FEE SCHEDULE

AUGUST 2022

SERVICES

Geotechnical Engineering

LOR Geotechnical Group, Inc. provides geotechnical engineering services, including: preliminary geotechnical investigations, foundation investigations, percolation feasibility investigations, liquefaction evaluation investigations, as well as grading observation materials testing services.

Geological

LOR Geotechnical Group, Inc. provides geological services, engineering geology investigations, seismic setting studies, slope stability investigations, liquefaction susceptibility investigations, hydrology/water resource studies, and bedrock rippability evaluations.

Environmental

LOR Geotechnical Group, Inc. provides, environmental site assessments, underground storage tank investigations and remediation investigations, groundwater monitoring systems, soil and groundwater sampling and analysis, and environmental studies for property transfers.

All costs for Geotechnical Engineering, Geological, and Environmental Services are based on the site and investigative parameters requested.

FEES

The hourly personnel charges and laboratory test unit rates are as follows:

Personnel Charges-Hourly	
Principal Engineer	$300.00
Project Engineer/Geologist	$165.00
Staff Engineer/Geologist	$140.00
Soil Technician/Deputy Inspector (Field or Laboratory) [1]	$104.00
Soil Technician/Deputy Inspector (Prevailing Wage) [1, 2]	$132.00
Soil Technician/Deputy Inspector (CBA) [1, 2]	$142.00
Traffic Control (Prevailing Wage) [1, 2]	$122.00
Drafting	$95.00
Clerical	$80.00
Laboratory Testing Charges - Unit Costs	
CT 202: Sieve Analysis (Soil)	$110.00
CT 202: Sieve Analysis (Aggregate)	$140.00
CT 202: #200 Sieve Wash	$65.00
CT 205: Crushed Particle Analysis	$140.00
CT 207: Specific Gravity Absorption of Fine Aggregate	$150.00
CT 211: LA Rattler	$250.00
CT 213: Organic Impurities	$80.00
CT 217: Sand Equivalent	$120.00
CT 217: Sand Equivalent -QC	$130.00
CT 226: Moisture Content	$30.00
CT 227: Cleanness Value	$130.00
CT 229: Durability Index Fine/Coarse	$260.00
CT 235: Percentage of Flat and Elongated Particles in Coarse Aggregate	$100.00
CT 301: R-Value	$350.00
CT 305: Swell Tests	$100.00
CT 307: Moisture Vapor Susceptibility	$175.00

CT 308 & CT 366: Asphalt Concrete Density & Stability/Rubberized.	$220.00/$270.00
CT 308: Asphalt Concrete Density/Rubberized.	$130.00/$190.00
CT 309: Asphalt Concrete Theoretical Maximum Density ..	$175.00
CT 366: Asphalt Concrete Stability/Rubberized.	$200.00/$250.00
CT 382: Asphalt Extraction & Gradation.	$260.00
CT 521: Concrete Cylinder Compressive Strength.	$35.00
CT 523: Beam Cylinder	$75.00
Concrete & Beam Cylinder Hold.	$10.00
ASTM D6913/7928: Mechanical Analysis..	$220.00
ASTM D1557: (Modified)/ ASTM D698: (Standard) Proctor (4").	$190.00
ASTM D1557: (Modified)/ ASTM D698: Proctor (6" or Cal-216).	$220.00
ASTM D2434: Permeability..	$400.00
ASTM D2435: Consolidation..	$240.00
ASTM D5333: Collapse Potential.	$200.00
ASTM D2216: Moisture Content.	$30.00
ASTM D221/D2937: Moisture/Unit Weight (Ring).	$40.00
ASTM D2974: Organic Matter Test..	$90.00
ASTM D4318: Atterberg Limits.	$220.00
ASTM D4829: Expansion Index.	$190.00
ASTM D3080: Direct Shear..	$270.00
Soluble Sulfate: (Test Kit SF-1).	$80.00

[1] 10% field supervision and equipment/vehicle charge will be added to all field services.

[2] Rate based on current State determined prevailing wage rates as of the date of this document. Adjustments to our rates may be necessary based on the actual State determined prevailing wage rates at the time of our work.

TERMS

Reimbursable Expenses

Outside services performed by others and direct costs expended on the client's behalf are charged at cost plus twenty percent. These expenses include rental of drill rigs, bulldozers, backhoes, travel and subsistence, permits, reproduction costs, etc.

Travel Time

Travel time required to provide professional or technical services will be charged at the appropriate hourly rates.

Overtime

An overtime rate of 1.5 times the standard rate will be used for time in excess of 8 hours per day and Saturdays. An overtime rate of 2.0 times the standard rate will be added for work on Sundays, official company holidays, and on all work in excess of 12 hours per day.

Prepayments

A retainer of fifty percent of the total fee is required for all field studies. The balance of the fee must be paid at the time the report is released to the client.

Billing

Billings will be provided periodically and will be classified by fee categories set forth above or as given by proposal.

Terms of Payment

Invoices rendered for professional services are due upon presentation. A service charge of 1.5 percent, per month, may be charged on accounts not paid within thirty days to cover additional processing and carrying costs. Any attorney's fees or other costs incurred in collecting any delinquent account will be paid by the client.

LOR GEOTECHNICAL GROUP, INC.
Soil Engineering ▲ Geology ▲ Environmental

STATEMENT OF QUALIFICATIONS
ON-CALL GEOTECHNICAL ENGINEERING
AND TESTING SERVICES,
CITY OF LAKE ELSINORE, CALIFORNIA

REFERENCE NO. 7079.P
DECEMBER 15, 2022

Prepared for:

City of Lake Elsinore
Engineering Division
130 S. Main Street
Lake Elsinore, California 92530

Attention: Mr. Carlos Norvani

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LOR GEOTECHNICAL GROUP, INC.
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December 15, 2022

City of Lake Elsinore, Engineering Division
130 S. Main Street
Lake Elsinore, California 92530

Reference No. 7079.P

Attention: Mr. Carlos Norvani

Subject: Statement of Qualifications, On-Call Geotechnical Testing Services, City of Lake Elsinore, California.

Reference: Request for Qualifications, Engineering On-Call Geotechnical Testing Services, City of Lake Elsinore, dated January 19, 2023.

In accordance with your request for qualifications (RFQ), LOR Geotechnical Group, Inc. (LOR) is pleased to submit this Statement of Qualifications to demonstrate our ability to provide the proposed geotechnical testing services during an on-call services agreement with the City of Lake Elsinore, California.

The legal name of our business is LOR Geotechnical Group, Inc., and we are located at 6121 Quail Valley Court, in the city of Riverside, California. LOR is a multi-disciplinary geotechnical, engineering, and consulting firm providing sound solutions and innovative strategies in the geotechnical, geologic, environmental, and construction inspection fields for our clients since 1988. Our firm has extensive experience with providing geotechnical engineering, compaction testing, and materials testing services on a wide range of capital improvement projects including domestic water, general district, sanitation, storm water, non-potable water, ground water replenishment, and more.

As stated in the RFQ, the terms and conditions of our statement of qualifications, and the associated fee schedule, is valid for a period of 90 days. We welcome any questions or comments that you may have regarding this document. We can be reached by telephone at (951) 653-1741, and by email at tguillen@lorgeo.com or jleuer@lorgeo.com. For additional information about our company you can visit our website at www.lorgeo.com.

Respectfully submitted,

John P. Leuer, President
LOR Geotechnical Group, Inc.

UNDERSTANDING OF PROJECT

LOR has been in business for over 34 years and has provided services similar to those presented in the RFQ for dozens of municipalities located throughout southern California, on hundreds of different projects. Our team is familiar with the many considerations that are involved with different types of public improvements projects. All staff members that will be assigned to provide the proposed services have been employed with LOR for a minimum of 15 years. Our very low turn over rate allows us to leverage our experience in planning, design, and field operations in order to achieve the City's project objectives.

We understand that although these types of projects might be similar to projects that we have served on in the past, each project has its own distinct requirements. Prior to the start of construction we begin to familiarize ourselves with the project by conducting a thorough review of the project documentation. If requested by the City, we can provide a proposal for each project that we are called to service during the on-call services agreement. Our proposals typically include a detailed scope of services that's based on our review and understanding of the project documentation. Our proposals also include a cost estimate that typically reflects the services that we have anticipated over the project duration.

Prior to the start of construction our engineering staff is available to attend pre-construction meetings to discuss the geotechnical and materials testing aspects of the project. Our engineering staff often provides materials submittal review to help verify that the materials that have been proposed for use on the project meet the requirements specified by the project documentation. These pre-construction processes help ensure that project expectations are ultimately delivered.

Each member of our team understands the many considerations that are involved during construction of a public improvements project, including the budget considerations. Our project management team will work closely with our field technicians and your construction management team to ensure that our services are being provided as needed, and that the relevant laboratory testing is being assigned and completed. Every step of the way, we will work closely with the city of Lake Elsinore to ensure that the project quality goals are being met, within the allocated budget.

APPROACH TO SCOPE OF WORK

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.

Prior to the start of construction our project management team will have reviewed the construction drawings, technical provisions, and contract information to have a full understanding of the project, as well as our firm's role as a consultant and provider of geotechnical engineering services. Our engineering staff is available prior to, and during construction, to attend construction meetings and to provide material submittal review if requested by the city of Lake Elsinore.

Prior to arriving onsite to the project, our technician's will have a thorough understanding of their role in the proposed construction. This includes the compaction testing frequency, minimum relative compaction specifications, sampling frequency, and materials specifications.

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.

At the start of construction, this firm should obtain native soil samples during the contractor's pot holing operation for utility trench backfill projects, or during the demolition phase of a roadway improvement project. We prefer to obtain our initial soil samples as early as practically possible to help ensure that our field personnel are able to provide timely compaction test and quality compliance results to your construction inspection team. Our technicians have been trained to provide soil classification during sampling of onsite and imported soil materials.

All of our field technicians have extensive experience with providing geotechnical observation and compaction testing during grading, various types of underground utility trench backfills, a wide range of roadway rehabilitation methods, and asphalt paving. Our field technicians have all been certified by the Caltrans district engineer to perform materials sampling and compaction testing procedures. Our technicians understand the capabilities of all the commonly used compaction equipment and earthwork methodologies. They are able to interpret the compaction test data, and concisely communicate their measurements to the construction inspector and to the contractor performing the work.

They are adept at helping the contractor troubleshoot issues as they arise. Our staff has an in-depth knowledge of their compaction testing equipment and routinely perform verification testing to ensure their equipment is functioning properly.

In addition to soil, aggregate, and hot-mix asphalt sampling and testing, our staff can provide sampling and testing of ready-mix Portland cement concrete (PCC) products, as specified within the RFP documentation. Our technicians have been certified by the American Concrete Institute to sample and test ready-mix PCC.

The construction inspector will be supplied with a copy of a time charge ticket and field report for each site visit. These documents describe the services that we provided and our test results for that day. Following completion of the project, a final compaction and quality compliance testing report will be prepared and delivered to the city of Lake Elsinore, wet signed and stamped by a registered geotechnical engineer.

Although a 24-hour notice prior to service is appreciated, LOR has the ability to provide service in most cases in as little as one hour.

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 geotechnical laboratory participates in the Caltrans Reference Sample Program. Under this program, reference samples are used to evaluate laboratory equipment, practices, tester competence, and the repeatability of test methods. The reference sample program affords LOR the opportunity to compare our laboratory performance relative to the entire population of participating laboratories. This helps ensure that we are completing our laboratory tests with a high degree of accuracy relative to our industry peers.

Our geotechnical laboratory has the ability to provide the maximum density, optimum moisture content, sieve analysis, sand equivalent, Atterberg Limits, asphalt, and slurry abrasion testing that is required within the RFP. Our laboratory has the capability to provide quality compliance results for soil, aggregate base, asphalt, slurry seal, and Portland cement concrete materials that are sampled during construction.

DESCRIPTION OF QUALIFICATIONS

Our engineer, geologists and technical support personnel are committed to serving the city of Lake Elsinore with personal, timely, and technically superior service. In addition, LOR's principals are directly involved in the implementation and completion of its professional services. We believe that you will find our understanding of our duties within this on-call service agreement to be unsurpassed and our individual and combined experience will

assure you that we will deliver what is expected.

Our professional staff is licensed, credentialed, and experienced, and our technical staff is certified by the Caltrans district engineer to provide the sampling and materials testing services that are described in the Proposed Scope of Services. To ensure the accuracy of our test results our geotechnical laboratory participates in the Caltrans Reference Sample program (RSP), which allows us to evaluate our laboratory equipment, practices, and tester competence. Our participation in the RSP allows us to compare our laboratory performance relative to the entire population of participating laboratories.

Our firm has extensive experience with providing geotechnical engineering, compaction testing, and materials testing services on a wide range of capital improvement projects including domestic water, general district, sanitation, storm water, non-potable water, ground water replenishment, and more. In our firm's history, LOR has provided a similar scope of services for numerous agencies including, but not limited to:

City of Adelanto
City of Anaheim
City of Big Bear Lake
Big Bear Community Services District
City of Canyon Lake
City of Corona
City of Cypress
City of Desert Hot Springs
City of Fontana
City of Fullerton
City of Garden Grove
City of Highland
City Indio
City of Lake Elsinore
City of Loma Linda
City of Moreno Valley
City of Orange
County of Orange
City of Palm Springs
City of Perris
City of Redlands
City of Riverside
County of Riverside
City of San Bernardino
County of San Bernardino
City of San Jacinto
City of Temecula
City of Tustin
City of Upland
City of Victorville
City of Yorba Linda
City of Yucaipa

Behind every field technician is the support of professional engineers and geologists, available to provide timely on-site solutions to construction problems if they arise. Our field and laboratory technicians are Caltrans and American Concrete Institute certified. Additionally, we have personnel that are certified by the American Construction Inspectors Association and the International Code Council.

RESUMES

John P. Leuer, President, CE, GE - Project Manager, City's Liaison
jleuer@lorgeo.com

John Leuer will be LOR's project manager for all on-call service projects that we serve on, and will also be the city's liaison. Mr. Leuer has gained a high-level of expertise with over 40 years of experience on literally hundreds of geotechnical projects. In this time, Mr. Leuer has developed an extensive knowledge of the many geotechnical considerations involved in construction in the southern California area. Mr. Leuer is highly experienced in all aspects of soil and foundation engineering for a wide variety of projects ranging from multi-story commercial and industrial structures to several thousand acre planned community developments. Mr. Leuer has substantial experience coordinating projects for many city, county and state agencies as well as in the public sector, gaining a reputation for being responsive to clients needs while providing strong technical expertise.

Mr. Leuer holds a B.S. in Civil Engineering from Cal State University at Northridge. He is a registered geotechnical and civil engineer in the state of California, and a registered civil engineer in the state of Nevada. Mr. Leuer is a member of the American Society of Civil Engineers and the National Groundwater Association. Mr. Leuer believes in continuing education and completed a nine-month soils engineering course at the California State Polytechnical University in Pomona. In addition, Mr. Leuer has instructed evening soils technology courses at Riverside Community College for inspection certifications.

Andrew A. Tardie, Staff Geologist
atardie@lorgeo.com

Andrew Tardie is a staff geologist and project manager at LOR, and has provided field and office support for various projects since 1999. During his tenure he has developed extensive understanding of geotechnical considerations within southern California and the Inland Empire. Mr. Tardie has been involved in all phases of geotechnical projects, ranging from initial site investigations, inspection and testing of soils/materials during construction, and project management for both public and private sectors.

Mr. Tardie has performed hundreds of geotechnical, geologic, and environmental investigations throughout the Inland Empire. This work has included geophysical surveys, slope investigations, liquefaction analysis, seismic hazard analysis, including fault surface rupture, and rock fall analysis. He has planned, supervised, and conducted geotechnical projects including hillside investigations, flat land explorations, and earthwork monitoring projects in Riverside, San Bernardino, Orange, Los Angeles, and San Diego Counties. Specialized detail in Mr. Tardie's experience includes logging exploratory borings and trenches, obtaining and documenting field samples, percolation and infiltration feasibility testing, pavement evaluation, and subsequent geotechnical report writing. Mr. Tardie holds a B.A. degree in Geology from California State University, San Bernardino.

Mark A. Switzer, Laboratory Manager
mswitzer@lorgeo.com

Mark Switzer is LOR's laboratory manager and will supervise or conduct all laboratory testing requested during the on-call service agreement.

Mr. Switzer has worked in the soils field 19 years and contributes extensive knowledge and experience performing a wide range of materials testing procedures for various materials including soils, aggregate material, asphalt concrete, epoxy grout, and concrete using both ASTM and Caltrans testing methods. In addition, he has performed materials testing for city, county, and state agencies for quality control/quality assurance projects.

Mr. Switzer oversees all work performed by personnel in the laboratory, including finalizing and reporting laboratory data. He also has experience in the field with sand cone and nuclear gauge testing methods, measuring cut and fill, basic trench compaction, bolt tensioning, and sampling materials in the field. Mr. Switzer is an American Concrete Institute (ACI) Grade 1 Technician and holds certifications in the following Caltrans Test Methods: 105, 125, 201, 202, 216, 217, 226, 227, 229, 231, 301, 304, 305, 307, 308, and 366. He also holds Caltrans certification for AASTO methods T11, T27, R47, R76, T176, T248, T255, T329, and T335. Mr. Switzer is International Code Council certified for soils special inspection.

In addition to his duties at LOR, Mr. Switzer is an instructor for the Caltrans' Joint Training and Certification Program. This program is an effort by Caltrans to train technicians to sample and test highway construction materials. Mr. Switzer teaches classes at Cal State University Long Beach and Cal State University San Jose.

A. Tony Guillen, Deputy Inspector, Field Operations Manager: ACI, ICC
tguillen@lorgeo.com

Mr. Guillen has worked in the soils field for approximately 18 years. Mr. Guillen holds a Bachelor's of Science Business degree from the University of Redlands. He has gained experience and knowledge in the disciplines of soil testing of miscellaneous trench backfill methods, has participated in preliminary site investigations, various grading projects, sampling of materials from different projects, i.e. asphalt concrete, as well as soils and environmental sampling (for lab analysis). He has also gained experience in laboratory testing methods, including maximum density determinations, sand equivalent, and preparation of materials for testing methods.

Mr. Guillen is an American Concrete Institute (ACI) Grade 1 Technician and holds certifications in the following Caltrans Test Methods: 125, 216, 231, 375, 504, 518, 523, 533, 539, 540, 556, & 557. He is currently International Code Council certified for reinforced concrete and structural masonry special inspection.

John R. Muir, Field Technician, Registered Construction Inspector, ACIA, ACI

Mr. Muir has over 30 years experience as a geotechnical field technician with LOR. Mr. Muir has extensive field experience with all geotechnical and inspection aspects of construction. His experience includes grading compliance and observations, compaction testing of soils in the field using the sand cone and nuclear gauge testing methodologies, compaction testing of asphalt concrete, casting concrete cylinders, and full-time observation of major street construction projects.

Mr. Muir is a American Construction Institute Association (A.C.I.A.) Registered Construction Inspector and an American Concrete Institute (ACI) Grade 1 Technician and holds certification in the following Caltrans Test Methods: 125, 216, 231, 375, 504, 518, 523, 533, 539, 540, 556, 557. Additionally, Mr Muir has certification by the California Department of Transportation (Caltrans) for sampling and testing of soil, aggregate base, asphalt concrete, and Portland Cement Concrete.

Fred Jimenez, Field Technician: ACI

Mr. Jimenez has over 25 years of experience in the soils field and has worked on a wide array of public works and capital improvement projects. His portfolio of work includes emergency highway grading for Caltrans, roadway widening projects, bridge construction, slope repair, underground utility improvements, and more.

Additionally, he has participated in preliminary site investigations, various grading projects, sampling of materials from different projects, i.e. asphalt concrete, as well as soils and environmental sampling (for lab analysis). He has also gained experience in the field of laboratory testing methods, including maximum density determinations, sand equivalent, and preparation of materials for testing methods.

Mr. Jimenez is an American Concrete Institute (ACI) Grade 1 Technician and holds certifications in the following Caltrans Test Methods: 125, 216, 231, 375, 504, 518, 523, 533, 539, 540, 556, & 557. Additionally, Mr. Muir has certification by the California Department of Transportation (Caltrans) for sampling and testing of soil, aggregate base, asphalt concrete, and Portland Cement Concrete.

PROJECTS COMPLETED BY KEY PERSONNEL

The following projects have been completed within the past 5 years and were collaborations involving the key staff at LOR.

"A" Street Improvements Project, Highland Vista Way to Metz Road, Perris, California

Client Contact: City of Perris, Engineering Department, Cassandra Sanchez, PE, 24 South D Street, Suite 100, Perris, California, (951) 963-9952.

Completed: January 2021.

Project Information: The "A" Street Improvements project featured the rehabilitation of a select segment of roadway on A Street, and included construction of new curb & gutter, commercial driveway approaches, and sidewalk. The subject project is located on A Street, adjacent to the California Military Institute, between Highland Vista Way and West Metz Road, in the City of Perris, California.

Scope of Services: LOR provided onsite geotechnical observation, compaction testing, materials sampling, and laboratory testing services for the project.

The roadway re-surfacing of “A” Street involved the construction of a cement stabilized pulverized base (CSPB) subgrade. During this process LOR provided aggregate gradation testing of the pulverized base material, compressive strength testing of the CSPB blend, observation of the micro-cracking process, and compaction testing during HMA paving operations.

LOR was also onsite on a periodic basis during construction of the sidewalk, curb & gutter, and commercial driveway approaches that were associated with the project. Our technician worked with the construction inspector and the contractor performing the work to ensure the minimum specified relative compaction results were achieved.

Upon completion of construction of the project, LOR prepared and submitted a final compaction and materials testing report that summarized our geotechnical observations, and presented our onsite compaction testing, and laboratory test results.

Citywide Pavement Rehabilitation Program (FY 2019-2020), City Project No. 801 0085, Moreno Valley, California

Client Contact: City of Moreno Valley, Quang Nguyen, PE, 14177 Frederick Street, PO Box 88005, Moreno Valley, California, 951-413-3159.

Completed: December 2020

Project Information: This project featured the widening and/or re-surfacing of multiple segments of arterial and collector roadways located throughout the City of Moreno Valley. The subject roadways were either re-surfaced with slurry seal or HMA/ARHM.

Prior to the start of construction LOR provided a Letter of Assent to the Local 12 Operating Engineers Union, in general accordance with the Community Workforce Agreement. Our technician registered with the union and was dispatched to the project.

LOR provided submittal review for the slurry seal and ARHM materials that were proposed for use by the contractor. We also attended a pre-construction meeting to discuss the geotechnical and materials testing aspects of the project with the contractor and city representatives.

Representative samples of the slurry seal materials were obtained periodically as requested by the City of Moreno Valley. During the slurry seal sampling operations consistency testing was performed and wet-track abrasion test specimens were fabricated

for laboratory testing. Laboratory testing of the slurry seal samples included gradation, binder content, moisture testing, and wet-track abrasion testing.

LOR was also onsite to conduct compaction testing during paving operations for the various arterial and collector roadways. Our field technicians also documented the arrival temperature of asphalt materials throughout the day, as well as the methodology the contractor used to compact the pavement mat and to achieve a smooth surface.

Our technician obtained representative samples of the ARHM materials that were used to finish pave the roadways. Batch plant sampling of the aggregates was also provided. Samples were subject to gradation, stability, density, and binder content testing. The results of our laboratory tests were reported immediately to the construction inspector.

Upon completion of the project LOR prepared and submitted a final compaction report that detailed the geotechnical observations that were documented during construction, as well as our compaction test, and laboratory test results.

2018 USDA Pipeline Replacement Project, City of Big Bear Lake, California

Client Contact: Water Systems Consulting, Chris Deiter, PE, 9375 Archibald Avenue, Suite 200, Rancho Cucamonga, California, (909) 483-3200 Ext. 203.

Completed: September 2021.

Project Information: The 2018 USDA Replacement Project was a two year, multi-phase project that consisted of the replacement and construction of new water lines across an 11 mile area that is serviced by the City of Big Bear Lake Department of Water and Power. The water lines were located within existing roadways which necessitated the replacement of the structural pavement section within the trench cut.

Scope of Services: During the preliminary design phase of the project LOR provided a subsurface investigation to evaluate the conditions within the proposed construction areas. Our investigation consisted of drilling over 50 borings, logging the subsurface conditions, and obtaining samples for laboratory testing. The samples obtained during our field investigation were subjected to laboratory testing to evaluate their physical and engineering properties. The data obtained during our geotechnical site investigation and laboratory testing were used to provide geotechnical design recommendations to incorporate into the construction process.

During the construction phase of the project, LOR was onsite to provide geotechnical observation and compaction during backfill operations for the trenches used to construct the water line improvements. Compaction testing was performed intermittently to check in-place moisture and to verify the minimum specified relative compaction had been achieved. Prior to paving the trench-cut area of the roadway, compaction testing was provided to verify 95 percent relative compaction had been achieved in the structural roadway section. The contractor and the inspector were informed of our results. Daily field reports were submitted to the inspector following each site visit.

Nuevo Road Bridge Reconstruction, City of Perris, California, City of Perris, California

Client Contact: City of Perris, Cassandra Sanchez, PE, 24 South D Street, Suite 100, Perris, California, cassandra@trilakeconsultants.com, (951) 943-6504.

Completed: December 2020.

Project Information: This project included the replacement and widening of an existing bridge that crossed the Perris Valley Storm Channel at Nuevo Road in Perris, California. Grading was performed within the adjacent channel walls to construct maintenance vehicle entrances into the channel. This project included the associated roadway improvements involved with the realignment of the bridge crossing. Modifications to the existing underground storm drain line, sewer, and water line were also included in the scope of this project.

Scope of Services: During the preliminary design phase of the project, LOR performed a subsurface soils investigation to evaluate the subsurface conditions at the bridge widening location. The scope of our preliminary services included a subsurface field investigation, laboratory testing of selected soil samples obtained during the field investigation, development of geotechnical recommendations for foundation design and construction, and preparation and submittal of the preliminary geotechnical investigation report.

Prior to the start of construction LOR provided a Letter of Assent to the Local 12 Operating Engineers Union, in general accordance with the Community Workforce Agreement. Our technician registered with the union and was dispatched to the project.

LOR provided continuous observation and compaction testing during site grading related to channel wall construction and bridge abutments. Continuous observation and

compaction testing was provided during backfilling of the trenches used to construct sewer, storm drain, and water line improvements. Our technicians also provided sampling and quality compliance testing of ready-mix Portland cement concrete used to construct the bridge.

Additionally, LOR provided geotechnical observation and compaction testing of subgrade soils and base grade materials during construction of sidewalk, curb & gutter, and roadway. The roadway areas adjacent the new bridge were resurfaced with HMA pavement. Our technicians provided compaction testing during HMA paving operations.

Laboratory quality compliance testing was conducted for aggregate base, hot-mix asphalt material, and ready-mix Portland cement concrete materials delivered to the project.

Hillview Neighborhood Street and Storm Drain Improvements, Phase I, City of Highland, California

Client Contact: City of Highland, Terry Renner, PE, QSD, 2305 Chicago Avenue, Riverside, California 92507, trenner@tkeengineering.com, (951) 680-0440.

Completed: December 2019**.**

Project Information: Storm drain improvements were installed within the existing roadways of a residential neighborhood in Highland, California. The storm drain improvements included the installation of 24- and 30-inch RCP main line and the related manholes, laterals, and catch basins. Additionally, street improvements were also constructed and included curb & gutter, cross-gutter and spandrells, and the widening of existing roadways.

Scope of Services: During construction of the new storm drain line, LOR provided continuous observation and compaction testing during trench backfill operations to verify the contractor had achieved the minimum specified relative compaction. Our technician also documented in-place moisture conditions during trench backfill and reported test results directly to the contractor and the construction inspector.

Also, periodic observation and compaction testing was provided during construction of street improvements. Compaction testing was provided following grading and compacting of subgrade soils for sidewalk, curb & gutter, spandrell & cross-gutter, and the street widening areas. Subsequently, aggregate base materials were graded and compacted, where applicable, and then compaction tested.

During construction of the proposed improvements, LOR provided materials testing for the aggregate base and hot-mix asphalt materials used on this project. At the completion of work, a final compaction and materials testing report was provided to our client.

2017/2018 SB-1 Maintenance and Traffic Improvements, City of Riverside, California

Client Contact: City of Riverside, Public Works Department, Steven Howard, 3900 Main Street, Riverside, California, (951) 826-5708.

Completed: October 2018.

Project Information: This roadway maintenance project included the resurfacing of 23 different roadways in their entirety, or in small sections. Within these areas, the existing asphalt was grinded in-place for the paving of new finish course.

Scope of Services: LOR provided observation and compaction testing during HMA paving operations. Compaction testing was completed to verify that the HMA material had been compacted to a minimum of 95 percent relative compaction. In addition to compaction testing, materials sampling and laboratory testing of HMA materials were provided. Sampling was performed in accordance with the procedures established by Caltrans and detailed in California Test Method 125-16. The following laboratory tests were completed to verify that sampled HMA material was in compliance with Caltrans Standard Specifications, Section 39: gradation (CTM 202-11), density (CTM 308-10), stability (CTM 366-00), and extraction (CTM 382-14). Our onsite observations, compaction test results, and laboratory results were provided to our client within daily field reports completed each day.

CLIENT REFERENCE LIST

1. City of Perris, Stuart Mckibbin PE, 951-943-6504, smckibbin@interwestgrp.com

LOR has provided on-call geotechnical engineering and materials testing services for the City of Perris for over 10 years. We have consulted on a wide range of projects including, but not limited to bridge construction, highway on-ramp/off-ramp construction, slope construction, community park renovation and construction, underground utility improvements, building addition/remodel, Portland cement concrete flatwork improvements, parking lot construction, roadway rehabilitation, and roadway construction.

The services that we provided during these projects included geotechnical site investigations, pavement evaluation, geotechnical observation during construction, compaction testing, deputy inspection, and laboratory materials testing.

2. City of Moreno Valley, Quang Nguyen PE, 760-413-3159, quangn@moval.org

LOR has provided on-call geotechnical engineering and materials testing services on an intermittent basis for the City of Moreno Valley over the past 30 years. We are currently servicing an on-call service agreement that started in 2020. In our long history as a geotechnical engineering consultant with the city of Moreno Valley we have provided geotechnical, compaction testing, and materials testing services on a range of projects that include community park improvements, soccer field renovations, underground utility improvement projects, and various types of street improvement projects.

During our most recent contract with the City of Moreno Valley, we have served on multiple local, arterial, and collector roadway improvements projects. The services that we've provided during our most recent on-call service agreement includes observation, compaction testing, and laboratory materials testing during roadway rehabilitation and construction.

LOR also provided laboratory testing to verify that project specifications for aggregate base, hot-mix asphalt, rubberized hot-mix asphalt, aggregate base, and slurry seal have been achieved.

3. City of Big Bear Lake, Israel Gomez Rosales, 909-866-5831 extension 137, igomez@cityofbigbearlake.com

We are currently servicing an on-call geotechnical, compaction testing, and laboratory materials testing agreement for the City of Big Bear Lake. LOR has been an on-call consultant for the city for the past 10 years.

We are currently providing geotechnical observation, compaction testing, and laboratory materials testing service on the Moonridge Road Rehabilitation project. This project includes underground storm drain improvements, full depth reclaimation roadway rehabilitation, the construction of various PCC flatwork improvements, and hot-mix asphalt paving.

Over the past 10 years we have provided geotechnical site investigations, geotechnical observation during construction, compaction testing, laboratory materials testing, and reinforced concrete deputy inspection for the city of Big Bear Lake.

4. TKE Engineering (Multiple Agencies including the City of Calimesa, City of Highland, City of Adelanto, and more), Terry Renner PE, 951-680-0440, trenner@tkeengineering.com.

LOR has partnered with TKE to complete dozens of projects for municipal clients, from design to construction, over the past 15 years of operation. During that time LOR has provided geotechnical site investigations, pavement evaluation, compaction testing, and laboratory testing services. We have partnered with TKE on various types of projects including underground utility improvement installation, roadway rehabilitation and construction, park site grading, PCC flatwork improvements, and more.

We are currently working with TKE on the County Line Road Transportation Corridor Improvements project. This project includes the construction of underground storm drain improvements, roadway widening, full depth reclaimation roadway rehabilitation, PCC flatwork improvements, and hot-mix paving the new roadway areas.

CLOSURE

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

Respectfully Submitted,
LOR Geotechnical Group, Inc.

John P. Leuer
President

TG:JPL:ss

Distribution: Addressee via email at cnorvani@lake-elsinore.org