs and desires of our clients, at a level of quality and service that exceeds expectations.

# Ronald H. Hobbs, AIA

Project Architect



Ron Hobbs Architects  
President

#### Education:

University of Texas at Austin,  
Bachelor of Architecture, 1970

Hobbs/Wiginton/Fawcett Architects, Inc.  
1980-90

Ron Hobbs-Architect, 1977-1980

#### Registrations

Texas, #5159

Oklahoma, #1861

NCARB, #25340

#### Awards and Honors:

1999 Citation of Honor, Dallas AIA

*Bethany Lakes Pavilion*

1996 Craftsman Award, Dallas CSI

*Joe Farmer Recreation Center*

1985 Design Award, Dallas AIA

*Fair Park Entry Competition*

1986 Award of Merit, Park Maintenance &  
Grounds Awards,

*One Eleven Ranch Picnic Shelter*

1987 Citation of Honor, Dallas AIA

*One Eleven Ranch Picnic Shelter*

1989 Park Design Award, TRAPS

*Carter Softball Facility*

*Tournament Facility*

1990 Design Award, Metal Architecture, *Carver*

*Multi-Purpose Ctr. III*

1990 National Grand Prize

*Silhouette Optical Design*

*Competition*

Ron is an award-winning architect with over 30 years experience in the planning and design of municipal projects throughout Texas. He will serve as the Project Architect for the Town of Addison on the Arapaho Bridge Project. Ron's projects are renowned for innovative solutions that strictly adhere to the budget while meeting, and frequently exceeding, programmatic requirements.

Ron worked with R-Delta Engineers, Inc. on the design of the Grove Street Bridge project in which the City of Richardson received the "American Public Works Association 1999 Project of the Year for Structures Less than \$2 million" award. Other RHA projects that Ron has served as the Principal-in-Charge and Project Designer for projects include:

- Addison Athletic Club  
Addison, Texas
- Grove Road Bridge  
Richardson, Texas
- Allen City Hall  
Allen, Texas
- Waxahachie City Hall  
Waxahachie, Texas
- Hurst City Hall  
Hurst, Texas
- Rockwall City Hall  
Rockwall, Texas
- North Irving Police Substation  
Irving, Texas
- Rockwall Police and Courts  
Rockwall, Texas
- Rowlett Police and Courts  
Rowlett, Texas
- Waxahachie Civic Center  
Waxahachie, Texas
- Plaza Theater Renovation  
Garland, Texas
- Performing Arts Center  
Garland, Texas
- Hurst Service Center  
Hurst, Texas

## Client References

### R-DELTA ENGINEERS, INC.

**John E. Baker, P.E.**  
City of Garland Bridges  
Director of Engineering  
Garland, Texas  
972-205-2179

**Steve Spanos, P.E.**  
City of Richardson Bridges  
City Engineer  
Richardson, Texas  
972-744-4100

**Michael Massey**  
Assistant Director - Parks  
City of Richardson Parks-Bridges  
Richardson, Texas  
972-744-4100

**Charles Tucker, P.E.**  
Texas Department of Transportation  
District 18  
Dallas, Texas  
214-320-6100

**John Yank, P.E.**  
Texas Department of Transportation  
Paris, Texas  
903-784-4311

**Richard Kaiser**  
Rockwell International  
Richardson, Texas  
972-705-3988

### RON HOBBS ARCHITECTS

**Slade Strickland**  
Parks Director  
Town of Addison  
Addison, Texas  
972-450-2851

**John Godwin**  
Acting City Manager  
City of Rowlett  
Rowlett, Texas  
972-412-6148

**Mark Guy**  
Assistant City Manager  
City of Carrollton  
Carrollton, Texas  
972-466-3000

**Bob Sokoll**  
City Manager  
City of Waxahachie  
Waxahachie, Texas  
972-937-7330

**Allan Weegar**  
City Manager  
Hurst, Texas  
817-788-7028

**Bob Hall**  
Parks Director  
Garland, Texas  
972-205-2000

## Consultants Qualifications

ACOUSTIC DESIGN ASSOCIATES, INC.

*Firm Background:*

ACOUSTIC DESIGN ASSOCIATES, INC. (ADAI) was founded in Dallas, Texas in 1975 and to date has consulted on over 1450 projects. The se range from the very small, such as narration recording booths, to the very large, including a 1.5 million square foot corporate headquarters facility and multi-building school campuses. In addition to giving design guidance, we have conducted field investigation and measurements, including measuring noise and vibration levels, mechanical systems noise levels, reverberation times or sound transmission between spaces.

*Services:*

ADAI's philosophy is to provide professional consulting services which are grounded in education and based on solid experience as well as on knowledge of state-of-the-art thinking and developments in the field of acoustics. Our focus is in the areas of acoustics and noise and vibration control as they affect buildings and the environment. The instrumentation we own is field portable and gives us the capability of quickly identifying specific noise or vibration sources.

*Key Personnel:*

William R. Johnson  
President

Bill received his Bachelor of Architectural Engineering from OSU, and a Masters of Science Degree in Architectural Engineering from the University of Texas at Austin. He served with the U.S. Army Corps of Engineers and the U.S. Army as a Captain in Viet Nam. He has consulted on a wide variety of buildings, both in the design phase and in solving problems in existing facilities. As Principal Consultant, Bill has total responsibility for projects, from programming and early design, to completion and final testing.

*Relevant Project Experience:*

***Vehicle Noise***

- Freeway Traffic Noise Studies  
Galleria Hotel - Dallas, Texas
- Freeway Traffic Noise Impact Studies  
Land Parcel - Grand Prairie, Texas
- Traffic and Aircraft Overflight Noise  
The Claridge Condominiums - Dallas, Texas
- Traffic Noise Study  
RHD Memorial Hospital - Farmers Branch, Texas

# Consultants Qualifications

ACOUSTIC DESIGN ASSOCIATES, INC.

## *Aircraft Noise*

- Aircraft Overflight Noise Impact Studies  
Oakwell Farms Development - San Antonio, Texas
- Aircraft Overflight Noise Impact Studies  
Sandstone at Bear Creek Condominiums - Euless, Texas
- Aircraft Overflight Noise Studies  
American Airlines Southern Reservations Center - Hurst, Texas
- Helicopter Overflight Noise Studies  
Aspen Square Apartments - Euless, Texas
- Helicopter Noise Studies  
Aerospatiale Helicopter Corporation - Grand Prairie, Texas
- Helicopter Noise Studies  
VIA Airways - St. Thomas, Vir. Is.

## *Train Noise*

- Train Noise and Vibration  
Multifamily Housing Project - Ft. Worth, Texas

## *Other*

- Construction Site noise monitoring  
USAA Towers - San Antonio, Texas
- Mechanical Equipment Impact on Neighbors  
Preston Hollow Presbyterian Church - Dallas, Texas
- Music Impact on Neighbors  
Disco Club - Dallas, Texas

## **ENVIRONMENTAL PROJECTS**

- Noise Impact on Sleeping Quarters  
Sebring Grand Prix Race Track - Tulsa, Oklahoma
- Recreational Boat Noise Studies  
Lake Sam Rayburn, Texas

# Consultants Qualifications

MIKE FANN & ASSOCIATES

*Firm Background:* Mike Fann & Associates was founded in 1995. Environmental Acoustics and Micro Vibration facility design are two specialty areas of service. Projects for Texas Instruments, Motorola, National Semiconductor, ST Microelectronics and Dallas Semiconductor include sizing new construction structure for billion dollar projects. Micro vibration stability and room noise objectives ensure trouble free high tech production. Environmental Acoustics activities vary from participation in zoning activities to Federal Improvement Program projects around airports. State of the art sound reconstruction and demonstration has become a trade mark of project communication. Thorough analysis using project specific techniques is often lacking in communication. Audio demonstrations allow unique opportunity to share the same experience for discussion. Another area of specialty is locomotive horn noise issues. Current work includes expert testimony for all major railroads at grade crossing accident litigation. Presently, Mr. Fann is working with the American Association of Railroads to ensure reasonable Federal Railroad Administration promulgation of horn rules and regulations.

- Services:* **Environmental Noise & Vibration Consulting Services include:**
- Baseline noise and vibration monitoring surveys that determine existing background levels.
  - Identification of noise and vibration source (e.g. aircraft, construction, railroad and automobile traffic) contribution to measured exposure levels (Leq).
  - Creation of noise exposure contours and vibration levels which are used as overlay districts to establish land use compatibility and sensitive land uses.
  - Determination of appropriate criterion and/or standards for land use compatibility with various noise and vibration sources.
  - Investigation of measures to reduce undesirable impacts. Alternative noise reduction measures include barriers, buffer zones, construction soundproofing, and zoning recommendations.
  - Identify local noise and vibration ordinances which may address allowable noise or vibration emanations.
  - Noise and vibration level forecasts to predict future levels. This often includes historical operational activity documentation, interviews with appropriate personnel, and analytical calculations to first predict operational activity levels of the subject noise sources.
  - Calculation schemes are developed to predict the corresponding

# Consultants Qualifications

MIKE FANN & ASSOCIATES

- increase in noise with increase in activity.
- Creation of community response questionnaires to poll public opinion of past familiarity with the noise source and the extent of perceived intrusion into community activity.
- Development of public relation efforts to introduce new noise sources into the community and to communicate efforts to reduce unwanted existing impacts.
- Expert witness testimony before public forums, governmental agencies and courts of law.

*Key Personnel:*

**MIKE FANN**  
Principal

Mike received his Master of Science in Mechanical Engineering, (Center of Acoustical Studies) at North Carolina State University, Raleigh, North Carolina (1977) and his Bachelor of Science in Engineering, University of Tennessee, Knoxville, Tennessee (1974). He is a registered Professional Engineer in Texas and Hawaii.

*Relevant Project Experience:*

- Irving Residents Class Action Suit Concerning DFW International Airport East Side Runway, Irving TX, 1998**  
Opening of East Side runway in October 1996 created widespread complaints in Coppell and Irving. Irving residents sought legal action for current and future impact of aircraft activity on this runway. Expert services focus on aircraft operational parameters and noise levels sufficient to cause sleep awakening and speech interference.
- Texas Motorplex Dragstrip Relocation, Grand Prairie TX, 1999***  
Evaluation of proposed site showed that dragstrip was consistent with the noise environment which included DFW aircraft overflight, Union Pacific railroad local operations, IH20 and Dallas Naval Air Station. Client: City of Grand Prairie TX
- Project: *Response to Dallas Citizens Complaints of Noise & Vibration for DART North Corridor Construction, 1999***  
Description: DART management sought to verify and understand increasing complaints of construction noise and house vibration during build out of north corridor light rail. Periodic measurements of equipment during construction activity documented noise and vibration levels and made recommendations for mitigation.  
Client: DART, Dallas TX

# Consultants Qualifications

DAVID C. BALDWIN, INC.

*Firm Background:* DAVID C. BALDWIN, INC., emphasizes consultations with other design disciplines in a team approach to achieve innovative site-development. At the same time, our firm encourages owner involvement in all aspects of design and development. Through this synergy our design team attains the three major goals of any project:

- Developing a site development plan that is compatible with the goals and needs of the client;
- Designing a plan that is adapted and complementary to its surroundings;
- Implementing a design that is within budget, on time and realistic in addressing the needs of the client.

*Organization:* Clients who select David C. Baldwin, Inc., know that they will always be welcomed in the design process. They also have the confidence in knowing that the company's principal will know the day-to-day status of their project. Clients can expect creative, innovative solutions-ideas that will set their project apart from others. And our staff takes pride in meeting these expectations.

*Services:* David C. Baldwin, Inc. strength comes through flexibility. Because of this, the firm is able to address an array of needs and has special design expertise in the following areas:

- Municipal, Institutional and Hospital Sites
- Church Projects
- Corporate Parks and Offices
- Parks and Recreational Spaces
- Hotels
- Retail and Public Places
- Streets and Roadways
- Residential Developments

To facilitate its clients' goals, David C. Baldwin, Inc., can address the following needs:

- Site Planning & Design Development Programs
- Master Site Development Plans
- Landscape and Underground Irrigation Design
- Park and Recreation Planning
- Site and construction Services
  - Layout Plans
  - Grading & Drainage



# Consultants Qualifications

DAVID C. BALDWIN, INC.

- Landscape Lighting Plans
- Water Feature Design
- Quantity and Cost Estimates
- Construction Details & Specifications
- Receiving Bids
- Contract Administration
- Computer generated perspectives and renderings

## *Key Personnel:*

**David C. Baldwin**  
President  
Principal-in-Charge/Designer

Mr. Baldwin is a registered landscape architect (Texas, Louisiana, Minnesota North Carolina) and member of the American society of Landscape Architects, and has worked for more than 23 years helping clients achieve their design goals. With his thorough academic grounding in ornamental horticulture, his continuing interest in visual art and design and his training in landscaping planning, Mr. Baldwin has been relied upon again and again by clients to address their outdoor space needs.

## *Project Experience:*

- Addison Athletic Center - Addison, Texas
- City of Irving Erosion Control Master Plan - Irving, Texas
- TBN International Production Center - Irving, Texas
- L & N Service Center School Expansion - Dallas, Texas
- Children's Medical Center Master Plan & Design - Dallas, Texas
- Greenville Ave. Design District Master Plan - Dallas, Texas
- Skyline Recycling & Disposal Facility End Use Plan - Ferris, Texas
- Millennium Business Park - Allen, Texas
- Allen City Hall - Allen, Texas
- Waterview Recreation Center - Rowlett, Texas
- Bent Tree West Swim & Tennis Club - Dallas, Texas
- Stonecreek Recreational Center - Flower Mound, Texas
- Bedford Plaza - Bedford, Texas
- Highland Village Municipal Complex - Highland Village, Texas
- Carrollton City Hall - Carrollton, Texas
- Denton County Courthouse - Denton, Texas
- Plano Joint Use Facility - Plano, Texas
- Mesquite Arts Center - Mesquite, Texas

## Similar Project Experience

Grove Road Underpass at KCS Railway



This R-Delta project is a 120 foot long 2-span bridge carrying a single KCS Railway track over the Grove Road extension in Richardson, Texas. The project was designed for the City of Richardson and involved extensive coordination with the KCS Railway Co. The project provides a gateway to the MCI/Alcatel Office Park in the Richardson Telecom Corridor from the DART park and ride facility, near the future DART light rail terminal. Close coordination by R-DELTA with the City of Richardson and KCS Railway ensured a blend of functionality and project aesthetics in the project design and landscape architecture for the roadway corridor.

Items of aesthetic significance for this bridge are as follows:

- Use of Reynobond aluminum composite panels to clad the bridge superstructure & substructure. Access hatches were included in the cladding to allow inspection of all bridge structural components
- Use of Cultured Stone veneers on retaining walls throughout the project
- Extensive landscaping improvements with xeriscape plant materials and an irrigation system controlled from offsite.
- Enhanced lighting package for roadway and pedestrian areas as well as spot lighting for the bridge structure itself
- Pedestrian seating area

Other items of significance in the project design include:

- Bridge substructure was precast by Contractor on site and installed over drilled shafts with heavy steel weldments
- Bridge superstructure was preassembled on site and placed on substructure during one 12-hour rail service interruption
- All bridge construction was accomplished with only two 12-hour interruptions to rail service
- Multi-modal trail construction was incorporated into the bridge project

*Construction Cost & Completion Date:*

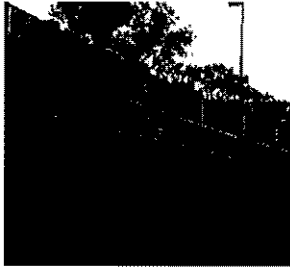
The project construction cost was \$1.9 million and was completed in summer, 1998. This project was chosen as the American Public Works Association's 1999 "project of the year" for structures under \$2 million.

*Contact Name and Number:*

City of Richardson Bridges - Mr. Steve Spanos, P.E.  
City Engineer (972) 744-4100

## Similar Project Experience

### Brand Road Bridge over Rowlett Creek



This project is a 900 foot long 9-span bridge carrying Brand Road over Rowlett Creek in Garland, Texas. The R-Delta project, designed for the City of Garland, required extensive coordination with the U. S. Army Corps of Engineers for both floodplain encroachment and 404 permitting issues.

Project aesthetics played a vital role in the success of this project. The realignment of Brand Road along the border of the existing Firewheel Lakes Golf Course and the proposed Bridges of Firewheel Golf Course provided an opportunity for many people to view the bridge structure from both a roadway and ground level vantage point. The scale of the project as well as the parklike setting of the adjacent golf courses dictated clean, simple lines that pull the viewers eye through the project.

Items of aesthetic significance for this bridge project include:

- Bridge substructure with aesthetic treatment of the intermediate supports
- Prestressed concrete box beam superstructure
- Architectural concrete stain
- Custom traffic and pedestrian bridge railing
- Enhanced bridge illumination package

Other items of significance in the project design include:

- Realignment of approximately 1100 linear feet of Rowlett Creek main channel
- Tied back gabion channel bank retaining walls and gabion matting channel armoring
- Corps of Engineers Individual Project 404 Permit
- Coordination with golf course Architect to incorporate bridge aesthetics into overall concept of Bridges of Firewheel Golf Course expansion

*Construction Cost & Completion Date:*

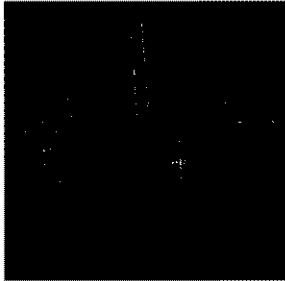
The project construction was completed in October 2001 with a total project cost of \$4,900,000.

*Contact Name and Number:*

City of Garland Bridges - Mr. John E. Baker, P.E.  
Director of Engineering (972) 205-2179

## Similar Project Experience

### Renner Road Bridge over Prairie Creek



This R-Delta project is a 300 foot long 3-span bridge carrying Renner Road over Prairie Creek in Richardson, Texas. The first phase of the project was designed by others and consisted of a two lane bridge. Our design effort involved widening the bridge and approximately 1.0 miles of roadway to six lanes.

Items of aesthetic significance for this bridge project include:

- Exposed aggregate finish on exposed substructure elements and riprap
- Architectural stain on bridge superstructure and rail elements
- Enhanced railing system with extensive stonework
- Enhanced bridge illumination package

*Construction Cost & Completion Date:*

The project construction was completed in October 2000 with a total project cost of \$2,300,000.

*Contact Name and Number:*

City of Richardson Bridges - Mr. Steve Spanos, P.E.  
City Engineer (972) 744-4100

# Similar Project Experience

## SH78 & Avenue F Bridges over Duck Creek



150 foot long 3-span bridge carrying State Highway 78 over Duck Creek and 140 foot long 2-span bridge carrying Avenue F over Duck Creek in Garland, Texas. The R-Delta project was designed jointly for the Texas Department of Transportation and the City of Garland under a shared funding program. Coordination with the U.S. Army Corps of Engineers was required to assimilate the project into their overall Duck Creek flood rehabilitation project.

Items of aesthetic significance for this bridge project include:

- Ashlar pattern finish for all retaining wall panels
- TxDot Type C411 Classic Combination Bridge Railing
- Prestressed concrete box beam superstructure

Other items of significance in the project design include:

- Extensive use of precast retaining wall panels and drilled shaft soldier piles for channelization of approximately 1,000 linear feet of Duck Creek main channel

*Construction Cost & Completion Date:*

The project construction was completed in November 1998 with a total project cost of \$4,200,000.

*Contact Name and Number:*

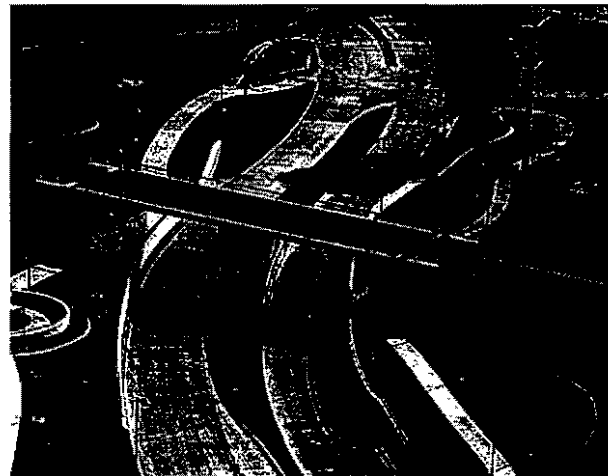
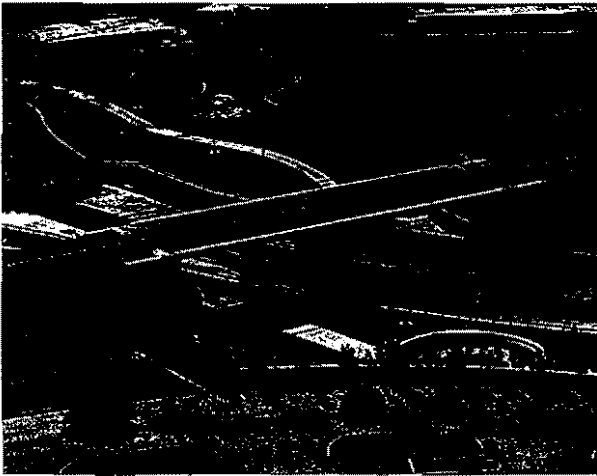
City of Garland Bridges - Mr. John E. Baker, P.E.  
Director of Engineering (972) 205-2179

City of Garland Bridges - Mr. John E. Baker, P.E.  
Director of Engineering (972) 205-2179

# Grove Street Railroad Bridge

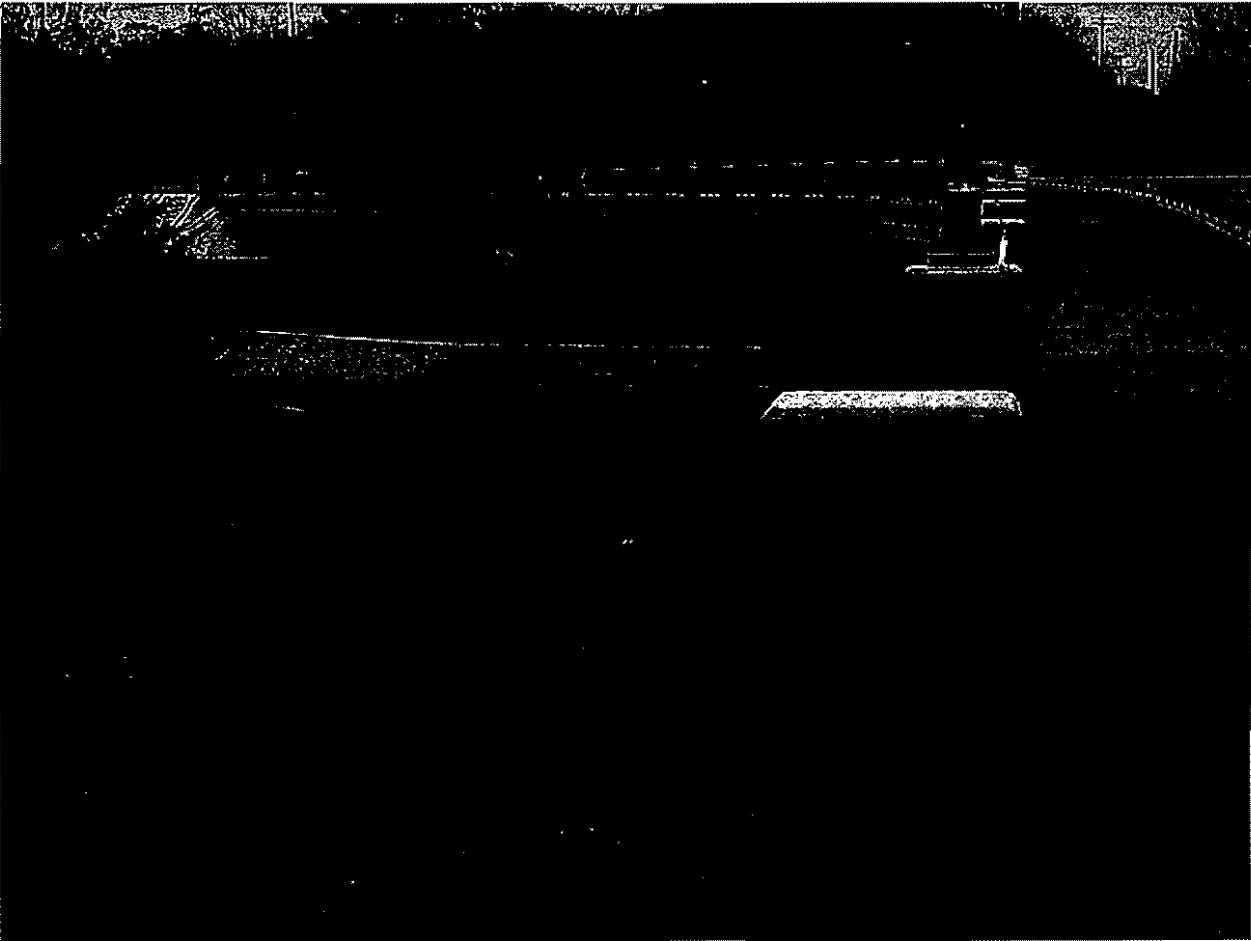
Richardson, Texas

This R-Delta Engineers/Ron Hobbs Architects project received the "APWA Project of the Year" Award in 1999.



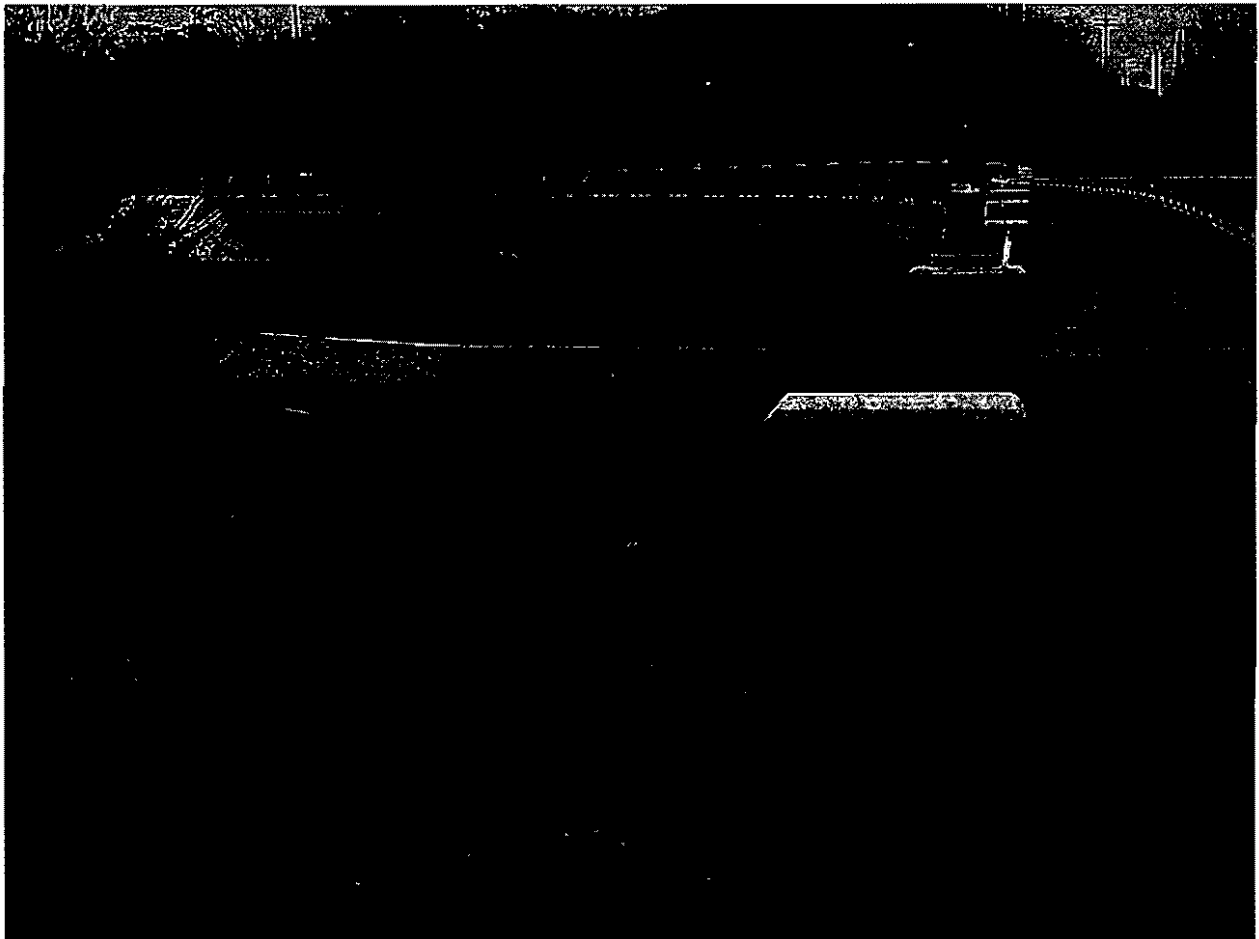
# Renner Road Bridge Over Prairie Creek

Richardson, Texas



# Brand Road Bridge

Garland, Texas





# Brand Road Over Rowlett Creek

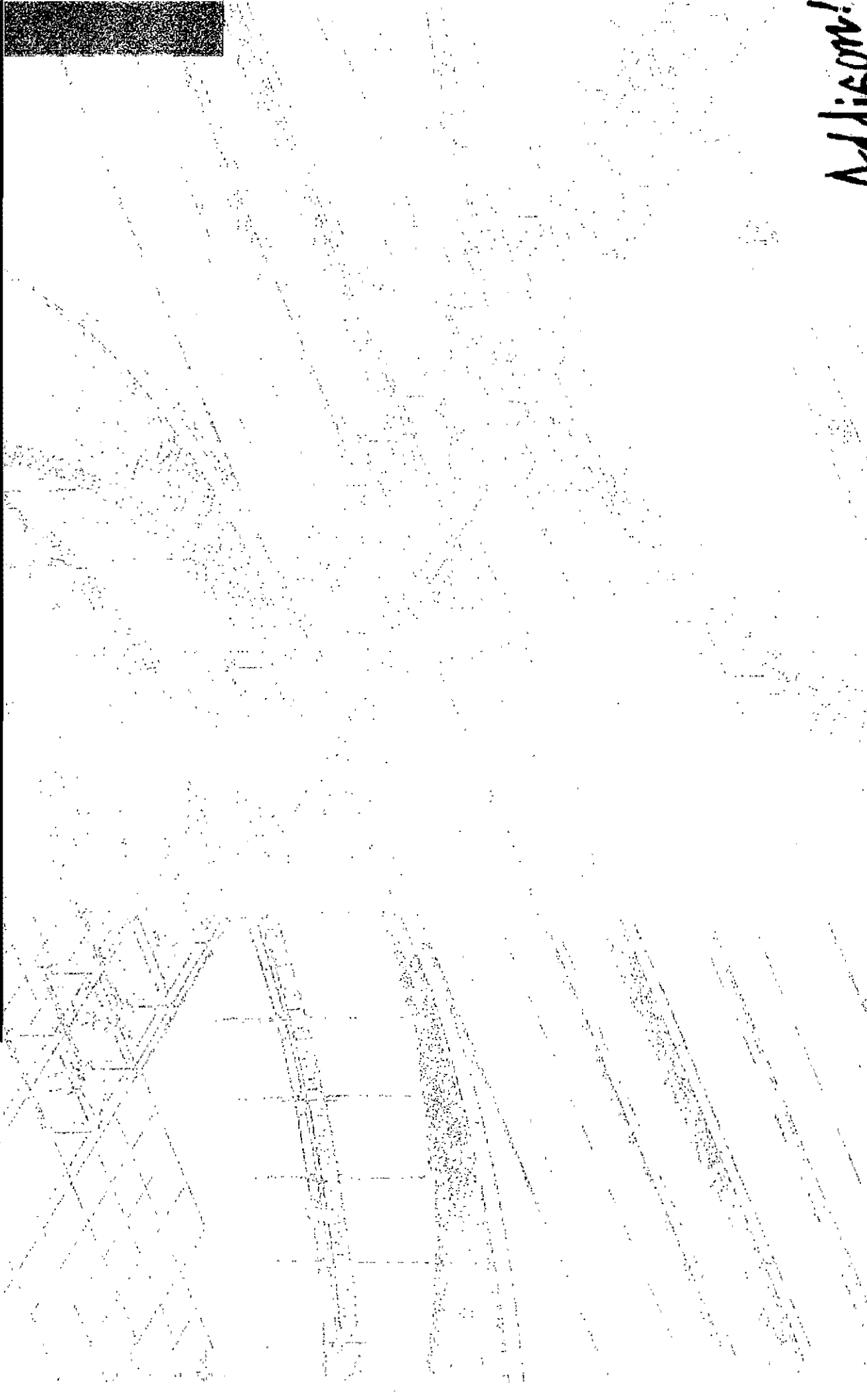
Garland, Texas



## Additional R-Delta Bridge Projects

- TxDot Bridges:* Loop 348 Bridge over Elm Fork of Trinity & East Relief - Dallas, Texas  
 US80 Bridge over Mountain Creek - Dallas, Texas  
 SH78 Bridge over Duck Creek - Garland, Texas  
 County Road over Celina Creek - Collin County, Texas  
 County Road over Jones Branch - Collin County, Texas  
 County Road over Sister Grove Creek - Collin County, Texas  
 County Road over Indian Creek - Collin County, Texas  
 County Road over Whites Creek - Collin County, Texas  
 County Road over Maxwell Creek - Collin County, Texas  
 12 Bridges IH35E Ellis County (in contract negotiations with TxDot)
- Dallas County Public Works Department Bridges :* Denton Tap Bridge over Grapevine Creek  
 Malloy Road Bridge over Cottonwood Creek
- City of Richardson Bridges:* KCS Railway over Grove Road  
 West Renner Road over Prairie Creek  
 Arapaho Road Bridge over Cottonwood Creek (under design)  
 Arapaho Road Bridge over West Fork (under design)
- City of Garland Bridges:* Brand Road Bridge over Rowlett Creek  
 Avenue F Bridge over Duck Creek  
 Big Spring (Campbell) Road Bridge over Spring Creek  
 Kingsley Road Bridge over Duck Creek  
 Shiloh Road Bridge over Duck Creek  
 Centerville Road Bridge over Toyah Creek  
 Centerville Road Bridge over Bradfield Branch  
 Centerville Road Bridge over Mills Branch  
 North Garland Avenue Bridge over Spring Creek  
 Ben Davis Road Bridge over Rowlett Creek (Rehab)  
 Wynn Joyce/LaPrada Bridge over Duck Creek  
 Oates Road Bridge over Duck Creek
- TxDot Bridge Inspection:* Over 9,000 bridges inspected since 1979 for TxDot BRINSAP program - Districts 1,8,12,15, and 18.

# transportation enhancement



Addison!

**HINT B**

# IMAGES

Project Experience

I-10 Deck Park  
Phoenix, Arizona



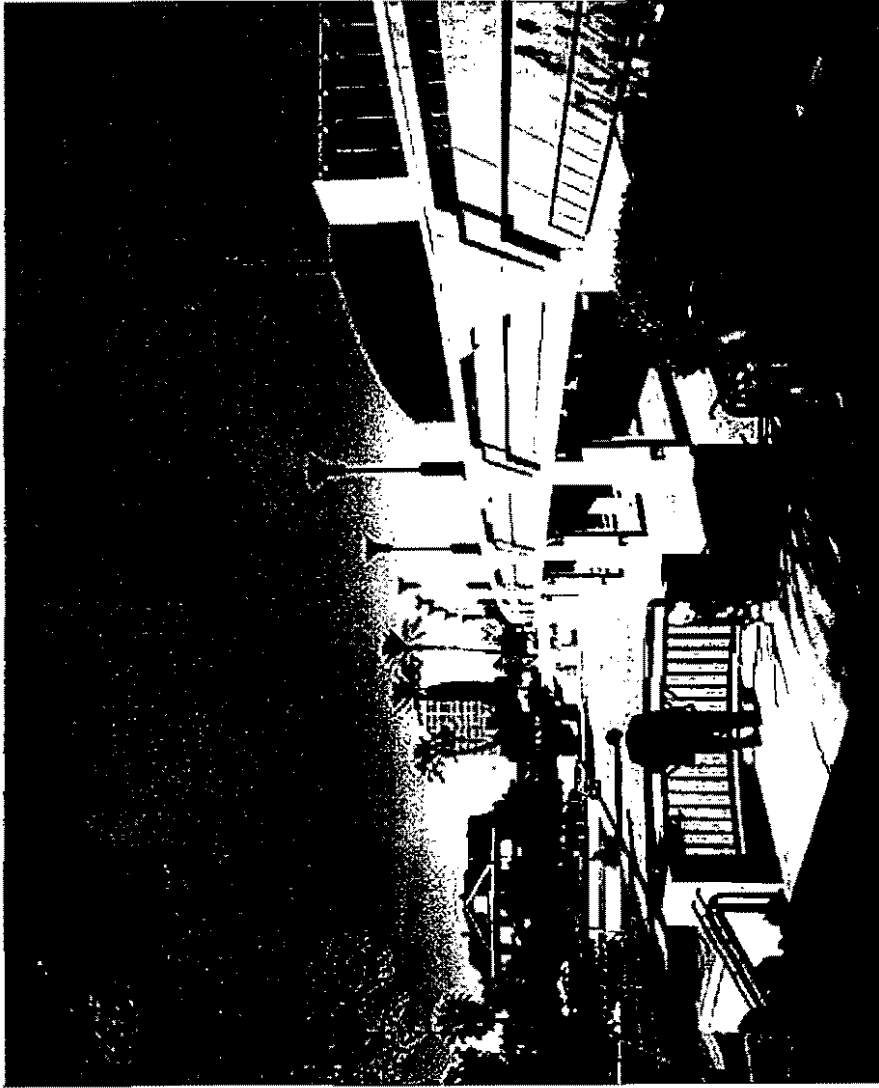
**HNTB**

*Allyson!*

# IMAGES

## Project Experience

I-10 Deck Park  
Phoenix, Arizona



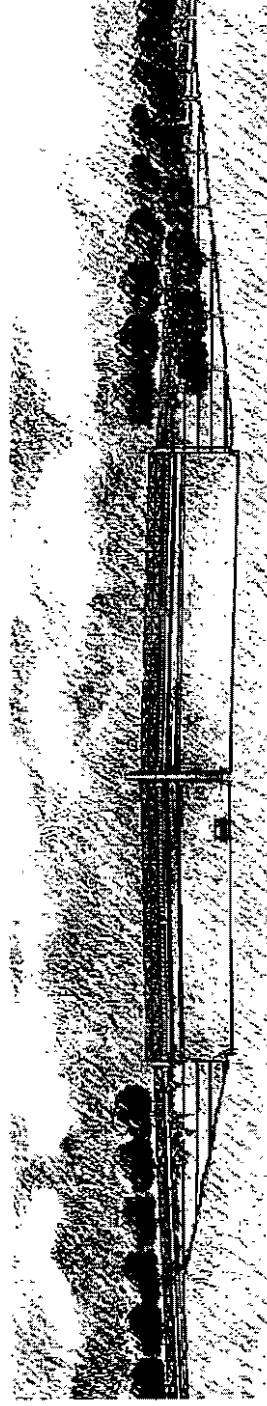
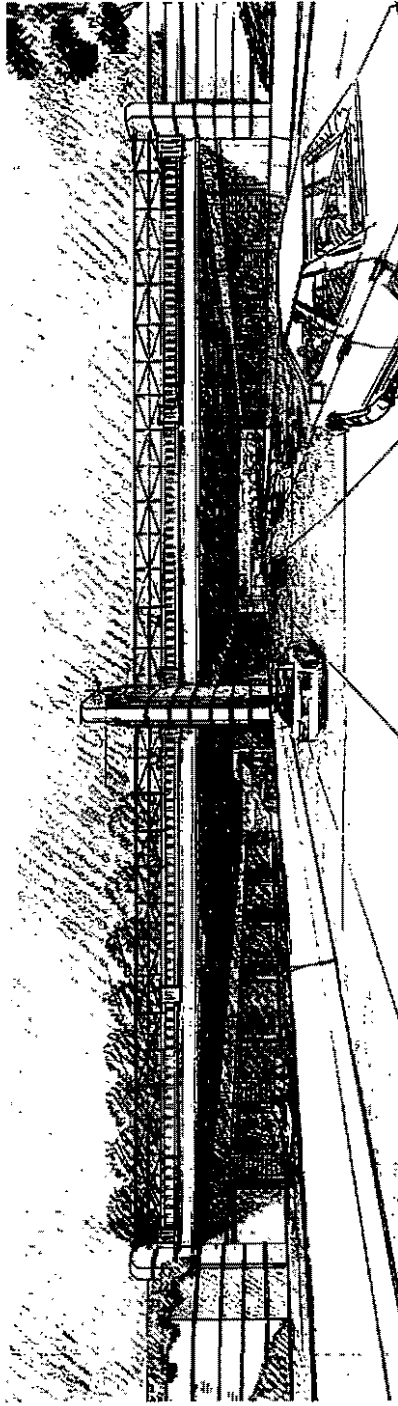
**HNTB**

*Addison!*

# IMAGES

Project Experience

I-335 Bridge Enhancement  
Mesquite, Texas



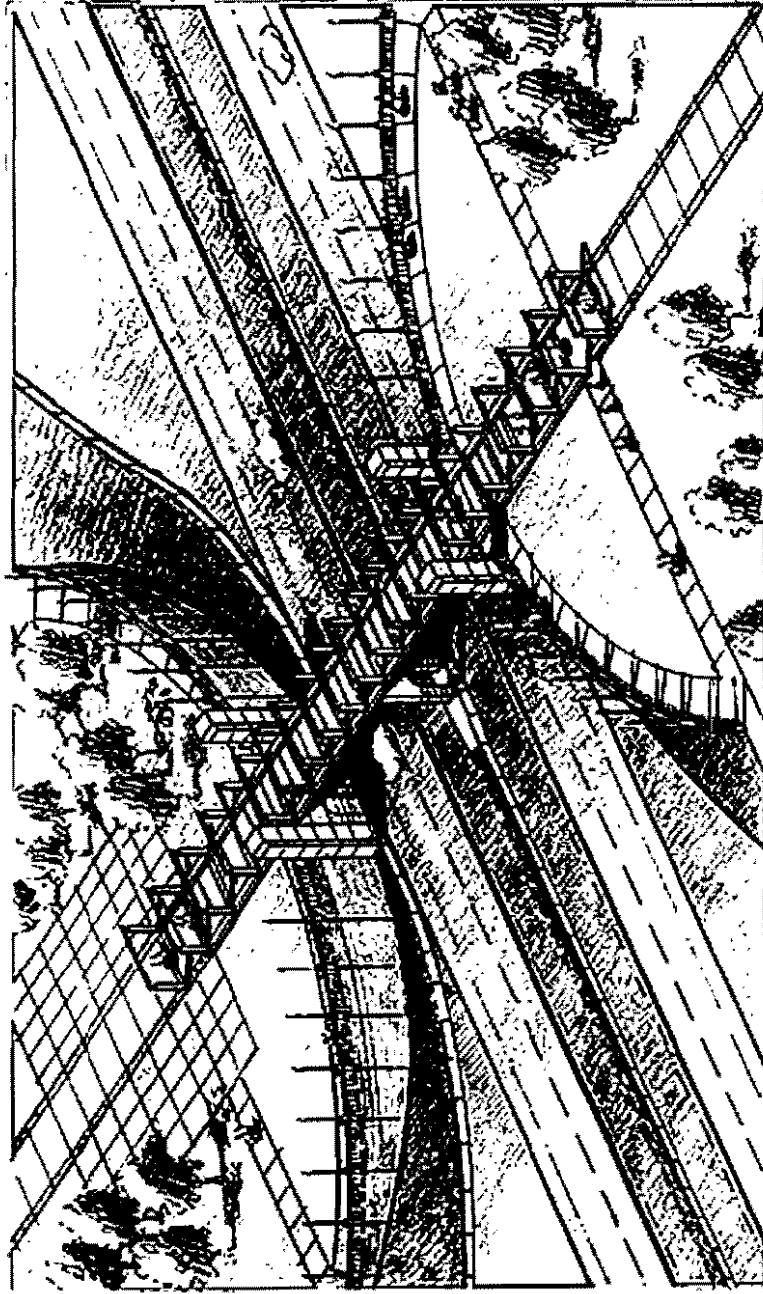
**HNTB**

*Admission!*

# IMAGES

Project Experience

East/West Freeway  
Lubbock, Texas



**HNTB**

*Advisors!*

# IMAGES

Project Experience

Bruce R. Watkins Parkway  
Kansas City, Missouri



**HNTB**

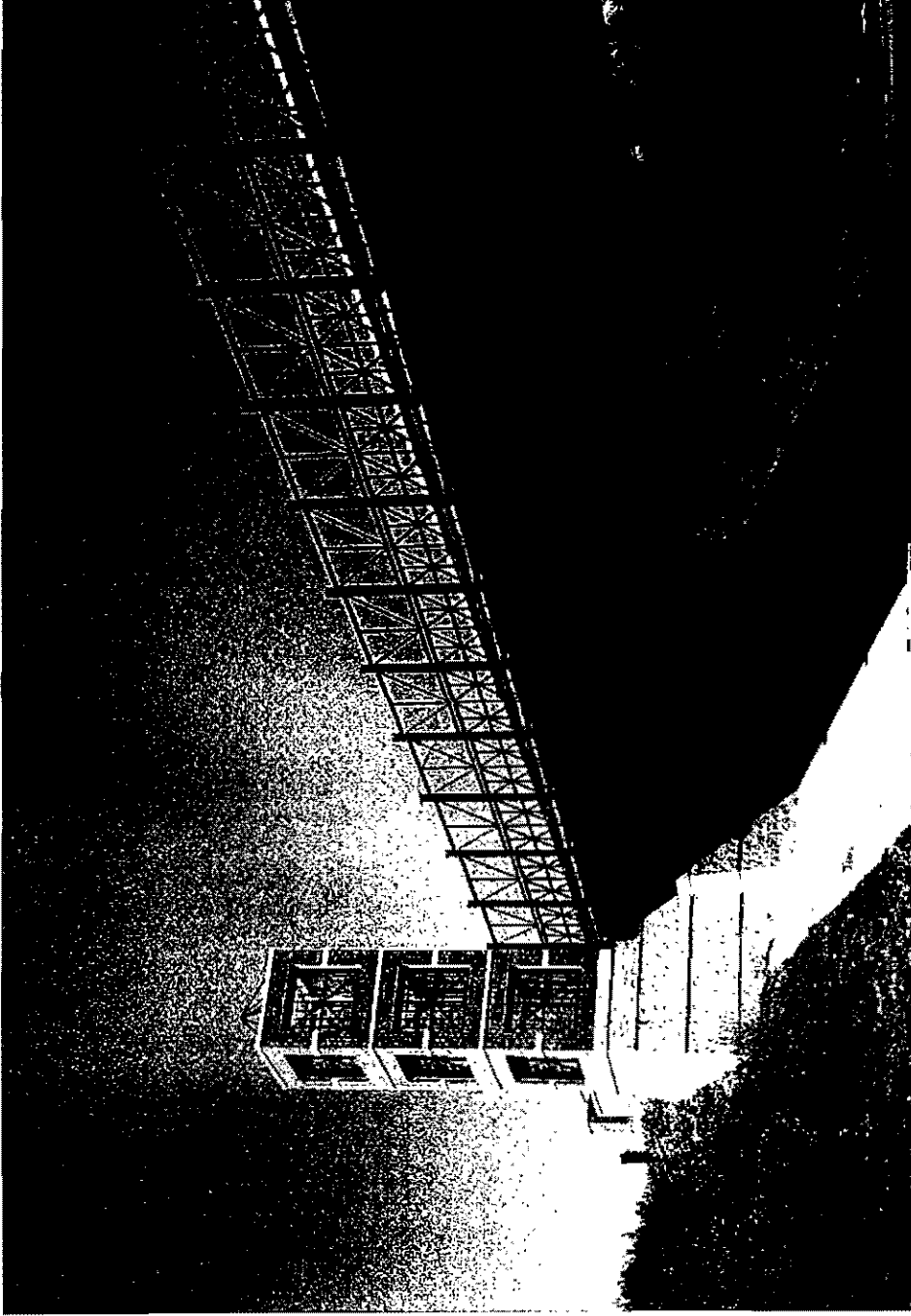
*Addison!*



# IMAGES

Project Experience

Bruce R. Watkins Parkway  
Kansas City, Missouri



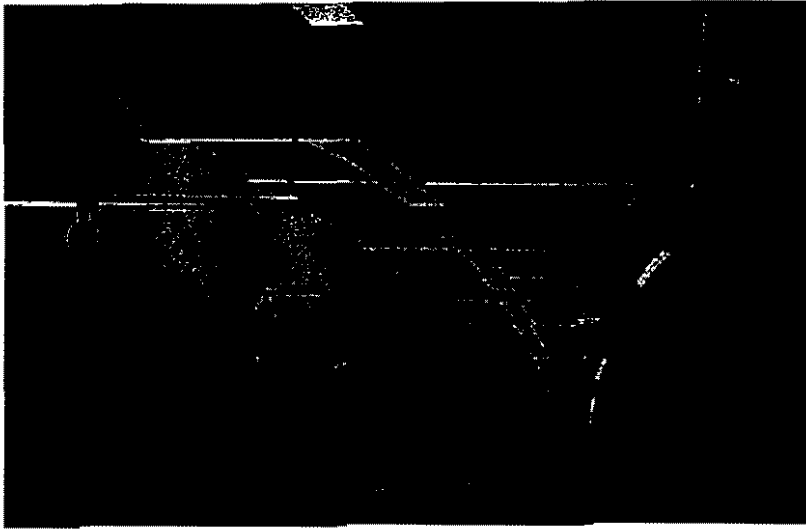
**HNTB**

*Admission!*

# IMAGES

## Project Experience

North Central Expressway  
Dallas, Texas



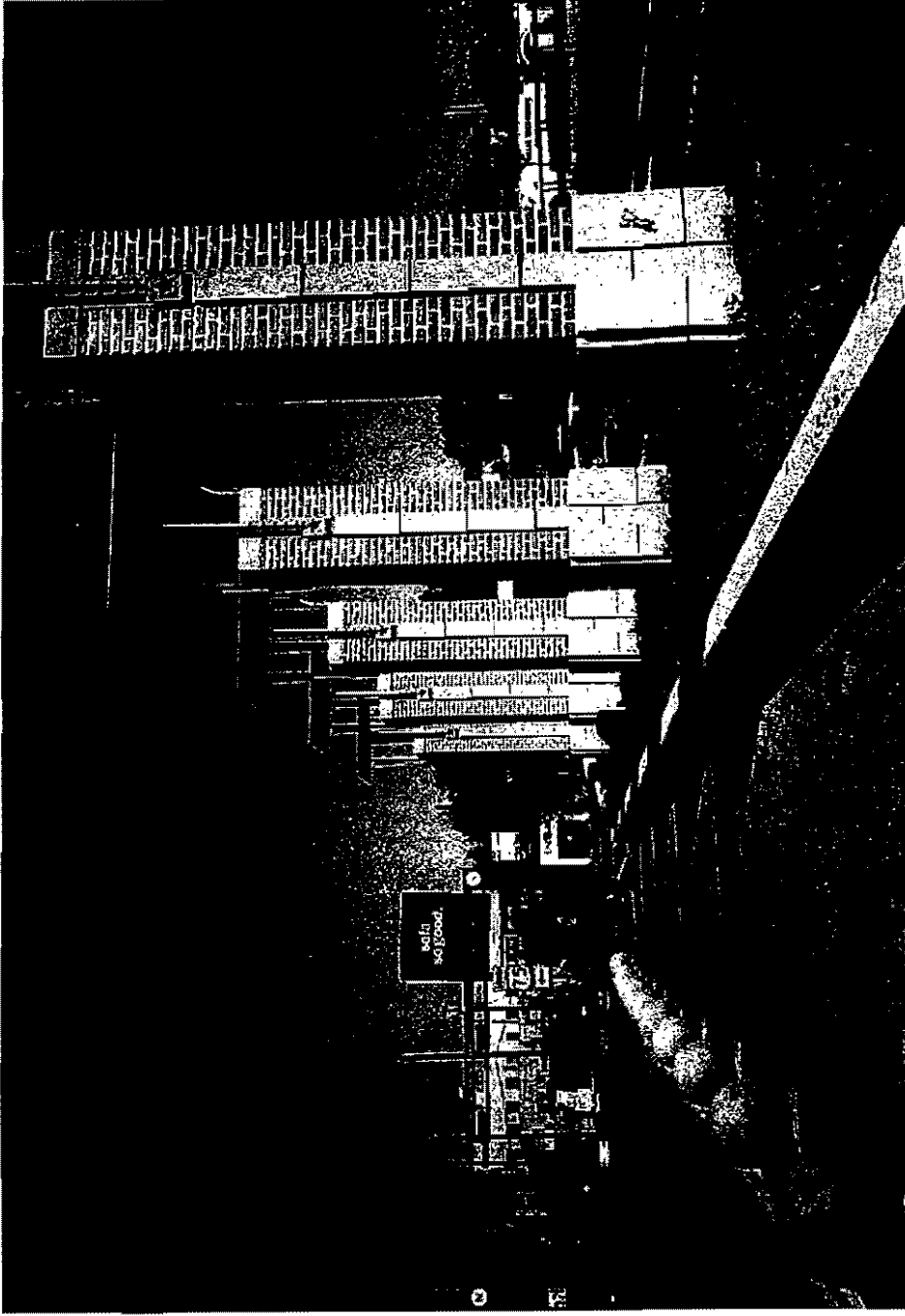
**HNTB**

*Addison!*

# IMAGES

Project Experience

North Central Expressway  
Dallas, Texas



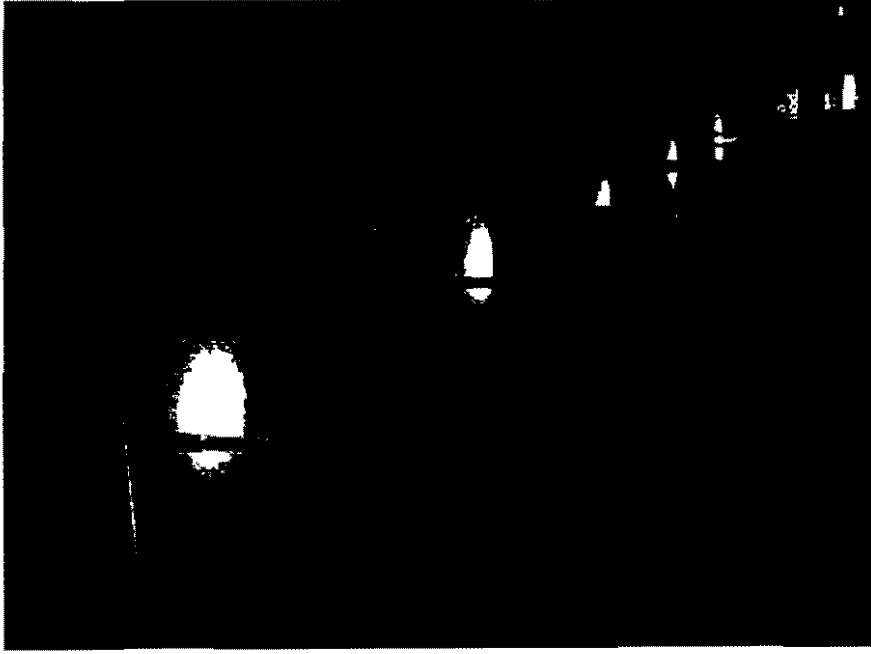
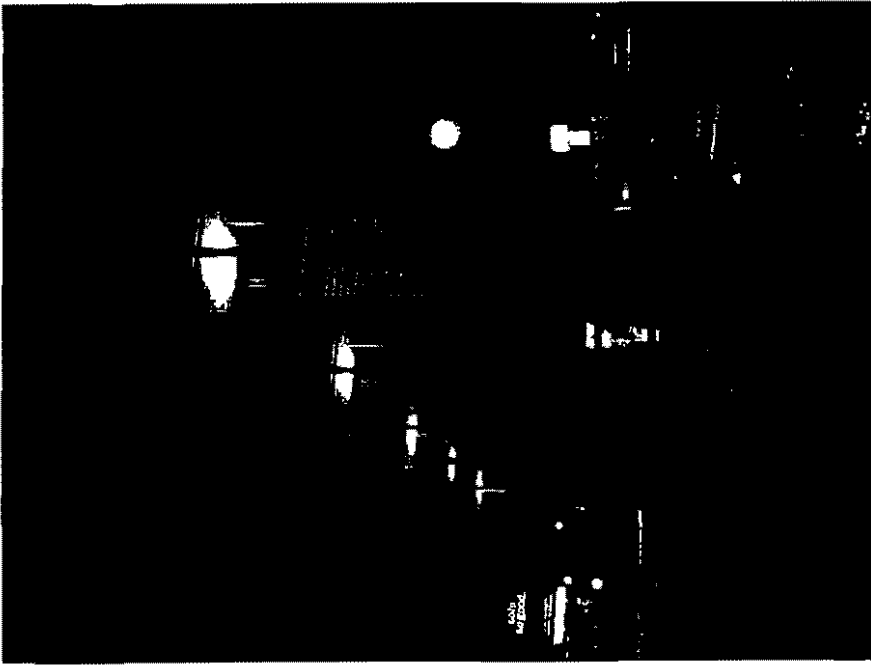
**HNTB**

*Advisors!*

# IMAGES

Project Experience

North Central Expressway  
Dallas, Texas



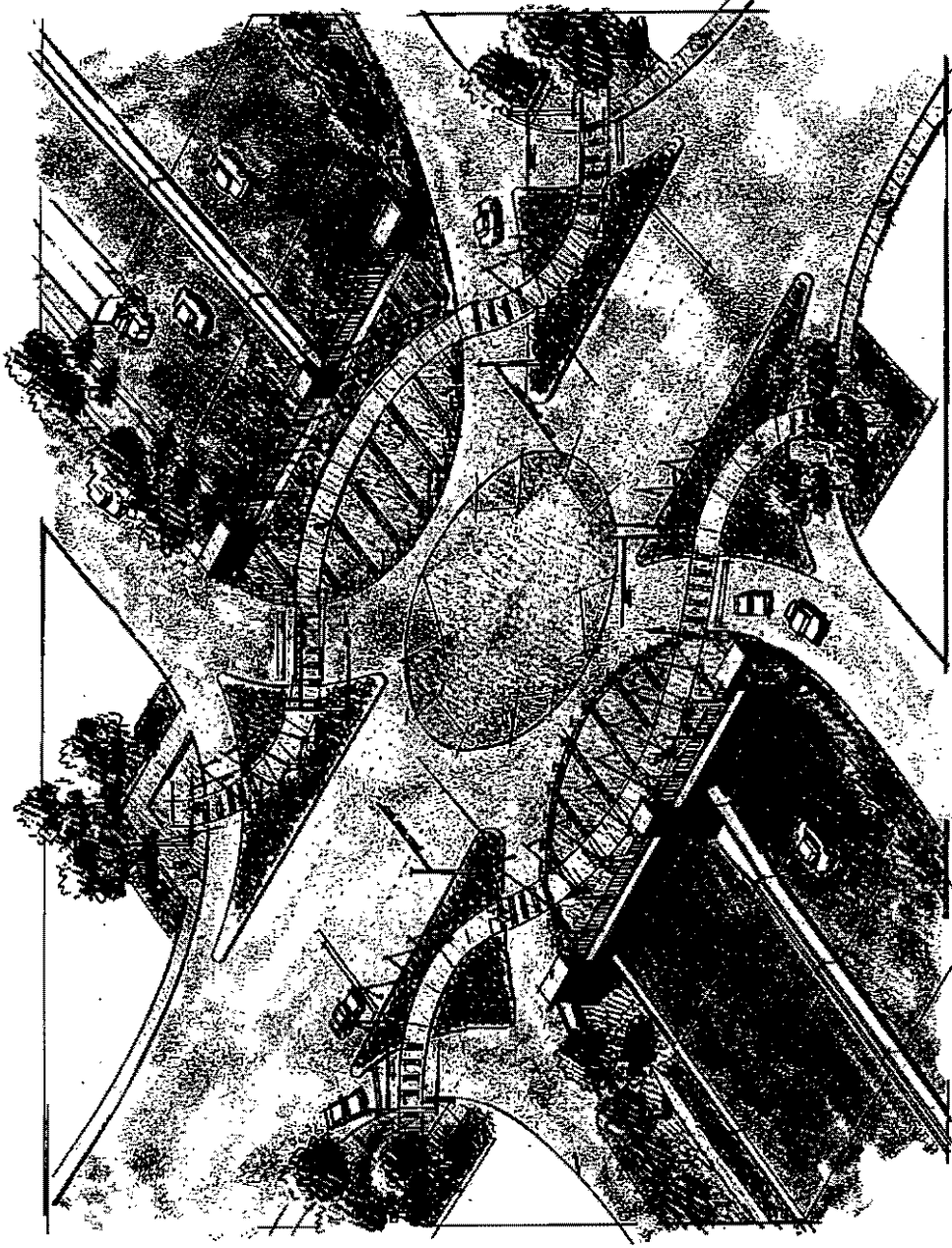
**HNTB**

*Abilene!*

# IMAGES

Project Experience

U.S. 40/I-64  
St. Louis, Missouri



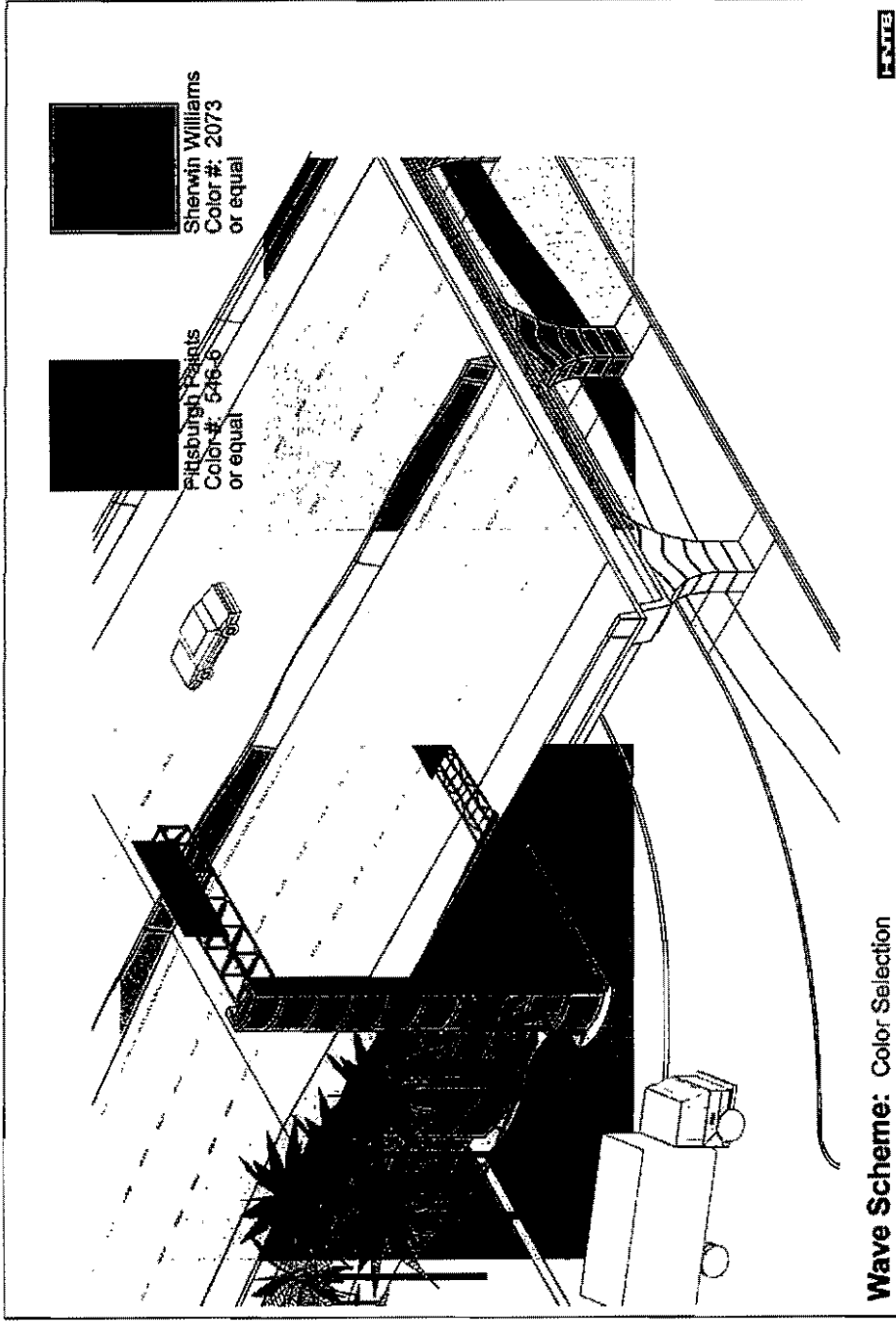
**HNTB**

*Allison!*

# IMAGES

Green Ribbon Corridor Aesthetics  
Houston, Texas

Project Experience



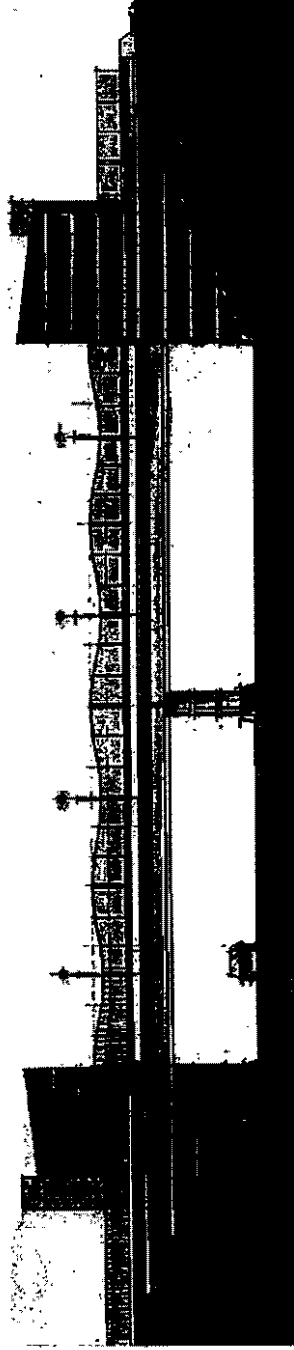
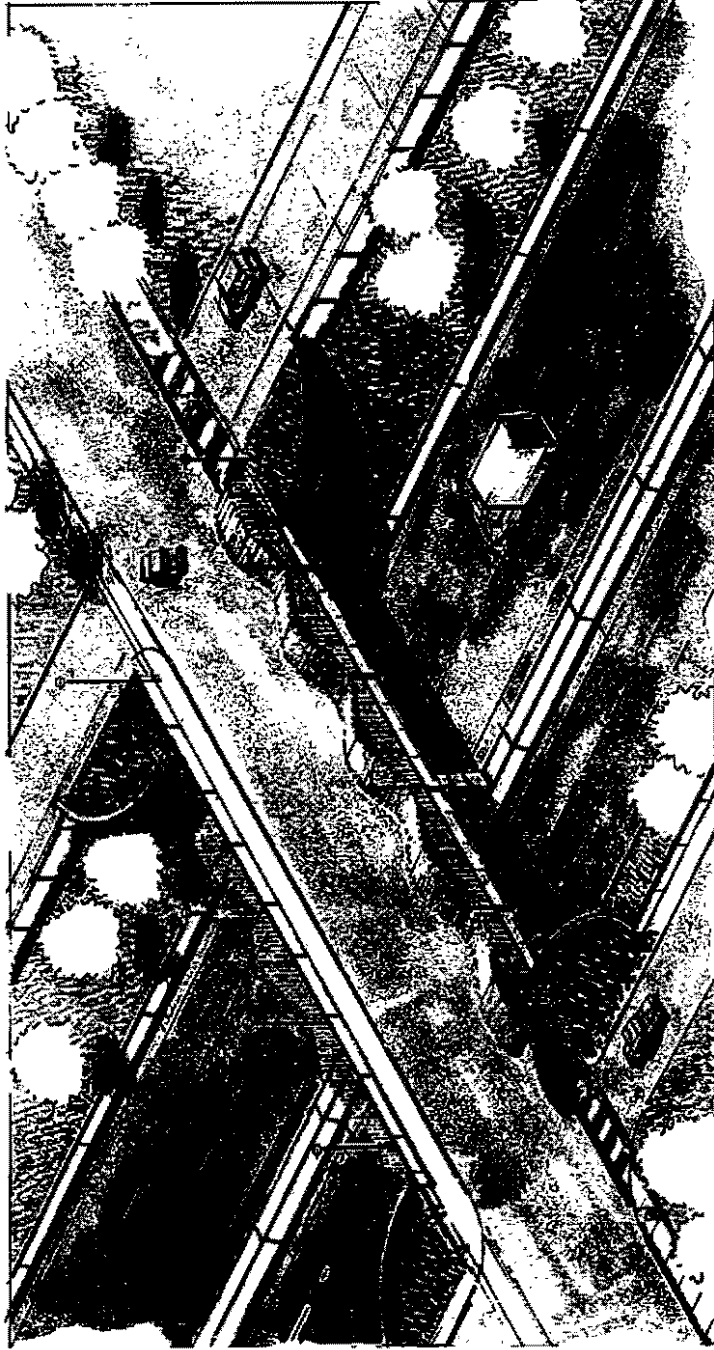
# HNTB

*Addison!*

# IMAGES

## Project Experience

Missouri River Bridges  
St. Louis, Missouri

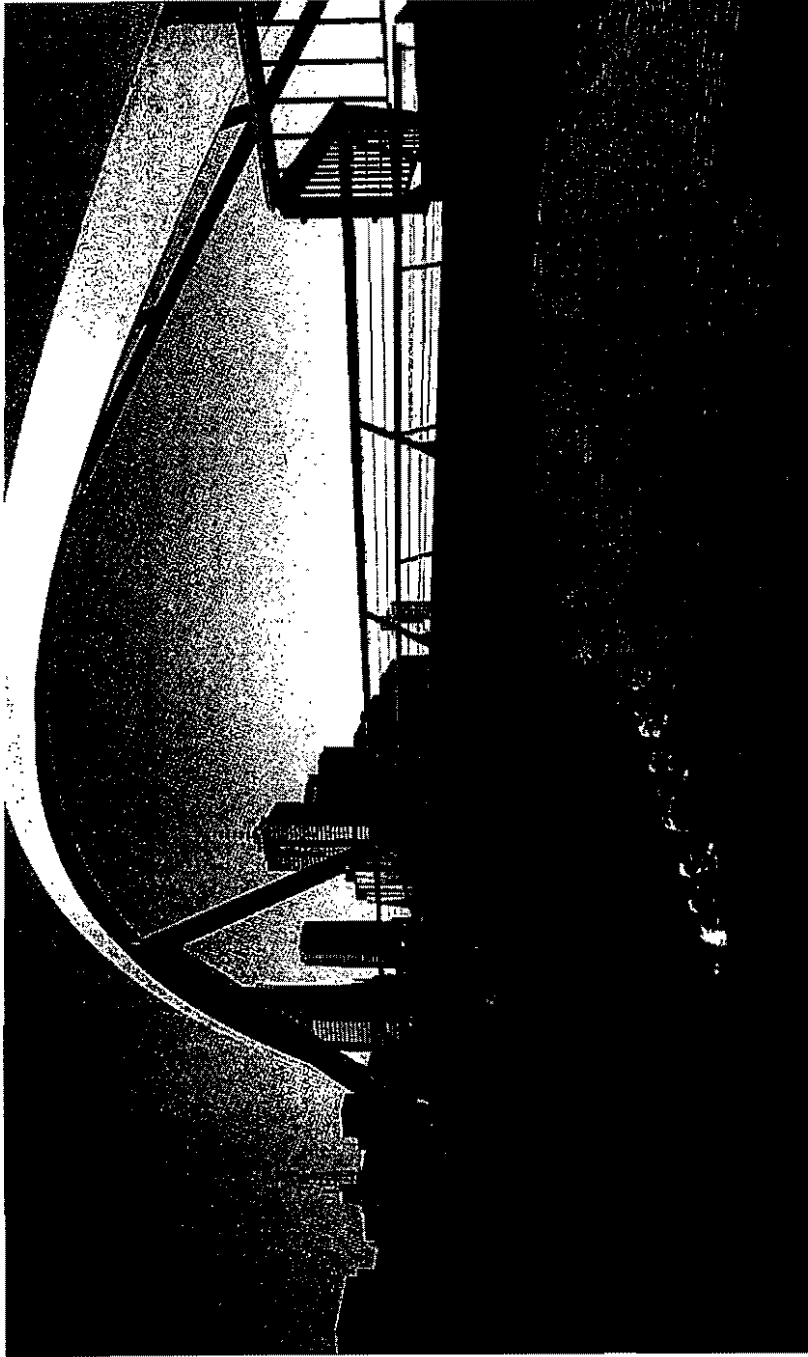


*Alison!*

# HNTB

# IMAGES

Precedents



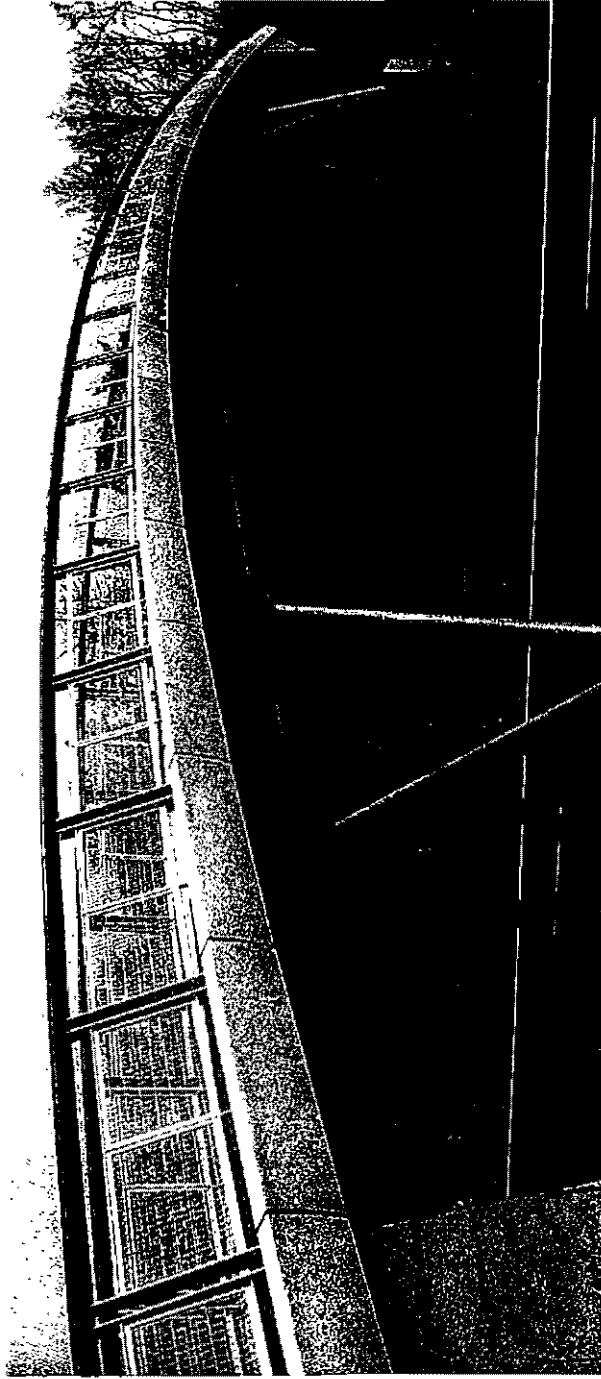
**HNTB**

*Admission!*



# IMAGES

Precedents

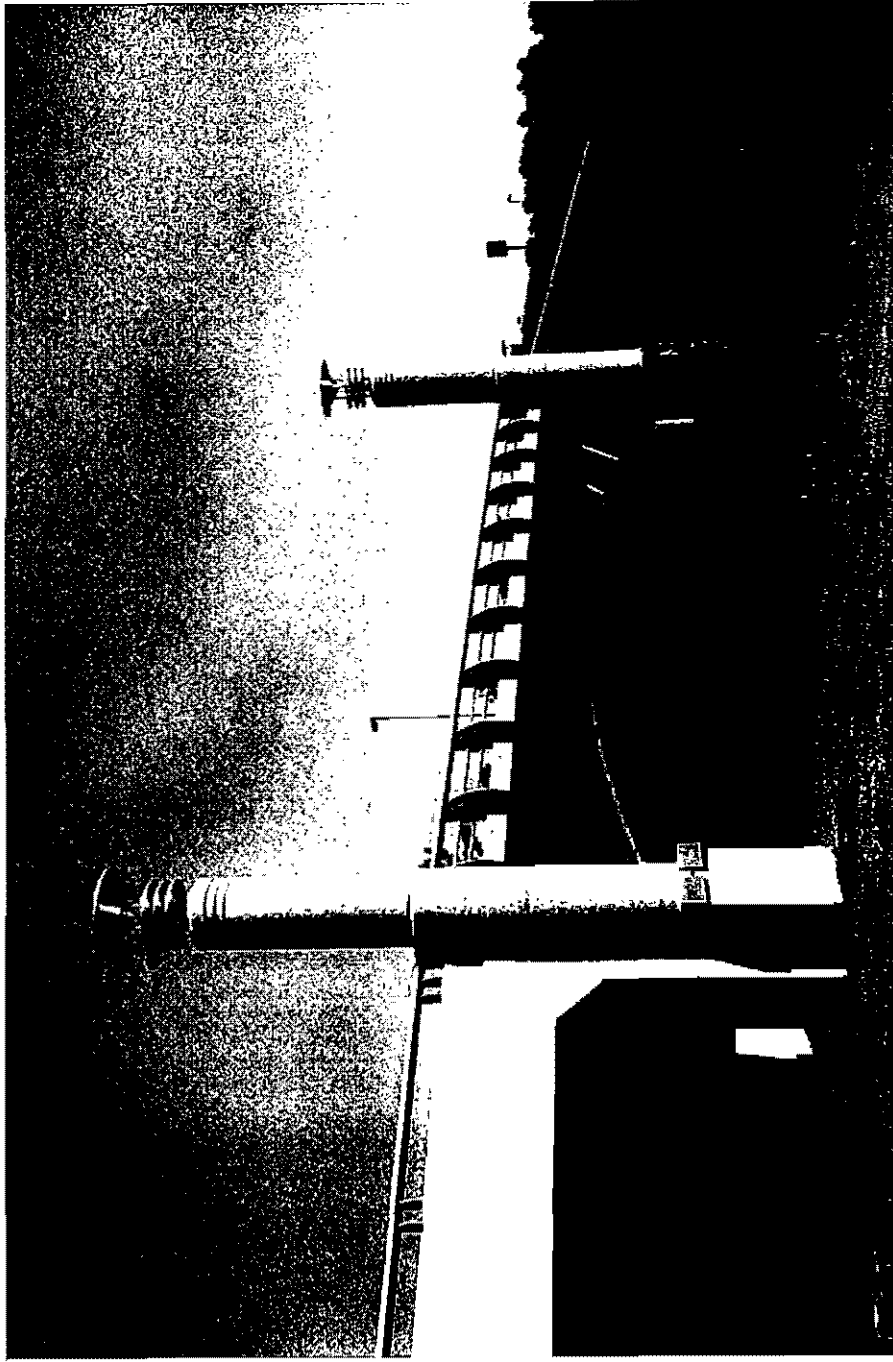


**HNTB**

*Addison!*

# IMAGES

## Precedents

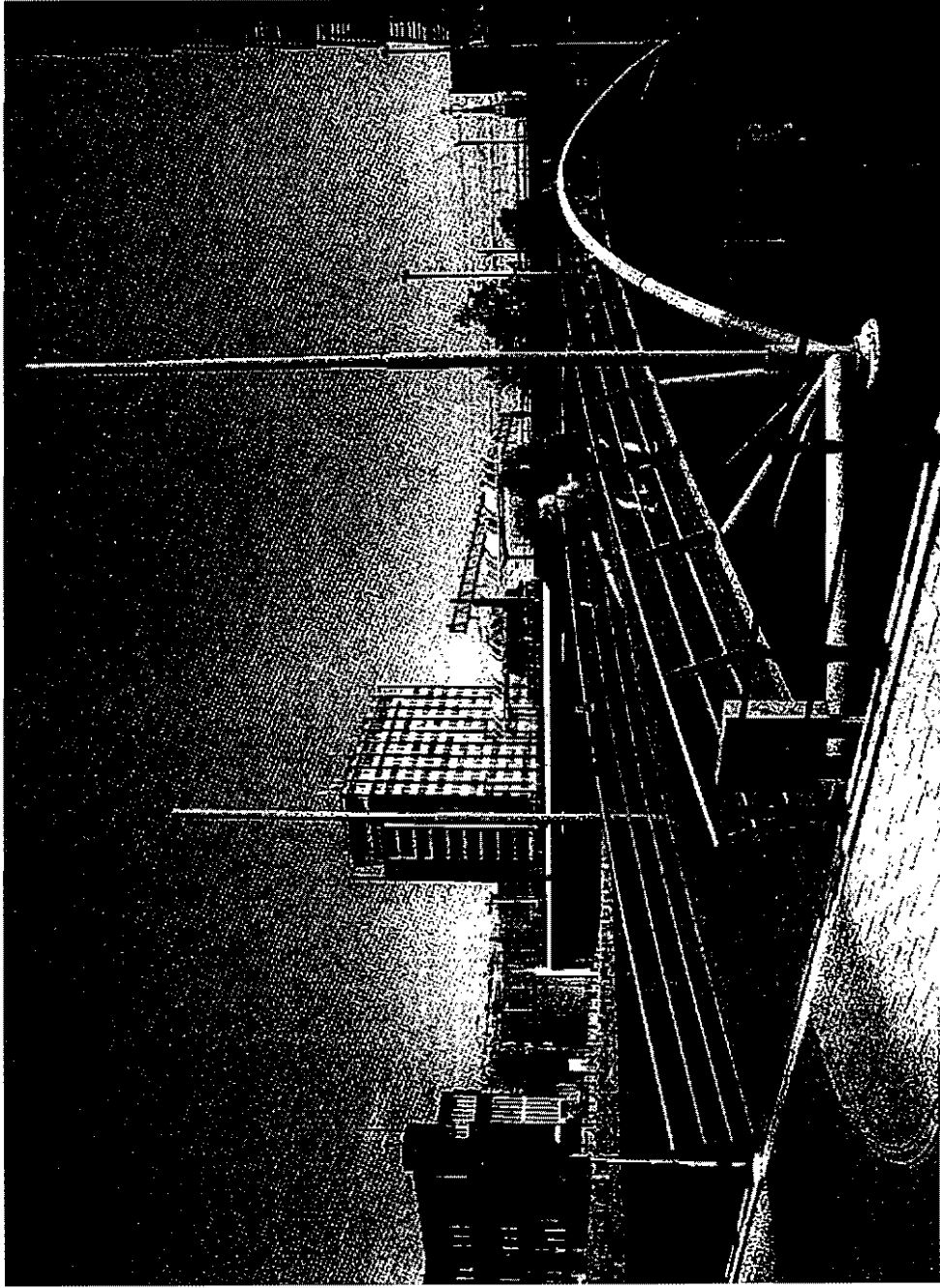


**HNTB**

*Addison!*

# IMAGES

Precedents

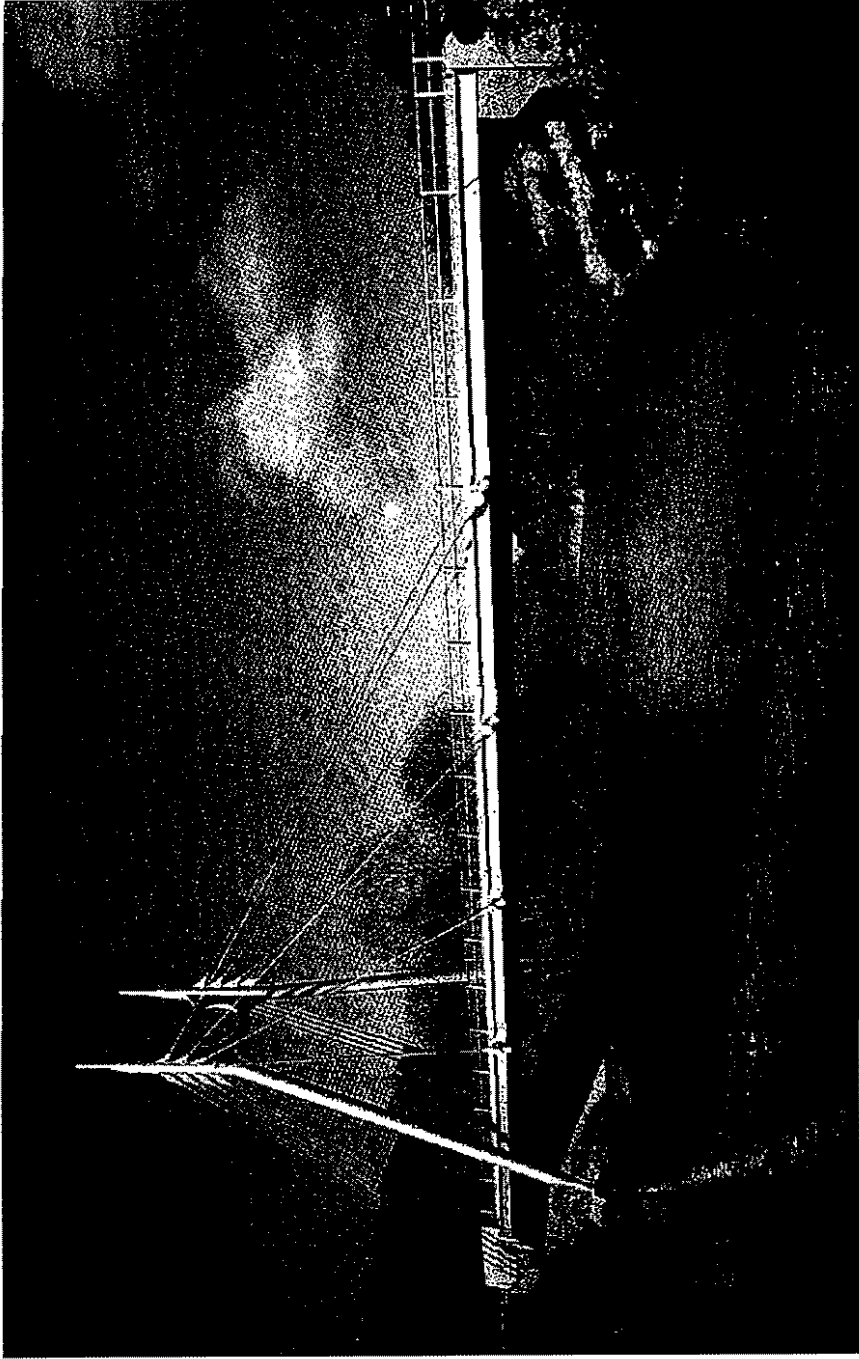


**HNTB**

*Addison!*

# IMAGES

Precedents



**HINTB**

*Admission!*

# IMAGES

Precedents

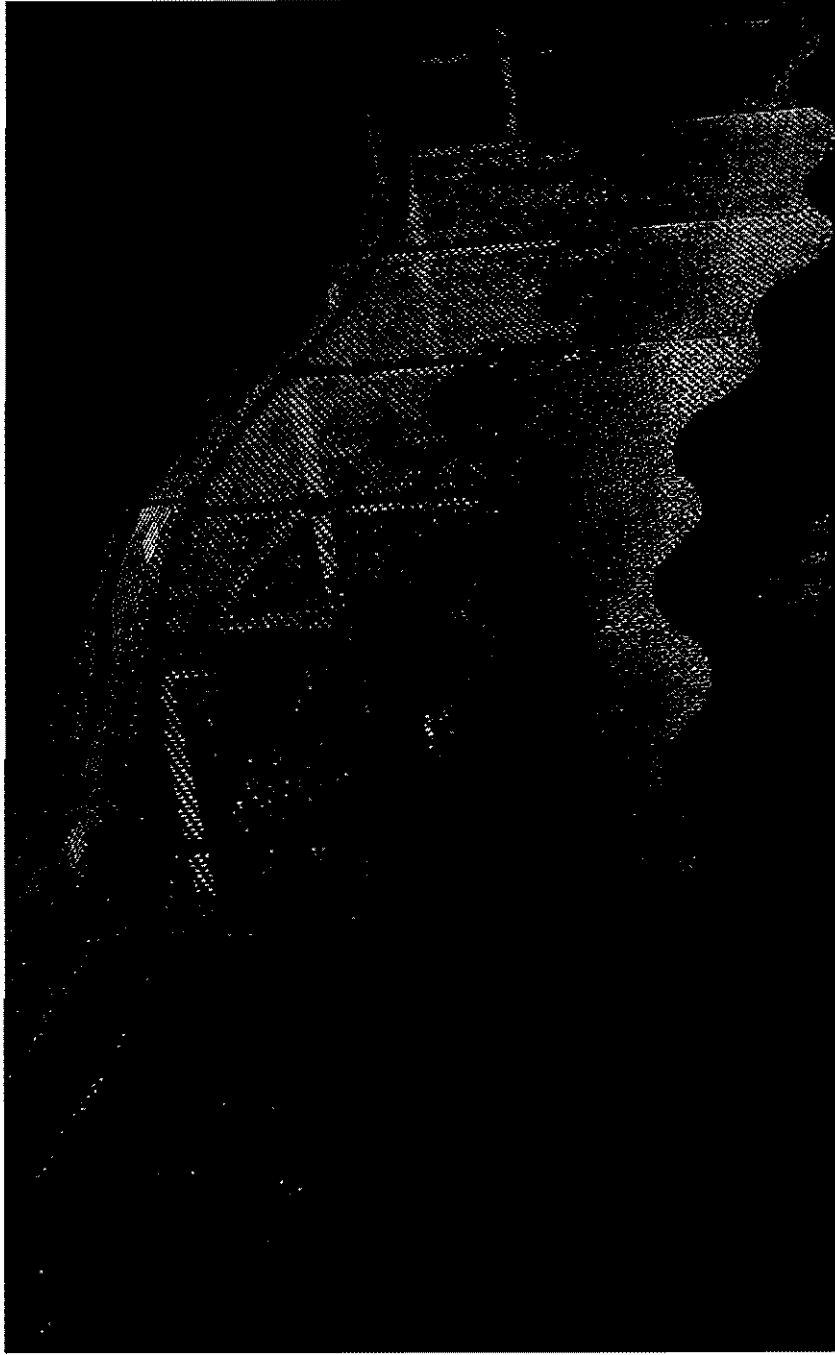


**HNTB**

*Addison!*

# IMAGES

Precedents

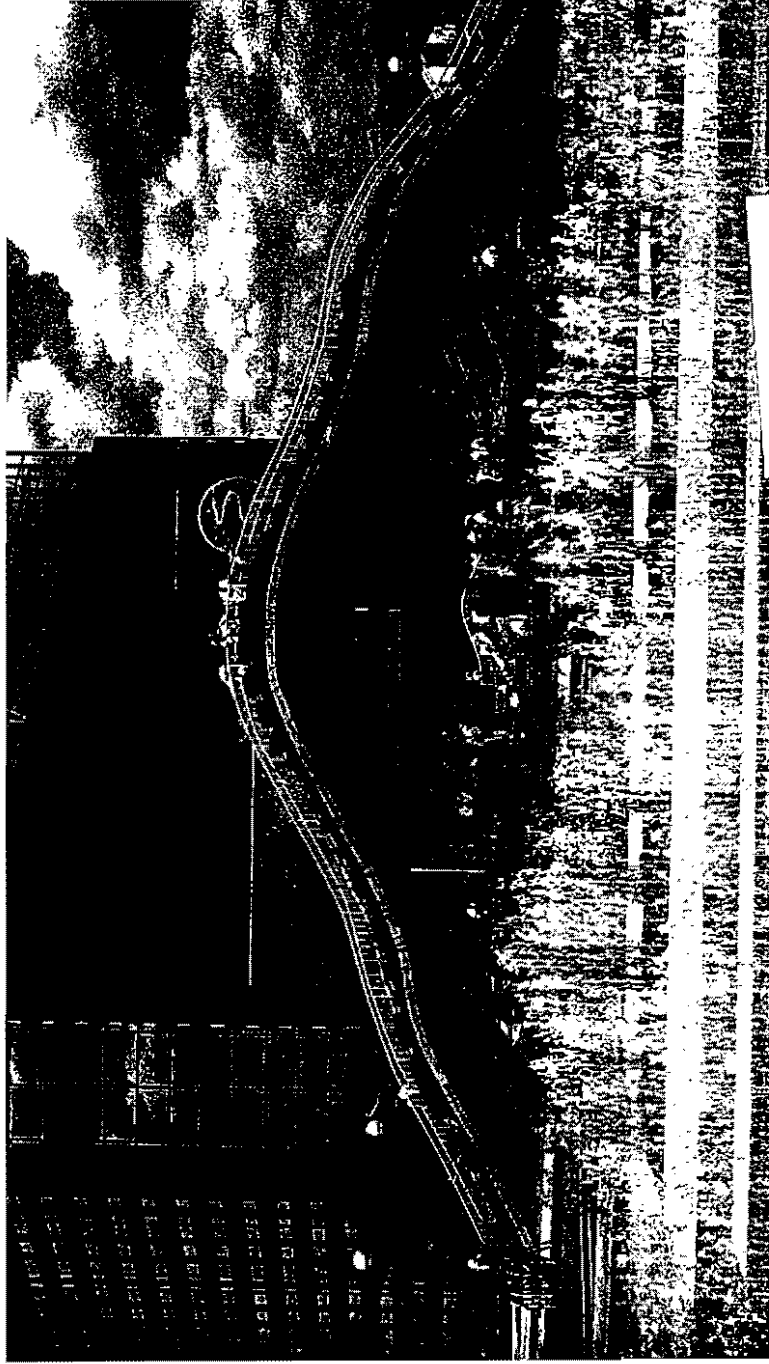


**HINTB**

*Addison!*

# IMAGES

## Precedents



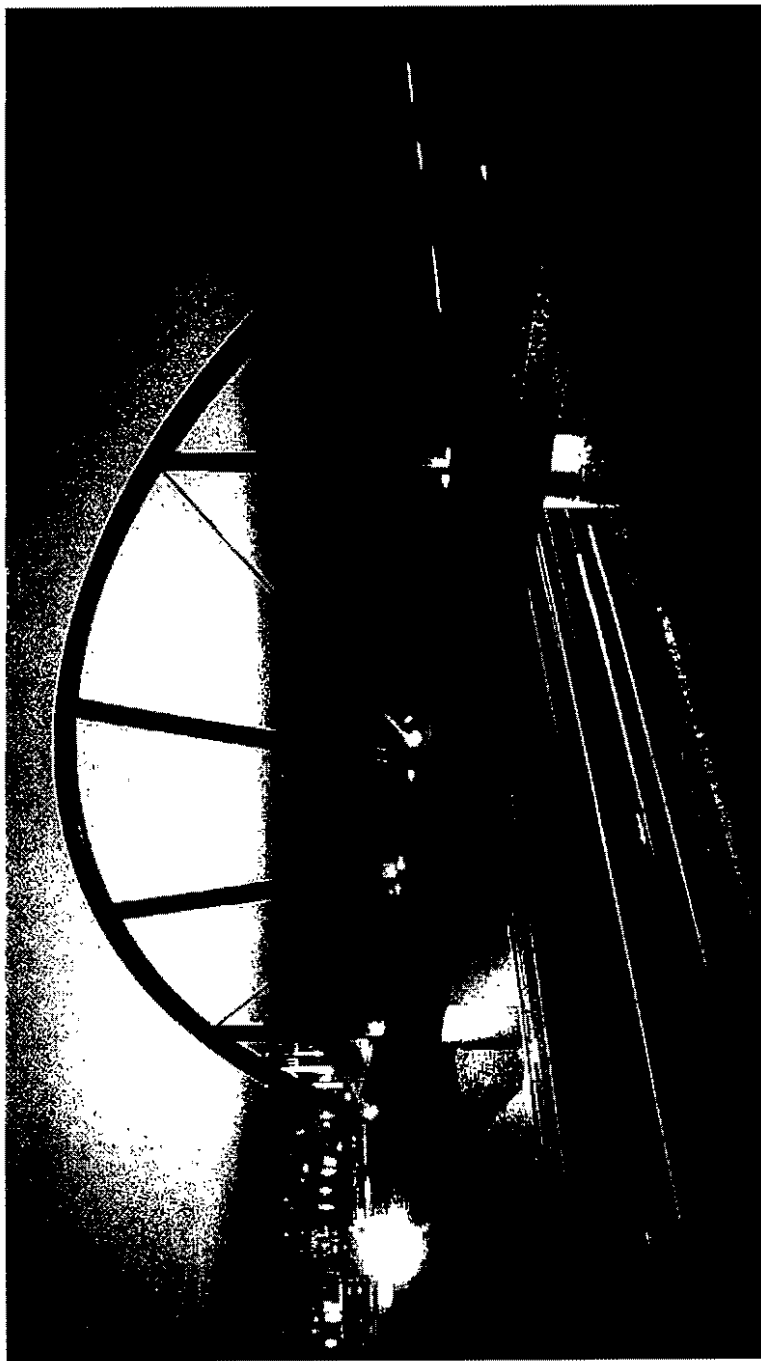
DOWNTOWN  
CHATTANOOGA

*ADDISON!*

**HNTB**

# IMAGES

## Precedents



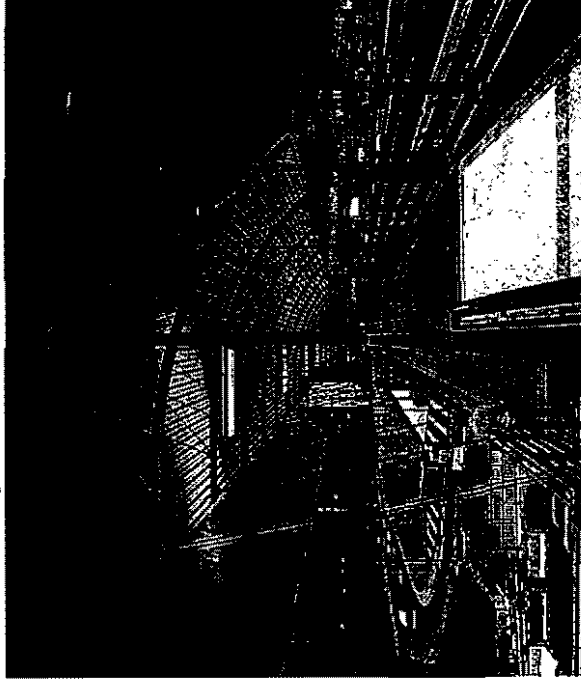
**HINTB**

*Alison!*



# IMAGES

## Precedents



**HNTB**

*Admission!*

Everett Spaeth  
Halff Associates, Inc.  
8616 Northwest Plaza Dr.  
Dallas, TX 75225

Frank Abugatti  
Kellogg Brown & Root  
601 Jefferson Avenue  
Houston, Texas 77002-4557

Phil Deaton  
Carter-Burgess  
7950 Elmbrook Drive  
Dallas, TX 75247-4925

CH2M Hill  
5339 Alpha Road #300  
Dallas, Texas 75240-7352

Alfred Vidaurri, Jr., AIA  
Freese & Nichols  
4055 International Plaza, Suite 200  
Fort Worth, Texas 76109-4895

*Mike Moran - Architecture*  
HDR, Inc.  
17111 Preston Rd Suite 300  
Dallas, TX 75248-1228

Jerry Holder  
HNTB-Dallas  
5910 W. Plano Parkway, Suite 200,  
Plano, TX 75093

Sandra Paret  
HOK  
2001 Ross Avenue  
Suite 2800  
Lock Box 106  
Dallas, TX 75201

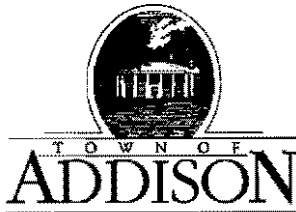
Parsons Brinckerhoff

2777 N. Stemmons Freeway  
Suite 1333  
Dallas, TX 75207

HKS Inc.  
Headquarters  
1919 McKinney Avenue  
Dallas, TX 75201

Lance Josal  
RTKL Associates Inc.  
1717 Pacific Avenue  
Dallas, Texas 75201-4688

Mesa Design Group  
3100 McKinnon Street #905  
Dallas, Texas 75201



**PUBLIC WORKS DEPARTMENT**

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

**March 7, 2002**

Mr. Steve Chutchian  
P. O. Box 9010  
Addison, TX 75001

Dear Committee Member:

First of all, I would like to express my appreciation on behalf of the Town of Addison. This is an exciting infrastructure project for the Town and I am pleased you have agreed to participate in our evaluation and recommendation process for the Bridge Competition. As you are aware, the competition is scheduled for April 11<sup>th</sup> from 7:30am – 5:00pm at the Addison Conference Centre (see schedule below). I would also request that all committee members meet in the Board Room at 7:30 am to go over the upcoming days events. *There will be breakfast refreshments available.*

Just a very brief update on what events took place to get us to the point at which we are today. In February 2000, the Town of Addison conducted a bond election in which the town of Addison voters approved \$20.5 million to go toward the design and construction of the extension of Arapaho Road from Addison Road to Marsh Lane. A key and crucial element to the overall project is the design and construction of a bridge to cross over Midway Road.

In November of 2001, we initiated the process by requesting Statements of Qualifications from engineering and architectural firms. The Town received 12 proposals from a wide variety of firms with connections around the nation. These 12 proposals were evaluated by a selection committee and reduced to the three finalists for the competition (HNTB, URS-Griener and Freese & Nichols). The Town of Addison City Council, prior to Request for Qualifications, approved a \$10,000 stipend to be paid to each of the three finalists to assist in the costs associated with preparation of their proposed bridge designs.

The evaluation process will be conducted as follows:

- *Each firm will be given two hours to make their presentations and answer questions from the panel, with at least 30 minutes dedicated to question and answer.*
- *Panel will use evaluation criteria stated in information below, with each item having equal value to assist in ranking each firm.*
- *Each member will then individually grade each firm, in a similar manner, giving each item a grade from 1-10, with 10 being best.*

- *Each member based on the total score given will rank the firms in order of grade 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup>.*
- *All panel members will submit their rankings to establish initial order.*
- *Group will have open discussions about individual concerns and opinions.*
- *All panel members will review their initial rankings and re-submit for final order.*
- *Each firm will be given an overall grade based on rank submitted by each member. 1<sup>st</sup> place will be awarded one point, 2<sup>nd</sup> place will be awarded 2 points and 3<sup>rd</sup> place will be awarded 3 points. The firm with the fewest total points will be the competition winner.*

Please note that I have included a copy of each firm's original *Statement of Qualifications* submittal.

Thank you, and I look forward to seeing all of you on April 11<sup>th</sup>. Should you have any questions prior to April 11<sup>th</sup>, feel free to contact my office at 972-450-2871 and speak with me or the Assistant Director of Public Works, Jim Pierce.

Sincerely,

Michael E. Murphy/Director of Public Works

**Arapaho Road Bridge Pre-Competition Meeting  
Agenda  
February 14, 2002**

- I. Welcome and introductions: *Ron Whitehead, City Manager***
  
- II. Directions to Consultant: *Mike Murphy, Director of Public Works***
  - A. Announce tentative day and time of presentations**
    - 1. First Presentation 8:00am-10am**
    - 2. Second Presentation 10:30am-12: 30pm**
    - 3. Third Presentation 1:30pm-3: 30pm**
  
  - B. No more than two designs**
  
- III. Grading will be based on the following criteria**
  - A. Aesthetics – appearance day and night, should include lighting design plan**
  - B. Landscaping**
  - C. Acoustics (how will noise affect adjacent buildings)**
  - D. Vibrations (how will motion affect adjacent buildings)**
  - E. Estimated cost of construction of the bridge design**
  - F. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.)**

- G. How does the bridge minimize obstruction to adjacent buildings from roadway**
- H. Overall quality and creativity of presentation (vislon, team plan / effort)**

**Presentation Schedule:**

<u>Time (April 11<sup>th</sup>)</u>	<u>Firm</u>	<u>Conference Centre Location</u>
7:30am – 8:00am	Committee Members	Board Room
8:00am – 10:00am	URS Griener	Stone Cottage
10:30am – 12:30pm	Freese & Nichols	Board Room
12:30pm – 1:30pm	Lunch	Board Room
1:30pm – 3:30pm	HNTB	Stone Cottage
3:30pm – 5:00pm	Panel Discussion/Selection	Board Room

EXAMPLE SCORE SHEET

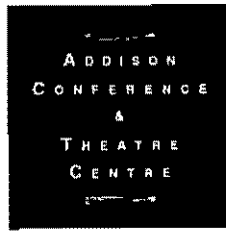
1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 10 POINTS**
2. **Landscaping (1-10) 7 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 5 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 6 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 4 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 10 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 9 POINTS**

**TOTAL SCORE 59 POINTS**



COMMITTEE	1	2	3	4	5	6	7	TOTAL SCORE	
FIRM #1	3	1	3	2	1	3	3	<b>16</b>	<b>#3</b>
FIRM #2	2	2	2	1	2	1	2	<b>12</b>	<b>#1</b>
FIRM #3	1	3	1	3	3	2	1	<b>14</b>	<b>#2</b>

Freese and Nichols  
HOK



Where does the bridge go up on the east?

Will water features accommodate volume of water in drainage.

16 mi. | + row + drainage + water line + landscaping

The project is bigger than the bridge

It is a discussion about how to

redevelop Arapaho and Belt Line.

✓ Noise ~~is~~ 70 dB - Charter  
Materials / aggregate to lighten up color.  
50 feet  
2 ft 9

Water & people water midway

Chin / Van Valkenburg

Is Arapaho where you want to spend this kind of money?

"How buildings learn"

Is it a back door or a front door - PARK

BATTERY PARK / Big Dig

500K for bike trail

design cost is not in project

Where does the road want to be.

Nicholas / Grimshaw

HNTB - Mike Preston

Jerry Holder - Approach

Judy Meyer -

Urban designer / CATALYST FOR CHANGE  
The Eden Project - Botanical Gardens

If it is too low it won't be  
visible

Separate bike & pedestrian -  
CADILVERVED

MAKE OVERPASS A DESTINATION

CATALYST FOR REDEVELOPMENT

Phase 1 - 200 feet tall

BUSINESS CONCERNS - PUBLIC ACCESS

Public relations process to explain

PROCESS.

Architectural lighting

Pedestrian Crossover

CABLE/STAKE  
CONCEPT

7 to 8 million on bridge

Thin deck - Charles River Bridge

Vibrations

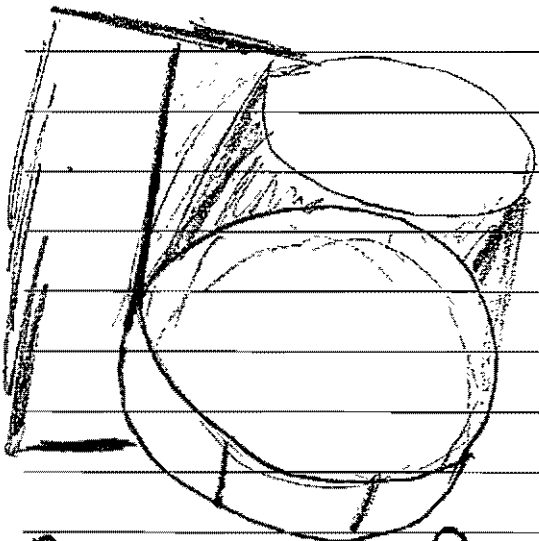
Idea of changing the way the  
bridge looks through lighting



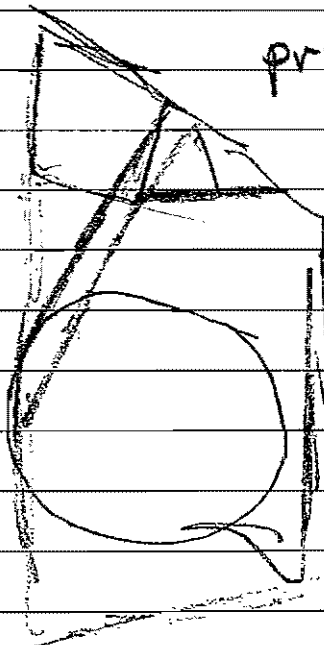
Lighting can create a theatrical effect. Light the underdecks.  
I AM NOT sure the view is that great. What are we looking at. What about scale.

★ Culvert should be supported by bridge structure  
2 elevators vs 1600 ft

Median barrier on bridge  
Candlevering Lane



One proposal



1. 28ft height  
precast concrete

2 year

★ work - remove  
channel - pour  
soil



URS

How they are going to maintain traffic  
on Midway,

Post tension structure / economy / durability

1600 ft long

174 ft span

drill and peer foundation

look down arapaho

erosion under buildings

Arbor /

Chris

NAME OF FIRM URS

SCORE SHEET

- 9 1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) \_\_\_\_\_ POINTS**
- 7 2. **Landscaping (1-10) \_\_\_\_\_ POINTS**
- 8 3. **Acoustics (how will noise affect adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 8 4. **Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 8 5. **Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS**
- 9 6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS**
- 9 7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS**
- 9 8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS**

**TOTAL SCORE 68 POINTS**

NAME OF FIRM Freeze/HOK

SCORE SHEET

- 9 1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) \_\_\_\_\_ POINTS**
- 8 2. **Landscaping (1-10) \_\_\_\_\_ POINTS**
- 9 3. **Acoustics (how will noise affect adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 8 4. **Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 5 5. **Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS**
- 8 6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS**
- 8 7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS**
- 9 8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS**

**TOTAL SCORE 56 POINTS**

27  
24  
5  
-----  
56

NAME OF FIRM HNTB/NGP

SCORE SHEET

- 9 1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) \_\_\_\_\_ POINTS**
- 7 2. **Landscaping (1-10) \_\_\_\_\_ POINTS**
- 9 3. **Acoustics (how will noise affect adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 8 4. **Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 7 5. **Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS**
- 7 6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS**
- 9 7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS**
- 9 8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS**

**TOTAL SCORE 65 POINTS**

47  
18  
—  
65



NAME OF FIRM

URS Greiner

Row

(1)

lights could change color for holidays.

translucent glass table  
E) bricks + concrete create - what makes addition, addition knife + fork.

SCORE SHEET

height?

soft to parking.

Cliff Hall

cost of drainage

Kit of parts to connect the down

1. Aesthetics - appearance day and night, should include lighting design plan (1-10) 10 POINTS
2. Landscaping (1-10) 10 POINTS
3. Acoustics (how will noise affect adjacent buildings) (1-10) 6 POINTS
4. Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS
5. Estimated cost of construction of the bridge design (1-10) 10 POINTS  
Concrete 5.3  
Blue 3.9
6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 10 POINTS
7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 10 POINTS
8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 10 POINTS

Arch is open and unobtrusive.  
Legacy projects

TOTAL SCORE \_\_\_\_\_ POINTS

suspension arch.

DAVE JOHNSTON - Project MANAGER  
CORRIGAN Architects - Chuck Armstrong  
URBAN Designer

Robert Prouse -

steel mesh for rail  
does not block businesses

highlights the historical value of the bridge.

416

2

NAME OF FIRM Freese and Nichols  
HOK

SCORE SHEET

- 1. Aesthetics - appearance day and night, should include lighting design plan (1-10) 10 POINTS
- 2. Landscaping (1-10) 10 POINTS
- 3. Acoustics (how will noise affect adjacent buildings) (1-10) 10 POINTS
- 4. Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS
- 5. Estimated cost of construction of the bridge design (1-10) 5 POINTS
- 6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 5 POINTS
- 7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 2 POINTS
- 8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 10 POINTS

TOTAL SCORE \_\_\_\_\_ POINTS

Double Deck

Scene A - Views across the landscape.

Water from drainage into lakes.

Scene B - Back to Midway - Suspension bridge

Joints create noise

Original	10.1
A	16.1
B	16.7

per cent of ROW

NAME OF FIRM HNTB

SCORE SHEET

- 1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 4 POINTS**
- 2. **Landscaping (1-10) 7 POINTS**
- 3. **Acoustics (how will noise affect adjacent buildings) (1-10) 10 POINTS**
- 4. **Vibrations (how will motion impact adjacent buildings) (1-10) 10 POINTS**
- 5. **Estimated cost of construction of the bridge design (1-10) 6 POINTS**
- 6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 7 POINTS**
- 7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 7 POINTS**
- 8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 5 POINTS**

**TOTAL SCORE \_\_\_\_\_ POINTS**

NAME OF FIRM

URS

#1

SCORE SHEET

1. Aesthetics - appearance day and night, should include lighting design plan (1-10) 9 POINTS
2. Landscaping (1-10) 8 POINTS
3. Acoustics (how will noise affect adjacent buildings) (1-10) 5 POINTS
4. Vibrations (how will motion impact adjacent buildings) (1-10) 6 POINTS
5. Estimated cost of construction of the bridge design (1-10) 10 POINTS
6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 8 POINTS
7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 9 POINTS
8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 9 POINTS

TOTAL SCORE 65 POINTS

Scott Wheeler

NAME OF FIRM

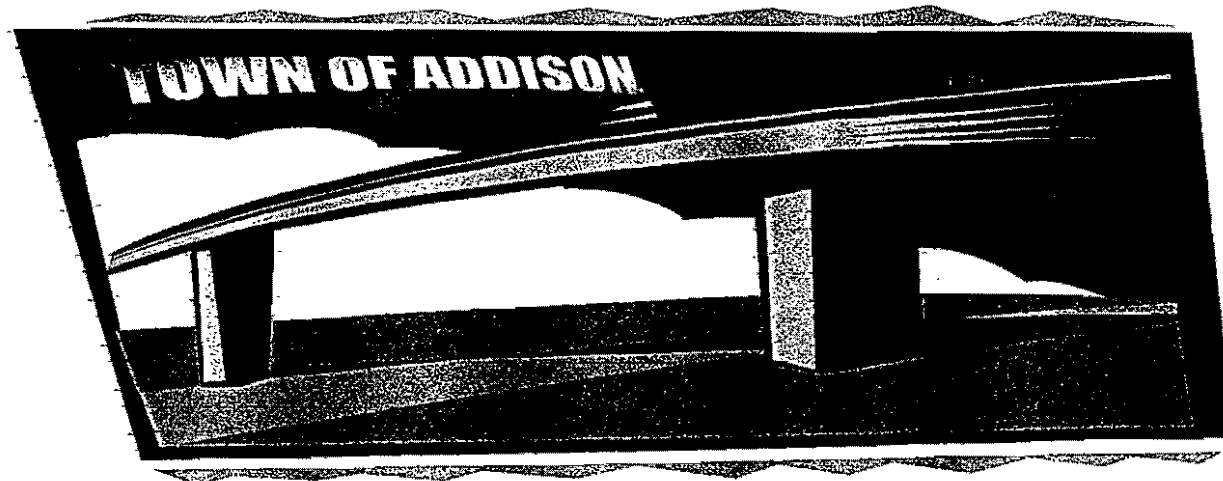
FREESE/NICHOLS

SCORE SHEET

1. Aesthetics - appearance day and night, should include lighting design plan (1-10) 4 POINTS
2. Landscaping (1-10) 10 POINTS
3. Acoustics (how will noise affect adjacent buildings) (1-10) 8 POINTS
4. Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS
5. Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS
6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS
7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS
8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS

TOTAL SCORE \_\_\_\_\_ POINTS

1/20/11 PETS



## **Arapaho Road Bridge Competition Agenda April 11, 2002**

- I. Welcome and introductions: *Ron Whitehead, City Manager***
  
- II. Directions to Committee Members: *Mike Murphy, Director of Public Works***
  - A. Announce presentation schedule:**
    - 1. First Presentation URS 8:00am-10am**
    - 2. Second Presentation Freese & Nichols  
10:30am-12:30pm**
    - 3. Third Presentation HNTB 1:30pm-3:30pm**
  
- III. Grading will be based on the following criteria**
  - A. Aesthetics – appearance day and night, should include lighting design plan**
  - B. Landscaping**
  - C. Acoustics (how will noise affect adjacent buildings)**
  - D. Vibrations (how will motion affect adjacent buildings)**
  - E. Estimated cost of construction of the bridge design**
  - F. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.)**
  - G. How does the bridge minimize obstruction to adjacent buildings from roadway**
  - H. Overall quality and creativity of presentation (vision, team plan / effort)**

## **Presentation Schedule:**

<u><i>Time (April 11<sup>th</sup>)</i></u>	<u><i>Firm</i></u>	<u><i>Conference Centre Location</i></u>
7:30am – 8:00am	Committee Members	Board Room
8:00am – 10:00am	URS Griener	Stone Cottage
10:30am – 12:30pm	Freese & Nichols	Board Room
12:30pm – 1:30pm	Lunch	Board Room
1:30pm – 3:30pm	HNTB	Stone Cottage
3:30pm – 5:00pm	Panel Discussion/Selection	Board Room

## **Evaluation Guide Lines:**

- *Each firm will be given two hours to make their presentations and answer questions from the panel, with at least 30 minutes dedicated to question and answer.*
- *Group will have open discussions about individual concerns and opinions.*
- *Panel will use evaluation criteria stated in information below, with each item having equal value to assist in ranking each firm.*
- *Each member will then individually grade each firm, in a similar manner, giving each item a grade from 1-10, with 10 being best.*
- *Each member based on the total score given will rank the firms in order of grade 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup>.*
- *All panel members will submit their rankings to establish initial order.*
- *Each firm will be given an overall grade based on rank submitted by each member. 1<sup>st</sup> place will be awarded one point, 2<sup>nd</sup> place will be awarded 2 points and 3<sup>rd</sup> place will be awarded 3 points. The firm with the fewest total points will be the competition winner.*



NAME OF FIRM

HNTB

#3

SCORE SHEET

1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) \_\_\_\_\_ POINTS**
2. **Landscaping (1-10) \_\_\_\_\_ POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
5. **Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS**

**TOTAL SCORE \_\_\_\_\_ POINTS**

Bill

NAME OF FIRM URS

SCORE SHEET

1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 8 POINTS**
2. **Landscaping (1-10) 5 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 5 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 5 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 10 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 5 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 5 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 6 POINTS**

**TOTAL SCORE 49 POINTS**

NAME OF FIRM Holt - Freese - Nichols

SCORE SHEET

1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 5 POINTS**
2. **Landscaping (1-10) 5 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 5 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 5 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 1 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 1 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 10 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 10 POINTS**

**TOTAL SCORE 42 POINTS**

NAME OF FIRM HNTB

SCORE-SHEET

1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 10 POINTS**
2. **Landscaping (1-10) 5 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 8 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 6 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 5 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 8 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 6 POINTS**

**TOTAL SCORE 56 POINTS**

*Mike*



NAME OF FIRM URS

SCORE SHEET

1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) 9 POINTS**
2. **Landscaping (1-10) 6 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 7 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 10 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 9 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 9 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 10 POINTS**

**TOTAL SCORE 68 POINTS**

nh

NAME OF FIRM FROESE & MICHOLES

3

SCORE SHEET

1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) 7 POINTS**
2. **Landscaping (1-10) 7 POINTS**
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 9 POINTS**
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 9 POINTS**
5. **Estimated cost of construction of the bridge design (1-10) 7 POINTS**
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 7 POINTS**
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 9 POINTS**
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 9 POINTS**

**TOTAL SCORE 64 POINTS**

Diane

NAME OF FIRM URS

SCORE SHEET

1. **Aesthetics – appearance day and night, should include lighting design plan (1-10) 9 POINTS**
2. **Landscaping (1-10) 6 POINTS** 15
3. **Acoustics (how will noise affect adjacent buildings) (1-10) 8 POINTS** 23
4. **Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS** 31
5. **Estimated cost of construction of the bridge design (1-10) 9 POINTS** 40
6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 6 POINTS** 46
7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 9 POINTS** 55
8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 9 POINTS** 64

**TOTAL SCORE 64 POINTS**

NAME OF FIRM PRICESE-NICHOLS

SCORE SHEET

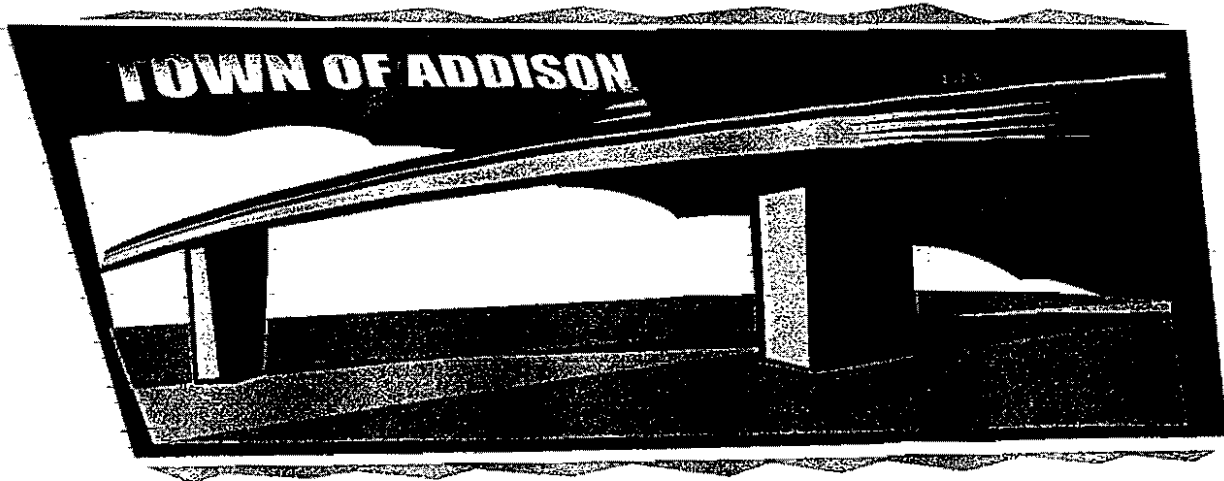
1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) 8 POINTS**
  2. **Landscaping (1-10) 8 POINTS**
  3. **Acoustics (how will noise affect adjacent buildings) (1-10) 8 POINTS**
  4. **Vibrations (how will motion impact adjacent buildings) (1-10) 8 POINTS** 32
  5. **Estimated cost of construction of the bridge design (1-10) 4 POINTS** 36
  6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 7 POINTS** 43
  7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 9 POINTS** 52
  8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 8 POINTS** 60
- TOTAL SCORE 60 POINTS**



NAME OF FIRM HNTB

SCORE SHEET

1. **Aesthetics - appearance day and night, should include lighting design plan (1-10) 5 POINTS**
  2. **Landscaping (1-10) 2 POINTS** 7
  3. **Acoustics (how will noise affect adjacent buildings) (1-10) 6 POINTS** 13
  4. **Vibrations (how will motion impact adjacent buildings) (1-10) 6 POINTS** 19
  5. **Estimated cost of construction of the bridge design (1-10) 5 POINTS** 24
  6. **Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) 5 POINTS** 29
  7. **How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) 8 POINTS** 37
  8. **Overall quality and creativity of presentation (vision, team plan / effort) (1-10) 8 POINTS** 45
- TOTAL SCORE 45 POINTS**



## **Arapaho Road Bridge Competition Agenda April 11, 2002**

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  - D. Vibrations (how will motion affect adjacent buildings)**
  - E. Estimated cost of construction of the bridge design**
  - F. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.)**
  - G. How does the bridge minimize obstruction to adjacent buildings from roadway**
  - H. Overall quality and creativity of presentation (vision, team plan / effort)**

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SZC  
4/11/02

NAME OF FIRM \_\_\_\_\_

①  
③ SCORE SHEET ②

URS Revised	F&MS	SH&TB
5	5	6
6	5	6
7	6	6
9	9	8
8	8	9
7	8	8
8	7	7
<u>58</u>	<u>54</u>	<u>55</u>
5% MAX	0.68% OF MAX	0.69% OF MAX

- 1. Aesthetics - appearance day and night, should include lighting design plan (1-10) \_\_\_\_\_ POINTS**
- 2. Landscaping (1-10) \_\_\_\_\_ POINTS**
- 3. Acoustics (how will noise affect adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 4. Vibrations (how will motion impact adjacent buildings) (1-10) \_\_\_\_\_ POINTS**
- 5. Estimated cost of construction of the bridge design (1-10) \_\_\_\_\_ POINTS**
- 6. Functionality / build ability (parking, pedestrian and bike users, safety, ADA etc.) (1-10) \_\_\_\_\_ POINTS**
- 7. How does the bridge minimize obstruction to adjacent buildings from roadway (1-10) \_\_\_\_\_ POINTS**
- 8. Overall quality and creativity of presentation (vision, team plan / effort) (1-10) \_\_\_\_\_ POINTS**

**TOTAL SCORE \_\_\_\_\_ POINTS**

VIBRATION? RESTRICT THE FAR CONSTRUCTION NOISE? FHWV TRAFFIC NOISE MORE 60dB CONTOUR 1250 FEET

URS GREINER  
\$3.9M

GREINER - BLUE-STEEL ARCH - BLUE & WHITE LIGHTS (LOOKS GOOD AT NIGHT)  
 BEACON BRIDGE - CONCRETE STRUCTURE W/ 4 TALL BEACON TOWERS (LOOKS GOOD IN DAY)  
 CAST IN PLACE, POST TENSIONED, CONTINUOUS 2170 SPAN ACROSS MIDWAY, CANTILEVER TO ROADWAY WINGS  
 DOUBLE SHAFT FOOTING 45" DIA.  
 \$5.3M ABOVE COST  
 SUPERSTRUCTURE 174 SPAN ACROSS MIDWAY  
 TUBULAR STEEL ARCH  
 PRECAST TEXAS U-BEAM SINGLE FLARED PIER