

**PROPOSAL TO PROVIDE GEOTECHNICAL,  
COMPACTION TESTING, AND MATERIALS  
TESTING SERVICES, COLLIER AVENUE,  
MINTHORN STREET, AND RANCHO LA  
LAGUNA LOCAL STREETS PAVEMENT  
REHABILITATION PROJECT  
CITY OF LAKE ELSINORE, CALIFORNIA**

**REFERENCE NO. 7048.P  
OCTOBER 12, 2022**

Prepared for:

City of Lake Elsinore  
130 South Main Street  
Lake Elsinore, California 92530

Attention: Mr. Carlos Norvani

October 12, 2022

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Lake Elsinore, California 92530

Reference No. 7048.P

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Subject: Proposal to Provide Geotechnical, Compaction Testing, and Materials Testing Services, Collier Avenue, Minthorn Street, and Rancho La Laguna Local Streets Pavement Rehabilitation Project, City of Lake Elsinore, California.

## **INTRODUCTION**

In accordance with your request for proposal, LOR Geotechnical Group, Inc., (LOR) is pleased to provide you with this cost estimate proposal to provide geotechnical, compaction testing, and materials testing services during construction of the Collier Avenue, Minthorn Street, and Rancho La Laguna Local Streets Pavement Rehabilitation Project. This project features the rehabilitation of several collector and local roadways that are located throughout the city of Lake Elsinore, California.

The services that we propose to provide includes observation, compaction testing, representative sampling of materials used for construction, and laboratory testing of the sampled construction materials. A summary of the services that are currently anticipated for this project is included within the following Preliminary Scope of Services.

A detailed construction schedule was not available to use as a reference while preparing our cost estimate. Therefore, the time frame estimates that were used to project the total costs for our services are largely based on a project duration of 40 days, as specified within the project contract documents (Lake Elsinore, 2022a). We also used the project pavement rehabilitation plans (Lake Elsinore, 2022b) as a guide when constructing our scope of services and estimating costs. If a detailed construction schedule is made available at a later time, LOR can provide an updated cost proposal that is based on the time frames detailed within the construction schedule, if requested.

The costs of our services are highly dependent on the actual field conditions at the time of construction. The field conditions that will impact the costs of our services might include the sequencing of construction, the performance of the various subcontractors, and the extent of our services that are required to complete the project, as determined by your

construction management team. These factors are difficult to predict in advance, therefore, we propose to provide our services on a time and materials basis. Under such an agreement, charges will only be billed after we have provided services for the project. There is no obligation, and no penalty, for unused funds against a purchase order.

### **PRELIMINARY SCOPE OF SERVICES**

The geotechnical, compaction testing, and materials testing services that are proposed for the subject project will include, but are not necessarily limited to:

1. Attendance of pre-construction and progress meetings as necessary to consult with authorized employees, agents, and representatives of our client, and other agencies having jurisdiction relative to the geotechnical engineering services of the project.
2. Materials submittal review for the slurry seal, aggregate base, and HMA/ARHM materials that are submitted for use on the project by the contractor.
3. Professional geotechnical engineering support that is often required during construction.
4. Representative sampling of onsite soil, aggregate base materials, Portland cement concrete (PCC) materials, slurry seal, and hot-mix asphalt (HMA) materials used during construction to determine engineering properties and for quality compliance testing.
5. Laboratory quality compliance testing of the aggregate base materials delivered to the project to verify compliance with Caltrans Class II specifications. LOR will conduct gradation, sand equivalent, and R-value testing.
6. Observation, representative sampling, and testing during placement of slurry seal materials. LOR will provide sand gradation, asphalt content, moisture content, and wet track abrasion testing of the slurry materials.
7. Providing American Concrete Institute (ACI) certified technicians for sampling and testing of ready-mix Portland cement concrete (PCC) materials delivered to the project. This includes fabricating compressive strength specimens from PCC samples.

8. Laboratory curing and strength testing of the compressive strength specimens that were fabricated on the job site. Compressive strength testing will be provided to verify that the concrete has met the specified 28-day compressive strength.
9. Periodic compaction testing during preparation of the subgrade soils and base grade (where required) for curb & gutter, driveway approaches, access ramps, and roadway improvements.
10. Periodic observation and compaction testing during the grading and compaction of the subgrade soils and aggregate base grade for roadway areas where full depth rehabilitation is proposed.
11. Continuous observation and compaction testing during asphalt paving of the roadways. LOR will also obtain representative samples of the HMA/ARHM materials for maximum density and quality compliance testing.
12. Preparation of daily field reports for each site visit. Our daily field reports will contain information regarding our geotechnical observations, compaction testing results, and results of our laboratory materials tests. They will be promptly submitted to the project superintendent.
13. Preparation and submittal of a compaction and materials testing report at the completion of the project following the notice of completion.

**COST ESTIMATE**

Geotechnical, Compaction Testing, and Materials Testing Services  
Collier Avenue, Minthorn Street, and Rancho La Laguna Local Streets Pavement  
Rehabilitation Project, Lake Elsinore, California

Description	Estimated Quantity	Per Unit	Extended Cost
<b>Engineering:</b> Submittal Review, Project Support	25	\$165/hour	\$4,125.00
<b>Soil Technician:</b> Compaction Testing and Materials Testing Services	250	\$132/hour	\$33,000.00
PCC Flatwork Subgrade, Base Grade	25		
Roadway Subgrade, Base Grade	80		

Description	Estimated Quantity	Per Unit	Extended Cost
Slurry Seal Observation and Testing	50		
HMA Paving	80		
PCC Sampling & Testing	15		
<b>10% Field Supervision and Equipment</b>			<b>\$3,300.00</b>
Laboratory Compaction, Soil & Aggregate Base	5	\$220/unit	\$1,100.00
Laboratory Quality Control, Aggregate Base	2	\$620/unit	\$1,240.00
Laboratory Slurry Seal, Gradation	5	\$130/unit	\$650.00
Laboratory Slurry Seal, Sand Equivalent	5	\$120/unit	\$600.00
Laboratory Slurry Seal, Wet Track Abrasion	5	\$165/unit	\$825.00
Laboratory Slurry Seal, Sieve Analysis	5	\$100/unit	\$500.00
Laboratory Slurry Seal, %Oil by Ignition	5	\$145/unit	\$725.00
Laboratory Slurry Seal, Moisture Content	5	\$50/unit	\$250.00
Laboratory Gradation & Extraction, Asphalt Concrete	10	\$270/unit	\$2,700.00
Laboratory Stability & Density	10	\$200/unit	\$2,000.00
Laboratory Compressive Strength	15	\$30/unit	\$450.00
Compaction & Materials Testing Report	1	--	\$2,500.00
	<b>SUBTOTAL</b>		<b>\$53,965.00</b>
10% Construction Contingency			\$5,396.50
	<b>ESTIMATE:</b>		<b>\$59,361.50</b>

The Soil Technician hourly rate listed in the above table incorporates the required prevailing wage LOR must pay to our Soil Technicians, as determined by the State of California. All unit charges used in our cost estimate are based on our current fee schedule (LOR, 2022). We have attached a current fee schedule, complete with our policies regarding reimbursable expenses, travel time, overtime, prepayments, billing, and terms of payment, as Enclosure 1.

## **OUR APPROACH**

LOR has provided professional geotechnical consulting and construction materials testing services on over three thousand projects, to the private and public sectors in southern California for over 30-years. When our office is contacted to serve under the terms of an on-call services agreement, our dispatch personnel will assign a qualified representative to perform the requested services. If additional technical support is required, our geologists and technicians have a direct line of communication to our principal engineer to discuss the details related to our projects. Additionally, our project managers maintain direct lines of communication with our field staff and our clients to help ensure projects run smoothly.

All of our field personnel have a company owned vehicle with a company logo displayed. In addition to providing a vehicle, we also provide our personnel with all of the equipment necessary to perform the requested services. LOR ensures that our field personnel have the most up-to-date tools, maintained in good working order, and calibrated as required.

In support of field personnel, our office has a full service, Caltrans certified, geotechnical laboratory that is fully staffed and capable of providing timely results.

Our office is located at 6121 Quail Valley Court on the east end of Riverside, California. Our proximity to the project will enable us to provide timely service during the course of a service agreement. We have the ability to provide 24-hour service seven days a week if required. Although a 24-hour notice prior to service is appreciated, LOR has the ability to provide service in most cases in as little as two hours.

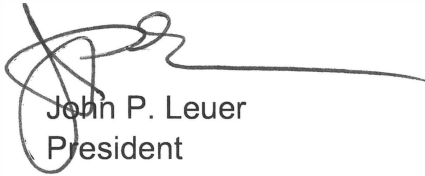
City of Lake Elsinore  
October 12, 2022

Reference No. 7048.P

**CLOSURE**

We thank you for the opportunity to provide this proposal. If you should have any questions, please do not hesitate to contact this firm at your convenience.

Respectfully submitted,  
**LOR Geotechnical Group, Inc.**



John P. Leuer  
President

TG:JPL:ss

Enclosures:            Enclosure 1: Fee Schedule

Distribution:            Addressee via email [cnorvani@Lake-Elsinore.org](mailto:cnorvani@Lake-Elsinore.org)

## REFERENCES

Lake Elsinore, City of, 2022a, Contract Documents, Specifications and Plans for Pavement Rehabilitation Project, Collier Avenue and Minthorn Street Rancho La Laguna - Local Streets, CIP Project No. Z-10059, Bid Opening Date October 12, 2022.

Lake Elsinore, City of, 2022b, Pavement Rehabilitation Project, Collier Avenue and Minthorn Street Rancho La Laguna-Local Streets, City Project Z-10059, dated September 1, 2022.

LOR Geotechnical Group, Inc., 2022, Fee Schedule, dated August 2022.