



MEMORANDUM

TO: Mayor Jones and Members of the Board

FROM: Karen Proctor, Town Administrator

DATE: April 7, 2022

RE: Engineering Scope of Work Proposal and Fee Estimate for 2022 Pavement Repair and Surface Treatment Program

DISCUSSION:

Attached is a scope of work and fee proposal from SEH for their management of the 2022 pavement repair and surface treatment program. This Agreement is for the development of the 2022 surface treatment program, bidding, and construction observation services. In addition, they have also provided their recommendation for the work to be done with an estimate of the cost for the crack and chip seal work. The total cost estimate is \$289,085. In the approved 2022 budget there is \$300,000 for the roads in the roads maintenance fund.

RECOMMENDED MOTION:

"I move to approve the SEH Scope of Work Proposal and Fee Estimate for 2022 Pavement Repair and Surface Treatment Program."

ATTACHMENTS:

Exhibit A – SEH 2022 Road Maintenance Memorandum
Exhibit B – SEH Supplemental Letter Agreement
Exhibit C – SEH Fee Estimate



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MEMORANDUM

TO: Town Of Foxfield

FROM: Gavin Macwilliam, EI and Erica Olsen, PE (CO)

DATE: March 31, 2022

RE: Foxfield Roadway Maintenance Plan; 2022 Update

This memo summarizes the Town of Foxfield's pavement maintenance program since 2012, provides recommendations for 2022 pavement maintenance program and initial planning for future years.

Background

From 2003 when the Town streets were paved, until 2012 the Town of Foxfield maintained streets through an annual crack sealing and patching program. In 2012 the Town contracted with Terracon to conduct a field investigation and develop a pavement condition index of your ten miles of streets. A Pavement Condition Index (PCI) is a numerical scale from 1-100 by which pavement condition is rated either very poor, poor, good, very good or excellent. At that time all streets were rated fair or better, which is to be expected for properly constructed pavement less than 10 years old. At that time the Town decided to develop a more formal pavement management program for treatments to maintain your pavement condition at fair (PCI of 55) or better.

In the summer of 2012 SEH conducted an evaluation of the roadways and ranking based on the PCI, traffic level and field observations. We provided a multi-year program to chip seal all streets. Chip seal provides a first line of defense for an on-going program improving the wearing ability of roadways, extending the pavement life and reducing cracking. It is about 15% of the cost of an overlay and is appropriate for roadways in fair condition. The initial program was three years, however the Town chose to chip seal all streets over two summers in 2013 and 2014. Prior to chip seal placement failing areas were patched, larger cracks (over ¼ inch wide) were milled and patched, and crack seal material was placed. Two different sizes of chip (1/4" or 3/8") were then placed, depending on the level of traffic on the street.

Since the initial chip seal program of 2013/14, patching of failing areas, crack patching and crack sealing have continued over the past four years as part of the Town's annual maintenance program.

2021 Pavement Maintenance Program Evaluation

In the summer of 2021, SEH completed the yearly pavement maintenance program that included crack sealing and crack patching all streets, along with chip sealing designated streets. The Town's streets were observed prior to the work to accurately log and document the crack sealant tonnage, crack patch linear footage, and the streets with the highest degree of aggregate deterioration. It was determined that each street would require crack sealant for cracks smaller than ¼ inch wide, and any cracks larger than ¼ inch wide would require a crack patch.

Recommended 2022 Maintenance Program

As requested, and periodically when SEH is on site for Town development inspections, we will observe and note locations where pavement is failing, or excessive cracking is occurring. Needed repairs are identified, inventoried, and included as part of the work performed annually by the pavement maintenance contractor. To establish recommendations for the 2022 crack seal/ patch maintenance program, a visual inspection will be completed by SEH. The evaluation for the 2022 maintenance program will follow the same procedures and observations as the 2021 maintenance program. The visual inspection of the roadways does also include the Town's concrete drainage cross pans.

At the Town's request, SEH will identify, inventory, and provide a list of recommended pavement crack patch and crack seal locations on Town streets to the contractor. Please see the attached 2022 estimate (**Exhibit A**) for your consideration. Also, please see the attached map (**Exhibit B**) identifying 2022 proposed chip seal locations based off our 2021 street evaluation.

SEH recommends the Board continue including pavement improvements and chip seal program in the 2022 (and/or beyond) budget. The provided mapping (Exhibit B) indicates proposed chip seal locations for the 2022 program.

With input, direction, and approval of the Town SEH will develop the 2022 Pavement Surfacing Program so that bidding can occur in winter/early spring of 2021/2022 for late spring/summer 2022 work to get the best prices, since that's when most communities bid their pavement management work. The cost estimate has been adjusted by 5% each year to account for anticipated market changes.

Roadway Surfacing: Roadway Program 2023 and Beyond

Typically chip seal treatment has a useful life of 5-10 years. With the work done in 2020, 2021, and this proposed work for 2022 the next major maintenance program will be expected after 2025. SEH recommends continued annual general inspections for breakthrough damages, wear, and typical cracking. Crack seal and crack patching will still be needed but expected to be at a reduced scale for the years following the chip seal.

CC: Scott Jardine.

Attachments:

Exhibit A: 2022 Quantity Estimation

Exhibit B: 2022 Chip Seal Plan



Foxfield 2022 Pavement Improvements Project
Foxfield, Colorado
Quantity Estimation

Crack Seal

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Crack Seal	\$ 3,937.50	TON	2.0	\$ 7,875.00
TOTAL					\$ 7,875.00

Large Crack Repair

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Crack Patching (18 Inches Wide)	\$ 10.82	LF	750.0	\$ 8,115.00
TOTAL					\$ 8,115.00

Small Patch

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Small Patch	\$ 82.26	SY	20.0	\$ 1,645.20
TOTAL					\$ 1,645.20

Chip Seal

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Chip Seal 3/8" with Fog Seal	\$ 3.93	SY	55,351.0	\$ 217,529.43
TOTAL					\$ 217,529.43

Traffic Control

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Traffic Control	\$ 15,000.00	EA	1.0	\$ 15,000.00
TOTAL					\$ 15,000.00

Contingency/Emergency Repair

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Contingency/Emergency Repair	\$ 15,000.00	EA	1.0	\$ 15,000.00
TOTAL					\$ 15,000.00

Epoxy Pvmt Mkg

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Epoxy Pvmt Mkg	\$ 14.00	SF	280.0	\$ 3,920.00
TOTAL					\$ 3,920.00

Construction Administration

	ITEM	UNIT PRICE	UNIT	ESTIMATED	ESTIMATED COST
	Construction Administration	\$ 20,000.00	EA	1.0	\$ 20,000.00
TOTAL					\$ 20,000.00

Overall Total	\$	289,084.63
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Supplemental Letter Agreement

In accordance with the Master Agreement for Professional Services between Town of Foxfield (“Client”), and Short Elliott Hendrickson Inc. (“Consultant”), effective January 1, 2015, and the 2022 Contract Amendment, this Supplemental Letter Agreement dated [REDACTED] authorizes and describes the scope, schedule, and payment conditions for the Consultant’s work on the Project described as: **2022 Pavement Repair and Surface Treatment Program**

Client’s Authorized Representative: Karen Proctor, Town Administrator

Address: P.O. Box 461450
Foxfield, Colorado 80046-1450

Telephone: 303.905.9339 **e-mail:** kproctor@townoffoxfield.com

Project Manager: Erica Olsen

Address: 2000 S. Colorado Blvd. Suite 6000
Denver, CO 80222

Telephone: 303.586.5828 **e-mail:** eolsen@sehinc.com

The Basic Services to be provided by the Consultant as set forth herein is provided subject to the General Conditions and Exhibits attached to this Agreement.

Understanding: Per the request of the Town Board, SEH was asked to provide a scope and fee proposal to you for development of your surface treatment program and bidding and construction observation services for the 2022 program.

SEH’s project team will consist of Erica Olsen, P.E., who will serve as Project Manager, along with Rick Coldsnow, P.E., as Senior Advisor (QA/QC) and Graduate Engineer/Field Representative Gavin Macwilliam.

Project History: In 2020, SEH developed a proposed surface treatment program for the Town of Foxfield to be implemented over a 2-4 year span.

Scope of Services:

Proposed services include the following:

Task 1 – Administration

- **Project task set up and close-out**
- **Miscellaneous task coordination with Town staff.**

Task 2– Program Development

- Review plan for 2022 with Town budget
 - Adjust 2022 plan to meet budget.
 - Field observation of 2021 completed streets for warranty work.
 - Field observation of proposed 2022 streets for patching, crack patching or other necessary prework prior to surface treatment. This includes, but is not limited to asphalt, concrete, and aggregate shoulders.

Task 3 - Bid Document Preparation and Assistance (after Town Board Acceptance)

- Update specifications for proposed repairs and treatments.
- Update typical details for patching and crack sealing.
- Develop street map for the 2022 program based on Town budget.
- Prepare bid forms.
- Work with the Town Attorney and Administrator to develop contract documents for the Project Manual.
- Conduct pre-bid meeting and site visit with contractors.
- Answer questions and prepare addenda as required.
- Receive bids and conduct bid opening.
- Prepare bid tabulation and review bids for accuracy and completeness.

Task 4 – Construction Services

- Conduct pre-construction meeting with contractor.
- Review material submittals within three business days of receipt.
- Mark patching areas prior to work.
- Coordinate with ACWWA for any valve box adjustments required.
- During patching and surface treatment placement our field inspector will be on site at least four hours per day to monitor placement procedures, traffic control and cleanup. We have estimated that the contractor will be on site no more than ten days. The inspector will prepare a daily log with photographs.
- At the completion of work the inspector will measure quantities and meet with the contractor to confirm.
- SEH will conduct a substantial completion walk through with the contractor and develop a punch-list of items to be completed.
- When the punch-list has been completed, SEH will field verify punch-list items have been addressed, and we will prepare a notice of final acceptance.
- SEH will review the contractor's pay requests.

Scope Exclusions

The proposed work does not include:

- Field Survey
- Utility Locates
- Fees for posting or advertising
- Material testing
- Preparation of construction traffic control or MHT plans
- Services include no more than two reviews of contractor submittals
- Construction observation in excess of ten days
- Title commitments
- Legal descriptions and exhibits
- Construction survey staking

Schedule:

If authorization to proceed to bidding is received by April 8, bid packages would be completed by April 13. Bids could then be received by the end of April. Work schedule to be coordinated with contractor for summer 2022.

Payment:

Attached is a spreadsheet with estimated hours for each task based on the hourly rates in our 2022 on-call contract amendment. The total, not-to-exceed, fee for this proposal is **\$18,478.00**. These fees include all labor, expenses, mileage and materials. Additional work, if requested, shall be compensated in accordance with the rates provided.

Other Terms and Conditions:

Other or additional terms contrary to the Master Agreement for Professional Services that apply solely to this project as specifically agreed to by signature of the Parties and set forth herein:

1. An item of work that is not specifically included and identified as a "Task" within the Scope of Work is specifically excluded from the Scope of Work.

SEH will not proceed with this work without prior approval from the Town of Foxfield. If this proposal is accepted, please sign below and return a pdf copy to SEH. Please feel free to call Erica Olsen or Rick Coldsnow with any questions.

Thank you for providing SEH this opportunity to assist you with this important project.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

Erica Olsen, P.E. CO
Project Manager
720.280.3695

Signature Name
Role
Contact

Accepted for the Town of Foxfield

By: _____

Title: _____

Date: _____

Town of Foxfield

FEE ESTIMATE

Surface Treatment Program Update and 2022 Bid and Construction Assistance						
April 1, 2022						
		Senior Advisor	Snr. Proj.	Staff	Senior	
Task	Description	Engineer II	Engineer II	Accountant	Task Subtotal	
	2022 Hourly Rates	\$234.00	\$181.00	\$120.00	\$129.00	
		RC	EO	GM	SO	
1	Administration	1	4		4	\$1,474.00
2	Program Development					
2.1	Review and adjust 2021 plan per Town budget		1	4		\$661.00
2.2	Field inspection of streets		1	8		\$1,141.00
3	Bid Assistance					
3.1	Update specifications	0.5	1	1		\$418.00
3.2	Update typical details		0.5	0.5		\$150.50
3.3	Street map		1	2		\$421.00
3.4	Bid forms		0.5	1		\$210.50
3.5	Contract documents	0.5	2	1		\$599.00
3.6	Coordinate with potential bidder (does not include public bid process)	0.5	0.5			\$207.50
3.7	Bid review		0.5			\$90.50
4	Construction Services					
4.1	Conduct pre-construction meeting		2	2		\$602.00
4.2	Review submittals		0.5	2		\$330.50
4.3	Mark patching areas			4		\$480.00
4.4	Coordinate with ACWWA		0.5	1		\$210.50
4.5	On-site observation (7 days)	3	3	60		\$8,445.00
4.6	Measure quantities and prepare substantial completion punch-list		2	8		\$1,322.00
4.7	Final walk through		3	3		\$903.00
4.8	Notice of acceptance		1			\$181.00
4.9	Review pay request		1	2		\$421.00
	Subtotal Hours	5.5	25	99.5	4	
	Subtotal Fees	\$1,287.00	\$4,525.00	\$11,940.00	\$516.00	
	Total Project Estimated Labor					\$18,268.00
	Expenses 300 miles @ \$0.58/miles					\$210.00
	Total Time & Materials Not-to-Exceed Fee					\$18,478.00

