




## STAFF REPORT

**Date:** Tuesday, February 9, 2016  
**To:** Bryan H. Montgomery, City Manager  
**From:** Kevin Rohani, P.E. Public Works Director/ City Engineer  
**SUBJECT:** Agreement with Pavement Engineering, Inc. (PEI) for Design Services Associated with CIP Project Number 179 – FY 2016/17 Street Repair and Resurfacing Project

Approved and Forwarded to City Council:

  
Bryan H. Montgomery, City Manager

### Background and Analysis

The City's Five-Year Capital Improvement Program (CIP) includes a project for the improvement and rehabilitation of the local streets in the City of Oakley. The City uses this annual project to perform rehabilitative and preventative maintenance on the public street network through various means such as: base dig-outs, crack sealing, slurry sealing, cape sealing, and pavement overlays.

The City of Oakley uses a Pavement Management System (PMS) to evaluate the condition of streets and to prioritize projects to repair and resurface the streets. Each annual street repair and resurfacing project is done strategically to ensure the funds allocated are utilized to not only repair and resurface the streets that are in poor condition, but also to rehabilitate streets that are in fair to good condition to prolong their life and performance.

One of the major issues that we are faced with in Oakley is the existence of Sierra-Crete in the roadway base. Sierra-Crete was a product of DuPont Corporation that was used as roadway base material in the then unincorporated Oakley streets, as well as other communities in East Contra Costa County between 1989 and 1996. This material has not performed as advertised and has resulted in numerous base failures under City streets over the past several years. As a part of the annual street repair and resurfacing projects, base repairs are performed and Sierra-Crete is removed from under the City streets.

The City's most recent street repair and resurfacing projects, located in the Heather Park and El Monte neighborhoods, contained similar failures and Sierra Crete. The design recommendation was to repair the failed areas and place a Thin Maintenance Overlay (TMO) over the entire street. The TMO provided a minor structural benefit and the final product looks like a newly paved street. The TMO has been in place for almost two years and is performing exceptionally well. This project had both Sierra Crete and non-Sierra Crete streets. They all have had similar failures due to their age and varying pavement condition. Not all the streets contain Sierra Crete and the

design team will evaluate the pavement and provide a combination of treatments, including slurry seal, overlays, and TMO that will extend the life of the roadways.

For the past few years, the consulting firm Pavement Engineering, Inc. (PEI) has been hired by the City of Oakley to design the annual street repair and resurfacing project. This firm specializes in pavement design and works for a large number of municipalities across California. They have performed effectively and efficiently on the City of Oakley projects. Staff requested a proposal from Pavement Engineering, Inc. to prepare plans, specifications, bid documents, and engineer's estimates. They have proposed to perform design services for a cost not to exceed \$74,095.00.

This type of project is considered to be a "fair weather" project and has to be constructed during the warmer months. The proposed schedule would be to design the project over the next few months and have it ready for construction in late summer of 2016. CIP 179 will perform street repair and resurfacing in the Vintage Parkway neighborhood.

#### **Fiscal Impact**

The FY 2016/17 CIP budget process will be developed in the coming months and as part of the approval, the budget funds will be allocated for the construction of CIP 179 – FY 2016/17 Street Repair and Resurfacing Project.

#### **Recommendation**

Staff recommends that the City Council adopt the resolution approving the agreement with PEI for design services, as described, for a cost not to exceed \$74,095.00 and authorize the City Manager to enter into the agreement. The Resolution also includes the assignment of \$74,095.00 of funds currently available in Gas Tax funds to pay for the work.

#### **Attachments**

- 1) Pavement Engineering Inc. Proposal
- 2) Resolution



October 23, 2015

MP15-459

Mr. Jason Kabalin  
City of Oakley  
3231 Main Street  
Oakley, CA 94561

Subject: Proposal to Provide Engineering Design Services for the FY 2016-2017 Street Repair & Resurfacing Project (see attached street lists)

Dear Jason:

We appreciate the confidence you have in our services and look forward to working with you and the City of Oakley on its FY 2016-17 Street Repair & Resurfacing Project. This proposal outlines our services and fees.

## **DESCRIPTION OF SERVICES**

The City of Oakley would like Pavement Engineering Inc. (PEI) to assist them with its FY 2016-17 Street Repair & Resurfacing Project. As part of this work, PEI's design focus will include maintaining the existing pavement to a serviceable and safe condition. Working off the attached street list we will compile measured field quantities, prepare contract documents and estimates and provide bid and construction support services. The scope of work and our approach will be similar to previous projects performed with the City of Oakley.

## **SCOPE OF WORK**

### **Task 1 - Measure Field Quantities**

PEI will compile information previously collected measurements and pertinent field quantities from each of the project. Physically measuring the quantities provides confidence that the bid quantities are correct and ensures smoother contract administration and reduces the potential for change orders.

We will compile and summarize physical elements, including the location of existing striping, pavement markers and paint markings; location of underground utility covers; limits of paving transitions, digouts, and other pavement repairs; and the total area of pavement to be resurfaced.

If we identify any concrete repairs or tree root damage during our field reviews, we will note it and bring it to your attention to determine if the repairs should be added to the contract.

Mr. Jason Kabalin  
October 23, 2015  
MP15-459  
Page 2

## **Task 2 - Prepare and Incorporate Contract Documents and Estimates**

PEI will compile all field quantities (Task 1) into individual engineer's estimates by street segment and will provide a summary spreadsheet of the entire project. Using these quantities, along with the pavement evaluation data (Task 3), PEI will meet with City staff to determine the most cost-effective maintenance approach for each of the project streets. This meeting will be considered the 65% submittal.

We will draft technical specifications and details for typical sections, transitions, conforms, digouts, and additional pavement work will be prepared. PEI will submit any portion of the maintenance work that requires further clarification in the form of drafted plan views, details, elevations, or cross sections, as is necessary. Where it facilitates the design, PEI will use aerial photographs to develop base sheets. This information will be submitted to the City at the 90% design review. Our work will include designing the required accessible ramps within the project limit.

After reviewing the 90% submittal, we will meet with City staff to resolve any outstanding issues and will adjust the contract documents accordingly. A final 100% submittal will follow.

This work does not include the design of ADA curb ramps. This service can be performed for an additional fee.

## **Task 3 – Perform deflection testing and coring for pavement design**

PEI will perform deflection testing, coring and analysis on the project streets. This type of analysis will eliminate the guesswork and ensure that an optimum maintenance approach is identified. In addition, PEI has found that adequate cores and deflection data is invaluable during both the design and construction phases of the project. Our experience suggests that gathering this additional data helps produce designs that can last longer than average approaches, resulting in additional savings to the City. The data collected would be helpful in evaluating these "Sierra-Crete" streets.

The deflection analysis will be performed in general accordance with California Test method 356 (CTM 356). Deflection tests will be performed at 100-foot maximum intervals in one lane (minimum 5 tests per segment). Coring will be performed at 500-foot maximum intervals over the street segment (minimum two cores per street segment).

Traffic control will be provided using a vehicle mounted warning lights. Flagging will be provided as needed. The City of Oakley will provide traffic index information.

## **Task 4 - Construction support services**

During construction, PEI will be available to the City construction staff to review design

Mr. Jason Kabalin  
October 23, 2015  
MP15-459  
Page 3

questions, submittals, and construction problems. In addition, PEI will assist the City during construction by meeting with the contractor and City representative to mark out areas of removal.

### **PROPOSED WORK SCHEDULE**

PEI understands that time is of the essence. We are committed to completing the final contract documents quickly, so the City can enter into a construction contract by early spring of 2016.

### **PROPOSAL FEE & FEE BREAKDOWN**

We estimate the construction cost for the listed project streets will be between \$550,000 and \$700,000. Our not-to-exceed fee to perform the outlined work will be \$74,095. PEI's fee for the work is based on our experience with similar projects performed for the City and throughout the State.

The estimated fees for the total project include all field work, design work and contract document development up to completion of the project for the project streets. Construction inspection and testing services are not included.

Our work will be invoiced on a time and material basis. All fees and costs associated with this project are subject to final negotiation with the City of Oakley. Any change in scope may result in additional fees. The enclosed proposal conditions apply.

Please call me at (805) 781-2265 with any questions you may have about this proposal. It's always great working with you, Jason. We will always endeavor to meet your expectations going forward.

Very truly yours,  
PAVEMENT ENGINEERING INC.



Joseph L. Ririe, P.E.  
Senior Principal Engineer

Enclosures: Street list  
Fee breakdown  
Proposal conditions

pc: C File, M File, MP Files

**CITY OF OAKLEY  
 FY 2016-17 STREET REPAIR & RESURFACING PROJECT  
 STREET LISTS**

AREA A			
Street	From	To	Treatment
Walnut Meadows Drive	Vintage Parkway	Fetzer Court	Overlay or digout w s/s
Walnut Meadows Drive	Fetzer Court	Jordan Lane	Overlay / Reconstruct
Walnut Meadows Drive	Jordan Lane	Fetzer Lane	Slurry Seal
Merlot Lane	Walnut Meadows Dr (West)	Walnut Meadows Dr (East)	Slurry Seal
Merlot Court	Merlot Lane	End	Slurry Seal
Chappalet Place	Merlot Lane	End	Slurry Seal
Walnut Meadows Court	Walnut Meadows Drive	End	Slurry Seal
Fetzer Court	Walnut Meadows Drive	End	Slurry Seal
Fetzer Lane	Fetzer Court	End	Slurry Seal
Jordan Lane	Fetzer Lane (North)	Fetzer Lane (East)	Slurry Seal
Forbes Court	Jordan Lane	End	Slurry Seal
Jomanet Court	Jordan Lane	End	Slurry Seal
Soda Rock Place	Walnut Meadows Drive	End	Digout with TMO
Deerpark Road	Walnut Meadows Drive	Lakespring Drive	Overlay / Reconstruct
Deerpark Way	Deerpark Road	End	Overlay / Reconstruct
Deerpark Court	Deerpark Road	End	Overlay / Reconstruct
Northgate Place	Lakespring Drive	End	Overlay / Reconstruct
Lakespring Drive	Walnut Meadows Drive	Beaulieu Lane (South)	Digout with TMO
Lakespring Drive	Beaulieu Lane (South)	Beaulieu Lane (North)	Slurry Seal
Cotati Court	Lakespring Drive	End	Slurry Seal
Beaulieu Lane	Walnut Meadows Drive	Lakespring Drive	Slurry Seal
Lakespring Place	Beaulieu Lane (North)	Beaulieu Lane (South)	Slurry Seal
Lakespring Court	Lakespring Place	End	Slurry Seal

AREA B			
Street	From	To	Treatment
Carol Lane	Main Street	Fairhaven Way	Digout with TMO
East Summerfield Court	Fairhaven	End	Digout with TMO
Fairhaven Court	Fairhaven Way	End	Digout with TMO
Fairhaven Way	West Summerfield Court	Fairhaven Court	Digout with TMO
West Summerfield Court	Fairhaven Way	End	Digout with TMO

VINTAGE PARKWAY			
Street	From	To	Treatment
Vintage Parkway NB	~290 N/O Main Street	PCC bridge deck	Rehabilitation
Vintage Parkway SB	PCC bridge deck	Main Street	Rehabilitation



<b>TASK 1</b>	<b>MEASUREMENT OF FIELD QUANTITIES</b>	<b>RATE</b>	<b>UNITS</b>	<b>TOTAL</b>
	Associate Engineer	\$145	2	\$290
	Senior Engineering Technician	125	20	2,500
	Engineering Technician	120	20	2,400
<b>Fee Task 1</b>				<b>\$5,190</b>
<b>TASK 2</b>	<b>PREPARE CONTRACT DOCUMENTS AND ESTIMATES</b>	<b>RATE</b>	<b>UNITS</b>	<b>TOTAL</b>
	Senior Principal Engineer	\$210	16	\$3,360
	Associate Engineer	145	33	4,785
	Senior Engineering Technician	125	78	9,750
	Engineering Technician	115	78	8,970
	CAD Drafting	110	130	14,300
<b>Fee Task 2</b>				<b>\$41,165</b>
<b>TASK 3</b>	<b>DEFLECTION TESTING / CORING FOR PAVEMENT DESIGN</b>	<b>RATE</b>	<b>UNITS</b>	<b>TOTAL</b>
	Senior Principal Engineer	\$210	12	\$2,520
	Senior Engineering Technician	145	8	1,000
	Clerical	75	8	600
	Dynalect Operator	340	6	2,040
	Assistant Dynalect Operator	160	6	960
	Dynalect and Coring Crew Preparation	110	2	220
	Coring Technician	250	10	2,500
	Assistant Coring Technician	175	10	1,750
	R-value	350	2	700
	Mobilization			3,420
	Traffic Control			2,000
<b>Fee Task 3</b>				<b>\$17,710</b>
<b>TASK 4</b>	<b>CONSTRUCTION SUPPORT SERVICES</b>	<b>RATE</b>	<b>UNITS</b>	<b>TOTAL</b>
	Senior Principal Engineer	\$210	16	\$3,360
	Associate Engineer	145	46	6,670
<b>Fee Task 4</b>				<b>\$10,030</b>
<b>TOTAL PROJECT FEE</b>				<b>\$74,095</b>



### PROPOSAL CONDITIONS

1. Proposal is valid for thirty days from the date of the proposal.
2. All work shall be performed utilizing common methods and practices of the civil engineering profession. Reports and construction documents will be signed by a registered civil engineer.
3. Fees for Lump Sum or Unit Price Proposals will be charged at the quoted price. The quoted prices include all laboratory testing costs. Fees for Engineering and Technical Services on a Time and Materials Basis will be charged at the applicable hourly rates of the current PEI Fee Schedule.
4. The proposal is based upon providing liability insurance with limits up to \$2,000,000.
5. One copy of an Engineering Report or Plans and Specifications will be provided to the Owner of a project. Additional copies are \$35 each.
6. Payment: Invoices will be submitted at the completion of the work for Engineering Reports. Inspection fees will be invoiced on a monthly basis. All invoices are due upon receipt. Interest of 1-1/2% per month (but not exceeding the maximum rate allowable by law) will be payable on any amounts not paid within 30 days, payment thereafter to be applied first to accrued interest and then to the principal unpaid amount. Attorneys' fees or other costs incurred in collecting any delinquent amount shall be paid by the client.





RESOLUTION NO. \_\_\_-16

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OAKLEY APPROVING AN AGREEMENT WITH PAVEMENT ENGINEERING INC., (PEI) FOR DESIGN SERVICES ASSOCIATED WITH CAPITAL IMPROVEMENT PROGRAM PROJECT NUMBER 179 – FY 2016/17 STREET REPAIR AND RESURFACING PROJECT AND AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT**

**WHEREAS**, as part of the Fiscal Year 2016/2017 Budget the City of Oakley approved a 5-Year Capital improvement Program (CIP); and

**WHEREAS**, Project 167 is the 2016/17 Street Repair and Resurfacing Project, which will include rehabilitative and preventative maintenance on the public street network through a series of dig-outs, crack sealing, and pavement overlay, and;

**WHEREAS**, staff identified numerous streets throughout the City of Oakley for the repair and resurfacing project; and

**WHEREAS**, Pavement Engineering Inc. has submitted a proposal to prepare design drawings, specifications, and cost estimates for CIP Project Number 167 for an amount not to exceed \$74,095.00.

**NOW, THEREFORE, BE IT RESOLVED AND ORDERED**, that the City Council of the City of Oakley hereby:

Approves the agreement with Pavement Engineering Inc., for the preparation of engineering design drawings, specifications, and cost estimates for CIP Project Number 179 for an amount not to exceed \$74,095.00, and authorizes the City Manager to execute said agreement; and

**PASSED AND ADOPTED** by the City Council of the City of Oakley at a meeting held on the 9<sup>th</sup> of February, 2016 by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTENTIONS:

APPROVED:

ATTEST:

\_\_\_\_\_  
Kevin Romick, Mayor

\_\_\_\_\_  
Libby Vreonis, City Clerk

\_\_\_\_\_  
Date