

# Mechanic Street Sidewalk - 2024 Cost Estimates

| Description                           | Estimated Quantity | Unit | Unit Price | Total Cost (2015) | Total Cost (2024)* |
|---------------------------------------|--------------------|------|------------|-------------------|--------------------|
| Removal of Existing Concrete Sidewalk | 100                | SY   | \$30       | \$3,000           | \$3,956            |
| Excavation of Surfaces                | 280                | SY   | \$10       | \$2,800           | \$3,692            |
| Bituminous Concrete Pavement          | 110                | TON  | \$115      | \$12,650          | \$16,679           |
| Detectable Warning Surface            | 60                 | SF   | \$45       | \$2,700           | \$3,560            |
| Portland Cement Concrete Sidewalk     | 1330               | SY   | \$100      | \$133,000         | \$175,361          |
| Vertical Granite Curb                 | 1360               | LF   | \$35       | \$47,600          | \$62,761           |
| Catch Basin                           | 1                  | EA   | \$3,500    | \$3,500           | \$4,615            |
| 18" HDPE Storm Drain                  | 240                | LF   | \$60       | \$14,400          | \$18,986           |
| Catch Basin Rehabilitation            | 4                  | EA   | \$1,500    | \$6,000           | \$7,911            |
| Painted Pavement Markings             | 1                  | LS   | \$10,000   | \$10,000          | \$13,185           |
| Crosswalk Signs                       | 4                  | EA   | \$110      | \$440             | \$580              |
| Sign Post (12 ft high)                | 4                  | EA   | \$100      | \$400             | \$527              |
| Remove and Reset Sign                 | 4                  | EA   | \$35       | \$140             | \$185              |
| Relocate Mailbox (single support)     | 5                  | EA   | \$125      | \$625             | \$824              |
| FlaggerS                              | 200                | MHRS | \$30       | \$6,000           | \$7,911            |
| Tree Protection                       | 1                  | LS   | \$9,000    | \$9,000           | \$11,867           |
| Traffic Control                       | 1                  | LS   | \$10,000   | \$10,000          | \$13,185           |
| Mobilization/Demobilization           | 1                  | LS   | \$55,000   | \$55,000          | \$72,518           |

Subtotal Construction Cost \$418,301  
 Contingency Factor (25%) \$104,575  
**Total Construction Cost \$522,876**

Project administration, engineering, and local MPM (25% subtotal construction cost) \$130,719  
 Construction inspection (15% of subtotal construction cost) \$78,431  
 ROW, legal (3% subtotal construction cost) \$15,686  
**Total Project Cost \$747,713**

\*Inflation factor 2015-2024: 1.3185

# Mechanic Street Sidewalk - 2024 Cost Estimates

| Description   | Segment 1<br>Cost<br>Estimate | Segment 2<br>Cost<br>Estimate | Segment 3<br>Cost<br>Estimate |
|---|-------------------------------|-------------------------------|-------------------------------|
| <i>Construction Cost (2015) without<br/>25% Contingency</i> | \$100,000                     | \$180,000                     | \$36,000                      |
| <i>Construction Cost (2024) without<br/>25% Contingency</i> | \$131,850                     | \$237,330                     | \$47,466                      |
| Construction Cost (2024) with 25%<br>Contingency            | \$164,813                     | \$296,663                     | \$59,333                      |
| Project administration, engineering,<br>and local MPM (25%) | \$41,203                      | \$74,166                      | \$14,833                      |
| Construction inspection (15%)                               | \$24,722                      | \$44,499                      | \$8,900                       |
| ROW, legal (3%)   | \$4,944                       | \$8,900                       | \$1,780                       |
| <b>Total Project Cost</b>                                   | <b>\$235,682</b>              | <b>\$424,227</b>              | <b>\$84,845</b>               |

Table 4-6:  
Preliminary Construction Cost Estimate – Concrete Sidewalk

| DESCRIPTION                           | ESTIMATED QUANTITY | UNIT | UNIT PRICE | TOTAL COST       |
|---------------------------------------|--------------------|------|------------|------------------|
| Removal of Existing Concrete Sidewalk | 100                | SY   | \$30       | \$3,000          |
| Excavation of Surfaces                | 280                | SY   | \$10       | \$2,800          |
| Bituminous Concrete Pavement          | 110                | TON  | \$115      | \$12,650         |
| Detectable Warning Surface            | 60                 | SF   | \$45       | \$2,700          |
| Portland Cement Concrete Sidewalk     | 1,330              | SY   | \$100      | \$133,000        |
| Vertical Granite Curb                 | 1,360              | LF   | \$35       | \$47,600         |
| Catch Basin                           | 1                  | EA   | \$3,500    | \$3,500          |
| 18" HDPE Storm Drain                  | 240                | LF   | \$60       | \$14,400         |
| Catch Basin Rehabilitation            | 4                  | EA   | \$1,500    | \$6,000          |
| Painted Pavement Markings             | 1                  | LS   | \$10,000   | \$10,000         |
| Crosswalk Signs                       | 4                  | EA   | \$110      | \$440            |
| Sign Post (12 ft high)                | 4                  | EA   | \$100      | \$400            |
| Remove and Reset Sign                 | 4                  | EA   | \$35       | \$140            |
| Relocate Mailbox (single support)     | 5                  | EA   | \$125      | \$625            |
| Flaggers                              | 200                | MHRS | \$30       | \$6,000          |
| Tree Protection                       | 1                  | LS   | \$9,000    | \$9,000          |
| Traffic Control                       | 1                  | LS   | \$10,000   | \$10,000         |
| Mobilization/Demobilization           | 1                  | LS   | \$55,000   | \$55,000         |
| Subtotal Construction Cost            |                    |      |            | \$317,000        |
| Contingency (25%)                     |                    |      |            | \$78,000         |
| <b>Total Construction Cost 2015</b>   |                    |      |            | <b>\$395,000</b> |

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 25% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 9962 when the cost estimate was completed in March 2015.
3. Painted pavement markings include full length 4-inch white line on both sides of road, 4-inch yellow center line, two stop bars for Mechanic Street/North Street intersection and three crosswalks.
4. Restoration of growth and protection of historic features are included in the Mobilization/Demobilization item.

Table 4-8:  
Total Project Cost

| DESCRIPTION                                   | TOTAL COST<br>CONCRETE<br>SIDEWALK | TOTAL COST<br>ASPHALT<br>SIDEWALK |
|---|------------------------------------|-----------------------------------|
| Construction Cost (2015) with 25% Contingency | \$395,000                          | \$275,000                         |
| Engineering:                                  |                                    |                                   |
| Design Phase Engineering                      | \$58,000                           | \$58,000                          |
| Construction Phase Engineering                | \$58,000                           | \$58,000                          |
| Local Project Management                      | \$38,000                           | \$38,000                          |
| Legal, Administrative and Fiscal              | \$11,000                           | \$11,000                          |
| <b>Total Project Cost</b>                     | <b>\$560,000</b>                   | <b>\$440,000</b>                  |

Notes:

1. Construction costs are shown in Table 4-6. The construction cost includes 25% contingency.
2. Engineering costs are estimated at 15-21% of the construction cost.
3. Local Project Management costs are estimated at 10-14% of the construction cost.
4. Legal, administrative and fiscal costs are estimated at about 3-4% of the construction cost.

Phasing Alternatives

At the Public Informational Meeting, there were discussions with the Village Trustees regarding phasing the pedestrian improvements. The construction of the project can easily be separated following the same segments developed for the alternatives evaluation. The segments are summarized as follows:

- Segment 1: Northern and Southern sides of Mechanic Street from Prospect Street to North Street, including the crosswalk at the intersection with Prospect Street.
- Segment 2: Southern side of Mechanic Street from North Street to Frederick Street.
- Segment 3: Southern side of Mechanic Street from Frederick Street to the cemetery, including the crosswalks at Frederick Street and at the cemetery.

The construction cost estimates and total project costs are presented for each segment of the project in Tables 4-9 and 4-10. If the project is separated into phases, the engineering, local project management and legal, administrative and fiscal costs will tend to be a higher percentage of the construction cost as many tasks will need to be repeated for each phase. For example, the environmental documentation would need to be prepared and submitted for each phase separately. Additionally, lower cost construction projects, such as Segment 3, will have even higher percentages as there are tasks in the VTrans design and construction process that are not based on the size of the project. Larger projects can absorb the cost of these tasks better than smaller projects can, therefore the percentage of engineering and local project management is increased on smaller projects.

Table 4-9:  
Total Project Cost by Segment – Concrete Sidewalk

| DESCRIPTION                                   | SEGMENT 1<br>COST<br>ESTIMATE | SEGMENT 2<br>COST<br>ESTIMATE | SEGMENT 3<br>COST<br>ESTIMATE |
|---|-------------------------------|-------------------------------|-------------------------------|
| Construction Cost (2015) with 25% Contingency | \$125,000                     | \$225,000                     | \$45,000                      |
| Engineering:                                  |                               |                               |                               |
| Design Phase Engineering                      | \$22,500                      | \$40,000                      | \$10,000                      |
| Construction Phase Engineering                | \$22,500                      | \$40,000                      | \$10,000                      |
| Local Project Management                      | \$15,000                      | \$27,000                      | \$7,000                       |
| Legal, Administrative and Fiscal              | \$5,000                       | \$8,000                       | \$3,000                       |
| <b>Total Project Cost</b>                     | <b>\$190,000</b>              | <b>\$340,000</b>              | <b>\$75,000</b>               |

Notes:

1. Construction costs are shown in Table 4-6. The construction cost includes 25% contingency.
2. Engineering costs are estimated at 18-22% of the construction cost. Segments with lower construction costs will have engineering costs at a higher percentage of the construction cost.
3. Local Project Management costs are estimated at 12-16% of the construction cost. Segments with lower construction costs will have local project management costs at a higher percentage of the construction cost.
4. Legal, administrative and fiscal costs are estimated at about 4-6% of the construction cost. Segments with lower construction costs will have legal, administrative and fiscal costs at a higher percentage of the construction cost.

Table 4-10:  
Total Project Cost by Segment – Asphalt Sidewalk

| DESCRIPTION                                   | SEGMENT 1<br>COST<br>ESTIMATE | SEGMENT 2<br>COST<br>ESTIMATE | SEGMENT 3<br>COST<br>ESTIMATE |
|---|-------------------------------|-------------------------------|-------------------------------|
| Construction Cost (2015) with 25% Contingency | \$85,000                      | \$170,000                     | \$20,000                      |
| Engineering:                                  |                               |                               |                               |
| Design Phase Engineering                      | \$22,500                      | \$40,000                      | \$10,000                      |
| Construction Phase Engineering                | \$22,500                      | \$40,000                      | \$10,000                      |
| Local Project Management                      | \$15,000                      | \$27,000                      | \$7,000                       |
| Legal, Administrative and Fiscal              | \$5,000                       | \$8,000                       | \$3,000                       |
| <b>Total Project Cost</b>                     | <b>\$150,000</b>              | <b>\$285,000</b>              | <b>\$50,000</b>               |

Notes:

1. Construction costs are shown in Table 4-6. The construction cost includes 25% contingency.
2. Engineering costs were developed in Table 4-8.
3. Local Project Management costs were developed in Table 4-8.
4. Legal, administrative and fiscal costs were developed in Table 4-8.