



REQUEST FOR PROPOSALS (RFP)
FOR
ENGINEERING & DESIGN SERVICES

Posting Date: January 18, 2022
Proposals Due: February 28, 2022 by 5:00 pm

SUBMIT QUALIFICATIONS AND PROPOSAL TO:

Attn: Chantell Steiner, City Clerk
700 US Hwy 2 / P.O. Box 287
Leavenworth, WA 98826
Phone 509-548-5275
financedir@cityofleavenworth.com

INTRODUCTION

The City of Leavenworth, Washington is seeking proposals for analyzing residential alley conditions, uses and future development potential and maintenance costs. A background/foundational whitepaper is attached. The city has several objectives for this work:

- Expand the inventory to address alley condition (rating scale), and define what is located in the alley (utilities/dumpsters, structures, fences, etc.).
- Develop a thorough understanding of upgrade and maintenance costs – current year and into the future. Of specific concern for upgrading alleys is stormwater impacts while a maintenance concern is snow removal costs.
- Define the vision and goals for residential alleys – including safety, development, and expanded residentially permitted uses.

Submittal Requirements

Interested firms shall submit electronically a proposal that contains the following:

1. Cover letter
2. Qualifications
 - a. Submit a general description of the proposed design team's background and experience with similar work.
3. Availability of Staff and Resources
 - a. Explain how the proposed design team will approach the work.
4. Personnel
 - a. Quality of personnel is critical in the decision-making process. List of available personnel for this project and similar work experience.
5. References
 - a. Provide the names of at least three (3) public agencies/groups that your organization has provided similar services in Washington since 2015 along with specific individuals we may contact for references.
6. Format
 - a. Proposals shall have a maximum page limit of 10 pages (5 pages if double-sided) excluding any title page or cover letter.

General Information

Pursuant to, and in compliance with, RCW 39.80 the City of Leavenworth requests proposals for engineering services specific to the design and use of residential alley development. This work is currently budgeted at \$25-40,000.

Proposals shall be provided to the City electronically. Late submissions will be automatically disqualified from consideration. Submissions are to be sent to Chantell Steiner, Finance Director/City Clerk, at financedir@cityofleavenworth.com. Questions may be directed to Lilith Vespier, Development Services Manager, at dsmanager@cityofleavenworth.com, phone 509-548-5275.

The City of Leavenworth, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. 2000d to 2000d-4) and the Regulations, hereby notifies all consultants that will affirmatively ensure that any contract entered into pursuant to this request for proposals, disadvantaged business enterprises will be afforded full and fair opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

This Request for Proposals does not commit the City to award a contract, to pay any costs incurred in the preparation of a proposal for this request, or to procure or contract for services. The City reserves the right to accept or reject any or all proposals received as a result of this request, to negotiate with any qualified firm or to modify or cancel in part or in its entirety the Request for Proposals if it is in the best interest of the city to do so.

All costs for developing a response to this RFP are the obligation of the respondent and are not chargeable to the city. The respondent must bear all costs associated with the preparation of the submittal and of any oral presentation requested by the city. All responses and accompanying documentation will become property of the city and will not be returned. Proposals may be withdrawn at any time prior to the published close date, provided notification is received in writing to the below listed city agent(s). Proposals cannot be withdrawn after the published close date.

Selection Process

City Staff will perform a review based on a matrix and what the city staff views as a good fit for the projects. The elevation will be based on the submittal requirements and the following criteria. Follow up interviews may be required.

Criteria	Description	Scoring
Similar experience	Alley inventory & development	20
Personnel Qualifications & Experience		
	Stormwater & Utility Planning	20
	Transportation Planning	20
Project Process	Proposed project approach steps	15
RFP Submittal	Complete, easy to read submittal	25

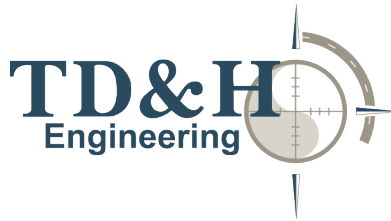
Terms and Conditions

The City reserves the right to amend terms of this RFP to circulate various addenda, or to withdraw the RFP at any time, regardless of how much time and effort firms may have spent on their responses.

Proposed Personnel

Consultant agrees to provide all professional staff necessary to perform the scope of work, including key individuals named in Consultant's proposal. These key personnel shall remain assigned for the duration of the contract, unless otherwise agreed to in writing by the City. In the event Consultant proposes to substitute any key personnel, the individual(s) proposed must demonstrate similar qualifications and experience as required to successfully perform such duties. The City shall have the sole right to determine whether key personnel proposed as substitutes are qualified to work on the project.

303 East 2nd Avenue
Spokane, WA 99202



509.622.2888
tdhengineering.com

April 20, 2021

Ms. Lilith Vespier, AICP
City of Leavenworth
700 Highway 2
Leavenworth, WA 98826

RE: ALLEY WHITEPAPER
TD&H ENGINEERING JOB NO. S21-008

Dear Lilith,

The purpose of this letter is to provide the City of Leavenworth (City) information regarding the alleys within City Limits.

This letter is divided into nine sections:

- 1) Inventory of Leavenworth's existing alleys
- 2) Determine the legal use of the alleys in the City
- 3) Determine the actual use of the alleys in everyday life.
- 4) Discussion of any missing information and why it is important.
- 5) Consult with other municipalities of similar size to determine how they govern alleys.
- 6) Determine the positive and negative effects of expanding alley use for multi-family, bed and breakfast, and commercial uses.
- 7) Provide a recommendation for typical sections for alleys.
- 8) Determine maintenance and upgrade cost per 100 linear feet of alley.
- 9) Provide information on alley improvement cost sharing.

Inventory of Leavenworth's Alleys

Please note this list includes only the developed alleys. There are several more undeveloped alleys within the City that may be considered for development or vacated.

Alleys		
Alley Between & Running With...	Approximate Length (ft)	Approximate Width (ft)
W. Commercial & SR-2	630	15
W. Commercial & Scholze	700	12
E. Commercial & Front	370	15
Front & Commercial	1,100	12
Cedar & Pine	2,030	12
Birch & Ash	950	12
Birch & Cedar	970	12
Evans & Ash	290	15
Whitman & Benton	1,470	12
West & Park	1,320	12
Center & West	660	12

Park & Prospect	580	12
W. Whitman & SR-2	1,320	15
W. Whitman & W. Benton	990	12
W. Benton & Mine & Mill	330	12
Benton & Center	820	15
Commercial & Main	820	15
Commercial & Waterfront	390	12
Total	15,740 (2.9 miles)	

Legal Use of Alleys

An “Alley” is defined as follows per the Leavenworth Municipal Code (LMC) §21.90.030:

“...a public thoroughfare or right-of-way used primarily for utility installation, service or delivery access, or for a secondary means of vehicular access for abutting properties that are adjacent to a street.”

As a comparison, a “Street” is defined as follows:

“...a public right-of-way which affords the principal means of access to abutting property, including avenue, place, way, drive, lane, boulevard, highway, road, and any other thoroughfare except an alley.”

The current City policy states alleys can be used for:

- Single Family Residential Zoning – Alleys can be used as a secondary access point.
- Multi-Family Residential Zoning – Not permitted as an access.
- Bed and Breakfast in Residential Zoning – Not permitted as an access.
- Commercial Zoning – Unwritten policy that alleys can be used for residential and commercial uses as a primary and/or secondary access.
- Snow Plowing – The Public Works Department removes snow from the alleys using a “V-blade” plow, when crews are available.

Actual Use of the Alleys in Everyday Life

A preliminary visual assessment of alley uses appear to be consistent with the above criteria. There are a few places where vehicles are parked “illegally” in the back yard setback area.

Additionally, people tend to use the alleys as a way to navigate through traffic during heavy traffic loads when vehicles are stacked up. This is especially true in the downtown core area.

Discussion of Missing Information

The City of Leavenworth is a very unique town. Even though the official population is approximately 2,400, the City can balloon up to 21,000 people during certain weekends and festivals. This obviously creates traffic flow, pedestrian flow, and parking issues that most municipalities do not typically experience.

Secondly, the average snowfall is approximately 96-inches, which is well above the normal for the US and the State of Washington. It is extremely difficult to find another municipality with approximately 2,400 people that can balloon up to ten times the population and have 96-inches inches of snow per year. Below are a few examples:

- Telluride, CO – 167 inches (population 2,000)
- Jackson, WY – 109 inches (population 10,500)
- *Leavenworth, WA – 96 inches (population 2,400)*
- Whitefish, MT – 73 inches (population 7,700)
- Twisp, WA – 71 inches (population 1,000)
- Bozeman, MT – 63 inches (population 46,700)
- Sandpoint, ID – 61 inches (population 8,400)
- Chelan, WA – 34 inches (population 4,100)
- Spokane, WA – 28 inches (City of Spokane population 217,400)

The closest comparison is Jackson, WY with a population of 10,500 that receives 109 inches of snow and functions similarly as a resort town with big influxes of people during certain times of the year.

In our opinion, this piece of information is important when discussing how the City addresses snow plowing. As you will see later in this white paper, the City of Spokane and City of Spokane Valley do not plow the alleys; however, the Spokane area only gets 28 inches of snow a year compared to the 96 inches in Leavenworth.

Other Municipalities Policies

We contacted several municipalities but only heard back from a few, City of Spokane and City of Spokane Valley. Although these cities border each other, their alley policies are polar opposites.

City of Spokane (Spokane)

Spokane has several miles of narrow streets. Spokane's philosophy is to pull as much traffic off of the main streets as possible to keep traffic flowing. Therefore, Spokane encourages the use of alleys as a primary access point in residential and commercial areas whenever feasible.

- Alley Surfacing: Asphalt, gravel, and dirt
- Alley Width: 10 to 12 feet wide.
- Fire Department Access: No, the alleys are less than 20-feet wide as required by fire code.
- Utilities: Spokane utilizes the alleys for wet and dry utilities
- Garbage: The alleys are the main route for garbage pickup.
- Residential Use: Prefer garages face alleys as opposed to the street frontage.
 - Garages in the alleys result in fewer driveway entrances onto the street to make a safer and more pedestrian friendly neighborhood.
 - Fewer driveway entrances onto the street also allows for more on-street parking.
 - The use of alleys as a primary access point for homes will become more and more important as infill development continues to occur in Spokane.
- Commercial: Prefer all deliveries be made in alleys to prevent delivery trucks from double parking on the street. This also places drivers and commercial employees off of the street in a safer area.
- Maintenance: Spokane has done very little maintenance on the alleys. What little maintenance they have done is "complaint driven" maintenance by the Spokane's solid waste department.
- Snow Plowing: None.
- Development: Spokane requires the developer to pave the alley

for multi-family and commercial developments. Paving the alley for a single family residential home would be cost prohibitive.

City of Spokane Valley (Valley)

Valley only has a handful of narrow streets. Valley's philosophy is to put all of the traffic on the wide streets and keep the number and length of alleys to a minimum. If alleys are necessary, then they need to be constructed to comply with the fire code, which is a minimum of 20-feet wide.

- Alley Surfacing: Gravel and dirt.
- Alley Width: Minimum of 20 feet wide.
- Fire Department Access: Yes.
- Utilities: In streets, not in the alleys.
- Garbage: On-street, not in the alleys.
- Residential Use: Prefer garages face the street and use alleys only as a secondary access.
- Commercial: Same concept as residential use.
- Maintenance: No maintenance. Valley's road maintenance superintendent has been with the Valley for five years and has never done any maintenance on the alleys.
- Snow Plowing: None.
- Development: Valley makes the developer install a minimum 20-foot wide alley and surfacing to comply with fire code.

Positive and Negative Effects of Expanding Alley Use

The positive and negative effects of expanding the alley use to multi-family, bed and breakfast, and commercial uses are explained in the section below.

Positives

- Pull more traffic off of Leavenworth streets into the alleys that results in one controlled entrance onto the streets as opposed to several driveway entrances.
- Deliveries could be moved into alleys to remove the delivery double-parking dilemma.

Negatives

- Alleys as a primary entrance could create difficulties for a fire department to access (due to the alley width) the building or facility in the event of an emergency.
- The address of the buildings could get confusing with a primary access onto an alley. This would be important in the event of emergency services trying to find the building.
- Maintenance is currently an issue. Adding more traffic to an already deteriorating alley will cause them to fail quicker.
- Very little lighting for personal safety and parking.

Positive or Negative (Depending on viewpoint)

- The alleys are not wide enough to accommodate two vehicles passing each other going in opposite directions. The alleys may need to be reclassified as a "one way" if the City decides to adopt a policy that will increase the amount of vehicle traffic.
- Fewer driveway entrances could increase the amount of on-street parking.

Alley – Typical Section

We recommend the typical section of any reconstructed or new alley be similar to the construction of Leavenworth Fire Apparatus Road, which is 2-inches of asphalt over 6-inches of crushed surfacing top course or base course.

Upgrading & Maintenance Costs

Herb Amick determined an alley improvement cost in July, 2018. (See attached.) The costs are based on:

- 15,675 feet (3.0 miles) of alleys.
- Adding 4-inches of gravel (or 2,400 cubic yards).
- Work will be done by Leavenworth forces.
- Includes clearing, compaction, mowing, pruning, and herbicide.

Total Cost (2018 dollars)	\$261,400
Add 5% per year for construction material inflation (2018 to 2021)	\$41,200
Total Cost (2021 Dollars)	\$302,600
Total Linear Feet for Alleys	15,675
Improvement Cost per Linear Foot (2021 Dollars)	\$19.30

Herb also determined a yearly maintenance cost in July, 2018. (See attached.) The costs are based on:

- 15,675 feet (3.0 miles) of alleys.
- Adding 2-inches of gravel (or 1,200 cubic yards) each year.
- Work will be done by Leavenworth forces.
- Includes landscape mowing, pruning, and herbicide.

Total Cost (2018 dollars)	\$144,600
Add 5% per year for construction material inflation (2018 to 2021)	\$22,800
Total Cost (2021 Dollars)	\$167,400
Total Linear Feet for Alleys	15,675
Maintenance Cost per Linear Foot (2021 Dollars)	\$10.68

It is likely the first year of maintenance will cost more than the \$10.68/foot due to the lack of maintenance to date; however, every subsequent year should cost approximately \$10.68/foot.

Alley Improvement Cost Sharing

There are very few funding sources available to maintain or improve alleys. Below are a few ideas for the maintenance or improvement:

- Using City funding to maintain/improve alleys.
- If a developer or current user proposes to use an alley as a primary and/or secondary access, the user would be responsible for the full cost to improve the alley to comply with the recommended typical section.
- Create a Local Improvement District (LID) per RCW Chapters 35.43 through 35.56. LIDs are a means of assisting benefiting properties in financing needed capital improvements through the formation of special assessment districts. Per the MRSC website, LIDs are very well-suited for filling in gaps in a city's existing infrastructure, including (among other tasks): Paving gravel streets or alleys to reduce dust and maintenance costs.

Summary

In our opinion, the first question Leavenworth needs to ask is “how do we want our alleys to function in a single family neighborhood versus a multi-family neighborhood versus a commercial neighborhood?” Based on those answers, the City can they start redeveloping or modifying the alley policy.

This white paper is in a draft form and we would love to continue to modify it to meet your needs. We already know we would like to reach out to the public works/maintenance employees in Jackson, Wyoming to determine how they approach snow removal in alleys, if they do at all.

Lastly, we want to take the time and thank Leavenworth for selecting us for this project. We have had the privilege of working on your streets for more than seven years and we do not take that responsibility lightly. We look forward to your feedback.

Sincerely,



Steven N. Marsh PE
Vice President / Regional Manager
TD&H ENGINEERING

Enclosure (2)

Alley Yearly/Every Other Year Maintenance Worksheet by Herb Amick
Alley Initial Improvement Assessment by Herb Amick

ALLEY YEARLY/EVERY OTHER YEAR MAINTENANCE

15,675 Lineal Feet (3 Miles)

2" Replacement Gravel – 1200 cu. yds. \$106,200.

- 1200 cu. yds. @ \$11/yd. = \$13,200.
- Gravel Installation Labor 1200 cu. yds. @ \$40/yd. = \$48,000.
- Equipment 900 hours @ \$50/yd. = \$45,000.

Other Required Yearly Maintenance (Mowing/Pruning/Herbicide) \$38,400.

- 16 Hours/week @ 32 weeks = 512 man-hours @ \$50. = \$25,600
- Equipment 256 hours @ \$50. = \$12,800.

Total Including Yearly 2" Gravel Replacement = \$144,600.

Note: If gravel is not replenished yearly, additional grading will be required in the off years in addition to the other maintenance.

ALLEY INITIAL IMPROVEMENT ASSESSMENT

\$261,358.00

July 6, 2018

West Commercial / SR 2 – 627' \$12,266. (\$19.56/lineal foot)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 4 man-hours @ \$50. = \$200.
- Removal of Dumped Debris 4 man-hours @ \$50.00 = \$200.
- Gravel 116 cu. yds. (4") @ \$11/yd. = \$1,276. (15' width)
- Gravel Installation – 116 cu. yds. @ \$40/cu. yd. = \$4,640.
- Misc. Equipment (Roller/Grader/Trucks) – 107 hours @ \$50. = \$5,350.

West Commercial | Scholze Street -696' \$11,503. (\$16.53/lineal foot)

- Clearing 16 man-hours @ \$50. = \$800.
- Grading 4 man-hours @ \$50. = \$200.
- Removal of Dumped Debris 4 man-hours @ \$50. = \$200.
- Gravel 103 cu. yds. (4") @ \$11/yd. = \$1,133. (12' width)
- Gravel Installation – 103 cu. yds. @ \$40/yd. = \$4,120.
- Misc. Equipment – 101 hours @ \$50. = \$5,050.

East Commercial / Front Street – 367' \$5,670. (\$15.45/lineal foot)

- Grading – 4 man-hours @ \$50. = \$200.
- Gravel 68 cu. yds. (4") @ \$11/yd. = \$748. (15' width)
- Gravel Installation – 68 cu. yds. @ \$40/yd. = \$2,720.
- Misc. Equipment – 55 hours @ \$50. = \$2,750.

(New) Front Street / Commercial – 1,108' \$18,514 (\$16.71/lineal foot)

- Clearing 24 man-hours @ \$50. = \$1,200.
- Grading – 12 man-hours @ \$50. = \$600.
- Removal of Dumped Debris 4 man-hours @ \$50. = \$200.
- Gravel 164 cu. yds. (4") @ \$11/yd. = \$1,804. (12' width)
- Gravel Installation 164 cu. yds. @ \$40/yd. = \$6,560.
- Misc. Equipment – 163 hours @ \$50. = \$8,150.

Cedar / Pine Street – 2,026' \$33,750. (\$16.66/lineal foot)

- Clearing 24 man-hours @ \$50. = \$1,200.
- Grading – 24 man-hours @ \$50. = \$1,200.
- Removal of Dump Debris 24 man-hours @ \$50. = \$1,200.
- Gravel 300 cu. yds. (4") @ \$11/yd. = \$3,300. (12' width)
- Gravel Installation 300 cu. yds. @ \$40/yd. = \$12,000.
- Misc. Equipment – 297 hours @ \$50. = \$14,850

Birch / Ash – 950' \$16,190 (\$17.04/lineal foot)

- Clearing 24 man-hours @ \$50. = \$1,200
- Grading 10 man-hours @ \$50. = \$500.
- Removal of Dumped Debris 4 man-hours @ \$50 = \$200.
- Gravel 140 cu. yds. (4") @ \$11. = \$1,540. (12' width)
- Gravel Installation 140 cu. yds. @ \$40/yd. = \$5,600.
- Misc. Equipment – 143 hours @ \$50. = \$7,150.

Birch / Cedar – 964' \$18,043 (\$18.72/lineal foot)

- Clearing 24 man-hours @ \$50. = \$1,200.
- Grading 24 man-hours @ \$50. = \$1,200.
- Removal of Dumped Debris 6 man-hours @ \$50. = \$300.
- Gravel 143 cu. yds. (4") @ \$11/yd. = \$1,573. (12' width)
- Gravel Installation 143 cu. yds. @ \$40/yd. = \$5,720.
- Misc. Equipment 161 hours @ \$50. = \$8,050.

Evans / Ash – 287' \$5,103 (\$17.78/lineal foot)

- Grading 4 man-hours @ \$50. = \$200.
- Gravel 53 cu. yds. (4") @ \$11/yd. = \$583. (15' width)
- Gravel Installation 53 cu. yds. @ \$40/yd. = \$2,120.
- Misc. Equipment – 44 hours @ \$50. = \$2,200.

Whitman / Benton – 1,462' \$26,017 (\$17.80/lineal foot)

- Clearing 48 man-hours @ \$50. = \$2,400.
- Grading 16 man-hours @ \$50. = \$800.
- Removal of Dumped Debris 4 man-hours @ \$50. = \$200.
- Gravel 217 cu. yds. (4") @ \$11/yd. = \$2,387. (12' width)
- Gravel Installation 217 cu. yds. @ \$40/yd. = \$8,680.
- Misc. Equipment 231 hours @ \$50. = \$11,550.

West Street / Park – 1,315' \$20,445 (\$15.55/lineal foot)

- Clearing 16 man-hours @ \$50. = \$800.
- Grading 16 man-hours @ \$50. = \$800.
- Gravel 195 cu. yds. (4") @ \$11/yd. = \$2,145. (12' width)
- Gravel Installation 195 cu. yds. @ \$40/yd. = \$7,800.
- Misc. Equipment 178 hours @ \$50. = \$8,900.

Center Street / West Street – 653' \$10,797. (\$16.53/lineal foot)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 8 man-hours @ \$50. = \$400.
- Removal of Dumped Debris 2 man-hours @ \$50. = \$100.
- Gravel 97 cu. yds. (4") @ \$11/yd. = \$1,067. (12' width)
- Gravel Installation 97 cu. yds. @ \$40/yd. = \$3,880.
- Misc. Equipment 95 hours @ \$50. = \$4,750.

Park / Prospect – 580' \$10,036 (\$17.30/lineal foot)

- Clearing 16 man-hours @ \$50. = \$800.
- Grading 8 man-hours @ \$50. = \$400.
- Gravel 86 cu. yds. (4") @ \$11/yd. = \$946.
- Gravel Installation 86 cu. yds. @ \$40/yd. = \$3,440.
- Misc. Equipment 89 hours @ \$50. = \$4,450.

W. Whitman / Highway 2 – 1,313' \$25,093 (\$19.11/lineal foot)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 16 man-hours @ \$50. = \$800.
- Removal of Dumped Debris 8 man-hours @ \$50. = \$400.
- Gravel 243 cu. yds. (4") @ \$11/yd. = \$2,673. (15' width)
- Gravel Installation 243 cu. yds. @ \$40/yd. = \$9,720.
- Misc. Equipment 218 hours @ \$50. = \$10,900.

W. Whitman / W. Benton - 984' \$16,546 (\$16,82/lineal foot)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 16 man-hours @ \$50. = \$800.
- Removal of Dumped Debris 8 man-hours @ \$50. = \$400.
- Gravel 146 cu. yds. (4") @ \$11/yd. = \$1,606. (12' width)
- Gravel Installation 146 cu. yds. @ \$40/yd. = \$5,840.
- Misc. Equipment 146 hours @ \$50/hr. = \$7,300.

W. Benton / Mine / Mill – 324' \$5,458. (\$16.81/lineal foot)

- Clearing 4 man-hours @ \$50. = \$200.
- Grading 4 man-hours @ \$50. = \$200.
- Removal of Dumped Debris 4 man-hours @ \$50. = \$200.
- Gravel 48 cu. yds. (4") @ \$11/yd. = \$528. (12' width)
- Gravel Installation 48 cu. yds. @ \$40/yd. = \$1,920.
- Misc. Equipment 48 hours @ \$50. = \$2,400

Benton / Center Street 820' \$16,652. (\$20.31/lineal foot)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 16 man-hours @ \$50. = \$800.
- Removal of Dumped Debris 4 man-hours @ \$50. = \$200.
- Gravel 152 cu. yds. (4") @ \$11/yd. = \$1,672. (15' width)
- Gravel Installation 152 cu. yds. @ \$40/yd. = \$6,080.
- Misc. Equipment 146 hours @ \$50. = \$7,300.

Commercial / Main Street – 814' \$3,018 (\$30.18/ lineal foot east end only)

- Clearing 12 man-hours @ \$50. = \$600.
- Grading 2 man- hours (excluding hill) @ \$50. = \$100
- Gravel 18 cu. yds. (4") (east end only) @ \$11/yd. = \$198. (15' width)
- Gravel Installation 18 cu. yds. @ \$40/yd. = \$720
- Misc. Equipment 28 hours @ \$50. = \$1,400.
- Note: Work at the east 100' only

Commercial Street / Waterfront – 385' \$6,257 (\$16.25/lineal foot)

- Clearing 6 man-hours @ \$50. = \$300.
- Grading 6 man-hours @ \$50. = \$300
- Gravel 57 cu. yds. (4") @ \$11/yd. = \$627. (12' width)
- Gravel Installation 57 cu. yds. @ \$40/yd. = \$2,280.
- Misc. Equipment 55 hours @ \$50. = \$2,750.