

Appendix D Cost Estimates

Table 2. Order of Magnitude Project Cost Ranges

Work Items (includes fully loaded labor, material, construction and management)

Preliminary Alternative-Specific Costs¹

| | SP-Opt.1: Precast Girder | | SP-Opt.2: CIP Box | | CS-Opt.2: Rigid Frame | | EB: CIP BOX | |
|----------------------------------|--------------------------|----------------------|----------------------|----------------------|-----------------------|----------------------|----------------------|----------------------|
| | -30% | 50% | -30% | 50% | -30% | 50% | -30% | 50% |
| Preconstruction - Design/Permits | \$ 1,544,000 | \$ 3,308,000 | \$ 1,544,000 | \$ 3,308,000 | \$ 1,544,000 | \$ 3,308,000 | \$ 1,817,000 | \$ 3,893,000 |
| Mobilization | \$ 2,349,000 | \$ 5,034,000 | \$ 2,349,000 | \$ 5,034,000 | \$ 2,380,000 | \$ 5,099,000 | \$ 2,384,000 | \$ 5,109,000 |
| Environmental | \$ 690,000 | \$ 1,479,000 | \$ 690,000 | \$ 1,479,000 | \$ 651,000 | \$ 1,395,000 | \$ 735,000 | \$ 1,575,000 |
| Earthwork | \$ 1,364,000 | \$ 2,924,000 | \$ 1,361,000 | \$ 2,917,000 | \$ 1,361,000 | \$ 2,917,000 | \$ 1,422,000 | \$ 3,046,000 |
| Structural | \$ 3,422,000 | \$ 7,333,000 | \$ 2,937,000 | \$ 6,293,000 | \$ 3,847,000 | \$ 8,244,000 | \$ 5,409,000 | \$ 11,592,000 |
| Roadway | \$ 903,000 | \$ 1,934,000 | \$ 526,000 | \$ 1,126,000 | \$ 523,000 | \$ 1,122,000 | \$ 1,127,000 | \$ 2,415,000 |
| Aesthetics | \$ 308,000 | \$ 660,000 | \$ 282,000 | \$ 605,000 | \$ 309,000 | \$ 663,000 | \$ 387,000 | \$ 829,000 |
| Drainage | \$ 719,000 | \$ 1,541,000 | \$ 658,000 | \$ 1,411,000 | \$ 721,000 | \$ 1,546,000 | \$ 903,000 | \$ 1,934,000 |
| Utilities/Electrical | \$ 257,000 | \$ 550,000 | \$ 235,000 | \$ 504,000 | \$ 258,000 | \$ 552,000 | \$ 322,000 | \$ 691,000 |
| Traffic Control | \$ 822,000 | \$ 1,761,000 | \$ 753,000 | \$ 1,613,000 | \$ 824,000 | \$ 1,767,000 | \$ 1,031,000 | \$ 2,210,000 |
| Landscaping | \$ 154,000 | \$ 330,000 | \$ 141,000 | \$ 302,000 | \$ 155,000 | \$ 331,000 | \$ 645,000 | \$ 1,381,000 |
| Signing/Striping | \$ 205,000 | \$ 440,000 | \$ 188,000 | \$ 403,000 | \$ 206,000 | \$ 442,000 | \$ 258,000 | \$ 553,000 |
| Contingency- Detail Scope | \$ 3,184,000 | \$ 6,824,000 | \$ 2,916,000 | \$ 6,249,000 | \$ 3,195,000 | \$ 6,846,000 | \$ 4,110,000 | \$ 8,807,000 |
| Proj Mang./Constr. Mang. | \$ 2,122,000 | \$ 4,548,000 | \$ 1,948,000 | \$ 4,174,000 | \$ 2,129,000 | \$ 4,563,000 | \$ 2,724,000 | \$ 5,837,000 |
| TOTAL | \$ 18,043,000 | \$ 38,666,000 | \$ 16,528,000 | \$ 35,418,000 | \$ 18,103,000 | \$ 38,795,000 | \$ 23,274,000 | \$ 49,872,000 |

| Single Pier Opt.1 | Single Pier Opt.2 | Clear Span Opt.2 | Elevated Bridge |
|---------------------|---------------------|---------------------|---------------------|
| \$2,205,500 | \$2,205,500 | \$2,205,500 | \$2,595,500 |
| \$3,355,900 | \$3,355,900 | \$3,399,300 | \$3,405,900 |
| \$985,800 | \$985,800 | \$929,800 | \$1,049,800 |
| \$1,949,216 | \$1,944,816 | \$1,944,816 | \$2,030,816 |
| \$4,888,400 | \$4,195,000 | \$5,496,100 | \$7,727,734 |
| \$1,289,590 | \$750,720 | \$747,670 | \$1,609,853 |
| \$440,232 | \$403,132 | \$441,696 | \$552,588 |
| \$1,027,208 | \$940,642 | \$1,030,623 | \$1,289,372 |
| \$366,860 | \$335,943 | \$368,080 | \$460,490 |
| \$1,173,952 | \$1,075,019 | \$1,177,855 | \$1,473,568 |
| \$220,116 | \$201,566 | \$220,848 | \$920,980 |
| \$293,488 | \$268,755 | \$294,464 | \$368,392 |
| \$4,549,066 | \$4,165,698 | \$4,564,188 | \$5,871,248 |
| \$3,031,893 | \$2,782,704 | \$3,041,722 | \$3,891,311 |
| \$25,777,222 | \$23,611,195 | \$25,862,660 | \$33,247,554 |

1 – Order of Magnitude (Accuracy Range: +50% / -30%)

SP-Opt.1 – Single Pier (Precast Concrete Girders)

SP-Opt.2 – Single Pier (Cast-in-Place Concrete Box)

CS-Opt.2 – Clear Span (Rigid Frame)

EB - Elevated Bridge

Includes North and South Bridges.

| | 9,562 | 9,562 | 10,238 | 11,453 | LEGEND |
|------------------------------|----------|----------|----------|----------|--|
| North Bridge Deck Area (ft2) | | | | | |
| Cost (\$/ft2) | \$364.93 | \$304.02 | \$407.52 | \$364.93 | \$/ft2 from quantity-based cost estimates |
| South Bridge Deck Area (ft2) | 4,390 | 4,390 | 4,390 | 9,723 | |
| Cost (\$/ft2) | \$318.67 | \$293.39 | \$301.57 | \$364.93 | \$/ft2 assumed from SP-Opt. 1 North Bridge |

This is not an offer for construction and/or project execution.

These AACE Classification Class 4 cost estimates are assumed to represent the actual total installed cost within the range of -30 percent to +50 percent (% based on AACE) of the cost indicated. It would appear prudent that internal budget allowances account for the highest cost indicated by this range as well as other site specific allowances. The cost estimate has been prepared for guidance in project evaluation and implementation from the information available at the time of the estimate. The final costs of the project will depend on actual labor and material costs, competitive market conditions, implementation schedule, and other variable factors. As a result, the final project costs will vary from the estimates presented herein. Because of this, project feasibility and funding needs must be carefully reviewed prior to making specific financial decisions to help ensure proper project evaluation and adequate funding.

Arlington Avenue Bridges, Reno NV
Precast Prestress Bridge Alternative

COST ESTIMATE SUMMARY

Site: Arlington Avenue Bridges
Location: Reno, NV
Phase: Pre-NEPA/Construction Feasibility Study
Base Year: 2021
Date: 1/27/2021

Description: Precast Prestress Bridge Alternative

CAPITAL COSTS

| DESCRIPTION | QTY | UNIT | UNIT COST | TOTAL | NOTES |
|--|--------|------|-------------|--------------------|--|
| Preconstruction - Design/Permits | | | | | |
| Design | 8000 | HR | \$175 | \$1,400,000 | |
| Design PM | 800 | HR | \$200 | \$160,000 | |
| Meetings w/stakeholders | 6 | EA | \$10,000 | \$60,000 | |
| Biological survey and report | 220 | HR | \$125 | \$27,500 | Historical |
| Cultural survey and report | 360 | HR | \$150 | \$54,000 | Historical |
| Survey | 30 | DY | \$3,300 | \$99,000 | Includes office engineering |
| Permits | | | | | |
| Initial Permit Application | 1060 | HR | \$130 | \$137,800 | USACE 404 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee | 1 | LS | \$40,000 | \$40,000 | |
| Initial Permit Application | 560 | HR | \$130 | \$72,800 | USACE 408 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee (Includes Funding via 1156 agreement) | 1 | LS | \$40,000 | \$40,000 | |
| SUBTOTAL | | | | \$2,205,500 | |
| Mobilization/Demobilization | | | | | |
| Workplan, procurement | 500 | HR | \$200 | \$100,000 | Historical, Contractor's cost |
| H&S, Stormwater, Environmental Plans | 360 | HR | \$110 | \$39,600 | Historical, Contractor's cost |
| Permits | 5 | EA | \$10,000 | \$50,000 | County construction |
| Meetings w/stakeholders | 6 | EA | \$30,000 | \$180,000 | |
| Survey | 80 | DY | \$3,000 | \$240,000 | Includes office engineering |
| Temporary fencing | 1500 | LF | \$25 | \$37,500 | Traffic Control Below |
| Temporary Utility Hookups | 1 | LS | \$30,000 | \$30,000 | Water, Power, communications |
| Set-up laydown yard | 10 | MO | \$25,000 | \$250,000 | |
| Trailers and Connex boxes | 30 | MO | \$10,000 | \$300,000 | Historical |
| Monthly trailer/utility costs | 20 | MO | \$1,200 | \$24,000 | Historical |
| Sanitary Units | 40 | MO | \$120 | \$4,800 | |
| Mobilize/Demob Equipment - Initial | 1 | EA | \$1,200,000 | \$1,200,000 | |
| Mobilize/Demob Equipment- Winter Shutdown | 1 | EA | \$900,000 | \$900,000 | |
| SUBTOTAL | | | | \$3,355,900 | |
| Environmental/Biological/Cultural/Water Treatment | | | | | |
| Biological Audits/Reports | 320 | HR | \$125 | \$40,000 | Historical |
| Cultural survey and report | 480 | HR | \$125 | \$60,000 | Historical |
| Soil/Bridge Sampling | 32 | HR | \$125 | \$4,000 | Historical |
| Sampling Supplies/Freight/Lab Analysis | 1 | LS | \$10,000 | \$10,000 | Allowance |
| Data Validation and Report | 40 | HR | \$145 | \$5,800 | Historical |
| Temp Upstream dam | 3 | EA | \$50,000 | \$150,000 | Upstream dam |
| Bypass Flue | 1200 | LF | \$70 | \$84,000 | CMP Flue |
| Misc Upstream Riprap | 200 | TN | \$80 | \$16,000 | |
| Cofferdam dewatering system | 3 | EA | \$150,000 | \$450,000 | Sump pumps, piping, power connection |
| Baker Tanks | 3 | EA | \$50,000 | \$150,000 | |
| Misc Downstream Riprap | 200 | TN | \$80 | \$16,000 | |
| SUBTOTAL | | | | \$985,800 | |
| Earthwork | | | | | |
| Site Prep/Access Road | 1 | LS | \$30,000 | \$30,000 | |
| Temporary Cofferdam | 40,000 | SF | \$35 | \$1,400,000 | North and South abutments, center pier |
| Demo Existing Utilities | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Fence and Walls | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Deck and Supports | 14,245 | SF | \$20 | \$284,900 | Sawcut sections |
| Demo Existing Foundation | 628 | CY | \$22 | \$13,816 | |
| Structural Excavation | 1,000 | CY | \$44 | \$44,000 | |
| Backfilling excavation with clean fill material | 200 | CY | \$35 | \$7,000 | assume 250 CY/day backfill |
| RipRap | 300 | CY | \$65 | \$19,500 | |
| SUBTOTAL | | | | \$1,949,216 | |
| Structural (North) | | | | | |
| Misc Falsework | 2000 | SF | \$25 | \$50,000 | Allowance |
| Drilled Shaft Foundation, 48" dia | 720 | VF | \$460 | \$331,200 | NDOT Historical |
| Pile Cap | 36 | CY | \$800 | \$28,800 | NDOT Historical |
| North Abutment | 130 | CY | \$1,100 | \$143,000 | NDOT Historical |
| South Abutment | 202 | CY | \$1,100 | \$222,200 | NDOT Historical |
| Center Pier | 212 | CY | \$1,300 | \$275,600 | NDOT Historical |
| Cap Beam | 88 | CY | \$1,200 | \$105,600 | NDOT Historical |
| Precast Girders | 1625 | LF | \$1,050 | \$1,706,250 | NDOT Historical |
| Wing Walls | 81 | CY | \$1,200 | \$97,200 | NDOT Historical |
| Wing Wall Foundations | 100 | CY | \$1,200 | \$120,000 | NDOT Historical |
| Reinforcement | 339600 | LB | \$1 | \$339,600 | NDOT Historical |
| Expansion Joint | 160 | LF | \$250 | \$40,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$30,000 | \$30,000 | |
| SUBTOTAL | | | | \$3,489,450 | |
| Roadway (North) | | | | | |
| Bridge Deck | 9,825 | SF | \$38 | \$373,350 | NDOT Historical |
| Bridge Deck Preparation | 1,090 | SY | \$6 | \$6,540 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 1,090 | SY | \$55 | \$59,950 | NDOT Historical |
| Concrete Railing and walk | 262 | LF | \$700 | \$183,400 | NDOT Historical |
| Guardrail | 300 | LF | \$45 | \$13,500 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 200 | LF | \$45 | \$9,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 600 | SY | \$65 | \$39,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 8,000 | SF | \$8 | \$64,000 | NDOT Historical |
| SUBTOTAL | | | | \$748,740 | |
| Structural (South) | | | | | |
| Misc Falsework | 1200 | SF | \$25 | \$30,000 | Allowance |
| Drilled Shaft Foundation, 36" dia | 560 | VF | \$250 | \$140,000 | NDOT Historical |
| Pile Cap | 22 | CY | \$800 | \$17,600 | NDOT Historical |
| North Abutment | 82 | CY | \$1,100 | \$90,200 | NDOT Historical |
| South Abutment | 146 | CY | \$1,100 | \$160,600 | NDOT Historical |
| Center Pier | 0 | CY | \$1,300 | \$0 | NDOT Historical |
| Cap Beam | 0 | CY | \$1,200 | \$0 | NDOT Historical |
| Precast Girders | 715 | LF | \$970 | \$693,550 | NDOT Historical |
| Wing Walls | 25 | CY | \$1,200 | \$30,000 | NDOT Historical |
| Wing Wall Foundations | 45 | CY | \$1,200 | \$54,000 | NDOT Historical |
| Reinforcement | 128000 | LB | \$1 | \$128,000 | NDOT Historical |
| Expansion Joint | 140 | LF | \$250 | \$35,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$20,000 | \$20,000 | |
| SUBTOTAL | | | | \$1,398,950 | |
| Roadway (South) | | | | | |
| Bridge Deck | 4,420 | SF | \$38 | \$167,960 | NDOT Historical |
| Bridge Deck Preparation | 490 | SY | \$6 | \$2,940 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 490 | SY | \$55 | \$26,950 | NDOT Historical |
| Concrete Railing and walk | 130 | LF | \$700 | \$91,000 | NDOT Historical |
| Guardrail | 400 | LF | \$45 | \$18,000 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 800 | LF | \$45 | \$36,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 1,200 | SY | \$65 | \$78,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 15,000 | SF | \$8 | \$120,000 | NDOT Historical |
| SUBTOTAL | | | | \$540,850 | |
| Roadway (Middle) | | | | | |
| Pulverize Existing Roadway | | SF | | \$0 | NDOT Historical |
| New Base | 0 | CY | | \$0 | NDOT Historical |

| | | | | | |
|--|-----|----|--------------|---------------------|--|
| New AC | 0 | CY | | \$0 | NDOT Historical |
| Fill Volume | | CY | | \$0 | NDOT Historical |
| SUBTOTAL | | | | \$0 | |
| Aesthetics | | | | | |
| 3% Lump Sum | 1 | LS | \$440,232 | <u>\$440,232</u> | NDOT Historical |
| SUBTOTAL | | | | \$440,232 | |
| Drainage | | | | | |
| 7% Lump Sum | 1 | LS | \$1,027,208 | <u>\$1,027,208</u> | NDOT Historical |
| SUBTOTAL | | | | \$1,027,208 | |
| Utilities/Electrical | | | | | |
| 2.5% Lump Sum | 1 | LS | \$366,860 | <u>\$366,860</u> | NDOT Historical |
| SUBTOTAL | | | | \$366,860 | |
| Traffic Control | | | | | |
| 8% Lump Sum | 1 | LS | \$1,173,952 | <u>\$1,173,952</u> | NDOT Historical |
| SUBTOTAL | | | | \$1,173,952 | |
| Landscaping | | | | | |
| 1.5% Lump Sum | 1 | LS | \$220,116 | <u>\$220,116</u> | NDOT Historical |
| SUBTOTAL | | | | \$220,116 | |
| Signing Striping | | | | | |
| 2% Lump Sum | 1 | LS | \$293,488 | <u>\$293,488</u> | NDOT Historical |
| SUBTOTAL | | | | \$293,488 | |
| SUBTOTAL CONSTRUCTION | | | | \$18,196,263 | |
| Contingency - 25% of Construction Subtotal | 25% | % | \$18,196,263 | <u>\$4,549,066</u> | 10% Scope + 15% Bid |
| SUBTOTAL | | | | \$22,745,329 | |
| Project Management | 5% | | \$22,745,329 | \$1,137,266 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Construction Management | 8% | | \$22,745,329 | \$1,819,626 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Record Drawings | 1 | LS | \$75,000 | <u>\$75,000</u> | Document Const. Work, QA/QC, and Record DWGs |
| SUBTOTAL | | | | \$3,031,893 | |
| TOTAL CAPITAL COST | | | | \$25,780,000 | |

Arlington Avenue Bridges, Reno NV
Box Girder Bridge Alternative

COST ESTIMATE SUMMARY

Site: Arlington Avenue Bridges
Location: Reno, NV
Phase: Pre-NEPA/Construction Feasibility Study
Base Year: 2021
Date: 1/27/2021

Description: Box Girder Bridge Alternative

CAPITAL COSTS

| DESCRIPTION | QTY | UNIT | UNIT COST | TOTAL | NOTES |
|--|--------|------|-------------|--------------------|--|
| Preconstruction - Design/Permits | | | | | |
| Design | 8000 | HR | \$175 | \$1,400,000 | |
| Design PM | 800 | HR | \$200 | \$160,000 | |
| Meetings w/stakeholders | 6 | EA | \$10,000 | \$60,000 | |
| Biological survey and report | 220 | HR | \$125 | \$27,500 | Historical |
| Cultural survey and report | 360 | HR | \$150 | \$54,000 | Historical |
| Survey | 30 | DY | \$3,300 | \$99,000 | Includes office engineering |
| Permits | | | | | |
| Initial Permit Application | 1060 | HR | \$130 | \$137,800 | USACE 404 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee | 1 | LS | \$40,000 | \$40,000 | |
| Initial Permit Application | 560 | HR | \$130 | \$72,800 | USACE 408 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee (Includes Funding via 1156 agreement) | 1 | LS | \$40,000 | \$40,000 | |
| SUBTOTAL | | | | \$2,205,500 | |
| Mobilization/Demobilization | | | | | |
| Workplan, procurement | 500 | HR | \$200 | \$100,000 | Historical |
| H&S, Stormwater, Environmental Plans | 360 | HR | \$110 | \$39,600 | Historical |
| Permits | 5 | EA | \$10,000 | \$50,000 | USACE River, County |
| Meetings w/stakeholders | 6 | EA | \$30,000 | \$180,000 | |
| Survey | 80 | DY | \$3,000 | \$240,000 | Includes office engineering |
| Temporary fencing | 1500 | LF | \$25 | \$37,500 | Traffic Control Below |
| Temporary Utility Hookups | 1 | LS | \$30,000 | \$30,000 | Water, Power, communications |
| Set-up laydown yard | 10 | MO | \$25,000 | \$250,000 | |
| Trailers and Connex boxes | 30 | MO | \$10,000 | \$300,000 | Historical |
| Monthly trailer/utility costs | 20 | MO | \$1,200 | \$24,000 | Historical |
| Sanitary Units | 40 | MO | \$120 | \$4,800 | |
| Mobilize/Demob Equipment - Initial | 1 | EA | \$1,200,000 | \$1,200,000 | |
| Mobilize/Demob Equipment- Winter Shutdown | 1 | EA | \$900,000 | \$900,000 | |
| SUBTOTAL | | | | \$3,355,900 | |
| Environmental/Biological/Cultural/Water Treatment | | | | | |
| Biological Audits/Reports | 320 | HR | \$125 | \$40,000 | Historical |
| Cultural survey and report | 480 | HR | \$125 | \$60,000 | Historical |
| Soil/Bridge Sampling | 32 | HR | \$125 | \$4,000 | Historical |
| Sampling Supplies/Freight/Lab Analysis | 1 | LS | \$10,000 | \$10,000 | Allowance |
| Data Validation and Report | 40 | HR | \$145 | \$5,800 | Historical |
| Temp Upstream dam | 3 | EA | \$50,000 | \$150,000 | Upstream dam |
| Bypass Flue | 1200 | LF | \$70 | \$84,000 | CMP Flue |
| Misc Upstream Riprap | 200 | TN | \$80 | \$16,000 | |
| Cofferdam dewatering system | 3 | EA | \$150,000 | \$450,000 | Sump pumps, piping, power connection |
| Baker Tanks | 3 | EA | \$50,000 | \$150,000 | |
| Misc Downstream Riprap | 200 | TN | \$80 | \$16,000 | |
| SUBTOTAL | | | | \$985,800 | |
| Earthwork | | | | | |
| Site Prep/Access Road | 1 | LS | \$30,000 | \$30,000 | |
| Temporary Cofferdam | 40,000 | SF | \$35 | \$1,400,000 | North and South abutments, center pier |
| Demo Existing Utilities | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Fence and Walls | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Deck and Supports | 14,245 | SF | \$20 | \$284,900 | Sawcut sections |
| Demo Existing Foundation | 628 | CY | \$22 | \$13,816 | |
| Structural Excavation | 900 | CY | \$44 | \$39,600 | |
| Backfilling excavation with clean fill material | 200 | CY | \$35 | \$7,000 | assume 250 CY/day backfill |
| RipRap | 300 | CY | \$65 | \$19,500 | |
| SUBTOTAL | | | | \$1,944,816 | |
| Structural (North) | | | | | |
| Misc Falsework | 9800 | SF | \$25 | \$245,000 | Allowance |
| Drilled Shaft Foundation, 48" dia | 720 | VF | \$460 | \$331,200 | NDOT Historical |
| Pile Cap | 36 | CY | \$800 | \$28,800 | NDOT Historical |
| North Abutment | 126 | CY | \$1,100 | \$138,600 | NDOT Historical |
| South Abutment | 200 | CY | \$1,100 | \$220,000 | NDOT Historical |
| Center Pier | 212 | CY | \$1,300 | \$275,600 | NDOT Historical |
| Cap Beam | 88 | CY | \$1,200 | \$105,600 | NDOT Historical |
| Cast-in-place Box and Deck | 521 | CY | \$1,400 | \$729,400 | NDOT Historical |
| Wing Walls | 81 | CY | \$1,200 | \$97,200 | NDOT Historical |
| Wing Wall Foundations | 100 | CY | \$1,200 | \$120,000 | NDOT Historical |
| Reinforcement | 545600 | LB | \$1 | \$545,600 | NDOT Historical |
| Expansion Joint | 160 | LF | \$250 | \$40,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$30,000 | \$30,000 | |
| SUBTOTAL | | | | \$2,907,000 | |
| Roadway (North) | | | | | |
| Bridge Deck | 0 | SF | \$38 | \$0 | NDOT Historical |
| Bridge Deck Preparation | 1,090 | SY | \$6 | \$6,540 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 1,090 | SY | \$55 | \$59,950 | NDOT Historical |
| Concrete Railing and walk | 262 | LF | \$700 | \$183,400 | NDOT Historical |
| Guardrail | 300 | LF | \$45 | \$13,500 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 200 | LF | \$45 | \$9,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 600 | SY | \$65 | \$39,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 8,000 | SF | \$8 | \$64,000 | NDOT Historical |
| SUBTOTAL | | | | \$375,390 | |
| Structural (South) | | | | | |
| Misc Falsework | 5000 | SF | \$25 | \$125,000 | Allowance |
| Drilled Shaft Foundation, 36" dia | 560 | VF | \$250 | \$140,000 | NDOT Historical |
| Pile Cap | 22 | CY | \$800 | \$17,600 | NDOT Historical |
| North Abutment | 89 | CY | \$1,100 | \$97,900 | NDOT Historical |
| South Abutment | 91 | CY | \$1,100 | \$100,100 | NDOT Historical |
| Center Pier | 0 | CY | \$1,300 | \$0 | NDOT Historical |
| Cap Beam | 0 | CY | \$1,200 | \$0 | NDOT Historical |
| Cast-in-place Box and Deck | 262 | CY | \$1,400 | \$366,800 | NDOT Historical |
| Wing Walls | 25 | CY | \$1,200 | \$30,000 | NDOT Historical |
| Wing Wall Foundations | 100 | CY | \$1,200 | \$120,000 | NDOT Historical |
| Reinforcement | 235600 | LB | \$1 | \$235,600 | NDOT Historical |
| Expansion Joint | 140 | LF | \$250 | \$35,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$20,000 | \$20,000 | |
| SUBTOTAL | | | | \$1,288,000 | |
| Roadway (South) | | | | | |
| Bridge Deck | 0 | SF | \$38 | \$0 | NDOT Historical |
| Bridge Deck Preparation | 530 | SY | \$6 | \$3,180 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 530 | SY | \$55 | \$29,150 | NDOT Historical |
| Concrete Railing and walk | 130 | LF | \$700 | \$91,000 | NDOT Historical |
| Guardrail | 400 | LF | \$45 | \$18,000 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 800 | LF | \$45 | \$36,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 1,200 | SY | \$65 | \$78,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 15,000 | SF | \$8 | \$120,000 | NDOT Historical |
| SUBTOTAL | | | | \$375,330 | |
| Roadway (Middle) | | | | | |
| Pulverize Existing Roadway | | SF | | \$0 | NDOT Historical |
| New Base | 0 | CY | | \$0 | NDOT Historical |

| | | | | | |
|------------------------------|-----|----|--------------|---------------------|--|
| New AC | 0 | CY | | \$0 | NDOT Historical |
| Fill Volume | | CY | | \$0 | NDOT Historical |
| SUBTOTAL | | | | \$0 | |
| Aesthetics | | | | | |
| 3% Lump Sum | 1 | LS | \$403,132 | \$403,132 | NDOT Historical |
| SUBTOTAL | | | | \$403,132 | |
| Drainage | | | | | |
| 7% Lump Sum | 1 | LS | \$940,642 | \$940,642 | NDOT Historical |
| SUBTOTAL | | | | \$940,642 | |
| Utilities/Electrical | | | | | |
| 2.5% Lump Sum | 1 | LS | \$335,943 | \$335,943 | NDOT Historical |
| SUBTOTAL | | | | \$335,943 | |
| Traffic Control | | | | | |
| 8% Lump Sum | 1 | LS | \$1,075,019 | \$1,075,019 | NDOT Historical |
| SUBTOTAL | | | | \$1,075,019 | |
| Landscaping | | | | | |
| 1.5% Lump Sum | 1 | LS | \$201,566 | \$201,566 | NDOT Historical |
| SUBTOTAL | | | | \$201,566 | |
| Signing Striping | | | | | |
| 2% Lump Sum | 1 | LS | \$268,755 | \$268,755 | NDOT Historical |
| SUBTOTAL | | | | \$268,755 | |
| SUBTOTAL CONSTRUCTION | | | | \$16,662,793 | |
| Contingency | 25% | | \$16,662,793 | \$4,165,698 | 10% Scope + 15% Bid |
| SUBTOTAL | | | | \$20,828,491 | |
| Project Management | 5% | | \$20,828,491 | \$1,041,425 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Construction Management | 8% | | \$20,828,491 | \$1,666,279 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Record Drawings | 1 | LS | \$75,000 | \$75,000 | Document Const. Work, QA/QC, and Record DWGs |
| SUBTOTAL | | | | \$2,782,704 | |
| TOTAL CAPITAL COST | | | | \$23,610,000 | |

Arlington Avenue Bridges, Reno NV
Rigid Frame Bridge Alternative

COST ESTIMATE SUMMARY

Site: Arlington Avenue Bridges
Location: Reno, NV
Phase: Pre-NEPA/Construction Feasibility Study
Base Year: 2021
Date: 1/27/2021

Description: Rigid Frame Bridge Alternative

CAPITAL COSTS

| DESCRIPTION | QTY | UNIT | UNIT COST | TOTAL | NOTES |
|--|--------|------|-------------|--------------------|--------------------------------------|
| Preconstruction - Design/Permits | | | | | |
| Design | 8000 | HR | \$175 | \$1,400,000 | |
| Design PM | 800 | HR | \$200 | \$160,000 | |
| Meetings w/stakeholders | 6 | EA | \$10,000 | \$60,000 | |
| Biological survey and report | 220 | HR | \$125 | \$27,500 | Historical |
| Cultural survey and report | 360 | HR | \$150 | \$54,000 | Historical |
| Survey | 30 | DY | \$3,300 | \$99,000 | Includes office engineering |
| Permits | | | | | |
| Initial Permit Application | 1060 | HR | \$130 | \$137,800 | USACE 404 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee | 1 | LS | \$40,000 | \$40,000 | |
| Initial Permit Application | 560 | HR | \$130 | \$72,800 | USACE 408 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee (Includes Funding via 1156 agreement) | 1 | LS | \$40,000 | \$40,000 | |
| SUBTOTAL | | | | \$2,205,500 | |
| Mobilization/Demobilization | | | | | |
| Workplan, procurement | 500 | HR | \$200 | \$100,000 | Historical |
| H&S, Stormwater, Environmental Plans | 300 | HR | \$110 | \$33,000 | Historical |
| Permits | 5 | EA | \$20,000 | \$100,000 | USACE River, County |
| Meetings w/stakeholders | 6 | EA | \$30,000 | \$180,000 | |
| Survey | 80 | DY | \$3,000 | \$240,000 | Includes office engineering |
| Temporary fencing | 1500 | LF | \$25 | \$37,500 | Traffic Control Below |
| Temporary Utility Hookups | 1 | LS | \$30,000 | \$30,000 | Water, Power, communications |
| Set-up laydown yard | 10 | MO | \$25,000 | \$250,000 | |
| Trailers and Connex boxes | 30 | MO | \$10,000 | \$300,000 | Historical |
| Monthly trailer/utility costs | 20 | MO | \$1,200 | \$24,000 | Historical |
| Sanitary Units | 40 | MO | \$120 | \$4,800 | |
| Mobilize/Demob Equipment - Initial | 1 | EA | \$1,200,000 | \$1,200,000 | |
| Mobilize/Demob Equipment- Winter Shutdown | 1 | EA | \$900,000 | \$900,000 | |
| SUBTOTAL | | | | \$3,399,300 | |
| Environmental/Biological/Cultural/Water Treatment | | | | | |
| Biological Audits/Reports | 320 | HR | \$125 | \$40,000 | Historical |
| Cultural survey and report | 480 | HR | \$125 | \$60,000 | Historical |
| Soil/Bridge Sampling | 32 | HR | \$125 | \$4,000 | Historical |
| Sampling Supplies/Freight/Lab Analysis | 1 | LS | \$10,000 | \$10,000 | Allowance |
| Data Validation and Report | 40 | HR | \$145 | \$5,800 | Historical |
| Temp Upstream dam | 3 | EA | \$50,000 | \$150,000 | Upstream dam |
| Bypass Flue | 400 | LF | \$70 | \$28,000 | CMP Flue |
| Misc Upstream Riprap | 200 | TN | \$80 | \$16,000 | |
| Cofferdam dewatering system | 3 | EA | \$150,000 | \$450,000 | Sump pumps, piping, power connection |
| Baker Tanks | 3 | EA | \$50,000 | \$150,000 | |
| Misc Downstream Riprap | 200 | TN | \$80 | \$16,000 | |
| SUBTOTAL | | | | \$929,800 | |
| Earthwork | | | | | |
| Site Prep/Access Road | 1 | LS | \$30,000 | \$30,000 | |
| Temporary Cofferdam | 40,000 | SF | \$35 | \$1,400,000 | North and South abutments |
| Demo Existing Utilities | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Fence and Walls | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Deck and Supports | 14,245 | SF | \$20 | \$284,900 | Sawcut sections |
| Demo Existing Foundation | 628 | CY | \$22 | \$13,816 | |
| Structural Excavation | 900 | CY | \$44 | \$39,600 | |
| Backfilling excavation with clean fill material | 200 | CY | \$35 | \$7,000 | assume 250 CY/day backfill |
| RipRap | 300 | CY | \$65 | \$19,500 | |
| SUBTOTAL | | | | \$1,944,816 | |
| Structural (North) | | | | | |
| Misc Falsework | 14000 | SF | \$35 | \$490,000 | Allowance |
| Drilled Shaft Foundation, 48" dia | 1080 | VF | \$460 | \$496,800 | NDOT Historical |
| Pile Cap | 24 | CY | \$800 | \$19,200 | NDOT Historical |
| North Abutment | 142 | CY | \$1,100 | \$156,200 | NDOT Historical |
| South Abutment | 146 | CY | \$1,100 | \$160,600 | NDOT Historical |
| Rigid Frame | 1310 | CY | \$1,300 | \$1,703,000 | NDOT Historical |
| Wing Walls | 111 | CY | \$1,200 | \$133,200 | NDOT Historical |
| Wing Wall Foundations | 150 | CY | \$1,200 | \$180,000 | NDOT Historical |
| Reinforcement | 753200 | LB | \$1 | \$753,200 | NDOT Historical |
| Expansion Joint | 160 | LF | \$250 | \$40,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$40,000 | \$40,000 | |
| SUBTOTAL | | | | \$4,172,200 | |
| Roadway (North) | | | | | |
| Bridge Deck Preparation | 1,090 | SY | \$6 | \$6,540 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 1,090 | SY | \$55 | \$59,950 | NDOT Historical |
| Concrete Railing and walk | 262 | LF | \$700 | \$183,400 | NDOT Historical |
| Guardrail | 300 | LF | \$45 | \$13,500 | NDOT Historical |
| Remove/Replace Existing Curb and Guttter | 200 | LF | \$45 | \$9,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 600 | SY | \$65 | \$39,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 8,000 | SF | \$8 | \$64,000 | NDOT Historical |
| SUBTOTAL | | | | \$375,390 | |
| Structural (South) | | | | | |
| Misc Falsework | 5000 | SF | \$25 | \$125,000 | Allowance |
| Drilled Shaft Foundation, 36" dia | 560 | VF | \$250 | \$140,000 | NDOT Historical |
| Pile Cap | 22 | CY | \$800 | \$17,600 | NDOT Historical |
| North Abutment | 81 | CY | \$1,100 | \$89,100 | NDOT Historical |
| South Abutment | 91 | CY | \$1,100 | \$100,100 | NDOT Historical |
| Rigid Frame | 315 | CY | \$1,300 | \$409,500 | NDOT Historical |
| Cap Beam | 0 | CY | \$1,200 | \$0 | NDOT Historical |
| Cast-in-place Box and Deck | 0 | CY | \$1,400 | \$0 | NDOT Historical |
| Wing Walls | 50 | CY | \$1,200 | \$60,000 | NDOT Historical |
| Wing Wall Foundations | 65 | CY | \$1,200 | \$78,000 | NDOT Historical |
| Reinforcement | 249600 | LB | \$1 | \$249,600 | NDOT Historical |
| Expansion Joint | 140 | LF | \$250 | \$35,000 | NDOT Historical |
| Misc Minor Concrete | 1 | LS | \$20,000 | \$20,000 | |
| SUBTOTAL | | | | \$1,323,900 | |
| Roadway (South) | | | | | |
| Bridge Deck | 0 | SF | \$38 | \$0 | NDOT Historical |
| Bridge Deck Preparation | 480 | SY | \$6 | \$2,880 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 480 | SY | \$55 | \$26,400 | NDOT Historical |
| Concrete Railing and walk | 130 | LF | \$700 | \$91,000 | NDOT Historical |
| Guardrail | 400 | LF | \$45 | \$18,000 | NDOT Historical |
| Remove/Replace Existing Curb and Guttter | 800 | LF | \$45 | \$36,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 1,200 | SY | \$65 | \$78,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 15,000 | SF | \$8 | \$120,000 | NDOT Historical |
| SUBTOTAL | | | | \$372,280 | |
| Roadway (Middle) | | | | | |
| Pulverize Existing Roadway | | SF | | \$0 | NDOT Historical |
| New Base | 0 | CY | | \$0 | NDOT Historical |
| New AC | 0 | CY | | \$0 | NDOT Historical |
| Fill Volume | | CY | | \$0 | NDOT Historical |

| | | | | | |
|------------------------------|-----|----|--------------|---------------------|--|
| SUBTOTAL | | | | \$0 | |
| Aesthetics | | | | | |
| 3% Lump Sum | 1 | LS | \$441,696 | \$441,696 | NDOT Historical |
| SUBTOTAL | | | | \$441,696 | |
| Drainage | | | | | |
| 7% Lump Sum | 1 | LS | \$1,030,623 | \$1,030,623 | NDOT Historical |
| SUBTOTAL | | | | \$1,030,623 | |
| Utilities/Electrical | | | | | |
| 2.5% Lump Sum | 1 | LS | \$368,080 | \$368,080 | NDOT Historical |
| SUBTOTAL | | | | \$368,080 | |
| Traffic Control | | | | | |
| 8% Lump Sum | 1 | LS | \$1,177,855 | \$1,177,855 | NDOT Historical |
| SUBTOTAL | | | | \$1,177,855 | |
| Landscaping | | | | | |
| 1.5% Lump Sum | 1 | LS | \$220,848 | \$220,848 | NDOT Historical |
| SUBTOTAL | | | | \$220,848 | |
| Signing Striping | | | | | |
| 2% Lump Sum | 1 | LS | \$294,464 | \$294,464 | NDOT Historical |
| SUBTOTAL | | | | \$294,464 | |
| SUBTOTAL CONSTRUCTION | | | | \$18,256,751 | |
| Contingency | 25% | | \$18,256,751 | \$4,564,188 | 10% Scope + 15% Bid |
| SUBTOTAL | | | | \$22,820,938 | |
| Project Management | 5% | | \$22,820,938 | \$1,141,047 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Construction Management | 8% | | \$22,820,938 | \$1,825,675 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Record Drawings | 1 | LS | \$75,000 | \$75,000 | Document Const. Work, QA/QC, and Record DWGs |
| SUBTOTAL | | | | \$3,041,722 | |
| TOTAL CAPITAL COST | | | | \$25,860,000 | |

Arlington Avenue Bridges, Reno NV
Elevated Bridge Alternative

COST ESTIMATE SUMMARY

Site: Arlington Avenue Bridges
Location: Reno, NV
Phase: Pre-NEPA/Construction Feasibility Study
Base Year: 2021
Date: 1/27/2021

Description: Elevated Bridge Alternative

CAPITAL COSTS

| DESCRIPTION | QTY | UNIT | UNIT COST | TOTAL | NOTES |
|--|--------|------|-------------|--------------------|--|
| Preconstruction - Design/Permits | | | | | |
| Design | 10000 | HR | \$175 | \$1,750,000 | |
| Design PM | 1000 | HR | \$200 | \$200,000 | |
| Meetings w/stakeholders | 6 | EA | \$10,000 | \$60,000 | |
| Biological survey and report | 220 | HR | \$125 | \$27,500 | Historical |
| Cultural survey and report | 360 | HR | \$150 | \$54,000 | Historical |
| Survey | 30 | DY | \$3,300 | \$99,000 | Includes office engineering |
| Permits | | | | | |
| Initial Permit Application | 1060 | HR | \$130 | \$137,800 | USACE 404 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee | 1 | LS | \$40,000 | \$40,000 | |
| Initial Permit Application | 560 | HR | \$130 | \$72,800 | USACE 408 PERMIT |
| Address comments, revise and resubmit | 240 | HR | \$130 | \$31,200 | |
| Permit Finalization | 200 | HR | \$130 | \$26,000 | |
| Permit Fee (Includes Funding via 1156 agreement) | 1 | LS | \$40,000 | \$40,000 | |
| SUBTOTAL | | | | \$2,595,500 | |
| Mobilization/Demobilization | | | | | |
| Workplan, procurement | 500 | HR | \$200 | \$100,000 | Historical, Contractor's cost |
| H&S, Stormwater, Environmental Plans | 360 | HR | \$110 | \$39,600 | Historical, Contractor's cost |
| Permits | 5 | EA | \$20,000 | \$100,000 | County construction |
| Meetings w/stakeholders | 6 | EA | \$30,000 | \$180,000 | |
| Survey | 80 | DY | \$3,000 | \$240,000 | Includes office engineering |
| Temporary fencing | 1500 | LF | \$25 | \$37,500 | Traffic Control Below |
| Temporary Utility Hookups | 1 | LS | \$30,000 | \$30,000 | Water, Power, communications |
| Set-up laydown yard | 10 | MO | \$25,000 | \$250,000 | |
| Trailers and Connex boxes | 30 | MO | \$10,000 | \$300,000 | Historical |
| Monthly trailer/utility costs | 20 | MO | \$1,200 | \$24,000 | Historical |
| Sanitary Units | 40 | MO | \$120 | \$4,800 | |
| Mobilize/Demob Equipment - Initial | 1 | EA | \$1,200,000 | \$1,200,000 | |
| Mobilize/Demob Equipment- Winter Shutdown | 1 | EA | \$900,000 | \$900,000 | |
| SUBTOTAL | | | | \$3,405,900 | |
| Environmental/Biological/Cultural/Water Treatment | | | | | |
| Biological Audits/Reports | 320 | HR | \$125 | \$40,000 | Historical |
| Cultural survey and report | 480 | HR | \$125 | \$60,000 | Historical |
| Soil/Bridge Sampling | 32 | HR | \$125 | \$4,000 | Historical |
| Sampling Supplies/Freight/Lab Analysis | 1 | LS | \$10,000 | \$10,000 | Allowance |
| Data Validation and Report | 40 | HR | \$145 | \$5,800 | Historical |
| Temp Upstream dam | 3 | EA | \$50,000 | \$150,000 | Upstream dam |
| Bypass Flue | 1200 | LF | \$70 | \$84,000 | CMP Flue |
| Misc Upstream Riprap | 600 | TN | \$80 | \$48,000 | |
| Cofferdam dewatering system | 3 | EA | \$150,000 | \$450,000 | Sump pumps, piping, power connection |
| Baker Tanks | 3 | EA | \$50,000 | \$150,000 | |
| Misc Downstream Riprap | 600 | TN | \$80 | \$48,000 | |
| SUBTOTAL | | | | \$1,049,800 | |
| Earthwork | | | | | |
| Site Prep/Access Road | 1 | LS | \$30,000 | \$30,000 | |
| Temporary Cofferdam | 40,000 | SF | \$35 | \$1,400,000 | North and South abutments |
| Demo Existing Utilities | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Fence and Walls | 1 | LS | \$75,000 | \$75,000 | Allowance |
| Demo Existing Deck and Supports | 14,245 | SF | \$20 | \$284,900 | Sawcut sections |
| Demo Existing Foundation | 628 | CY | \$22 | \$13,816 | |
| Structural Excavation | 1,650 | CY | \$44 | \$72,600 | |
| Backfilling excavation with clean fill material | 600 | CY | \$35 | \$21,000 | assume 250 CY/day backfill |
| RipRap | 900 | CY | \$65 | \$58,500 | |
| SUBTOTAL | | | | \$2,030,816 | |
| Structural (North) | | | | | |
| Misc Falsework | | SF | \$25 | \$0 | Allowance |
| Drilled Shaft Foundation, 48" dia | | VF | \$460 | \$0 | NDOT Historical |
| Pile Cap | | CY | \$800 | \$0 | NDOT Historical |
| North Abutment | | CY | \$1,100 | \$0 | NDOT Historical |
| South Abutment | | CY | \$1,100 | \$0 | NDOT Historical |
| Center Pier | | CY | \$1,300 | \$0 | NDOT Historical |
| Cap Beam | | CY | \$1,200 | \$0 | NDOT Historical |
| Precast Girders | | LF | \$1,050 | \$0 | NDOT Historical |
| Wing Walls | | CY | \$1,200 | \$0 | NDOT Historical |
| Wing Wall Foundations | | CY | \$1,200 | \$0 | NDOT Historical |
| Reinforcement | 0 | LB | \$1 | \$0 | NDOT Historical |
| Expansion Joint | | LF | \$250 | \$0 | NDOT Historical |
| Misc Minor Concrete | | LS | \$30,000 | \$0 | |
| SUBTOTAL | | | | \$0 | |
| Roadway (North) | | | | | |
| Bridge Deck | | | | \$0 | NDOT Historical |
| Bridge Deck Preparation | 1,635 | SY | \$6 | \$9,810 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 1,635 | SY | \$55 | \$89,925 | NDOT Historical |
| Concrete Railing and walk | 393 | LF | \$700 | \$275,100 | NDOT Historical |
| Guardrail | 450 | LF | \$45 | \$20,250 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 300 | LF | \$45 | \$13,500 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 900 | SY | \$65 | \$58,500 | NDOT Historical |
| Resurface Interchange and Island Approach | 8,000 | SF | \$8 | \$64,000 | NDOT Historical |
| SUBTOTAL | | | | \$531,085 | |
| Structural (South) | | | | | |
| Misc Falsework | | SF | \$25 | \$0 | Allowance |
| Drilled Shaft Foundation, 36" dia | | VF | \$250 | \$0 | NDOT Historical |
| Pile Cap | | CY | \$800 | \$0 | NDOT Historical |
| North Abutment | | CY | \$1,100 | \$0 | NDOT Historical |
| South Abutment | | CY | \$1,100 | \$0 | NDOT Historical |
| Center Pier | | CY | \$1,300 | \$0 | NDOT Historical |
| Cap Beam | | CY | \$1,200 | \$0 | NDOT Historical |
| Precast Girders | | LF | \$970 | \$0 | NDOT Historical |
| Wing Walls | | CY | \$1,200 | \$0 | NDOT Historical |
| Wing Wall Foundations | | CY | \$1,200 | \$0 | NDOT Historical |
| Reinforcement | 0 | LB | \$1 | \$0 | NDOT Historical |
| Expansion Joint | | LF | \$250 | \$0 | NDOT Historical |
| Misc Minor Concrete | | LS | \$20,000 | \$0 | |
| SUBTOTAL | | | | \$0 | |
| Roadway (South) | | | | | |
| Bridge Deck | | SF | \$38 | \$0 | NDOT Historical |
| Bridge Deck Preparation | 1,590 | SY | \$6 | \$9,540 | NDOT Historical |
| Thin Bonded Multilayer Overlay | 1,590 | SY | \$55 | \$87,450 | NDOT Historical |
| Concrete Railing and walk | 390 | LF | \$700 | \$273,000 | NDOT Historical |
| Guardrail | 1,200 | LF | \$45 | \$54,000 | NDOT Historical |
| Remove/Replace Existing Curb and Gutter | 2,400 | LF | \$45 | \$108,000 | NDOT Historical |
| Remove/Replace Existing Sidewalk | 3,600 | SY | \$65 | \$234,000 | NDOT Historical |
| Resurface Interchange and Island Approach | 15,000 | SF | \$8 | \$120,000 | NDOT Historical |
| SUBTOTAL | | | | \$885,990 | |
| Roadway (Middle) | | | | | |
| Pulverize Existing Roadway | 4,800 | SF | \$5 | \$24,000 | NDOT Historical |
| New 12" Base | 180 | CY | \$50 | \$9,000 | NDOT Historical; Arterial with MAC per RTC's RTP '6" |

| | | | | | |
|------------------------------|-------|----|--------------|---------------------|---|
| New 6" AC | 540 | SY | \$100 | \$54,000 | NDOT Historical; Arterial with MAC per RTC's RTP 6" |
| Fill Volume | 3,022 | CY | \$35 | \$105,778 | NDOT Historical; 10' to FG in Middle (Subtract out |
| SUBTOTAL | | | | \$192,778 | |
| Aesthetics | | | | | |
| 3% Lump Sum | 1 | LS | \$552,588 | \$552,588 | NDOT Historical |
| SUBTOTAL | | | | \$552,588 | |
| Drainage | | | | | |
| 7% Lump Sum | 1 | LS | \$1,289,372 | \$1,289,372 | NDOT Historical |
| SUBTOTAL | | | | \$1,289,372 | |
| Utilities/Electrical | | | | | |
| 2.5% Lump Sum | 1 | LS | \$460,490 | \$460,490 | NDOT Historical |
| SUBTOTAL | | | | \$460,490 | |
| Traffic Control | | | | | |
| 8% Lump Sum | 1 | LS | \$1,473,568 | \$1,473,568 | NDOT Historical |
| SUBTOTAL | | | | \$1,473,568 | |
| Landscaping | | | | | |
| 5% Lump Sum | 1 | LS | \$920,980 | \$920,980 | NDOT Historical |
| SUBTOTAL | | | | \$920,980 | |
| Signing Striping | | | | | |
| 2% Lump Sum | 1 | LS | \$368,392 | \$368,392 | NDOT Historical |
| SUBTOTAL | | | | \$368,392 | |
| SUBTOTAL CONSTRUCTION | | | | \$23,484,994 | |
| Contingency | 25% | | \$23,484,994 | \$5,871,248 | |
| SUBTOTAL | | | | \$29,356,242 | |
| Project Management | 5% | | \$29,356,242 | \$1,467,812 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Construction Management | 8% | | \$29,356,242 | \$2,348,499 | USEPA 2000, p. 5-13, \$2M-\$10M |
| Record Drawings | 1 | LS | \$75,000 | \$75,000 | Document Const. Work, QA/QC, and Record DWGs |
| SUBTOTAL | | | | \$3,891,311 | |
| TOTAL CAPITAL COST | | | | \$33,250,000 | |