



STAFF REPORT

Report To: Board of Supervisors **Meeting Date:** April 4, 2019

Staff Contact: Carol Akers and Ann Bollinger

Agenda Title: For Possible Action: Discussion and possible action regarding approval of award of Contract No. 1819-179, Carson River Trail System Phase II Design, Engineering and Construction Management, to Lumos & Associates, Inc., for a total not to exceed amount of \$404,900. (Carol Akers, CAkers@carson.org and Ann Bollinger, abollinger@carson.org)

Staff Summary: The project deliverables include, but are not limited to plans, specifications and bid documents for the layout and design, engineering, permitting, and construction of three non-motorized trail segments and amenities, totaling over three miles in length, of the Carson River Trail System Phase II: the Prison Hill Trail, the Mexican Ditch Trail Extension, and the West Riverbank Trail. The contract for \$404,900 is funded by a grant award from the Bureau of Land Management / Southern Nevada Public Land Management Act.

Agenda Action: Formal Action / Motion **Time Requested:** 5 minutes

Proposed Motion

I move to approve the award of Contract No. 1819-179.

Board's Strategic Goal

Quality of Life

Previous Action

April 21, 2016: The Board of Supervisors accepted the recommendation of the Open Space Advisory Committee to submit a grant application to the Bureau of Land Management, Southern Nevada Public Land Management Act Program for trail and trail head improvements and to allow the Mayor to sign a letter in support of the project.

August 17, 2017: The Board of Supervisors authorized the Mayor to sign the Grant and Cooperative Agreement from the Bureau of Land Management / Southern Nevada Public Lands Management Act providing \$1,843,685 for the design and construction of non-motorized trails as part of the Carson River Trail System, Phase II – Ranch Connections

Background/Issues & Analysis

In 2016, the City submitted a grant application to the Bureau of Land Management / Southern Nevada Public Land Management Act grant program (SNPLMA). The grant application requested funding for three trail segments, as identified above.

As identified in Carson City's Unified Pathways Master Plan and the Charrette Summary: Creating a Community Vision - Silver Saddle Ranch and the Carson River, the identified trails are important for enhanced recreation opportunities and trail system connectivity.

A formal Request for Qualifications was released on January 31, 2019 and proposals were accepted through 2pm on February 22, 2019. Six (6) proposals were received and the Review and Selection Committee selected Lumos & Associates, Inc. to recommend to the Board for award.

Applicable Statute, Code, Policy, Rule or Regulation

NRS 332.115(1)(b) and NRS 625.530

Financial Information

Is there a fiscal impact? Yes

If yes, account name/number: Quality of Life-Open Space, Capital Projects-Construction (SNPLMA) / #254-5047-452-7040, Project #011801

Is it currently budgeted? Yes

Explanation of Fiscal Impact: The funding for this project is budgeted in FY19. 254-5047-452-7040 will be reduced by \$404,900, the available budget is \$1,893,685 (\$1,843,685 from the SNPLMA grant award and \$50,000 from the Quality of Life-Open Space budget).

Alternatives

Do not approve the contract and provide alternative direction to staff.

Attachments:

[1819-179 Back up docs.pdf](#)

[1819-179 Draft Contract.pdf](#)

Board Action Taken:

Motion: _____	1) _____	Aye/Nay
	2) _____	_____

(Vote Recorded By)

1819-179 Carson River Trail System Phase	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Avg Score		Rank
Lumos & Assoc.	88	96	94	88	91	91		1
Cardno	82	92	98	72	86	86		2
Kimley Horn	82	91	98	63	75	82		3
Stantec	85	84	73	74	90	81		4
CTA Engineering & Surveying	67	84	81	61	88	76		5
Summit Engineering Corp.	73	76	82	50	77	72		6

Round 13 -
Eagle Valley Creek
Trail Segment

Existing Trailhead
Parking

Riverview Park

Connect to
Riverview Park Trail

Buzzy's Ranch

Connection to
Mexican Ditch Trail

West Riverbank
Trail

Mexican Ditch

Carson River

Prison Hill
Trail

Prison Hill

Future Trailhead
and Road Crossing

Future Trail

Carson River Road

Future Trail

Trail Connection
Under Bridge

Mexican Ditch
Trail Extension

Existing Trail

Silver Saddle
Ranch Buildings

Future Round(s) -
Silver Saddle Ranch

Exhibit B



CARSON CITY
PARKS & RECREATION DEPARTMENT
Carson River Trail System
Phase II

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PROFESSIONAL SERVICES CONSULTANT AGREEMENT
Contract No. 1819-179
Title: Carson River Trail System Phase II Design, Engineering and Construction Management

THIS CONTRACT made and entered into this _____ day of _____, 2019, by and between Carson City, a consolidated municipality, a political subdivision of the State of Nevada, hereinafter referred to as “**CITY**”, and Lumos & Associates, Inc., hereinafter referred to as “**CONSULTANT**”.

WITNESSETH:

WHEREAS, the Purchasing and Contracts Manager for **CITY** is authorized pursuant to Nevada Revised Statutes (hereinafter referred to as “NRS”) 332 and 338 and Carson City Purchasing Resolution #1990-R71, to approve and accept this Contract as set forth in and by the following provisions; and

WHEREAS, this Contract is for consulting services from one or more licensed architects, engineers and/or land surveyors; and

WHEREAS, this Contract (does involve ___) (does not involve X) a “public work” construction project, which pursuant to NRS 338.010(17) means any project for the new construction, repair or reconstruction of an applicable project financed in whole or in part from public money; and

WHEREAS, CONSULTANT’S compensation under this agreement (does X) (does not ___) utilize in whole or in part money derived from one or more federal grant funding source(s); and

WHEREAS, it is deemed necessary that the services of **CONSULTANT** for **CONTRACT No. 1819-179** (hereinafter referred to as “Contract”) are both necessary and in the best interest of **CITY**; and

NOW, THEREFORE, in consideration of the aforesaid premises, and the following terms, conditions and other valuable consideration, the parties mutually agree as follows:

1. REQUIRED APPROVAL:

This Contract shall not become effective until and unless approved by the Carson City Board of Supervisors.

2. SCOPE OF WORK (Incorporated Contract Documents):

2.1 **CONSULTANT** shall provide and perform the following services set forth in **Exhibit A**, which shall all be attached hereto and incorporated herein by reference for and on behalf of **CITY** and hereinafter referred to as the “SERVICES”.

2.2 **CONSULTANT** represents that it is duly licensed by **CITY** for the purposes of performing the SERVICES.

2.3 **CONSULTANT** represents that it is duly qualified and licensed in the State of Nevada for the purposes of performing the SERVICES.

For P&C Use Only	
CCBL expires	_____
GL expires	_____
AL expires	_____
PL expires	_____
WC expires	_____

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2.4 **CONSULTANT** represents that it and/or the persons it may employ possess all skills and training necessary to perform the SERVICES described herein and required hereunder. **CONSULTANT** shall perform the SERVICES faithfully, diligently, in a timely and professional manner, to the best of its ability, and in such a manner as is customarily performed by a person who is in the business of providing such services in similar circumstances. **CONSULTANT** shall be responsible for the professional quality and technical accuracy of all SERVICES furnished by **CONSULTANT** to **CITY**.

2.5 **CONSULTANT** represents that neither the execution of this Contract nor the rendering of services by **CONSULTANT** hereunder will violate the provisions of or constitute a default under any other contract or agreement to which **CONSULTANT** is a party or by which **CONSULTANT** is bound, or which would preclude **CONSULTANT** from performing the SERVICES required of **CONSULTANT** hereunder, or which would impose any liability or obligation upon **CITY** for accepting such SERVICES.

2.6 Before commencing with the performance of any work under this Contract, **CONSULTANT** shall obtain all necessary permits and licenses as may be necessary. Before and during the progress of work under this Contract, **CONSULTANT** shall give all notice and comply with all the laws, ordinances, rules and regulations of every kind and nature now or hereafter in effect promulgated by any Federal, State, County, or other Governmental Authority, relating to the performance of work under this Contract. If **CONSULTANT** performs any work that is contrary to any such law, ordinance, rule or regulation, it shall bear all the costs arising therefrom.

2.7 Special Terms and Conditions for Engineers, Architects, and Land Surveying/Testing:

2.7.1 *Use of **CONSULTANT'S** Drawings, Specifications and Other Documents:*

2.7.1.1 The drawings, specifications and other documents prepared by **CONSULTANT** for this Contract are instruments of **CONSULTANT'S** service for use solely with respect to this Contract and, unless otherwise provided, **CONSULTANT** shall be deemed the author of these documents and shall retain all common law statutory and other reserved rights, including the copyright.

2.7.2 *Cost Accounting and Audits:*

2.7.2.1 If required by **CITY**, **CONSULTANT** agrees to make available to **CITY** for two (2) years after the completion of the SERVICES under this Contract, such books, records, receipts, vouchers, or other data as may be deemed necessary by **CITY** to enable it to arrive at appropriate cost figures for the purpose of establishing depreciation rates for the various materials and other elements which may have been incorporated into the SERVICES performed under this Contract.

2.7.3 *If Land Surveying or Testing SERVICES are provided to a Public Work Project involving actual Construction (not solely design work):*

2.7.3.1 DAVIS-BACON & RELATED ACTS 29 CFR PARTS 1,3,5,6,&7 AND NRS 338.070(5): **CONSULTANT** shall comply with Davis-Bacon Act and NRS 338.070(5). **CONSULTANT** and each covered contractor or subcontractor must provide a weekly

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statement of wages paid to each of its employees engaged in covered SERVICES. The statement shall be executed by **CONSULTANT** or subcontractor or by an authorized officer or employee of **CONSULTANT** or subcontractor who supervised the payment of wages and shall be on the "Statement of Compliance" form. **CONSULTANT** shall submit a Statement of Compliance that is prescribed by the Nevada Labor Commissioner or contains identical wording. Per NRS 338.070(6) the records maintained pursuant to subsection 5 of this statute must be open at all reasonable hours to the inspection of the public body (the **CITY'S** representative) awarding the contract. The **CONSULTANT** engaged on the public work or subcontractor engaged on the public work shall ensure that a copy of each record for each calendar month is received by the public body awarding the contract (the **City**) **no later than 15 days after the end of the month.**

2.7.3.2 FEDERAL FUNDING: In the event federal funds are used for payment of all or part of this Contract, **CONSULTANT** shall submit a Statement of Compliance form WH347 or a form with identical wording and a Statement of Compliance prescribed by the Nevada Labor Commissioner **within 7 days after the regular pay date for the pay period.** The original Statements shall be delivered to Carson City Public Works, 3505 Butti Way, Carson City, Nevada 89703, attention Davis-Bacon/Federal Funding Compliance.

2.7.3.3 CERTIFIED PAYROLLS FOR DAVIS-BACON AND PREVAILING WAGE PROJECTS: The higher of the Federal or local prevailing wage rates for **CITY**, as established by the Nevada Labor Commission and the Davis-Bacon Act, shall be paid for all classifications of labor on this project SERVICES. Should a classification be missing from the Davis-Bacon rates the **CONSULTANT** shall complete a request of authorization for additional classification or rate form SF1444 in its entirety and submit it to the **CITY** for approval and submission to the U.S. Department of Labor. Also, in accordance with NRS 338, the hourly and daily wage rates for the State and Davis-Bacon must be posted at the work site by **CONSULTANT**. **CONSULTANT** shall ensure that a copy of **CONSULTANT'S** and subcontractor's certified payrolls for each calendar week are received by **CITY**.

2.7.3.3.1 Per NRS 338.070(5) a **CONSULTANT** engaged on a public work and each subcontractor engaged on the public work shall keep or cause to be kept:

(a) An accurate record showing, for each worker employed by the contractor or subcontractor in connection with the public work:

- (1) The name of the worker;
- (2) The occupation of the worker;
- (3) The gender of the worker, if the worker voluntarily agreed to specify that information pursuant to subsection 4, or an entry indicating that the worker declined to specify such information;
- (4) The ethnicity of the worker, if the worker voluntarily agreed to specify that information pursuant to subsection 4, or an entry indicating that the worker declined to specify such information;

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(5) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and

(6) The actual per diem, wages and benefits paid to the worker; and

(b) An additional accurate record showing, for each worker employed by the contractor or subcontractor in connection with the public work who has a driver's license or identification card:

(1) The name of the worker;

(2) The driver's license number or identification card number of the worker; and

(3) The state or other jurisdiction that issued the license or card.

2.7.3.3.2 The original payroll records shall be certified and shall be submitted weekly to Carson City Public Works, 3505 Butti Way, Carson City, Nevada 89703, attention Davis-Bacon/Federal Funding Compliance. Submission of such certified payrolls shall be a condition precedent for processing the monthly progress payment. **CONSULTANT**, as General Contractor, shall collect the wage reports from the subcontractors and ensure the receipt of a certified copy of each weekly payroll for submission to **CITY** as one complete package.

2.7.3.3.3 Pursuant to NRS 338.060 and 338.070, **CONSULTANT** hereby agrees to forfeit, as a penalty to **CITY**, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any WORK done under the Contract, by **CONSULTANT** or any subcontractor under him/her, or is not reported to **CITY** as required by NRS 338.070.

2.7.3.4 FAIR EMPLOYMENT PRACTICES: Pursuant to NRS 338.125, Fair Employment Practices, the following provisions must be included in any contract between **CONSULTANT** and a public body such as **CITY**:

2.7.3.4.1 *In connection with the performance of work or SERVICES under this Contract, CONSULTANT agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity, or age, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation, apprenticeship.*

2.7.3.4.2 **CONSULTANT** further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

2.7.3.5 PREFERENTIAL EMPLOYMENT: Unless, and except if, this Contract is funded

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in whole or in part by federal grant funding (see 40 C.F.R. § 31.36(c) *Competition*), pursuant to NRS 338.130, in all cases where persons are employed in the construction of public works, preference must be given, the qualifications of the applicants being equal: (1) First: To persons who have been honorably discharged from the Army, Navy, Air Force, Marine Corps or Coast Guard of the United States, a reserve component thereof or the National Guard; and are citizens of the State of Nevada. (2) Second: To other citizens of the State of Nevada.

2.7.3.5.1 In connection with the performance of SERVICES under this Contract, **CONSULTANT** agrees to comply with the provisions of NRS 338.130 requiring certain preferences to be given to which persons are employed in the construction of a public work. If **CONSULTANT** fails to comply with the provisions of NRS 338.130, pursuant to the terms of NRS 338.130(3), this Contract is void, and any failure or refusal to comply with any of the provisions of this section renders this Contract void.

2.7.4 If the CITY was required by NRS 332.039(1) to advertise or request a proposal for this Agreement, by signing this Agreement, the **CONSULTANT** provides a written certification that the **CONSULTANT** is not currently engaged in, and during the Term shall not engage in, a Boycott of Israel. The term "Boycott of Israel" has the meaning ascribed to that term in Section 3 of Nevada Senate Bill 26 (2017). The **CONSULTANT** shall be responsible for fines, penalties, and payment of any State of Nevada or federal funds that may arise (including those that the CITY pays, becomes liable to pay, or becomes liable to repay) as a direct result of the **CONSULTANT's** non-compliance with this Section.

2.8 **CITY Responsibilities:**

2.8.1 **CITY** shall make available to **CONSULTANT** all technical data that is in **CITY'S** possession, reasonably required by **CONSULTANT** relating to the SERVICES.

2.8.2 **CITY** shall provide access to and make all provisions for **CONSULTANT** to enter upon public and private lands, to the fullest extent permitted by law, as reasonably required for **CONSULTANT** to perform the SERVICES.

2.8.3 **CITY** shall examine all reports, correspondence, and other documents presented by **CONSULTANT** upon request of **CITY**, and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the work of **CONSULTANT**.

2.8.4 It is expressly understood and agreed that all work done by **CONSULTANT** shall be subject to inspection and acceptance by **CITY** and approval of SERVICES shall not forfeit the right of **CITY** to require correction, and nothing contained herein shall relieve **CONSULTANT** of the responsibility of the SERVICES required under the terms of this Contract until all SERVICES have been completed and accepted by **CITY**.

3. **CONTRACT TERM:**

3.1 This Contract shall be effective from April 4, 2019, subject to Carson City Board of Supervisors' approval (anticipated to be April 4, 2019) to December 31, 2020, unless sooner terminated by either party as specified in **Section 7** (CONTRACT TERMINATION).

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4. NOTICE:

4.1 Except any applicable bid and award process where notices may be limited to postings by **CITY** on its Bid Opportunities website (www.carson.org), all notices or other communications required or permitted to be given under this Contract shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by e-mail, by regular mail, by telephonic facsimile with simultaneous regular mail, or by certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party at the address specified below.

4.2 Notice to **CONSULTANT** shall be addressed to:

Michael Bennett, Director
Lumos & Associates, Inc.
308 N. Curry St. Ste 200
Carson City, NV 89703
775-883-7077
mbennett@lumosinc.com

4.3 Notice to **CITY** shall be addressed to:

Carson City Purchasing and Contracts Department
Carol Akers, Purchasing and Contracts Administrator
201 North Carson Street, Suite 2
Carson City, NV 89701
775-283-7362 / FAX 775-887-2286
CAkers@carson.org

5. COMPENSATION:

5.1 The parties agree that **CONSULTANT** will provide the SERVICES specified in **Section 2** (SCOPE OF WORK) and **CITY** agrees to pay **CONSULTANT** the Contract's compensation based upon Time and Materials and the Scope of Work Fee Schedule for a not to exceed maximum amount of Four Hundred and Four Thousand Nine Hundred Dollars and 00/100 (\$404,900.00), and hereinafter referred to as "Contract Sum".

5.2 Contract Sum represents full and adequate compensation for the completed SERVICES, and includes the furnishing of all materials; all labor, equipment, tools, and appliances; and all expenses, direct or indirect, connected with the proper execution of the SERVICES.

5.3 **CONSULTANT** shall provide **CITY** with a scope of work for each task to be completed and if approved by the Parks, Recreation and Open Space Director, **CONSULTANT** will be provided a "Task Order" authorizing the work.

5.4 **CITY** has provided a sample invoice and **CONSULTANT** shall submit its request for payment using said sample invoice.

5.5 Payment by **CITY** for the SERVICES rendered by **CONSULTANT** shall be due within thirty (30) calendar days from the date **CITY** acknowledges that the performance meets the requirements of this

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Contract or from the date the correct, complete, and descriptive invoice is received by **CITY** employee designated on the sample invoice, whichever is the later date.

5.6 **CITY** does not agree to reimburse **CONSULTANT** for expenses unless otherwise specified.

6. TIMELINESS OF BILLING SUBMISSION:

6.1 The parties agree that timeliness of billing is of the essence to this Contract and recognize that **CITY** is on a fiscal year which is defined as the period beginning July 1 and ending June 30 of the following year. All billings for dates of service prior to July 1 must be submitted to **CITY** no later than the first Friday in August of the same year. A billing submitted after the first Friday in August will subject **CONSULTANT** to an administrative fee not to exceed \$100.00. The parties hereby agree this is a reasonable estimate of the additional costs to **CITY** of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to **CONSULTANT**.

7. CONTRACT TERMINATION:

7.1 Termination Without Cause:

7.1.1 Any discretionary or vested right of renewal notwithstanding, this Contract may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.

7.1.2 **CITY** reserves the right to terminate this Contract for convenience whenever it considers termination, in its sole and unfettered discretion, to be in the public interest. In the event that the Contract is terminated in this manner, payment will be made for SERVICES actually completed. If termination occurs under this provision, in no event shall **CONSULTANT** be entitled to anticipated profits on items of SERVICES not performed as of the effective date of the termination or compensation for any other item, including but not limited to, unabsorbed overhead. **CONSULTANT** shall require that all subcontracts which it enters related to this Contract likewise contain a termination for convenience clause which precludes the ability of any subconsultant to make claims against **CONSULTANT** for damages due to breach of contract, of lost profit on items of SERVICES not performed or of unabsorbed overhead, in the event of a convenience termination.

7.2 Termination for Nonappropriation:

7.2.1 All payments and SERVICES provided under this Contract are contingent upon the availability of the necessary public funding, which may include various internal and external sources. In the event that Carson City does not acquire and appropriate the funding necessary to perform in accordance with the terms of the Contract, the Contract shall automatically terminate upon **CITY'S** notice to **CONSULTANT** of such nonappropriation, and no claim or cause of action may be based upon any such nonappropriation.

7.3 Cause Termination for Default or Breach:

7.3.1 A default or breach may be declared with or without termination.

7.3.2 This Contract may be terminated by either party upon written notice of default or breach to the other party as follows:

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7.3.2.1 If **CONSULTANT** fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or any SERVICES called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

7.3.2.2 If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or SERVICES or any services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or

7.3.2.3 If **CONSULTANT** becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or

7.3.2.4 If **CITY** materially breaches any material duty under this Contract and any such breach impairs **CONSULTANT'S** ability to perform; or

7.3.2.5 If it is found by **CITY** that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by **CONSULTANT**, or any agent or representative of **CONSULTANT**, to any officer or employee of **CITY** with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

7.3.2.6 If it is found by **CITY** that **CONSULTANT** has failed to disclose any material conflict of interest relative to the performance of this Contract.

7.4 Time to Correct (Declared Default or Breach):

7.4.1 Termination upon a declared default or breach may be exercised only after providing 7 (seven) calendar days written notice of default or breach, and the subsequent failure of the defaulting or breaching party, within five (5) calendar days of providing that default or breach notice, to provide evidence satisfactory to the aggrieved party demonstrating that the declared default or breach has been corrected. Time to correct shall run concurrently with any notice of default or breach and such time to correct is not subject to any stay with respect to the nonexistence of any Notice of Termination. Untimely correction shall not void the right to termination otherwise properly noticed unless waiver of the noticed default or breach is expressly provided in writing by the aggrieved party. There shall be no time to correct with respect to any notice of termination without cause or termination for nonappropriation.

7.5 Winding Up Affairs Upon Termination:

7.5.1 In the event of termination of this Contract for any reason, the parties agree that the provisions of this **Subsection 7.5** (Winding Up Affairs Upon Termination) survive termination:

7.5.1.1 The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination; and

7.5.1.2 **CONSULTANT** shall satisfactorily complete SERVICES in progress at the

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agreed rate (or a pro rata basis if necessary) if so requested by **CITY**; and

7.5.1.3 **CONSULTANT** shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by **CITY**; and

7.5.1.4 **CONSULTANT** shall preserve, protect, and promptly deliver into **CITY** possession all proprietary information in accordance Section 19 (CITY OWNERSHIP OF PROPRIETARY INFORMATION).

7.6 Notice of Termination:

7.6.1 Unless otherwise specified in this Contract, termination shall not be effective until seven (7) calendar days after a party has provided written notice of default or breach, or notice of without cause termination. Notice of Termination may be given at the time of notice of default or breach, or notice of without cause termination. Notice of Termination may be provided separately at any time after the running of the 7-day notice period, and such termination shall be effective on the date the Notice of Termination is provided to the party unless a specific effective date is otherwise set forth therein. Any delay in providing a Notice of Termination after the 7-day notice period has run without a timely correction by the defaulting or breaching party shall not constitute any waiver of the right to terminate under the existing notice(s).

8. REMEDIES:

Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorney's fees and costs. The parties agree that, in the event a lawsuit is filed and a party is awarded attorney's fees by the court, for any reason, the amount of recoverable attorney's fees shall not exceed the rate of \$125 per hour. **CITY** may set off consideration against any unpaid obligation of **CONSULTANT** to **CITY**.

9. LIMITED LIABILITY:

CITY will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Liquidated damages shall not apply unless otherwise expressly provided for elsewhere in this Contract. Damages for any **CITY** breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to **CONSULTANT**, for the fiscal year budget in existence at the time of the breach. **CONSULTANT'S** tort liability shall not be limited.

10. FORCE MAJEURE:

Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including, without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Contract after the intervening cause ceases.

11. INDEMNIFICATION:

11.1 To the extent permitted by law, including, but not limited to, the provisions of NRS Chapter 41, each party shall indemnify, hold harmless and defend, not excluding the other's right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including but not limited to reasonable attorney's fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of the indemnity which would otherwise exist as to any party or person described in this Section.

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11.2 As required by NRS 338.155, if this Contract involves a “public work” construction project as defined above, **CONSULTANT** shall defend, indemnify and hold harmless the **CITY**, and the employees, officers and agents of the public body from any liabilities, damages, losses, claims, actions or proceedings, including without limitation, reasonable attorney’s fees, to the extent that such liabilities, damages, losses, claims, actions or proceedings are caused by the negligence, errors, omissions, recklessness or intentional misconduct of the **CONSULTANT** or the employees or agents of the **CONSULTANT** in the performance of the Contract. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of the indemnity which would otherwise exist as to any party or person described in this section. However, with respect to any anticipated benefits to **CITY** resulting from the Scope of Work, **CONSULTANT** shall not be responsible or liable to **CITY** for any warranties, guarantees, fitness for a particular purpose or loss of anticipated profits resulting from any termination of this Contract. Additionally, **CONSULTANT** shall not be responsible for acts and decisions of third parties, including governmental agencies, other than **CONSULTANT’S** subcontractors, that impact project completion and/or success.

11.3 Except as otherwise provided in **Subsection 11.5** below, the indemnifying party shall not be obligated to provide a legal defense to the indemnified party, nor reimburse the indemnified party for the same, for any period occurring before the indemnified party provides written notice of the pending claim(s) or cause(s) of action to the indemnifying party, along with:

- 11.3.1 a written request for a legal defense for such pending claim(s) or cause(s) of action; and
- 11.3.2 a detailed explanation of the basis upon which the indemnified party believes that the claim or cause of action asserted against the indemnified party implicates the culpable conduct of the indemnifying party, its officers, employees, and/or agents.

11.4 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall not be obligated to fund or reimburse any fees or costs provided by any additional counsel for the indemnified party, including counsel through which the indemnified party might voluntarily choose to participate in its defense of the same matter.

11.5 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall be obligated to reimburse the reasonable attorney’s fees and costs incurred by the indemnified party during the initial thirty (30) day period of the claim or cause of action, if any, incurred by separate counsel.

12. INDEPENDENT CONTRACTOR:

12.1 **CONSULTANT**, as an independent contractor, is a natural person, firm or corporation who agrees to perform SERVICES for a fixed price according to his or its own methods and without subjection to the supervision or control of the **CITY**, except as to the results of the SERVICES, and not as to the means by which the SERVICES are accomplished.

12.2 It is mutually agreed that **CONSULTANT** is associated with **CITY** only for the purposes and to the extent specified in this Contract, and in respect to performance of the contracted SERVICES pursuant to this Contract. **CONSULTANT** is and shall be an independent contractor and, subject only to the terms of this Contract, shall have the sole right to supervise, manage, operate, control, and direct performance of the details incident to its duties under this Contract.

12.3 Nothing contained in this Contract shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for **CITY** whatsoever with respect to the indebtedness, liabilities, and obligations of **CONSULTANT** or any other party.

12.4 **CONSULTANT**, in addition to **Section 11** (INDEMNIFICATION), shall indemnify and hold **CITY**

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harmless from, and defend **CITY** against, any and all losses, damages, claims, costs, penalties, liabilities, expenses arising out of or incurred in any way because of, but not limited to, **CONSULTANT'S** obligations or legal duties regarding any taxes, fees, assessments, benefits, entitlements, notice of benefits, employee's eligibility to work, to any third party, subcontractor, employee, state, local or federal governmental entity.

12.5 Neither **CONSULTANT** nor its employees, agents, or representatives shall be considered employees, agents, or representatives of **CITY**.

13. INSURANCE REQUIREMENTS (GENERAL):

13.1 NOTICE: The following general insurance requirements shall apply unless these general requirements are altered by any specific requirements set forth in CITY'S solicitation for bid document, the adopted bid or other document incorporated into this Contract by the parties.

13.2 **CONSULTANT**, as an independent contractor and not an employee of **CITY**, must carry policies of insurance in amounts specified and pay all taxes and fees incident hereunto. **CITY** shall have no liability except as specifically provided in this Contract.

13.3 **CONSULTANT** shall not commence work before: (1) **CONSULTANT** has provided the required evidence of insurance to **CITY** Purchasing and Contracts, and (2) **CITY** has approved the insurance policies provided by **CONSULTANT**.

13.4 Prior approval of the insurance policies by **CITY** shall be a condition precedent to any payment of consideration under this Contract and **CITY'S** approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent this Contract. Any failure of **CITY** to timely approve shall not constitute a waiver of the condition.

13.5 *Insurance Coverage (13.6 through 13.23):*

13.6 **CONSULTANT** shall, at **CONSULTANT'S** sole expense, procure, maintain and keep in force for the duration of this Contract the following insurance conforming to the minimum requirements specified below. Unless specifically specified herein or otherwise agreed to by **CITY**, the required insurance shall be in effect prior to the commencement of work by **CONSULTANT** and shall continue in force as appropriate until the later of:

13.6.1 Final acceptance by **CITY** of the completion of this Contract; or

13.6.2 Such time as the insurance is no longer required by **CITY** under the terms of this Contract.

13.6.3 Any insurance or self-insurance available to **CITY** under its coverage(s) shall be in excess of and non-contributing with any insurance required from **CONSULTANT**. **CONSULTANT'S** insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by **CITY**, **CONSULTANT** shall provide **CITY** with renewal or replacement evidence of insurance no less than thirty (30) calendar days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by this Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as **CONSULTANT** has knowledge of any such failure, **CONSULTANT** shall immediately notify **CITY** and immediately replace such insurance or bond with an insurer meeting the requirements.

13.7 *General Insurance Requirements (13.8 through 13.23):*

13.8 **Certificate Holder:** Each certificate shall list Carson City c/o Carson City Purchasing and Contracts, 201 N. Carson Street, Suite 2, Carson City, NV 89701 as a certificate holder.

13.9 **Additional Insured:** By endorsement to the general liability insurance policy evidenced by

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CONTRACTOR, The City and County of Carson City, Nevada, its officers, employees and immune contractors shall be named as additional insureds for all liability arising from this Contract.

13.10 **Waiver of Subrogation:** Each liability insurance policy, except for professional liability, shall provide for a waiver of subrogation in favor of City.

13.11 **Cross-Liability:** All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

13.12 **Deductibles and Self-Insured Retentions:** Insurance maintained by **CONTRACTOR** shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by **CITY**. Such approval shall not relieve **CONTRACTOR** from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed \$5,000.00 per occurrence, unless otherwise approved by **CITY**.

13.13 **Policy Cancellation:** Except for ten (10) calendar days' notice for non-payment of premium, premium, **CONTRACTOR** or its insurers must provide thirty (30) calendar days prior written notice to Carson City Purchasing and Contracts if any policy will be canceled, non-renewed or if required coverage and /or limits reduced or materially altered, and shall provide that notices required by this paragraph shall be sent by mail to Carson City Purchasing and Contracts, 201 N. Carson Street, Suite 2, Carson City, NV 89701. When available, each insurance policy shall be endorsed to provide thirty (30) days' notice of cancellation, except for ten (10) days' notice for non-payment of premium, to City.

13.14 **Approved Insurer:** Each insurance policy shall be issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers under federal and Nevada law and having agents in Nevada upon whom service of process may be made, and currently rated by A.M. Best as "A-VII" or better.

13.15 **Evidence of Insurance:** Prior to commencement of work, **CONTRACTOR** must provide the following documents to Carson City Purchasing and Contracts, 201 North Carson Street, Suite 2, Carson City, NV 89701:

13.16 **Certificate of Insurance:** **CONTRACTOR** shall furnish City with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth herein. The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to Carson City Purchasing and Contracts to evidence the insurance policies and coverages required of **CONTRACTOR**.

13.17 **Additional Insured Endorsement:** An Additional Insured Endorsement (CG20 10 or C20 26), signed by an authorized insurance company representative, must be submitted to Carson City Purchasing and Contracts to evidence the endorsement of **CITY** as an additional insured per **Subsection 13.9** (Additional Insured).

13.18 **Schedule of Underlying Insurance Policies:** If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the Underlying Schedule from the Umbrella or Excess insurance policy may be required.

13.19 **Review and Approval:** Documents specified above must be submitted for review and approval by **CITY** Purchasing and Contracts prior to the commencement of work by **CONTRACTOR**. Neither approval by **CITY** nor failure to disapprove the insurance furnished by **CONTRACTOR** shall relieve **CONTRACTOR** of **CONTRACTOR'S** full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not limit the liability of **CONTRACTOR** or its sub-contractors, employees or agents to **CITY** or others, and shall be in addition to and not in lieu of any other remedy available to **CITY** under this Contract or otherwise. **CITY** reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements.

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13.20 COMMERCIAL GENERAL LIABILITY INSURANCE:

CONTRACTOR shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000 each occurrence.

13.20.1 *Minimum Limits required:*

13.20.2 Two Million Dollars (\$2,000,000.00) - General Aggregate.

13.20.3 Two Million Dollars (\$2,000,000.00) - Products & Completed Operations Aggregate.

13.20.4 One Million Dollars (\$1,000,000.00) - Each Occurrence.

13.20.5 CGL insurance shall be written on ISO occurrence form CG 00 01 04 13 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, products-completed operations, personal and advertising injury, and liability assumed under an insured contract [(including the tort liability of another assumed in a business contract)].

13.20.6 City and County of Carson City, Nevada, its officers, employees and immune contractors shall be included as an insured under the CGL, using ISO additional insured endorsement CG 20 10 or CG 20 26, or a substitute providing equivalent coverage, and under the commercial umbrella, if any.

13.20.7 This insurance shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to City There shall be no endorsement or modification of the CGL to make it excess over other available insurance; alternatively, if the CGL states that it is excess or pro rata, the policy shall be endorsed to be primary with respect to the additional insured.

13.20.8 There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability assumed under a contract.

13.20.9 Contractor waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this Contract. Insurer shall endorse CGL policy as required to waive subrogation against City with respect to any loss paid under the policy.

13.21 BUSINESS AUTOMOBILE LIABILITY INSURANCE:

13.21.1 *Minimum Limit required:*

13.21.2 Contractor shall maintain automobile liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each accident for bodily injury and property damage.

13.21.3 Such insurance shall cover liability arising out of owned, hired, and non-owned autos (as applicable). Coverage as required above shall be written on ISO form CA 00 01, CA 00 05, CA 00 25, or a substitute form providing equivalent liability coverage.

13.21.4 Contractor waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the automobile liability or other liability insurance obtained by **CONTRACTOR** pursuant this Contract.

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13.22 PROFESSIONAL LIABILITY INSURANCE

13.22.1 *Minimum Limit required:*

13.22.2 **CONTRACTOR** shall maintain professional liability insurance applying to all activities performed under this Contract with limits not less than One Million Dollars (\$1,000,000.00) and Two Million Dollars (\$2,000,000) in the aggregate.

13.22.3 Retroactive date: Prior to commencement of the performance of this Contract.

13.22.4 **CONTRACTOR** will maintain professional liability insurance during the term of this Contract and for a period of three (3) years after termination of this Contract unless waived by the City. In the event of non-renewal or other lapse in coverage during the term of this Contract or the three (3) year period described above, **CONTRACTOR** shall purchase Extended Reporting Period coverage for claims arising out of **CONTRACTOR's** negligence acts, errors and omissions committed during the term of the Professional Liability Policy. The Extended Reporting Period shall continue through a minimum of three (3) years after termination date of this Contract.

13.22.5 A certified copy of this policy may be required.

13.23 WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE:

13.23.1 **CONTRACTOR** shall provide workers' compensation insurance as required by NRS Chapters 616A through 616D inclusive and Employer's Liability insurance with a minimum limit not less than \$1,000,000 each accident for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease.

13.23.2 **CONTRACTOR** may, in lieu of furnishing a certificate of an insurer, provide an affidavit indicating that **CONTRACTOR** is a sole proprietor; that **CONTRACTOR** will not use the services of any employees in the performance of this Contract; that **CONTRACTOR** has elected to not be included in the terms, conditions, and provisions of NRS Chapters 616A-616D, inclusive; and that **CONTRACTOR** is otherwise in compliance with the terms, conditions, and provisions of NRS Chapters 616A-616D, inclusive.

13.23.3 **CONTRACTOR** waives all rights against City and its agents, officers, directors, and employees for recovery of damages to the extent these damages are covered by the workers' compensation and employer's liability or commercial umbrella liability insurance obtained by Contractor pursuant to this Contract. Contractor shall obtain an endorsement equivalent to WC 00 03 13 to affect this waiver.

14. BUSINESS LICENSE:

14.1 **CONSULTANT** shall not commence work before **CONSULTANT** has provided a copy of his Carson City business license to Carson City Purchasing and Contracts.

14.2 The Carson City business license shall continue in force until the later of: (1) final acceptance by **CITY** of the completion of this Contract; or (2) such time as the Carson City business license is no longer required by **CITY** under the terms of this Contract.

15. COMPLIANCE WITH LEGAL OBLIGATIONS:

CONSULTANT shall procure and maintain for the duration of this Contract any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or SERVICES or any services of this Contract. **CONSULTANT**

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will be responsible to pay all government obligations, including, but not limited to, all taxes, assessments, fees, fines, judgments, premiums, permits, and licenses required or imposed by law or a court. Real property and personal property taxes are the responsibility of **CONSULTANT** in accordance with NRS Chapter 361 generally and NRS 361.157 and 361.159, specifically regarding for profit activity. **CONSULTANT** agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract. **CITY** may set-off against consideration due any delinquent government obligation.

16. WAIVER OF BREACH:

Failure to declare a breach or the actual waiver of any particular breach of this Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

17. SEVERABILITY:

If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the nonenforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

18. ASSIGNMENT / DELEGATION:

To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by **CITY**, such offending portion of the assignment shall be void, and shall be a breach of this Contract. **CONSULTANT** shall neither assign, transfer nor delegate any rights, obligations or duties under this Contract without the prior written approval of **CITY**. The parties do not intend to benefit any third party beneficiary regarding their respective performance under this Contract.

19. CITY OWNERSHIP OF PROPRIETARY INFORMATION:

Any files, reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer programs, computer codes, and computer records (which are intended to be consideration under this Contract), or any other documents or drawings, prepared or in the course of preparation by **CONSULTANT** (or its subcontractors) in performance of its obligations under this Contract shall be the exclusive property of **CITY** and all such materials shall be delivered into **CITY** possession by **CONSULTANT** upon completion, termination, or cancellation of this Contract. **CONSULTANT** shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of **CONSULTANT'S** obligations under this Contract without the prior written consent of **CITY**. Notwithstanding the foregoing, **CITY** shall have no proprietary interest in any materials licensed for use by **CITY** that are subject to patent, trademark or copyright protection.

20. PUBLIC RECORDS:

Pursuant to NRS 239.010, information or documents received from **CONSULTANT** may be open to public inspection and copying. **CITY** will have the duty to disclose unless a particular record is made confidential by law or a common law balancing of interests. **CONSULTANT** may clearly label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 332.061, provided that **CONSULTANT** thereby agrees to indemnify and defend **CITY** for honoring such a designation. The failure to so label any document that is released by **CITY** shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

21. CONFIDENTIALITY:

CONSULTANT shall keep confidential all information, in whatever form, produced, prepared, observed or received by **CONSULTANT** to the extent that such information is confidential by law or otherwise required by this Contract.

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22. FEDERAL FUNDING:

22.1 *In the event federal grant funds are used for payment of all or part of this Contract:*

22.1.1 **CONTRACTOR** certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to the regulations implementing Executive Order 12549, Debarment and Suspension, 28 C.F.R. pt. 67, § 67.510, as published as pt. VII of the May 26, 1988, Federal Register (pp. 19160-19211), and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

22.1.2 **CONTRACTOR** and its subcontractors shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder contained in 28 C.F.R. 26.101-36.999, inclusive, and any relevant program-specific regulations.

22.1.3 **CONTRACTOR** and its subcontractors shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, P.L. 93-112, as amended, and any relevant program-specific regulations, and Executive Order 11478 (July 21, 2014) and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, sexual orientation, gender identity, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions).

22.1.4 If and when applicable to the particular federal funding and the Scope of Work under this Contract, **CONTRACTOR** and its subcontractors shall comply with: American Iron and Steel (AIS) provisions of P.L. 113- 76, Consolidated Appropriations Act, 2014, Section 1605 – Buy American (100% Domestic Content of iron, steel and manufactured goods); Federal Highway Administration (FHWA) 23 U.S.C. § 313 – Buy America, 23 C.F.R. §635.410 (100% Domestic Content of steel, iron and manufactured products); Federal Transit Administration (FTA) 49 U.S.C. § 5323(j), 49 C.F.R. Part 661 – Buy America Requirements (See 60% Domestic Content for buses and other Rolling Stock).

23. LOBBYING:

23.1 The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

23.1.1 Any federal, state, county or local agency, legislature, commission, council or board;

23.1.2 Any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or

23.1.3 Any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

24. GENERAL WARRANTY:

CONSULTANT warrants that it will perform all SERVICES required hereunder in accordance with the prevailing standard of care by exercising the skill and care normally required of individuals performing the same or similar SERVICES, under the same or similar circumstances, in the State of Nevada.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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25. PROPER AUTHORITY:

The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. **CONSULTANT** acknowledges that this Contract is effective only after approval by the Carson City Board of Supervisors and only for the period of time specified in this Contract. Any SERVICES performed by **CONSULTANT** before this Contract is effective or after it ceases to be effective is performed at the sole risk of **CONSULTANT**.

26. ALTERNATIVE DISPUTE RESOLUTION (Public Work):

If the SERVICES under this Contract involve a "public work" as defined under NRS 338.010(17), then pursuant to NRS 338.150, a public body charged with the drafting of specifications for a public work shall include in the specifications a clause requiring the use of a method of alternative dispute resolution ("ADR") before initiation of a judicial action if a dispute arising between the public body and the **CONSULTANT** engaged on the public work cannot otherwise be settled. Therefore, unless ADR is otherwise provided for by the parties in any other incorporated attachment to this Contract, in the event that a dispute arising between **CITY** and **CONSULTANT** regarding that public work cannot otherwise be settled, **CITY** and **CONSULTANT** agree that, before judicial action may be initiated, **CITY** and **CONSULTANT** will submit the dispute to non-binding mediation. **CITY** shall present **CONSULTANT** with a list of three potential mediators. **CONSULTANT** shall select one person to serve as the mediator from the list of potential mediators presented by **CITY**. The person selected as mediator shall determine the rules governing the mediation.

27. GOVERNING LAW / JURISDICTION:

This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. **CONSULTANT** consents and agrees to the jurisdiction of the courts of the State of Nevada located in Carson City, Nevada for enforcement of this Contract.

28. ENTIRE CONTRACT AND MODIFICATION:

This Contract and its integrated attachment(s) constitute the entire Contract of the parties and such are intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other Contracts that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto and approved by the Carson City Board of Supervisors. Conflicts in language between this Contract and any other agreement between **CITY** and **CONSULTANT** on this same matter shall be construed consistent with the terms of this Contract. The parties agree that each has had their respective counsel review this Contract which shall be construed as if it was jointly drafted.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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29. ACKNOWLEDGMENT AND EXECUTION:

This Contract may be executed in counterparts. The parties hereto have caused this Contract to be signed and intend to be legally bound thereby as follows:

CITY

Finance Department
Attn: Carol Akers, Purchasing & Contracts Administrator
Purchasing and Contracts Department
201 North Carson Street, Suite 2
Carson City, Nevada 89701
Telephone: 775-283-7362
Fax: 775-887-2286
CAkers@carson.org

CITY'S LEGAL COUNSEL

Carson City District Attorney

I have reviewed this Contract and approve as to its legal form.

By: _____
Sheri Russell, Chief Financial Officer

By: _____
Deputy District Attorney

Dated _____

Dated _____

CITY'S ORIGINATING DEPARTMENT
CONSULTANT will not be given authorization to begin work until this Contract has been signed by Purchasing and Contracts

BY: Carol Akers
Purchasing & Contracts Administrator

Account: 254-5047-452-7040
Project # 011801

By: _____

Dated _____

PROJECT CONTACT PERSON:

Robb Fellows, Project Manager
Telephone: 775-283-7370

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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Undersigned deposes and says under penalty of perjury: That he/she is **CONSULTANT** or authorized agent of **CONSULTANT**; that he/she has read the foregoing Contract; and that he/she understands the terms, conditions and requirements thereof.

CONSULTANT

BY: Michael Bennett

TITLE: Director

FIRM: Lumos and Associates, Inc.

CARSON CITY BUSINESS LICENSE #: 19-00000471

Address: 308 N. Curry Street, Suite 200

City: Carson City **State:** NV **Zip Code:** 89703

Telephone: (775) 883-7077

E-mail Address: mbennett@lumosinc.com

(Signature of Contractor)

DATED _____

STATE OF _____)

)ss

County of _____)

Signed and sworn (or affirmed before me on this _____ day of _____, 20__.

(Signature of Notary)

(Notary Stamp)

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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CONTRACT ACCEPTANCE AND EXECUTION:

The Board of Supervisors for Carson City, Nevada at their publicly noticed meeting of April 4, 2019 approved the acceptance of the attached Contract hereinbefore identified as **CONTRACT No. 1819-179**. Further, the Board of Supervisors authorizes the Mayor of Carson City, Nevada to set his hand to this document and record his signature for the execution of this Contract in accordance with the action taken.

CARSON CITY, NEVADA

ROBERT L. CROWELL, MAYOR

DATED this 4th day of April 2019.

ATTEST:

AUBREY ROWLATT, CLERK-RECORDER

DATED this this 4th day of April 2019.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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SAMPLE INVOICE

Invoice Number: _____
 Invoice Date: _____
 Invoice Period: _____

Invoice shall be submitted to:

Carson City Parks, Recreation and Open Space Department
 Attn: Patti Liebespeck
 3303 Butti Way #9
 Carson City NV 89701

Line Item #	Description	Unit Cost	Units Completed	Total \$\$
Total for this invoice				

Original Contract Sum \$ _____
 Less amount previously billed \$ _____
 = contract sum prior to this invoice \$ _____
 Less this invoice \$ _____
 =Dollars remaining on Contract \$ _____

ENCLOSE COPIES OF RECEIPTS & INVOICES FOR EXPENSES & OUTSIDE SERVICES

Carson River Trail System Phase II

Scope of Work, 3-14-19

Phase II of the Carson River Trail System will complete two key links in the greater east Carson City trail network. The project includes three non-motorized trail segments:

- The Prison Hill Trail will connect the existing dirt parking area at the southwest corner of East Fifth Street and Carson River Road to the entrance of Silver Saddle Ranch.
- The Mexican Ditch Trail Extension will connect the Prison Hill Trail to the Mexican Ditch Trail near the Red House Complex at Silver Saddle Ranch.
- The West Riverbank Trail will connect Riverview Park with Silver Saddle Ranch, passing through Buzzy's Ranch.

The trails will be 10-foot wide with 2-foot shoulders. They will be unpaved, but constructed of structural material with a decomposed granite surface. The total trail length is approximately three miles. Carson City requires design and construction documents to be completed by the end of 2019.

Based on discussions with Carson City staff, Lumos & Associates proposes the following tasks and budgets to accomplish the required elements and deliverables for the project. Tasks will be billed on a time and materials basis.

Task 1: Project Management and Meetings

This task will include project management and coordination for the duration of the project. Lumos Project Manager Chas Macquarie, P.E., will be the prime point of contact with the City and other agencies. He will coordinate the activities of RCI and will communicate with City Open Space Administrator, Ann Bollinger, and City Project Manager Robb Fellows, P.E., on a regular basis. Project meetings will occur at key points in the design process, but not on a weekly basis.

Task Budget: \$21,980

Task 2: Environmental Studies

A cultural/archaeological study/report is currently in progress by another consultant for the City. This draft report will be made available to Lumos by May 2019 to aid in identifying alignment alternatives. The cultural study/report is not part of this scope of work.

Task 2.1: Wetland Delineation

The USFW National Wetlands Inventory map shows the irrigated fields of Buzzy's Ranch as wetlands. Lumos' subconsultant, Resource Concepts, Inc. (RCI) will conduct a wetland and other waters of the United States (WOUS) delineation in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (TR-Y-87-1) as amended by the Arid West Regional Supplement (2008), A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (2008), and the Arid West 2016 Regional Wetland Plant List.

The purpose of a wetland delineation report is to identify and describe aquatic resources and known possible sensitive plant, fish, and wildlife species. This report facilitates efforts to:

- Avoid or minimize impacts to aquatic resources during the project design process;
- Document aquatic resource boundary determinations for review by the USACE;
- Provide early identification of known sensitive species within the survey area; and,

- Provide background information on the survey area.

Following the field work and report preparation, RCI will meet with the Army Corps of Engineers (ACOE) to go over our findings and determine the most efficient steps forward in developing mitigation for impacts to wetlands and other WOUS.

RCI's scope and cost estimate are based on the following assumptions:

- The trail along the river will cross some jurisdictional wetlands. The National Wetland Inventory map indicates the trail could cross 700 feet of wetlands. This area is also mapped as having hydric soils.
- The trail along the river will cross other WOUS. There are three drainages related to irrigation discharge that will be crossed by the trail.
- Two field surveys will be conducted. One prior to irrigation being turned onto the field of interest to assess wetland hydrology and one later in the spring to identify the vegetation in the wetland areas to the species level.
- The total project impacts will be more than 1/10th of an acre and less than ½ acre of wetlands and may be permitted under Nationwide Permit (NWP) #14 for Linear Transportation Projects. This permit allows for activities required for crossings of WOUS associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., trails) in WOUS. This permit requires Pre-Construction Notification (PCN) if the project impacts between ½ and 1/10th of an acre. If impacts are less, then a courtesy letter to the ACOE will be prepared.
- Results from cultural resource investigations will be completed by others for use in the ACOE submittals.
- There is no habitat for federally listed species in the project area.

Deliverables: Verified wetland delineation map in electronic format.

Task 2.2: Biological and Botanical Data Review

RCI will review the Natural Heritage Program database for sensitive species and summarize their findings in a brief letter report. No fieldwork is included in this task.

Deliverables: Letter report detailing findings from the Natural Heritage Resource database.

Task Budget: \$18,230

Task 3: Preliminary Project Basemap

Lumos will prepare a preliminary project basemap using the results of the environmental studies together with available mapping provided by the City (aerial photos and 2-foot contours) and site visits as needed. The preliminary basemap will show property lines, existing infrastructure and roadways, utilities (based on aerial and record data), drainage features, wetland limits based on the National Wetlands Inventory, floodplain boundaries based on FEMA FIRM data, and environmentally sensitive areas. Lumos will use the City's GIS parcel data for this initial determination of parcel boundary locations.

Deliverables: Lumos will provide the City with electronic files of the preliminary basemap on 11" x 17" sheets in Adobe Acrobat and AutoCAD 2018.

Task Budget: \$5,640

Task 4: Field Visits and Preliminary Alignment Flagging

Lumos will walk the three project trail segments with City staff and flag the alignment segments and any alternative alignments. Lumos will conduct a second field visit to refine the flagged alignments to make sure they meet ADA requirements. We will do this using a hand-held clinometer and a hand-held GPS unit. The GPS alignment data will be added to the electronic basemap.

Deliverables: Updated electronic basemap.

Task Budget: \$7,570

Task 5: Identify Alignment Alternatives

The alignment corridors for all three trail segments are fairly well defined, but there will be potential alignment alternatives in a number of areas, including:

- How extensively to use old road beds
- Drainage crossings
- Alignment on the steeper side slopes of Prison Hill
- Road crossings and connections to the existing Mexican Ditch Trail
- Tie-in to the Silver Saddle Ranch building complex
- Tie-in to the existing river access parking south of the Carson River Road bridge
- The undercrossing at the Carson River Road bridge
- Avoiding sensitive habitat along the West bank of the Carson River
- Minimizing wetland impacts on the West Riverbank Trail
- Exactly where to locate the bridge to connect to the Riverview Park trail system

Alignment alternatives will be identified based on the above factors and shown on the basemap.

Deliverables: Alignment alternatives exhibit in 11" x 17".pdf format.

Task Budget: \$2,540

Task 6: Alignment Alternatives Analysis

Lumos will prepare an alternative analysis that discusses the following:

- Description of each alternative
- Advantages and disadvantages of each alignment alternative, including:
 - Safety at road crossings and key connection points
 - Topographic and existing infrastructure constraints
 - Vegetation and soils
 - Drainage, Carson River floodplain impacts, and water quality
 - Ability to accommodate connections to future trail segments
 - Ability to meet AASHTO, and ADA standards
 - Ability to be permitted by NDOT (bridge undercrossing) and USACOE (for potential wetland impacts)
 - Impact to trees
 - Preliminary estimated cost
 - Constructability and maintenance

- Impact to wetlands, biological (including tree removal), and heritage resources. (Cultural resources will be shown on working drawings for review by staff, but will not be shown on any final document available for public review.)
- A recommendation of a preferred alternative for each of the three trail segments

Deliverables: Lumos will submit electronic files in .pdf version to the City. The alternative analysis will be reviewed with the City and other stakeholders to gain consensus on a preferred alignment.

Task Budget: \$7,460

Task 7: Updated Basemap of Selected Alternative

An updated project basemap will be created using a combination of aerial photogrammetry from an Unmanned Aerial Vehicle (UAV) and ground collected survey field shots. The project will be flown at an appropriate elevation to obtain a horizontal scale of 1"=20' with a 1' contour interval accuracy. Field shots will be obtained at critical locations such as edge of existing roadways and tie-in locations to achieve a higher degree of vertical accuracy. The field shots will be combined with the aerial digital terrain model to supplement the basemap. A best fit of the existing boundaries will be made based upon found monuments and record mapping. A digital terrain model, topographic basemap, and color orthophoto will be generated as deliverables for this task.

Horizontal Control for the project will be referenced to the Carson City Control Network, Nevada Coordinate System, West Zone, NAD83 using a local combined scale factor to establish ground values for the basemap. The vertical datum for the project will be the Carson City Control Network referenced to NAVD88. The area to be mapped will be along the Proposed Trail Routes.

Deliverables: Updated project basemap with 1' contour interval accuracy, current high resolution aerial imagery, property lines of record, utilities (based on aerial and record data), drainage features, wetland limits based on the RCI wetlands delineation, and floodplain boundaries based on FEMA FIRM data.

Task Budget: \$25,090

Task 8: Geotechnical Investigation and Report

Lumos will perform a field investigation that will consist of ten (10) test pits five (5) to fifteen (15) feet deep, along the length of the trail proposed for construction at approximately 2,000 foot intervals along the proposed route. Lumos will collect samples at regular intervals and note the existing soils conditions at each excavation. Lumos will provide the excavation services, and notify USA Dig.

Lumos will provide laboratory testing on the samples collected. Additionally, we will perform engineering analyses and calculations and develop a report that will discuss the site conditions, field and laboratory test data, and our conclusions and recommendations from a geotechnical perspective. Our Geotechnical Investigation will be supervised by a Registered Professional Civil Engineer in the State of Nevada and will specifically include the following services:

Field Investigation will include:

- USA Dig Clearance
- Identification of All Exploration Locations
- Test Pit Excavation
- Observation of Test Pits
- Soil Sampling

Laboratory analysis may include:

- Direct Shear
- R-Value
- Atterberg Limits
- Grain Size Analysis (including fines content)
- Expansion Index
- pH/Resistivity/Soluble Sulfate

Report, Recommendations, and Conclusions:

- Table of Contents
- Exploration Logs – which will include test results, and depth of test pits
- Site Conditions
- Field Investigation
- Soil Types and Classifications
- Laboratory Analysis and Test Results which will include sample locations (P.I, % passing #200, R-Value)
- Grading Recommendations
- Trail Section Recommendations and Calculations
- Foundation Recommendations
- Slope stability analysis in critical areas
- Ground Water Depth, if Encountered
- Test Pit Location Map
- Signature Sheet which will include preparer's signature and Engineers professional stamp

This scope does not include any soil and/or groundwater contamination evaluation at the site.

Excavation equipment will use existing access roads and the proposed trail alignment to the greatest extent possible; however, some ground disturbance outside the trail limits will be required in order to perform the geotechnical investigation. No rehabilitation of the disturbed ground is proposed.

Deliverables: Geotechnical Investigation Report in electronic files in .pdf format.

Task Budget: \$22,000

Task 9: Preliminary Design Report and 30% Plans, Details, and Cost Estimate

Lumos will prepare preliminary (30%) design plans of the selected alignments consistent with Carson City and AASHTO design guidelines to the maximum extent possible. The preliminary design will use the parcel boundary data provided by the City in GIS format and the field survey data gathered in Task 7.

The Preliminary Design Report will include the following:

1. Introduction and project background
2. Project need and goals
3. Design standards
4. Alignment alternatives descriptions and evaluations (from Task 6)
5. Preferred alignment recommendation (from Task 6)
6. Design and construction issues

- 6.1 Topography and alignment (ability to follow natural terrain)
 - 6.2 Vegetation and soils
 - 6.3 Connections to existing roads and trail junction details
 - 6.4 ADA and AASHTO compliance
 - 6.5 Drainage memo, floodplain impacts, and water quality
 - 6.6 Road crossing alternatives and recommendation
 - 6.7 Bridge alternatives and recommendation
 - 6.8 Impacts to utilities and trees
 - 6.9 Impacts to wetlands, and biological and cultural resources
 - 6.10 Required easements
 - 6.11 Constructability and maintenance
7. Preliminary construction cost estimate
 8. References

Figures:

- Project location map
- Alignment alternatives map
- Map showing trail footprint at wetlands and any threatened or endangered species areas

The Preliminary Plans will be prepared on 11" x 17" sheets and will include:

- Cover sheet
- Index sheet(s)
- Plan and profile sheets at 1" = 40' scale, with centerline, trail limits, tops and toes of cuts and fills, wall locations, and trees to be removed
- Trail connections to the Silver Saddle Ranch buildings
- Jurisdictional wetlands
- Property lines and proposed easements and/or right-of-way requirements
- Trail and wall typical sections and details
- Details of trail crossings and connections to existing roads and parking areas
- Details of fencing, signs, and trail amenities
- Preliminary bridge layout and schematics
- Preliminary drainage and water quality facilities and details

In addition to the 11" x 17" Engineering plan set, Lumos will prepare one (1) large-scale color exhibit showing the preferred alignment and the alternatives considered.

Deliverables: Draft Preliminary Design Report and preliminary plans in electronic .pdf format. One (1) large-scale color exhibit showing the preferred alignment and the alternatives considered.

Task Budget: \$54,830

Task 10: City and Agency Review

Lumos will present the Preliminary Design Report and 30% plans to the City and NDOT. We will also lead another field visit if requested by the City.

Task Budget: \$3,400

Task 11: Stakeholder/Public Meeting

Lumos will present the Preliminary Design Report and 30% plans to the City Open Space Advisory Committee and present the plans at one stakeholder/public meeting.

Task Budget: \$4,020

Task 12. Wetland Mitigation Design

If wetland mitigation is required RCI will design the wetland mitigation as required by the ACOE for the 404 permit. No other agencies need to approve the mitigation. This scope is based on the 700 feet that may be wetland as indicated on the National Wetlands Inventory Map and a 20-foot-wide trail. This equates to 0.3 acres of impact.

Wetland mitigation can take the form of wetland creation or wetland enhancement. The ACOE determines the appropriate compensatory mitigation ratio after reviewing recommendations from the applicant and appropriate resource agencies, and by evaluating and comparing the functions and services of the aquatic resources to be compensated for, to the functions and services of the proposed aquatic resources to be compensated with, as well as the likelihood of success of the proposed aquatic resource mitigation.

Often, the replacement acreage is greater than the acreage lost when taking into consideration; a qualitative assessment of functional loss at the impact site versus expected functional gain at the mitigation site, mitigation site location, net loss of aquatic resource surface area, type conversion, risk and uncertainty, and/or temporal loss of function. Typically, implementation of compensatory mitigation is completed in advance of or concurrent with the authorized impacts.

There is a wide variety of possibilities for mitigation for this project. From none required to significant effort to locate a mitigation area and the detailed design and permitting. A broad range of costs is possible for this service. The estimated cost in the project budget is based on a moderate design effort. If a greater design and approval effort is required by the ACOE then additional budget will be required.

Deliverables: Wetland mitigation design plans for a moderate level of mitigation.

Task Budget: \$52,960

Task 13: Permit Applications

Depending on the permits required and the estimated permitting time, permit applications will be prepared and submitted to the permitting agencies as early as possible in the design process. Plans needed for the 404 and 401 permits will be developed to a stage sufficient for permit submittal, which is anticipated to be approximately 60% design level.

Task 13.1: Section 404 Permit

The outcome of the wetland delineation on Buzzy's Ranch will determine the type of permit required by the ACOE. If wetlands and other WOUS will be crossed by the trail and impacts are over 1/10th of an acre but less than 1/2 of an acre, then RCI will prepare a Pre-Construction Notification (PCN) for project authorization under NWP #14. The submittal will include a site plan, detailed project description, estimates of impacts to WOUS, discussion of BMPs and impact minimization measures, and pre-construction photos.

The ACOE district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision."

According to the ACOE published information, compensatory mitigation is required for all activities in which the impacts to the aquatic resources have been avoided and minimized to the maximum extent practicable, but would still result in unavoidable adverse effects.

The PCN requires a description of the Proposed Compensatory Mitigation related to fill/excavation and dredge activities includes acres and linear feet (where appropriate) the total quantity of WOUS proposed to be created, restored, enhanced and/or preserved for purposes of providing compensatory mitigation. The water body type (wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, etc.) or non-jurisdictional (uplands). The mitigation type may be permittee-responsible on-site/off-site, mitigation bank, or in-lieu fee program.

For the purposes of the project budget we have assumed a Nation Wide permit #14 and 401 Certification will be required.

Task 13.2: Section 401 Permit

Activities requiring a federal permit must "certify" that the proposed work will not violate state water quality standards. RCI will prepare an application for Section 401 Water Quality Certification from the State of Nevada. The information required for this application is similar to the information required for the 404 PCN application. Special conditions may be required by the State in order to remove or mitigate potential impacts to water quality standards. Such conditions must ultimately be included in the Federal Section 404 permit.

The permit requires before, during and after photos. RCI will provide the before construction photos and the photo point locations. Lumos or the contractor will provide the during and after photos.

For the purposes of the project budget we have assumed a Nation Wide permit #14 and 401 Certification will be required.

Task 13.3: Temporary Working in Waterways Permit

A working in Waterways Temporary Permit covers temporary working or routine maintenance in surface waters of the State. This permit is required before operating earthmoving equipment in any body of water. There are three irrigation drainages crossed by the conceptual trail where this permit may be required.

RCI's cost estimate does not include on-site monitoring during construction or the \$250 permit fee.

Task 13.4: NDOT Encroachment Permit

An encroachment permit will be required from NDOT for the trail segment under the existing Carson River Road bridge. Lumos will prepare a permit application to NDOT and respond to their comments. A scour analysis is not included in this scope, but if required by NDOT can be provided for an additional fee.

We assume that the trail will be outside the bed and banks of the Carson River and a permit will not be required from the Nevada Division of State Lands.

Task Budget: \$19,520

Task 14: 90% Plans, Specifications, and Cost Estimate

This task will include developing plans, specifications and cost estimates to the 90% level for the preferred alignment of the trail segments, road crossings and bridge. City and NDOT comments from the 30% review will be incorporated into this iteration of plans. Technical specifications and preliminary bid documents will be in detail form at this level of design. Specifications will include all the trail components including trail amenities and performance specifications for the premanufactured bridge. Carson City will provide their boilerplate contract language to include in the preliminary bid documents.

Plans will include:

- Updated components of the 30% plans.
- Erosion control best management practices (BMPs) and revegetation details but Lumos will not prepare a draft Storm Water Pollution Prevention Plan (SWPPP) because the contractor is required to submit and obtain that from NDEP.
- Structural layout and details for bridge abutments and wingwalls.

Deliverables:

- 90% plans in electronic .pdf format.
- Preliminary contract documents with detailed technical specifications.
- Structural calculations for bridge abutments and wingwalls per the 2018 IBC.
- Updated construction cost estimate by trail segment.

Task Budget: \$44,610

Task 15: City Review

Lumos will present the 90% plans to the City, NDOT, Carson City Open Space Committee, and any Stakeholders as requested by the City.

Task Budget: \$3,400

Task 16: Final Contract Documents

Lumos will prepare final plans, specifications, and contract documents. City and other agency comments from the 90% plan review will be incorporated into the contract documents.

Deliverables: Lumos will provide plans at 1" = 40' scale on 11" x 17" and 1" = 20' scale on 24" x 36" sheets in .pdf format. The contract documents will be provided to the City on disk in AutoCAD 2018 and Word. The City will make copies of the bid documents and distribute them to bidders.

Task Budget: \$17,060

Task 17: Bidding Assistance

Lumos will attend the pre-bid conference, respond to technical questions during the bid process, and assist in the preparation of addenda if necessary.

Task Budget: \$4,020

Task 18: Construction ServicesTask 18.1: Construction Management and Engineering Assistance During Construction

Engineering assistance will include: review of contractor submittals, responding to requests for information, additional engineering and plan changes due to changed field conditions, and meetings requested by the City and/or agencies.

Construction management services will include: conducting the preconstruction meeting, monitoring contractor schedule and progress, regular tailgate meetings, processing pay requests and change orders, and coordination of the record drawings. The City will monitor the contractor's certified payroll.

Task 18.2: Construction Inspection

Lumos will provide part-time construction inspection, estimated at 25 hours a week for a 60 working day construction contract for a total of 300 hours. Our construction inspector will be in close contact with both the Lumos construction project manager and City construction personnel. The construction inspector will provide a daily report for each day he/she is on site. Our budget for this task assumes that Davis-Bacon wages are not required for the construction inspector.

Task 18.3: Materials Testing

Lumos will provide materials testing for the project. Anticipated testing includes:

- Compaction testing for soils, aggregate base, and decomposed granite for a total of 50 site visits.
- Concrete testing for bridge abutments and concrete trail segments for a total of four site visits.

Task 18.4: Construction Survey Control

Lumos will provide survey control for the contractor to do their own staking. This will be the same control network used for the initial field survey. Lumos will spend an estimated two days of survey crew time to check and re-establish any damaged control points.

Task Budget: \$90,570

Total Project Budget: \$404,900

**CARSON CITY
CARSON RIVER TRAIL SYSTEM PHASE II
Project Schedule, March 12, 2019**

Task	Description	2019										2020
		April	May	June	July	August	September	October	November	Dec		
1	Project Management											
2	Environmental Studies											
2.1	Wetland Delineation											
2.2	Biological & Botanical Data Review											
3	Preliminary Project Basemap											
4	Field Visits & Alignment Flagging											
5	Identify Alignment Alternatives											
6	Alignment Alternatives Analysis											
7	Additional Field Survey											
8	Geotechnical Investigation and Report											
9	30% Plans, Specifications & Cost Est.											
9.1	Trail Plans, Specs & Cost Estimate											
9.2	Floodplain & No-rise analysis											
9.3	Drainage Memo											
10	City & Agency Review											
11	OSAC and Stakeholder meetings											
12	Wetland Mitigation Design											
13	Permitting											
13.1	Section 404 Permitting (USACOE)											
13.2	Section 401 Water Qual. Cert. (NDEP)											
13.3	Temp. Working in Waterways Permit											
13.4	NDOT Encroachment Permit											
14	90% Plans, Specs & Cost Estimate											
15	City and Agency Review											
16	Final Contract Documents											
17	Bidding Assistance											
18	Construction Services											

Lumos Design
 RCI Design
 City Review
 Permit Review

Engineering & Development	Per Hour
President	\$255
Director	230
Group Manager	215
Planning Group Manager	175
Project – Senior Project Manager	175-185
Hydrogeologist - Senior Hydrogeologist	165-170
Staff - Project - Senior Engineer	135-145-155
Staff - Project - Senior Structural Engineer	135-145-165
Landscape Architect Manager	145
Landscape Architect Designer – Landscape Architect	120-135
Project Coordinator	130
Project - Senior Project Designer	120-125
Structural - Senior Structural Designer	105-115
Assistant Planner	105
Engineering Technician I - II	95-105
Support Technician	70
Construction	Per Hour
Director	\$230
Group Manager	215
Project Manager	175
Geotechnical Engineer	195
Construction Services Engineer	160
Construction Services Supervisor	140
Geotechnician	130
Inspector - Senior Inspector (includes nuclear gauge)	110-120
Field Technician I – II (includes nuclear gauge)	95-100
Surveying	Per Hour
Director	\$230
Group Manager	215
Project Manager	175
Project - Senior Surveyor	140-150
Project Coordinator	130
Staff Surveyor	125
Surveying Technician I - II	100-115
Party Chief	145
Chain Person	75
Administrative & Other Services	Per Hour
Administrator	\$75
Clerical	65
30x42 Color/B&W (per copy)	10/5
24x36 Mylar/Color/B&W (per copy)	20/5/3
8.5x11 Color /B&W (per copy)	0.50/0.15
Mileage (per mile)	0.70

- Fees for prevailing wage rate projects available upon request.
- Map filing, checking, consulting, and other fees paid on behalf of the client shall be billed at cost plus fifteen percent (15%).
- Overtime hours will be billed at 1.5 times standard rate where applicable.
- Survey and Field crew billing rates include standard field survey equipment and truck up to 30 mile radius, after which mileage rates apply
- Fees for depositions and testimony will be billed at two (2) times the standard billing rates

Invoices are due upon receipt and considered to be past due after 30 days.
This fee schedule applies to services provided from February 1, 2019 until further notice.

Testing/Inspection		Per Hour
Director		\$230
Group Manager		215
Geotechnical Engineer		195
Construction Services Engineer		160
Construction Services Supervisor		140
Geotechnician		130
Senior Inspector (includes nuclear gauge)		120
Inspector (includes nuclear gauge)		110
Field Technician II (includes nuclear gauge)		100
Field Technician I (includes nuclear gauge)		95
Administrator		75
Clerical		65

Particle Size Testing For Soils/Aggregates		Each
Sieve Analysis	(ASTM C-136/C-117)	\$175
Wash	(ASTM C-117)	125
Grain Size Analysis Soils	(ASTM D-421/422)	300
Sieve Analysis/Wash (coarse combined)	(ASTM C-136/C-117)	200

Soils & Aggregate Testing		Each
Specific Gravity & Absorption — Coarse or Fine Aggregate	(ASTM C-127/C-128)	\$125
Sand Equivalent	(ASTM D-2419)	200
Dry Unit Weight of Aggregate	(ASTM C-29)	100
Organic Impurities	(ASTM C-40)	75
Fractured Faces	(NDOT T-230)	100
L.A. Abrasion	(ASTM C-131)	250
Sodium Sulfate Soundness (5 cycles)	(ASTM C-88)	500
Moisture Content	(ASTM C-566)	50
Moisture Content and Unit Density	(ASTM D-2937)	75
Plastic Index	(ASTM D-4318)	225
Expansion Index	(ASTM D-4829)	275
R-Value	(ASTM D-2844)	350
California Bearing Ratio	(ASTM D-1883)	Quote on request
Direct Shear	(ASTM D-3080)	350
Unconfined Compression	(ASTM D-2166)	Quote on request
Consolidation	(ASTM D-2435)	500
Permeability (4-inch Rigid Wall, Falling head)	(ASTM D-4491)	Quote on request
Soluble Sulfates		Quote on request
pH	(ASTM D-4972)	Quote on request
Resistivity		Quote on request
Clay Lumps/Friable Parts	(ASTM C-142)	100
Cement Treated Base Mix Design		Quote on request
Cement Treated Base Compression Test		75
Fine Durability Index	(ASTM D-3744)	225
Coarse Durability Index	(ASTM D-3744)	300
Cleanness Value	(CAL 229)	225

Moisture Density Testing		Each
Compaction	(ASTM D-698 or ASTM D-1557)	\$275
Rock Correction	(ASTM D-4718)	125
Harvard Miniature	(NDOT T-101)	110
CAL 216		225
Check Point	(ASTM D-1557)	125

Emulsion Testing		Each
% Residue By Evaporation/Softening Point (Ring & Ball)	(AASHTO T-53 & T-59) 24 hr. turnaround	\$400
% Residue By Evaporation/Softening Point (Ring & Ball)	(AASHTO T-53 & T-59) 3-day turnaround	350
Saybolt Furol Viscosity Test @ 122°	(AASHTO T-59)	275

Concrete Testing		Each
Compression Concrete Cylinders	(ASTM C-39)	\$40
Hold Cylinder (Cured but not tested)		25
Compression, Concrete Core	(ASTM C-42)	35
Flexural Strength of Concrete Beams	(ASTM C-78/C-293)	75
Compression, Grout Cylinder	(UBC 24-28)	35
Compression, Mortar Cylinder	(UBC 24-28)	35
Masonry Block Absorption and Moisture	(ASTM C-140)	Quote on request
Shrinkage	(ASTM C-426)	Quote on request
Compression, Concrete Masonry Units	(ASTM C-140)	Quote on request
Compression, Concrete Masonry Prisms	(ASTM C-1314)	Quote on request
Density of Spray Applied Fireproofing		Quote on request
Concrete Mix Design, including Mixing and Casting of Cylinders		Quote on request

Asphalt Concrete Testing		Each
Sieve Analysis	(ASTM D-5444)	\$125
Unit Weight on Compacted Sample	(ASTM D-2726)	50
Unit Weight on Core	(ASTM D-2726)	75
Marshall Stability & Flow	(ASTM D-1559)	50
Max. Theoretical Specs. Gravity	(ASTM D-2041)	100
Bitumen Content	(ASTM D-6307)	150
Asphalt Concrete Mix Design		Quote on request
A.C. Series (Marshall)		675
Oven Correction	(ASTM D-6307)	300

- Fees for prevailing wage rate projects available upon request.
- Map filing, checking, consulting, and other fees paid on behalf of the client shall be billed at cost plus fifteen percent (15%).
- Overtime hours will be billed at 1.5 times standard rate where applicable.
- Billing rates include standard testing equipment and truck up to 30 mile radius, after which mileage rates apply.
- Fees for depositions and testimony will be billed at two (2) times the standard billing rates

**Invoices are due upon receipt and considered to be past due after 30 days.
 This fee schedule applies to services provided from February 1, 2019 until further notice.**



PREPARED FOR CARSON CITY | RESPONSE TO RFQ 1819-179

CARSON RIVER TRAIL SYSTEM PHASE II DESIGN, ENGINEERING, AND CONSTRUCTION MANAGEMENT

Carson City, Nevada

FEBRUARY 22, 2019



Local Team. Proven Experience. Realistic Solutions.



Carson City
308 N Curry St Ste 200
Carson City, Nevada 89703
775.883.7077

February 22, 2019

Carol Akers, Purchasing and Contract Administrator
Carson City Purchasing and Contracts
201 N. Carson Street, Suite 2
Carson City, NV 89701

Subject: RFQ 1819-179, Carson River Trail System Phase II Design, Engineering, and Construction Management

Dear Ms. Carol Akers and Selection Panel:

Carson City has an excellent understanding of the benefits that a strong trail system bring to a community. Not only do trails improve the quality of life for the City's residents, they also provide a recreational draw for the many people who visit the area and are an important part of the community's economy. To be effective, a trail system has to be continuous and connected. The Carson River Trail System Phase II is a significant project because it will provide two critical links: one along the east side of Prison Hill connecting to Silver Saddle Ranch; and two, filling in the critical gap along the Carson River between Riverview Park and Silver Saddle Ranch across Buzzy's Ranch.

The consultant that the City selects for this project must be able to complete the project in an efficient and cost-effective manner within the desired time frame, but should also be familiar with the project area and interested in the overall goals for the City's trail network. Our Team is that team. Key members of our team provided information and an exhibit that helped obtain the SNPLMA grant and we have worked with Carson City on previous trail projects. **We know the project area.**

For this project, **Lumos & Associates** has included **Resource Concept, Inc. (RCI)** on our team for wetland delineation on Buzzy's Ranch. Lumos and RCI have worked together on several previous projects. **We are a proven team that understands the way Carson City works and what it expects from its consultants.** This understanding, together with our existing knowledge of the project area, will enable us to hit the ground running with a minimum amount of time spent familiarizing ourselves with the project.

Lumos will be the lead firm and will provide engineering, geotechnical report, surveying, construction documents, and construction services for the project; RCI will provide the wetland delineation and permitting and wetland mitigation design should it be necessary. We have a deep bench of staff who have trail experience and who are available to work on this project.

Chas Macquarie, P.E. will be project manager for this project. Chas has worked on over 30 miles of trails in the Carson City, Lake Tahoe and Truckee area and has a keen interest in Carson City trails. He likes working in and for the City.

We welcome the opportunity to work with the City on Phase II of the Carson River Trail System and to discuss our unique qualifications with you and the selection committee in further detail.

Sincerely,

Michael Bennett, P.E.
Principal-in-Charge

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Section 1

Project Understanding

Statement of Project Understanding

Phase II of the Carson River Trail System will complete two key links in the greater east Carson trail network. The project includes three non-motorized trail segments:

- The Prison Hill Trail/Mexican Ditch Trail Extension will connect the existing dirt parking area at the southwest corner of East Fifth Street and Carson River Road to the Silver Saddle Ranch Buildings.
- The West Riverbank Trail will connect Riverview Park with Silver Saddle Ranch, passing through Buzzy’s Ranch.

The trails will be 10-foot wide with 2-foot shoulders. They will be unpaved, but constructed of structural material with a decomposed granite surface, similar to the recently repaired trails in Riverview Park.

The project is funded by a federal grant through the Southern Nevada Public Land Management Act (SNPLMA) and the budget for the entire project is \$1.8 million, which includes design, construction, construction management, and administration.

Lumos Project Manager, Chas Macquarie, assisted Carson City Open Space staff with the grant application by providing an exhibit showing the proposed trails, a preliminary cost estimate, and a brief description of the trail alignments.



Carson River Rd. Crossing location at the Mexican Ditch



Under the Carson River Road Bridge

Prison Hill Trail

Carson River Road is a popular route for cyclists. Most of these are road riders who will likely continue to use the road since it is paved. However, vehicle speeds are high on Carson River Road and the lack of a sidewalk and limited shoulders mean that very few pedestrians use the road. The Prison Hill Trail will enable pedestrians, equestrians, and mountain bike riders to safely travel between Fifth Street and Silver Saddle Ranch without risking their lives on Carson River Road.

There will be two short connecting trails to the Mexican Ditch Trail. The first will be near the existing bridge over the Mexican Ditch; the second will be at Carson River Road where the road crosses over the ditch. The trail will also provide additional access to Prison Hill, enabling a loop to be done via the Dead Truck Canyon single track trail and the North Prison Hill loop trail.

The two connections to the Mexican Ditch Trail will require careful evaluation and design, since they will cross Carson River Road. Vehicle speeds are high and appropriate advance warning and potentially traffic calming measures will be required to make the crossings safe for trail users.

West Riverbank Trail

The current wide-trail system along the west bank of the Carson River extends from the Morgan Mill Rd. parking lot, south (upriver) to the Mexican Dam with one very notable gap at Buzzy’s Ranch. There are further single track extensions at either end, and also the old V&T alignment down-river from the Deer Run Rd. bridge. The West Riverbank Trail will fill in the wide-trail gap at Buzzy’s Ranch making a continuous five mile long wide-trail along the west side of the Carson River. This would greatly expand the connectivity and usability of the river trail network.

The trail will start at the existing parking lot in Silver Saddle Ranch on the south side of Carson River Road, pass under the Carson River Road bridge adjacent to the west abutment (this section will have a concrete surface), then extend north on the riverbank outside the floodplain to connect to the existing trail at the southeast corner of Silver Saddle Ranch. A bridge over an existing irrigation ditch will be required to make this connection.

Project Scope

Design Elements

The project deliverables include, but are not limited to plans, specifications and bid documents for the layout and design, engineering, permitting, and construction of the three non-motorized trail segments and amenities, totaling over three miles in length.

The design elements listed in the RFQ are as follows:

- Ten (10) foot wide trail with 2-foot shoulders.
- Trail will be unpaved, constructed with structural material, and include a compacted decomposed granite surface.
- Concrete trail section under bridge, including NDOT required permitting.
- Rock slope protection as necessary on side slopes greater than 2:1.
- Plans and specifications for trail drainage to include, but not be limited to, culverts (to include CMP pipe and headwalls), pedestrian/equestrian bridges, grade reversals, and tread outslope, erosion control and bank stabilization measures as needed.
- Plans and specifications for safe Carson River Road crossings. Consider and evaluate various possible design alternatives that may include, but not be limited to, cross walk striping, flashing pedestrian/equestrian crossing sign with pedestrian/equestrian button control, pedestrian islands, traffic calming methods, and under crossings.
- Three-rail split rail fence along Carson River Road, as needed.
- Plan for signage to include wayfinding trail signs and road signs compliant with Manual on Uniform Traffic Control Devices (MUTCD) and Carson City Parks, Recreation and Open Space Department Signage Master Plan.
- Trail shall follow the topography (rolling contour trail).
- Incorporation of principles of sustainability and low impact development to effectively manage water, minimize construction disturbance, and reduce long-term maintenance costs.
- Plan for revegetation of disturbed areas.
- The design shall not raise the floodway. A no-rise certificate will be required.

The Lumos team has extensive experience in all the above design elements. We have designed over 30 miles of wide trail in the greater Carson City area, including the Lake Tahoe Basin and Truckee, where both terrain and permitting are challenging. These projects have included bridges ranging from 20 to 148 feet in length, surface road crossings, road undercrossings, trails under existing bridges, retaining walls, steep slope protection, drainage improvements, signage plans, and trail amenities.

Many of our previous trail projects have won awards from the organizations such as the American Public Works Association, the California Transportation Foundation, and the Tahoe Regional Planning Agency.

We have a demonstrated ability to fit trails into the natural terrain in order to minimize ground disturbance and enhance user experience. We know how to design trails so that construction is as easy as possible, given the inherent constraints in constructing a long, skinny facility. This minimizes construction cost.

Project Scope

Procedures and Deliverables

The RFQ lists the following tasks for the consultant:

- Plan a “Kick Off” meeting with City staff, including a site visit.
- Prepare 30%, 60%, 90%, and 100% design, engineering, and construction plans for three trail segments using City engineering details, as appropriate.
- Make requested revisions.
- Obtain required permits, of behalf of the City, from State and federal agencies (which may include, but not be limited to, NDOT, NDSL, and ACOE) and required City departments. This will include responding to questions from permitting agencies.
- Prepare bid documents.
- Provide an engineer’s estimate of probable costs including construction and permitting requirements at 60% and 90% design.
- Provide City with bid assistance, answer questions from bidders.
- Provide and coordinate materials and compaction testing as needed.
- Provide for geotechnical studies, as needed and determined by trail design.
- Project design and bid documents shall be completed by the end of calendar year 2019.
- Provide construction management through completion of project. This includes full-time inspection, construction management, and materials testing as needed to verify that the project was constructed in accordance with the plans and specifications.
- Provide supplemental topographic survey

Lumos has provided all the above services to Carson City on previous projects (though not necessarily all on the same project). We are familiar with City procedures and preferences, and understand what the City wants from their consultants.

Additional Project Components

Additional project components that may be required include:

- Wetlands delineation
- Section 410 Water Quality Certification and USACOE Section 404 permitting (if wetlands are impacted)
- Wetland mitigation design (if wetlands are impacted)
- Construction staking (or at least survey control for the contractor to stake the project).



Section 2

Project Approach

Project Approach

The RFQ outlines the required design elements and deliverables and these are listed in the previous section. Lumos & Associates proposes the following tasks to accomplish the required elements and deliverables based on our experience with many similar projects.

TASK 1

Project Management and Meetings

This task will include project management and coordination for the duration of the project. Lumos Project Manager Chas Macquarie, P.E., will serve as the prime point of contact with the City and other agencies. He will coordinate the activities of RCI and communicate with City Open Space Administrator, Ann Bollinger, and City Project Manager Robb Fellows, P.E., on a regular basis. Chas will ensure that adequate resources are committed to the project to keep it on schedule.

The Lumos Team will meet with City staff to discuss the details of the project scope. This will be an opportunity to refine the scope in order to meet the City’s needs and budget. The exact scope of the baseline studies will be determined at this meeting. Prior to the meeting, Lumos will review the available basemap data such as aerial imagery, contours, property information, etc., to better define what additional data might be needed to complete the basemap.

TASK 2

Task 2: Review Baseline Environmental Studies

It is our understanding that cultural/archaeological, biological, and botanical studies have been completed by the City and that information will be provided to the Lumos Team. The USFW National Wetlands Inventory map shows the irrigated fields of Buzzy’s Ranch as wetlands. There is an area at the northeast corner of the ranch where the trail may well go through some wetlands. If a wetland delineation is required to verify the exact wetland limits it will be provided by our subconsultant, RCI, who will work with the US Army Corps of Engineers (USACOE) for approval of the delineation.

The purpose of a wetland delineation report is to identify and describe aquatic resources and known possible sensitive plant, fish, and wildlife species. This report facilitates efforts to:

- Avoid or minimize impacts to aquatic resources during the project design process;
- Document aquatic resource boundary determinations for review by the USACOE;
- Provide early identification of known sensitive species within the survey area; and,
- Provide background information on the survey area



DELIVERABLES: Verified wetland delineation map.

TASK 3

Task 3: Prepare Project Basemap

Lumos will prepare a preliminary project basemap using the results of the baseline studies together with available mapping provided by the City (aerial photos and 2-foot contours) and site visits as needed. The basemap will show property lines, existing infrastructure and roadways, utilities (based on aerial and record data), drainage features, wetland limits, floodplain boundaries based on FEMA FIRM data, and environmentally sensitive areas. We will use the City’s GIS parcel data for this initial determination of parcel boundary locations.

Once the preferred trail alignments (for the various segments) have been selected and additional field survey completed (Tasks 5, 6 and 7), the field shots will be incorporated into the basemap and the digital terrain model (DTM) will be updated to a greater level of accuracy, suitable for detailed design.



DELIVERABLES: Lumos will provide the City with one 24” x 36” hard copy of the basemap and electronic files in Adobe Acrobat, AutoCAD 2018 and GIS formats to match the existing City GIS data.

**TASK
4**

Field Visits and Preliminary Alignment Flagging

Lumos will walk the three project trail segments with City staff and flag the alignment segments and any alternative alignments. Lumos will conduct a second field visit to refine the flagged alignments to make sure they meet ADA requirements. We will do this using a hand-held clinometer and a hand-held GPS unit. The GPS data will be added to the basemap.

**TASK
5**

Identify Alignment Alternatives

The alignment corridors for all three trail segments are fairly well defined, but there will be potential alignment alternatives in a number of areas, including:

- How extensively to use old road beds
- Drainage crossings
- Alignment on the steeper side slopes of Prison Hill
- Road crossings and connections to the existing Mexican Ditch Trail
- Tie-in to the Silver Saddle Ranch building complex
- Tie-in to the existing river access parking south of the Carson River Road bridge
- The undercrossing at the Carson River Road bridge
- Avoiding sensitive habitat along the West bank of the Carson River
- Minimizing wetland impacts on the West Riverbank Trail
- Exactly where to locate the bridge to connect to the Riverview Park trail system
- These, and any other identified alternatives will be discussed and evaluated in Task 6.

**TASK
6**

Alignment Alternatives Analysis

Lumos will prepare an alternative analysis that addresses the following:

- Description of each alternative
- Advantages and disadvantages of each alignment alternative, including:
 - » Safety at road crossings and key connection points
 - » Topographic and existing infrastructure constraints
 - » Vegetation and soils
 - » Drainage, Carson River floodplain impacts, and water quality
 - » Ability to accommodate connections to future trail segments
 - » Ability to meet AASHTO, and ADA standards
 - » Ability to be permitted by NDOT (bridge undercrossing); USACOE (for potential wetland impacts); and potentially NDSL
 - » Impact to trees
 - » Preliminary estimated cost
 - » Constructability and maintenance
 - » Impact to wetlands, biological (including tree removal), and heritage resources. (Cultural resources will be shown on working drawings for review by staff, but will not be shown on any final document available for public review.)
- A recommendation of a preferred alternative for each of the three trail segments



DELIVERABLES: Lumos will submit one hard copy and an electronic version to the City. The alternative analysis will be reviewed with the City, and other stakeholders to gain consensus on a preferred alignment.

**TASK
7**

Supplemental Field Survey of Selected Alternative

Lumos will conduct a field survey of the selected alignment. The survey will include cross sections at roughly 100-foot intervals, buildings, visible utilities, trees, and boulders/rock outcrops within 20 feet either side of the centerline, wetlands limits, and other relevant features that could affect the 30% design.

**TASK
8**

Geotechnical Investigation and Report

This task will consist of a geotechnical investigation of up to 10 test pits to a depth of 5 to 15 feet (or practical refusal if encountered at a shallow depth) along the length of the shared use path at approximately 2,000 foot intervals and at the bridge site, and logging of the test pits.

Lumos will collect samples at regular intervals and note the existing soils conditions at each excavation. Lumos will provide the excavation services, and notify USA Dig. Soils will be classified in accordance with the Unified Soil Classification System (USCS). Lumos will perform engineering analyses and calculations, and develop a Geotechnical Investigation Report that will discuss the geologic setting, exploration and site condition, field and laboratory test data, and our conclusions and recommendations from a geotechnical perspective. Our Geotechnical Investigation will be supervised by a Registered Professional Civil Engineer in the State of Nevada and will specifically include the following services:

- The Field Investigation includes:
- USA dig clearance
 - Location of test pits
 - Test pit excavation
 - Observation of test pits
 - Soil sampling
 - Water table measurement, if encountered

- Laboratory analysis may include:
- Direct shear
 - R-Value
 - Atterberg limits
 - Grain size analysis (including fines content)
 - Expansion index
 - pH, Soluble sulfate and resistivity

- Report, Recommendations, and Conclusions:
- Table of contents
 - Exploration logs – which will include test results, and depth of test pits
 - Site conditions
 - Field investigation
 - Soil types and classifications
 - Laboratory analysis and test results which will include sample locations (P.I, % passing #200, grain size analysis, R-Value)
 - Grading recommendations
 - Trail structural section recommendations
 - Portland Cement Concrete recommendations
 - Foundation recommendations, including bearing capacity and settlement
 - Rockery retaining wall recommendations and calculations
 - Ground water depth, if encountered
 - Test pit location map
 - Slope stability analysis in critical areas
 - Signature sheet which will include preparer’s signature and Engineer’s professional stamp

Excavation equipment will use existing access roads and the proposed trail alignment to the greatest extent possible; however, some ground disturbance outside the trail limits will be required in order to perform the geotechnical investigation.

 **DELIVERABLES:** Geotechnical Investigation Report in hardcopy (3 copies) and .pdf format.

**TASK
9**

Preliminary Design Report and 30% Plans, Details, and Cost Estimate

Lumos will prepare preliminary (30%) design plans of the selected alignments consistent with Carson City and AASHTO design guidelines, to the maximum extent possible. The preliminary design will use the parcel boundary data provided by the City in GIS format and the field survey data gathered in Task 7.

The Preliminary Design Report will include the following:

1. Introduction and project background
2. Project need and goals
3. Design standards
4. Alignment alternatives descriptions and evaluations (from Task 6)
5. Preferred alignment recommendation (from Task 6)
6. Design and construction issues
 - 6.1 Topography and alignment (ability to follow natural terrain)
 - 6.2 Vegetation and soils
 - 6.3 Connections to existing roads and trail junction details
 - 6.4 ADA and AASHTO compliance
 - 6.5 Drainage, floodplains, and water quality
 - 6.6 Road crossing alternatives and recommendation
 - 6.7 Bridge alternatives and recommendation
 - 6.8 Impacts to utilities and trees
 - 6.9 Impacts to wetlands, and biological and cultural resources
 - 6.10 Required easements
 - 6.11 Constructability and maintenance
7. Preliminary construction cost estimate
8. References


Figures:

- Project location map
- Alignment alternatives map
- Map showing trail footprint at wetlands and any threatened or endangered species areas
- Trail and bridge typical sections and details
- Details of trail crossings and connections to existing roads

The Preliminary Plans will be prepared on 11" x 17" sheets and will include:

- Cover sheet
- Index sheet(s)
- Plan and profile sheets at 1" = 40' scale, with centerline, trail limits, tops and toes of cuts and fills, wall locations, and trees to be removed
- Trail connections to the Silver Saddle Ranch buildings
- Jurisdictional wetlands
- Property lines and proposed easements and/or right-of-way requirements
- Trail and wall typical sections and details
- Details of trail crossings and connections to existing roads and parking areas
- Details of fencing, signs, and trail amenities
- Preliminary bridge layout and details
- Preliminary boardwalk layout and design (if needed)
- Preliminary drainage and water quality facilities and details

In addition to the 11" x 17" Engineering plan set, Lumos will prepare one (1) large-scale color exhibit showing the preferred alignment and the alternatives considered.

 **DELIVERABLES:** Draft Preliminary Design Report and preliminary plans in hardcopy (3 copies) and .pdf format. One (1) large-scale color exhibit showing the preferred alignment and the alternatives considered.

**TASK
10**


City and Agency Review

Lumos will present the Preliminary Design Report and 30% plans to the City, NDOT, Carson City Open Space Committee, and any Stakeholders as requested by the City. We will also lead another field visit if requested by the City.

**TASK
11**

60% Plans, Outline Specifications, Drainage Report, and Cost Estimate

This task will include developing plans, specifications and cost estimates to the 60% level for the preferred alignment of the trail segments, walls, road crossings and bridge. City and NDOT comments from the 30% review will be incorporated into this iteration of plans. Specifications will be in outline form at this level of design. We will complete a drainage report that evaluates the offsite drainage that needs to be accommodated in the trail design. Since these trails will be soft-surface trails, drainage design will be critical in areas of steep cross slopes.

 **DELIVERABLES:** 60% plans in hardcopy (3 copies) and .pdf format. Outline specifications and updated cost estimate.

**TASK
12**

City Review and Permit Applications

Lumos will present the 60% plans to the City, NDOT, Carson City Open Space Committee, and any Stakeholders as requested by the City.

Depending on the permits required and the estimated permitting time, permit applications will be prepared and submitted to the permitting agencies at either the 60% or 90% design stage.

The outcome of the wetland delineation on Buzzy’s Ranch will determine the type of permit required by the USACOE. If the project impacts less than ½ acre of wetlands (which is what we anticipate), then it may be permitted under Nation Wide Permit #14 for Linear Transportation Projects. This permit allows for activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., trails) in waters of the United States. This permit requires pre-construction notification if the project impacts between ½ and 1/10th of an acre. If impacts are less, then a courtesy letter to the Corps will be prepared.


A Section 401 Water Quality Certification will be required from the State of Nevada. The information required for this application is similar to the information required for the 404 permit application.

An encroachment permit will be required from NDOT for the trail segment under the existing Carson River Road bridge. At this stage we do not anticipate involvement from the Nevada Division of State Lands provided the trail is outside the bed and banks of the Carson River.

**TASK
13**

90% Plans, Specifications, and Cost Estimate

This task will include developing plans, specifications and cost estimates to the 90% level for the preferred alignment of the trail segments, road crossings and bridge. City and NDOT comments from the 60% review will be incorporated into this iteration of plans. Specifications will be in detail form at this level of design.

 **DELIVERABLES:** 90% plans in hardcopy (3 copies) and .pdf format. Detailed specifications and updated cost estimate.

**TASK
14**


City Review

Lumos will present the 90% plans to the City, NDOT, Carson City Open Space Committee, and any Stakeholders as requested by the City.

TASK
15

Final Contract Documents

Lumos will prepare final plans, specifications, and contract documents. City and other agency comments from the 90% plan review will be incorporated into the contract documents.

 **DELIVERABLES:** Lumos will provide plans at both 1" = 40' scale on 11" x 17" sheets and 1" = 20' scale on 24" x 36" sheets. The documents will be provided to the City in reproducible hard copy and on disk in AutoCAD 2018 and Word. The City will make copies of the bid documents and distribute them to bidders.

TASK
16

Bidding Assistance

Lumos will attend the pre-bid conference, respond to technical questions during the bid process, and assist in the preparation of addenda if necessary.

TASK
17

Construction Management, Inspection and Testing

Lumos will provide engineering assistance and construction management during construction. Engineering assistance will include: review of contractor submittals, responding to requests for information, additional engineering and plan changes due to changed field conditions, and meetings requested by the City and/or agencies.

Construction management services will include conducting the preconstruction meeting, monitoring contractor schedule and progress, regular tailgate meetings, processing pay requests and change orders, coordinate the record drawings, and any other construction services requested by the City.

We will provide full time construction inspection. Our team has worked with the City on numerous previous construction projects and we understand the City process and requirements. Our construction inspector will be in close contact with both the Lumos construction project manager and City construction personnel.

Lumos will provide materials testing for the project. Anticipated testing includes:

- Compaction testing for soils, aggregate base, and decomposed granite
- Concrete testing for bridge abutments and concrete trail segments

Lumos will provide survey control for the project. Depending on how the contract is structured, Lumos can provide full construction staking or just survey control for the contractor to do their own staking.



Truckee River Legacy Trail Phase 3B – Alignment fits terrain on steep side-slope



A runner (and friend) enjoy Phase 3A of the Truckee River Legacy Trail

Key Issues

Project Schedule

The City requires design and bid documents to be completed by the end of calendar year 2019. As our proposed project schedule in the next section shows, Lumos believes this is quite doable. We will do as much work as possible on the Alignment Alternatives task prior to getting the final wetland delineation results. RCI will give the preliminary results to Lumos as soon as their field work has been completed.

We can complete the identification of alternatives and alignment alternatives analysis in six weeks; however, it will be critical to get a responsive review by City staff and stakeholders. Selective field survey of the preferred alignments will take about four weeks. We can complete the Preliminary Design Report and 30% design in five weeks that will be put us at the middle of August.

After City review and approval of the 60% plans and specifications the alignments and impacts to wetlands will be known, and we will submit the 404 permit application to the USCOE and a 401 permit application to the State. It is anticipated that the impacts will be less than 0.5 acres and so a Nationwide Permit #14 will be required.

90% plans and specifications, City review, and final contract documents will be completed by December 20, 2019.

Aesthetic Low Impact Trail Design

Successful trail layout and design require fitting the trail to the existing landforms so that it is aesthetically pleasing for recreational users. Curves should join

together gracefully so that they do not appear to be forced or disjointed. A pleasant experience for the pedestrian or cyclist includes varied terrain, elimination of long, straight stretches of trail, combining shade and sun/trees and open areas, and minimizing grade as much as possible. From a technical standpoint, the trail layout should include flat shoulders in steep areas, minimize cuts/fills by adding walls where needed, be situated to drain and melt snow for late spring/early summer use, and have a high degree of connectivity to other trails in the area to generate usage. Good trails are signed to show users trail destinations, rules of the road, materials, ADA accessibility, slope, and segment mileages. Many larger community trails include a map for orientation, with an aerial photo below the trail layout. Amenities such as interpretive signs for areas of interest, rest areas with benches, and drinking water locations make trails useable for a larger segment of the population.

The Mexican Ditch Extension and the Carson River Trail have some trees in portions of their alignments. Assessing the trees for type, size, and condition will be critical in the evaluation of the preliminary trail alignments. The trail locations will need to consider grading requirements adjacent to the existing trees and avoiding tree roots as much as possible. Buffer zones around trees are important both during design and construction, where heavy equipment can compact the root zones and cause tree injury. Besides trees, trail alignments should consider creek and drainage crossings, floodplains, wetlands, and cultural resources. Native seeding of graded slopes is key to ensuring the path fits into the native environment, reduces fire danger, and minimizes potential noxious weed growth.

Lumos has a tremendous amount of experience with trail design that fits with the natural setting of the trail and minimizes disturbance while providing a superior experience for the user.

Crossing Carson River Road

Two crossings of Carson River Road are proposed: one where the Mexican Ditch Trail currently ends at Carson River Road and one about half a mile north of that near the existing trail bridge over the Mexican Ditch. Careful design of these crossings is essential for the safety of trail users.

Currently, the southern end of the Mexican Ditch Trail terminates in the middle of a bend in Carson River Road where it turns from heading southeast to heading east. Even though the posted speed on Carson River Road is 45 mph, vehicles regularly exceed the speed limit and have been recorded doing up to 60 mph. Options for crossing Carson River Road to extend the Mexican Ditch Trail to the south include: a) an undercrossing; b) relocating the existing trail to cross where the road is straight; c) crossing where the trail currently ends. Lumos will evaluate these and any other options that are identified as part of the alignment alternatives analysis. In working with Carson City Open Space for the SNPLMA grant application, Lumos did a preliminary evaluation of these options.

An undercrossing, while being the safest option since it avoids any conflict between vehicles and trail users, has two major drawbacks: 1) it will cost more than can be accommodated in the current \$1.8 million budget; 2) it will be immediately adjacent to and below the bed level of the Mexican Ditch and will be below the water table. Construction would require significant dewatering, culvert and wingwall sealing to exclude groundwater, and sump pumps to pump out any seepage of groundwater. This will further



Annie's Glen undercrossing

increase the cost. Relocating the trail crossing to a straight section of road will require relocating a portion of the

existing Mexican Ditch Trail. Vehicle speeds would be unchanged unless traffic calming measures are used and the sight distance would not be significantly improved since the bend will still affect the sight distance to the east.

The radius of the bend in Carson River Road is approximately 650 feet and absent any obstructions this would provide adequate sight distance for a vehicle traveling at 55 mph to see a pedestrian crossing in the middle of the bend where the trail currently ends. However, the full sight distance would require that the tall sagebrush and other vegetation on either side of the Mexican Ditch be removed.

Also, some combination of pedestrian/equestrian/bike activated flashing warning signage, such as a rectangular rapid flashing beacon (RRFB) will be advisable to alert motorists



Rectangular Rapid Flashing Beacon Example

of trail users crossing the road. These options and other traffic calming measures will be fully evaluated during the preliminary design process.

Lumos has designed trail undercrossings on the Tahoe East Shore Trail and as access to Annie's Glen in Chico. We have designed traffic calming measures on a number of complete streets and streetscape projects, and we designed a rectangular rapid flashing warning system for a trail in Truckee.

Crossing under the Carson River Road Bridge

The south end of the West Riverbank trail will go under the deck of the Carson River Road bridge adjacent to the west abutment. This location will be out of the river channel and thus should not need permitting from the USACOE or the Nevada Division of State Lands; however, the bridge is owned and maintained by NDOT, so they will have to approve the design. The trail will be in the floodplain of the Carson River and the City will require a no-rise certificate. Our understanding is that this can be issued by the City's Floodplain Manager with technical data provided by Lumos that demonstrates there will be no increase in the 100-year flood water surface elevations. Typically, this is done by generating

before and after cross sections that demonstrate that equal conveyance has been provided.

Lumos has designed several bridge undercrossings of this type, including the Tahoe Pyramid Trail undercrossing at Wells Avenue in Reno, the Galena Creek Trail undercrossing at Joy Lake Road in Washoe County, and we are currently working with Washoe County RTC and NDOT to design a trail crossing under I-580 on the south bank of the Truckee River in Reno.

Small Bridge Design

Lumos has designed many trail projects that include small and large bridges, from a 148-foot span across Martis Creek on the Truckee River Legacy Trail to a 22-foot span on the Ash to Kings Trail in Carson City. We designed two existing bridges on the Mexican Ditch Trail over the Mexican Ditch in Riverview Park, and the bridge over Eagle Creek between Riverview Park and the Eagle Valley Golf Course. The majority of these bridges have been prefabricated trusses on reinforced concrete abutments. Lumos’ team designed the abutments and wingwalls on many of these projects, and a few were designed by others (on pro bono projects that were done by a design team).

Trail Surface and Drainage

The three trail segments will not be paved and this will require very careful attention to drainage. On paved trails that are located on sloping terrain it is common to slope the trail to the downhill side of the

natural terrain so that water flows across the trail and the natural sheet flow runoff pattern is perpetuated. This avoids concentrating sheet flow runoff.

However; if this approach is used on a soft-surface trail there will be rilling, and potentially trail failure if the runoff becomes concentrated. Thus for portions of the trails that are on sloping ground it will be necessary to have a ditch on the uphill side of the trail. The ditch will require some form of protection (usually rip-rap or erosion control blanket) depending on the gradient of the ditch and the erosivity of the soil.

Wetlands and Sensitive Resources Permitting

The US Fish and Wildlife Services’ (USFW) National Wetlands Inventory Map shows wetlands on the northeast portion of Buzzy’s Ranch that extend to the top of the west bank of the Carson River. The exact extent of the jurisdictional wetlands will have to be determined by a wetland delineation, but if the USFW mapping is confirmed, the West Riverbank Trail will be impact these wetlands. The impacts to the wetlands will require a 401 permit from the State of Nevada and a 404 permit from the USACOE, and typically mitigation will be required. Mitigation may be possible at the recently constructed Ducks Unlimited enhancement project. It appears that the impacts will be under half an acre, so a Nationwide Permit should be sufficient. In the worst case scenario where the wetlands are more than half an acre, other measures may be required. On the East Shore Trail at Lake Tahoe, Lumos designed a boardwalk to deal with a similar situation.



Galena Creek Trail at Joy Lake Road Bridge

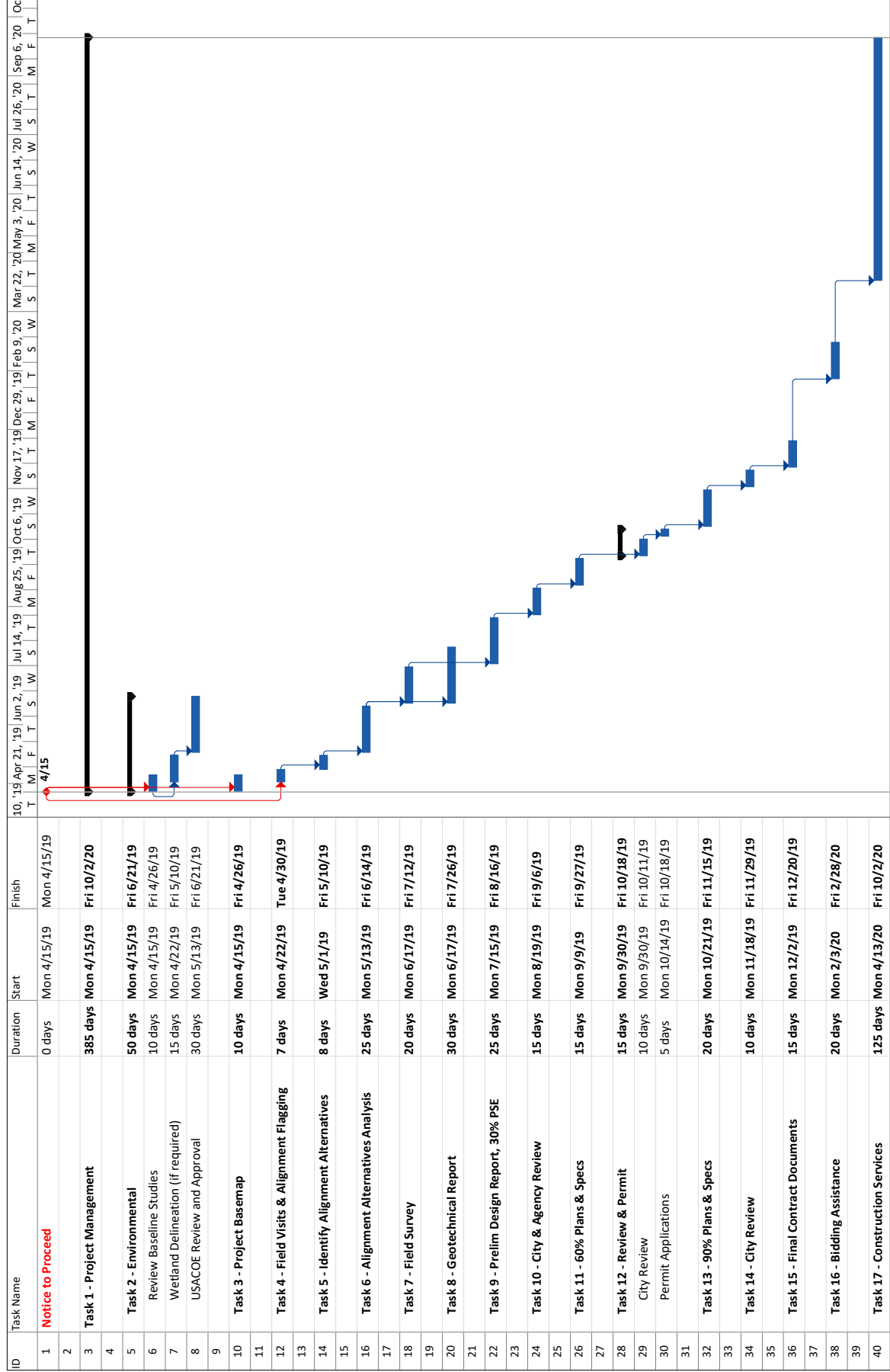


Existing Bridge over the Mexican Ditch



Section 3

Project Schedule/Timeline



Project: Carson River Trail System
Date: February 15, 2019

Legend:

- Task: Solid blue bar
- Split: Dotted blue bar
- Milestone: Diamond symbol
- Summary: White bar with black outline
- Project Summary: Diamond with blue outline
- External Task: White bar with blue outline
- External Milestone: Diamond with blue outline
- Inactive Task: Grey bar
- Inactive Milestone: Diamond with grey outline
- Manual Task: White bar with black outline
- Duration-only: White bar with black outline
- Manual Summary Rollup: Diamond with blue outline
- Manual Summary: White bar with black outline
- Start-only: White bar with black outline
- Finish-only: White bar with black outline
- Deadline: Horizontal line with arrowhead
- Progress: Horizontal line with arrowhead



Section 4

Key Personnel Information

Key Personnel

You will find that we have assembled a team of highly qualified professionals to provide engineering, surveying, baseline environmental studies, wetland delineation, and other services for the Truckee River Legacy Trail Phase IV Project. Following is a list of our key team members and their roles on this project, brief biographies of individual team members, succeeded by an organization chart that reflects our depth of resources.



Michael Bennett, P.E. | Principal-in-Charge

Licensed Civil Engineer, Nevada (17465); California (73668)
B.S., Civil Engineering, University of Nevada, Reno, 2005

Michael has nearly 25 years of engineering experience, including preparation of reports, plans and specifications, cost estimates, design, construction management, and administration of a variety of projects. His background includes roadways, storm drains, water systems, sewer systems, and public and commercial developments. Michael’s combination of skills, initiative, experience, and education has driven his progress from laboratory technician to project designer to engineering manager to his current role as the Director of Engineering for Lumos. Michael also serves as District Engineer for the Gardnerville Ranchos GID. He served as Principal-in-Charge on the Trout Creek/Tahoe Donner Trail for the Town of Truckee and as Project Manager for the Eagle Creek Bridge on the Carson River Trail in Carson City. He has been with Lumos for 24 years. **Michael will be the City’s contact for contractual matters and allocate adequate resources to complete the project on schedule.**



Chas Macquarie, P.E. | Project Manger

Licensed Civil Engineer, Nevada (7489); California (40900)
B.S., with Honors, Civil Engineering, University of Leeds, England, 1971

Chas has nearly 40 years of experience in engineering. In 2012, he stepped down as CEO of Lumos & Associates to concentrate on project management and design of special projects, particularly bicycle and multi-use trails. Chas has worked in consulting engineering as a project engineer, project manager, and principal-in-charge, with responsibility for design, preparation of reports, plans and specifications, cost estimates, and engineering studies on a variety of projects in Nevada and California. These projects include roadway, transportation, storm drain, erosion control, and sewer and water system design and construction, as well as hydrologic and hydraulic modeling. Chas is very familiar with Carson City. He has served as Project Manager on several trail, streetscape, and street reconstruction projects, including the Trout Creek/Tahoe Donner Trail, the Truckee River Legacy Trail Phases 2, 3A, and 3B, and the Brockway Road Trail. He has been with Lumos for over 30 years. **Chas will be your primary contact, and will be responsible for public and Stakeholder meetings, alternatives analysis, preliminary and final design and schedule compliance.**



Michelle Gamble, P.E. | Quality Assurance/Quality Control

Licensed Civil Engineer, Nevada (16974); California (65764) | Qualified SWPPP Developer (CA 00069)
Qualified Industrial Stormwater Practitioner | B.S., Civil Engineering, University of Nevada, Reno

Michelle has been providing civil engineering and project management services for over 17 years. Her work includes projects for numerous public and private clients in both California and Nevada, development of Best Management Practices (BMPs) and water quality improvement projects for clients in the Lake Tahoe Basin, stream channel restoration design, and permitting with regulatory agencies including the Tahoe Regional Planning Agency (TRPA), California Regional Water Quality Control Board permitting, Caltrans, NDOT and local and state governmental entities. **She has been with Lumos for one year. Michelle will provide Quality Assurance and Quality Control oversight on the project.**



Jason Tokhiem, P.E., QSD/QSP | Project Engineer

Licensed Civil Engineer, Nevada (24070); California (72380) | Qualified SWPPP Developer (CA 21657)
B.S., Civil Engineering, University of Pacific, California, 2005

Jason has over 11 years of experience in engineering. He possesses a wide range of experience in civil engineering including design, drafting, surveying, project management, and construction inspection in addition to his design experience in land development, including wet utility design and grading, and levee design and rehabilitation for the larger part of the Sacramento-San Joaquin Delta. He has worked on the Truckee River Recreation Access Plan for Placer County. He has had the opportunity to be project manager on several design projects and has gained experience coordinating with subconsultants, interacting with clients, and overseeing the projects from start to completion since coming to Lumos. Jason has been with Lumos for three years. **Jason will serve as Project Engineer with responsibility for alternatives analysis, preliminary and final design, recommended alternative, BMPs, preliminary plans, and cost estimates.**



Tom Young, P.E., WRS | Carson River Hydraulic Analysis Lead

Licensed Civil Engineer, Nevada (24070); California (72380) | Qualified SWPPP Developer (CA 21657)
 B.S., Civil Engineering, University of Pacific, California, 2005

Tom applies his 25 years of engineering experience. Tom is a Principal in the firm and serves as Group Manager in the Engineering Division. His responsibilities include project management, preparation of reports, plans, specifications, and cost estimates, design and construction management of a variety of projects including recreation, airports, roadways, railroads, storm drains, hydrologic and hydraulic studies, water systems, sewer systems, and commercial and institutional developments. Tom has been with Lumos for 25 years.



Kristin Morten | Project Designer & Draftsman

B.S., Occupational Health & Safety, Keene State College, New Hampshire, 2001
 Civil Drafting Technology, Western Nevada College

Kristin has over 14 years of drafting and design experience on a variety of commercial, public works, and private development projects. She is fluent in AutoCAD and Civil 3D and has successfully completed several advanced courses in drafting and related functions. Kristin has worked on the Truckee River Legacy Trail Phases 3A and 3B, the Trout Creek Trail Phases 1 and 2, and the Brockway Road Trail for the Town of Truckee. **Kristin will provide the City detailed project design and plans.**



Gregory Phillips, P.L.S. | Project Surveyor

Licensed Professional Land Surveyor, Nevada (17616); California (7936)
 B.S., Fisheries & Wildlife Management, University of Missouri, 1997

Greg has over 28 years of surveying and mapping experience with the last 14 years of work occurring throughout California and Nevada. He began his surveying career working as a chairman for his uncle's engineering and surveying business in Rogersville, MO, and worked his way up through the survey ranks, putting himself through college as a survey technician and party chief. Greg currently serves as Lumos' Surveying Manager, overseeing all survey activities in the firm. He is familiar with AutoCAD survey and design software and has prepared topographic maps, boundary, ALTA, and control surveys, and legal descriptions as well as grading and site layout plans. Craig has provided surveying, mapping, drawings, construction staking, and related services on bike trails, roadways, and commercial projects across Northern California and Nevada. He was in charge of the survey for eight miles of trail on Phase 3 of the Nevada Stateline to Stateline Bikeway at Lake Tahoe and provided supplemental survey and easement descriptions for the Trout Creek/Tahoe Donner Trail in Truckee. He has been with Lumos for eight years. **Greg will serve as Project Surveyor and will provide basemapping, supplemental field survey, and easement and right-of-way descriptions and exhibits.**



Mitch Burns, P.E., C.E.M. | Project Engineer, Geotechnical Investigations/Materials Testing

Licensed Civil Engineer, Nevada (15001); California (72704) | Certified Environmental Manager, Nevada— 2292
 M.S., Civil Engineering, University of Nevada, Reno, 1996 | B.S., Civil Engineering, University of Nevada, Reno, 1992

Mitch has over 27 years of geotechnical engineering experience and has served as a materials technician, special inspector, project engineer, project manager, and department manager. Mitch has authored numerous geotechnical reports for roadways, airports, pipelines, buildings, and site developments, and has experience in slope stability analysis, fault evaluations, and a wide variety of roadway rehabilitation methods that include pulverizing and reusing existing roadway sections, lime and cement treatments, rock stabilization, geogrids, and geotextile fabrics. Mitch has been with Lumos for 14 years. He authored geotechnical reports for the Truckee River Legacy Trail Phases 3A and 3B, the Brockway Road Trail, and the Trout Creek/Tahoe Donner Trail in Truckee, and the South Demonstration Bikeway in South Lake Tahoe. **Mitch will serve as Project Engineer for geotechnical evaluation and reports.**



Terrence Tobey, P.E., S.E. | Project Engineer, Structural

Registered Structural Engineer, Nevada (5941); California (S-3323); UT, AZ, HI, ID
 B.S., Civil Engineering, University of Nevada, Reno, 1977

Terrence is a Principal of Lumos & Associates and Director of our Structural Engineering Division. For more than 37 years, Terrence has been a licensed structural engineer working throughout the Western United States. A graduate of the University of Nevada, Reno with a Bachelor of Science in Civil Engineering, Terrence has provided his expertise to a wide range of sectors including transportation, military institutions, green energy companies, and seismic retrofits for historic buildings throughout urban and rural communities. Terrence is a licensed Structural Engineer in Nevada, California, Arizona, Idaho, Hawaii, New Mexico, and Utah. He has been with Lumos for 17 years.



Lynn Zonge, CPESC, PG8924 | Geomorphologist

Registered Structural Engineer, Nevada (5941); California (S-3323); UT, AZ, HI, ID B.S., Civil Engineering, University of Nevada, Reno, 1977

Ms. Zonge draws from more than 20 years of experience with environmental permitting, watershed analyses, and land planning. She specializes in geomorphology, surface water hydrology and geology of the Sierra Nevada and Great Basin regions, technical writing and community outreach. Her environmental permitting projects have primarily included small site and linear rights of way across federally managed lands in Nevada and northern California including NEPA, CEQA, Endangered Species Act, and Clean Water Act compliance. Projects include utilities, trails, and recreational facilities. Ms. Zonge’s watershed analyses have focused on large developments or areas devastated by fire and/or flooding. She provides Properly Functioning Condition (PFC) analyses, Rosgen classification, and other geomorphic characterizations. Ms. Zonge coordinates the analyses teams, prepares the assessment reports, and coordinates the community outreach. Ms. Zonge prepares open space plans, habitat conservation plans, river recreation plans, and other land management plans in conjunction with an excellent interdisciplinary RCI team. Ms. Zonge is a successful grant writer and grant manager. Ms. Zonge is certified by the Soil and Water Conservation Society as a Professional Soil Erosion and Sediment Control Specialist, and by the State of California as a Professional Geologist.

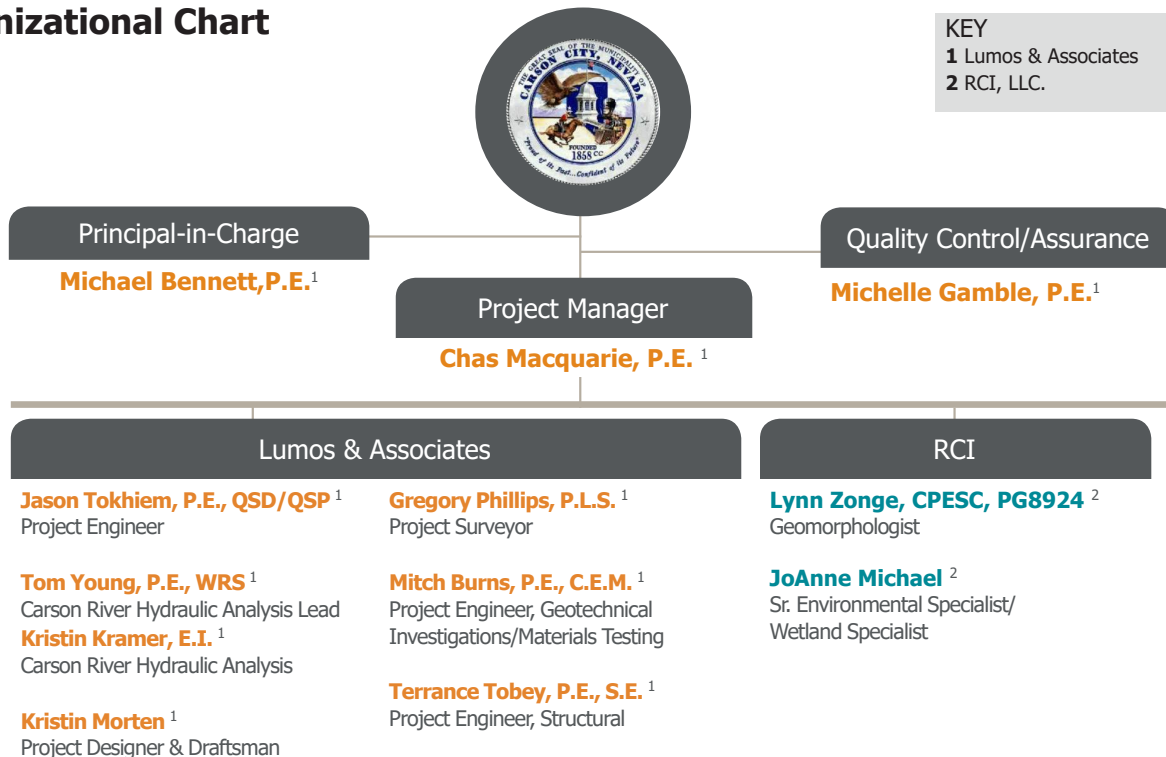


JoAnne Michael | Sr. Environmental Specialist/Wetland Specialist

Registered Structural Engineer, Nevada (5941); California (S-3323); UT, AZ, HI, ID

JoAnne Michael has worked within the environmental arena since 1999 on projects ranging from individual residential parcel development to development of large community plans, linear transportation and utility projects, and ski resort improvements. Ms. Michael provides expertise in biological resource surveys and impact assessments for sensitive plants and wildlife, delineations of waters of the United States, and noxious weed surveys. Using her knowledge of these natural resources, Ms. Michael has become an expert in permitting under the Clean Water Act Section 404 and 401, as well as state water resource regulations and permitting in both Nevada and California. Ms. Michael also has experience preparing Biological Evaluations/ Biological Assessments and works closely with federal agencies to facilitate ESA Section 7 consultations. Ms. Michael routinely contributes to and authors NEPA and CEQA reviews and helps her clients to minimize project impacts and obtain necessary permits in an efficient and expedient manner. Ms. Michael is experienced in working with state and federal agencies to comply with individual agency regional management plans, policies, and guidelines.

Organizational Chart

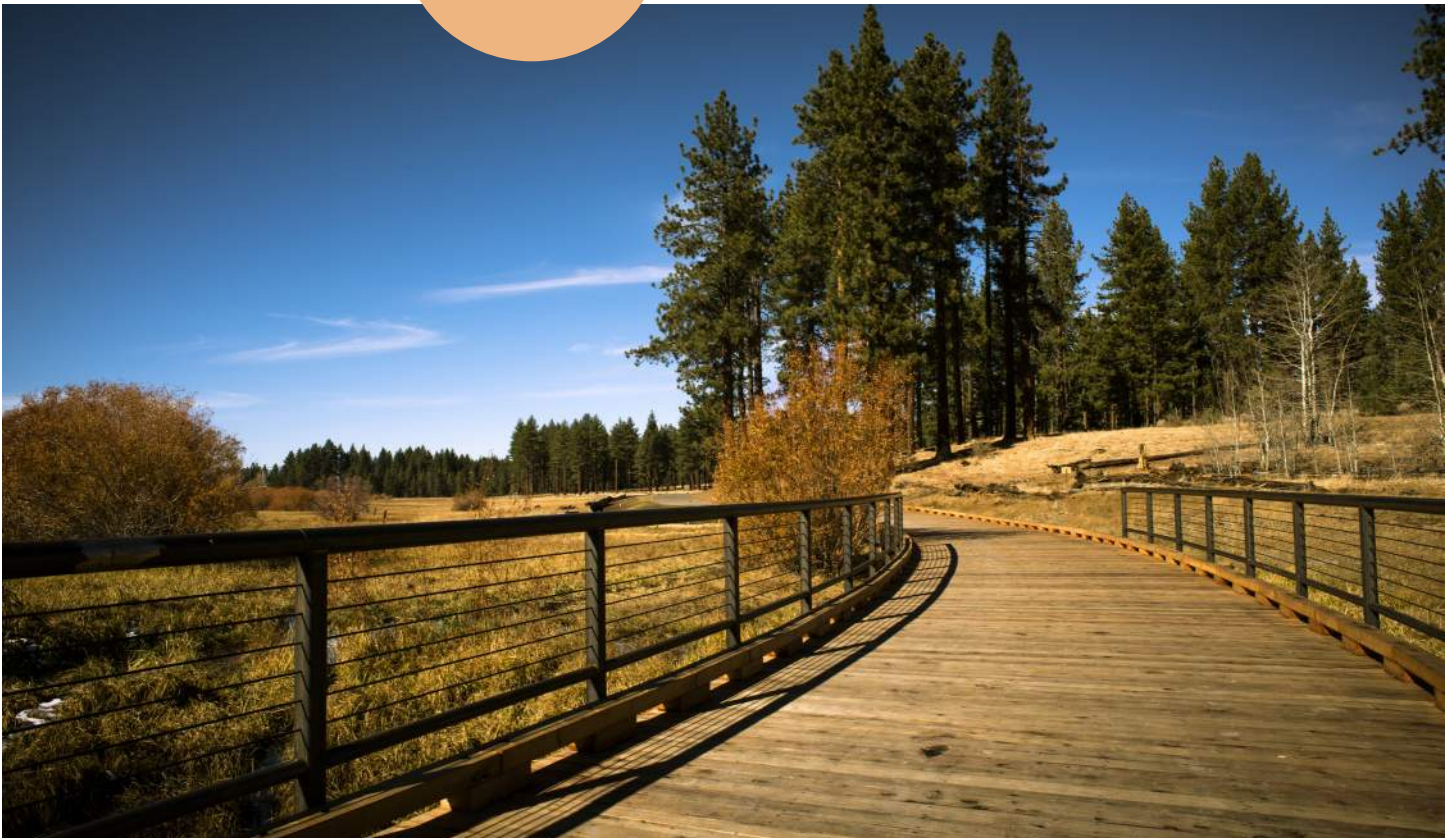
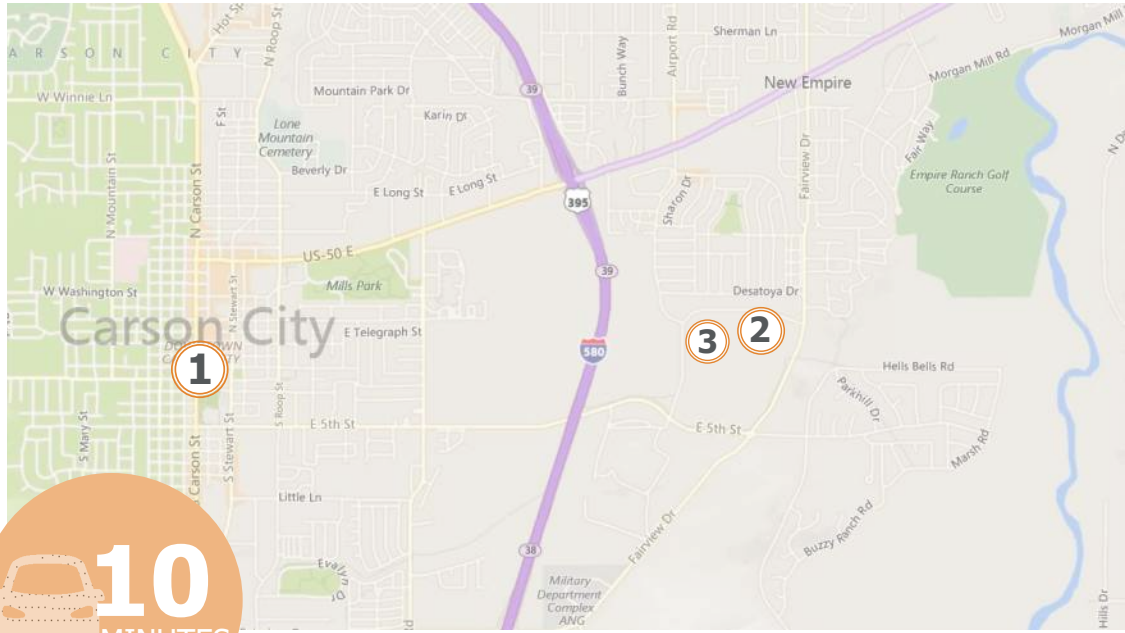


KEY
 1 Lumos & Associates
 2 RCI, LLC.

Proximity to Project Staff

Our team in centrally located in Carson City and will be available to meet with you within short notice.

- 1. Lumos & Associates**
308 N Curry St Ste 200
Carson City, NV 89703
- 2. City of Carson Public Works**
3505 Butti Way
Carson City, NV 89701
- 3. City of Carson Parks, Recreation & Open Space Department**
3303 Butti Way
Carson City, NV 89701





Section 5

Project Experience



Project Experience

1. Tahoe Donner Trail, Town of Truckee

In 2011 the Town of Truckee selected Lumos to perform an alignment alternatives analysis and preliminary design for two trail segments totaling over three miles. The project, known as the Tahoe Donner to Downtown Recreational Trail, consisted of an east-west trail connecting Northwoods Boulevard to Pioneer Trail and a north-south trail connecting Mougale Lane to Bridge Street. The scope of work included baseline environmental and cultural studies, and Lumos included JBR Environmental and Far Western Anthro-pological Research Group on our team to cover these tasks. Lumos prepared the preliminary design report and the Town then retained Lumos to prepare the final plans and specifications for over 8,000 feet of trail from Northwoods Boulevard to Bridge Street. Phase 1, known as the Trout Creek Trail, is 4,200 foot long, and was constructed in 2014. Phase 2, known as the Tahoe Donner Trail, which includes trailhead parking and an 80-ft bridge over Trout Creek, was completed in 2016.

Key Personnel: Mike Bennett, Principal-in-Charge; Chas Macquarie, Project Manager; Cecilia Hamilton, Project Engineer.

Client Contact: Jessica Thompson, Project Manager Phase 1, Town of Truckee, 530.582.7700

Key Points:

- » High Altitude Project
- » Steep & Difficult Terrain
- » Multiple Stakeholders
- » Complicated Permitting
- » USFS Coordination
- » Wetlands Delineation
- » Biological Surveys
- » Cultural Resource Inventory
- » Floodplain Determination
- » Bridge

2. Trout Creek and Tahoe Donner Trails, Town of Truckee, Truckee, CA — 2014-15

In 2011, the Town of Truckee selected Lumos to perform an alignment alternatives analysis and preliminary design for two trail segments totaling over three miles. The project, known as the Tahoe Donner to Downtown Recreational Trail, consisted of an east-west trail connecting Northwoods Boulevard to Pioneer Trail and a north-south trail connecting Mougale Lane to Bridge Street. The scope of work included baseline environmental and cultural studies, and Lumos included JBR Environmental and Far Western Anthropological Research Group on our team to cover these tasks. Lumos prepared the preliminary design report, and the Town then retained Lumos to prepare the final plans and specifications for over 8,000 feet of trail from Northwoods Boulevard to Bridge Street. Phase 1, known as the Trout Creek Trail, is 4,200 foot long and was constructed in 2014. Phase 2, known as the Tahoe Donner Trail, which includes trailhead parking and an 80-ft bridge over Trout Creek, is currently under construction and will be completed in Spring 2016.

Key Personnel: Mike Bennett, Principal-in-Charge; Chas Macquarie, Project Manager; Cecilia Hamilton, Project Engineer.

Client Contact: Dan Wilkins, Director of Public Works, & Jessica Thompson & Mike Vaughan, Project Managers, Town of Truckee, 530.582.7700

Key Points:

- » High Altitude Project
- » Steep & Difficult Terrain
- » Multiple Stakeholders
- » Complicated Permitting
- » USFS Coordination
- » Wetlands Delineation
- » Biological Surveys
- » Cultural Resource Inventory
- » Floodplain Determination
- » Bridge

3. Nevada East Shore Trail Ph. 1C, Tahoe Transportation District

Lumos provided basemapping, geotechnical investigation, preliminary and final design, and construction documents for Phases 1B and 1C of this project. Phase 1C consisted of 6,500 feet of trail over difficult terrain around Round Mound and provides trail access to Round Hill Pines Beach. Construction was completed in 2013. Lumos worked closely with a technical advisory committee composed of representatives from Douglas County, TRPA, the Tahoe Transportation District, the US Forest Service, Nevada DOT, and several interest groups to develop the final design.

Phase 1C Award Winner: This project won the 2014 APWA Nevada Chapter Best Transportation Project, under \$10 million category.

Key Personnel: Chas Macquarie, Project Manager; Steve Rodriguez and Cecilia Hamilton, Project Engineer.

Client Contact: Carl Hasty, District Manager, Tahoe Transportation District, 775.589.5501

Key Points:

- » High Altitude Project
- » Steep & Difficult Terrain
- » Multiple Stakeholders
- » Complicated Permitting
- » USFS Coordination
- » Wetlands Delineation
- » Biological Surveys
- » Cultural Resource
- » Inventory
- » Floodplain Determination
- » Bridge
- » CEQA/NEPA Document

4. Truckee River Legacy Trail Phase 3B, Town of Truckee, Truckee, CA — 2013-14

Lumos provided basemapping, alternatives analysis, preliminary design, and a preliminary design report for nearly three miles of recreational trail on the south side of the Truckee River east of the Town of Truckee. Lumos provided final design and bid documents for Phase 3B that includes over 11,000 feet of trail over varied terrain including steep side slopes and dense trees and crosses Martis Creek on a 148-foot clear span bridge. Several alignment alternatives were considered to minimize disturbance to wildlife habitat and extensive cultural resources. The project was complex due to the extensive cultural resources in the corridor and involvement from multiple agencies, including the Town of Truckee, the Truckee-Tahoe Sanitation Agency, the Truckee Sanitation District, Caltrans, the US Forest Service, and the Lahontan Regional Water Quality Control Board. Construction started in the fall of 2013 and was completed in 2014.

Key Personnel: Chas Macquarie, Principal-in-Charge and Project Manager; Cecilia Hamilton, Project Engineer.

Client Contact: Dan Wilkins, Director of Public Works & Becky Bucar, Engineering Manager, Town of Truckee, 530.582.7700

Key Points:

- » High Altitude Project
- » Steep & Difficult Terrain
- » Multiple Stakeholders
- » Wetlands Delineation
- » Biological Surveys
- » Cultural Resource Inventory
- » Floodplain Determination
- » Bridge

5. Nevada East Shore Trail Ph. 1B, Tahoe Transportation District

Lumos provided basemapping, geotechnical investigation, preliminary and final design, and construction documents for Phases 1B and 1C of this project. Phase 1B consisted of over 6,000 feet of trail, a 210 foot long boardwalk over Burke Creek, expanded trailhead parking, and a restroom. It was constructed in 2012. Lumos worked closely with a technical advisory committee composed of representatives from Douglas County, TRPA, the Tahoe Transportation District, the US Forest Service, Nevada DOT, and several interest groups to develop the final design.

Key Personnel: Chas Macquarie, Project Manager; Steve Rodriguez and Cecilia Hamilton, Project Engineer.

Client Contact: Carl Hasty, District Manager, Tahoe Transportation District, 775.589.5501

Key Points:

- » High Altitude Project
- » Steep & Difficult Terrain
- » Multiple Stakeholders
- » Complicated Permitting
- » USFS Coordination
- » Wetlands Delineation
- » Biological Surveys
- » Cultural Resource
- » Inventory
- » Floodplain Determination
- » Bridge
- » CEQA/NEPA Document

Other Recent Trail Experience		Key Components								
		High Altitude	Survey	Geotechnical Report	Alignment Alternatives	Preliminary Design	Final Design/Construction Documents	Construction Services	Bridge	Wetland Delineations
Project	Year									
Truckee River Recreational Access Plan (Placer Co.)	Ongoing	●	●		●				●	
Truckee River Trail Phase 1 (Placer County)	Ongoing	●	●	●	●	●			●	●
Nevada Stateline-to-Stateline Bikeway, Ph 3 (TTD)	Ongoing	●	●		●	●				●
Nevada Stateline-to-Stateline Bikeway, North Demonstration Project (TTD)	2015-18	●	●	●	●	●				●
Ski Run Blvd. to El Dorado Beach (South Lake Tahoe U.S. 50 corridor)	2016	●	●			●	●			●
Nevada Stateline-to-Stateline Bikeway, South Demonstration Project Ph. 1B, 1C, and 1D (TTD)	2012-15	●	●	●	●	●	●	●	●	●
Trout Creek and Tahoe Donner Trails (Truckee)	2014-15	●	●	●	●	●	●	●	●	●
Truckee River Legacy Trail Phase 3B (Truckee)	2013-14	●	●	●	●	●	●	●	●	●
Brockway Road Trail (Truckee)	2013	●	●	●	●	●	●	●	●	●
Truckee River Legacy Trail Phase 3A (Truckee)	2010	●	●	●	●	●	●	●		●
Truckee River Legacy Trail Phase 2 (Truckee)	2004	●	●	●	●	●	●	●	●	●
Third Tahoe Donner Connection Preliminary Alignment Study (Truckee)	2002	●	●		●	●	●			●



Firm References

**Becky Bucar, PE,
Engineering Manager**

Town of Truckee
10183 Truckee Airport Road
Truckee, California 96161
530.582.7710
bbucar@townoftruckee.com

**Kansas McGahan,
Senior Engineer**

Placer County Public Works
10825 Pioneer Trail, Ste 105
Truckee, CA 96161
530.581.6217
kmcgahan@placer.ca.gov

**Carl Hasty,
District Manager**

Tahoe Transportation District
128 Market Street, Suite 3F
Stateline, Nevada 89449
775.589.5501
chasty@tahoetransportation.org

Janet Phillips, President

Tahoe Pyramid Bikeway
4790 Caughlin Parkway, #138
Reno, Nevada 89519
775.825.9868
tahoepyramidbike@aol.com



Appendix A

Expanded Resume - Key Personnel



Michael D. Bennett, P.E., W.R.S.

Principal-in-Charge

Michael has over 23 years of engineering experience, including preparation of reports, plans and specifications, cost estimates, design, construction management, and administration of a variety of projects. His background includes roadways, storm drains, hydrologic and hydraulic studies, water systems, sewer systems, and public and commercial developments. Michael's combination of skills, initiative, experience, and education has driven his progress from laboratory technician to project designer to engineering manager to his current role as the Director of Lumos' Engineering Division. Michael serves as District Engineer for the Gardnerville Ranchos GID and the Lyon County School District.

EDUCATION

Bachelor of Science,
Civil Engineering,
University of Nevada,
Reno, 2005

Applied Science,
Western Nevada
Community College,
2000

PROFESSIONAL LICENSURE & CERTIFICATIONS

Registered Civil
Engineer
Nevada #17465
California #73668

Water Rights Surveyor
Nevada #1263

PROFESSIONAL AFFILIATIONS

American Society
of Civil Engineers
(ASCE), Nevada— Past
President, Capitol
Branch

American Public Works
Associations — Northern
Nevada Chapter

INDUSTRY TENURE

24 years

LUMOS TENURE

24 years

Downtown Streetscape Improvement Project

Carson City, NV

Principal-in-Charge & Project Manager. Lumos led a multi-discipline design team to revitalize and enhance fourteen blocks of Carson Street, four blocks of Curry Street, and create an open space plaza (McFadden Plaza) in downtown Carson City. Construction of the Carson Street and McFadden Plaza portions of the project were completed October, 2016, while the Curry Street portion was completed in November 2018. Utilizing the "road diet" philosophy, the design team transformed the 80' corridor of four traffic lanes and narrow sidewalks to a bike/pedestrian friendly area. This consisted of 20' sidewalks, bike lanes, greatly improved pedestrian and bicycle amenities, additional on-street parking, increased vegetation and tree cover (reduce the heat island effect), amenities for public transit, and improved pedestrian-bicyclist-vehicle safety throughout the corridor. The scope of the project also included full replacement of aging utility infrastructure with water, sewer, storm drain systems, and upgrade/expand event power throughout the corridor.

Glenshire Drive/Dorchester Drive Pedestrian and Bicycle Improvement Project

Truckee, CA

Principal-in-Charge. This project consisted of reconstructing and widening 8,660 feet of Glenshire and Dorchester Drive to accommodate bike lanes and a left turn pocket at Dorchester Drive off Glenshire Drive. The existing road structural section was pulverized and the material used as base under the new roadway. Drainage improvements consisted of an Infiltration Basin and surface conveyance. Due to steep side slopes on portions of the alignment, 180 +/- feet of rockery walls were required between Somerset Drive and Wellington Way. Lumos is provided preliminary and final design, and construction documents on a fast track schedule.

Glenshire Drive Bike Lane Project Phase II, Town of Truckee, Truckee, CA

Truckee, CA

This project consisted of reconstructing and widening 8,800 feet of Glenshire Drive to accommodate bike lanes and a left turn pocket at Olympic Boulevard. The existing road structural section was pulverized and the material used as base under the new roadway. 15 drainage culverts were replaced. Due to steep side slopes on much of the alignment, rockery walls were required at the Olympic Boulevard turn pocket, and rock slope protection was required on other portions of the project. Lumos provided preliminary and final design, and construction documents on a fast track schedule. Construction was completed in the fall of 2014. This project had a very tight timeline in which to be completed. Lumos was able to meet that timeframe as a result of our project scheduling and management.



Chas Macquarie, P.E.

Project Manager

Chas has nearly 40 years of experience in engineering. In 2012 he stepped down as CEO of Lumos & Associates to concentrate on project management and design of special projects, particularly bicycle and multi-use trails. Chas has worked in consulting engineering as a project engineer, project manager, and principal-in-charge, with responsibility for design, preparation of reports, plans and specifications, cost estimates, and engineering studies on a variety of projects in Nevada and California. These projects include roadway, transportation, storm drain, erosion control, and sewer and water system design and construction, as well as hydrologic and hydraulic modeling.

EDUCATION

Bachelor of Science with Honors, Civil Engineering, University of Leeds, England, 1971

PROFESSIONAL LICENSURE & CERTIFICATIONS

Registered Civil Engineer
Nevada #7849
California #40900

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)
(Past President – Capital Branch)

INDUSTRY TENURE

39 years

LUMOS TENURE

30 years

Glenshire/Dorchester Pedestrian and Bicycle Improvement Project Truckee, CA

Project manager for preliminary and final design of 1.5 miles of road widening to accommodate bike lanes.

Glenshire Drive Bike Lane Project, Phase 2 Truckee, CA

Project manager for preliminary and final design of 1.7 miles of road widening to accommodate bike lanes.

Trout Creek Trail Truckee, CA

Project manager for preliminary and final design of 1.5 miles of multi-purpose trail between Northwoods Blvd. and Bridge Street.

Tahoe Donner to Downtown Trail Truckee, CA

Project manager for alternatives analysis and preliminary design of 3 miles of multi-purpose trail between the Tahoe Donner Subdivision and Downtown Truckee.

Nevada Tahoe Stateline to Stateline Bikeway Feasibility Study, Tahoe Transportation District Stateline, NV

Principal-in-charge and project manager for civil design and alternatives analysis on planned 30-mile paved bicycle trail along Lake Tahoe's eastern shore.

Nevada Tahoe Stateline to Stateline Bikeway Phase 3, Tahoe Transportation District

Project manager for alternatives analysis and preliminary design on an 8-mile trail section from Sand Harbor to Spooner Summit.

Nevada Tahoe Stateline to Stateline Bikeway South Demonstration Project, Tahoe Transportation District Stateline, NV

Principal-in-charge and project manager for alternatives analysis, preliminary and final design on a 3-mile trail section from CA/NV state line to Round Hill Pines Beach.

Nevada Tahoe Stateline to Stateline Bikeway North Demonstration Project, Tahoe Transportation District Stateline, NV

Project manager for alternatives analysis and preliminary design on a 3-mile trail section from Sand Harbor to Ponderosa Ranch Road.

Brockway Road Trail Truckee, CA

Principal-in-charge and project manager for alternatives analysis, preliminary and final design of 0.5 miles of multi-purpose trail adjacent to Brockway Road.

Truckee River Legacy Trail Phase 2

Truckee, CA

Principal-in-charge and project manager for alternatives analysis, preliminary and final design of 1.2 miles of multi-purpose trail along the south bank of the Truckee River.

Ski Run Boulevard Bike Path, City of South Lake Tahoe,

South Lake Tahoe, CA

Principal-in-charge and project manager for this 3/4 mile bike path and road rehabilitation and landscaping project.

Truckee River Bike Path Feasibility Study

Reno, NV

Feasibility study for grade separation of the Truckee River Bike Path under the Wells Avenue Viaduct.

Third Tahoe Donner Connection Alignment Study

Truckee, CA

Principal-in-charge and project manager for alternatives analysis and final design of 3.5 miles of new roadway and multi-purpose trail between the Tahoe Donner Subdivision and Pioneer Trail with a connection to Downtown Truckee.

Bartley-Anderson Park, Washoe County

Washoe County, NV

Project Manager for the master planning for this 60-acre regional park in Washoe County including the internal trail system.

Crystal Peak Park, Washoe County

Washoe County, NV

Project Manager for a trail and handicapped fishing access along the Truckee River.



Michelle Gamble, P.E.

Quality Assurance/Quality Control

Michelle has been providing civil engineering and project management services for over 18 years. Her work includes projects for numerous public and private clients in both California and Nevada, development of Best Management Practices (BMPs) and water quality improvement projects for clients in the Lake Tahoe Basin, stream channel restoration design, and permitting with regulatory agencies including the Tahoe Regional Planning Agency (TRPA), California Regional Water Quality Control Board permitting, Caltrans, NDOT and local and state governmental entities.

EDUCATION

Bachelor of Science,
Civil Engineering,
University of Nevada,
Reno

PROFESSIONAL LICENSURE & CERTIFICATIONS

Registered Civil
Engineer
California #65764
Nevada #16974

Qualified SWPPP
Developer
California #00069

Qualified Industrial
Stormwater Practitioner
California

PROFESSIONAL AFFILIATIONS

Community Chest, Inc.
Board Member,
2010-Present

INDUSTRY TENURE

18 years

LUMOS TENURE

1 year

Kirkwood Meadows Public Utility District

Kirkwood, California

Michelle served as the overall project manager and project civil engineer for the \$38 million Out-Valley Power Line Project. In her role as project manager, Michelle coordinated the design and permitting of two electrical substations, over three miles of overhead power line and over 24 miles of underground power line in the Sierra Nevada. The project required extensive coordination with the US Forest Service, PG&E, Caltrans, three California counties, the Regional Water Quality Control Board, the California Division of Safety of Dams and numerous private land owners. The project was funded through USDA RUS and Michelle was also responsible for making sure all project contracts met the stringent RUS requirements. Ultimately after two years of construction, four separate construction contracts, the community of Kirkwood began receiving electrical power off California's electric grid. Michelle also provided services to the District for three years post construction to ensure all of the environmental monitoring and all Forest Service Special Use Permit requirements were implemented.

Northstar California Resort Basin Retrofit Project Design and Environmental Services*

Truckee, California

Project Manager and Design Engineer. The project included environmental and community sensitive work that required a significant level of coordination with the regulatory agencies. The project included the removal of existing volume-based water quality improvements and the design and installation of new flow based water quality improvements. This required the development of extensive documentation for the review by the Regional Water Quality Control Board and other regulatory agencies as well as coordination with the client and other stakeholders. Michelle was instrumental in developing the design and supporting documentation and meeting with the regulatory agencies such that the project was able to be permitting and constructed.

Heavenly Mountain Resort Epic Discovery Project*

South Lake Tahoe, California

This project included the development of civil engineering and site restoration plans for the proposed Epic Discovery projects for Heavenly Mountain Resort. The projects were grouped into three general areas across the ski resort and included ziplines, an alpine coaster, aerial canopy tours, mountain bike paths and maintenance and hiking trails. Michelle served as the project civil engineer and lead consultant to coordinate the other design disciplines for plan set review and submittals for permitting and construction of each of the individual projects. Each specific project also had a temporary and permanent BMP and site restoration component included in the design completed by Michelle. The BMP and site restoration plans met the stringent requirements of TRPA, the Regional Water Quality Control Board and the Forest Service.



Jason Tokheim, P.E., QSD/QSP

Project Engineer

Jason has over 13 years of experience in engineering. He possesses a wide range of experience in civil engineering including design, drafting, surveying, project management, and construction inspection. His design experience consists primarily of land development, including wet utility design and grading, and levee design and rehabilitation for the larger part of the Sacramento-San Joaquin Delta. He has had the opportunity to be project manager on several design projects and has gained experience coordinating with subconsultants, interacting with clients, and overseeing the projects from start to completion since coming to Lumos.

EDUCATION

Bachelor of Science,
Civil Engineering,
University of Pacific,
California, 2005

PROFESSIONAL LICENSURE & CERTIFICATIONS

Registered Civil
Engineer
Nevada #24070
California #72380

Qualified Stormwater
Developer (QSD)
#21657

PROFESSIONAL AFFILIATIONS

American Society of
Civil Engineers (ASCE)
(Past President, Vice
President, Treasurer,
and Secretary –
Sacramento Section,
Central Valley Branch)

INDUSTRY TENURE

13 years

LUMOS TENURE

3 years

East Incline Village – Phase 1 Water Quality Improvement Project

Washoe County, Nevada

Project Designer and Drafter. Lumos was awarded the design phase for the East Incline Village Phase 1 Water Quality Improvement Project. Lumos is working with a team of experts under the oversight of a Technical Advisory Committee comprised of storm water quality experts from various local agencies and funding entities to develop an Initial Conditions Assessment that catalogs project area existing conditions relating to storm water quality.

Ski Run Boulevard to El Dorado Beach Bike Trail

South Lake Tahoe, California

Project Designer and Drafter. Lumos provided preliminary and final design, survey mapping, easement acquisition requirements, CEQA and NEPA environmental assessment, permitting services and construction documents for approximately 3/4 of a mile of bicycle path on the north side of US 50 in South Lake Tahoe between El Dorado Beach and Ski Run Boulevard.

Glenshire Drive & Dorchester Drive Pedestrian & Bike Improvements

Truckee, California

Project Designer and Drafter. Jason designed and drafted a layout for road widening improvements on Glenshire Drive and Dorchester Drive. The improvements will include a bike/pedestrian lane on both sides of the road.

Wildwood Residential Development

South Lake Tahoe, California

Project Designer and Drafter. Jason designed and drafted the site layout, as well as grading, utilities, and BMPs for 30% submittal to TRPA.

Tahoe Valley Stormwater & Greenbelt Improvement Project

South Lake Tahoe, California

Project Designer and Drafter. Jason designed and drafted the 30% level utility layout for water quality improvements in South Lake Tahoe.

Genoa Lakes North Subdivision

Douglas County, Nevada

Project Designer and Drafter. Jason designed and drafted the site layout, grading, and utilities for a private 54 unit development in Genoa.

K. Lynn Zonge, CPESC, PG₈₉₂₄ / Geomorphologist

Ms. Zonge draws from more than twenty years of experience with environmental permitting, watershed analyses, and land planning. She specializes in geomorphology, surface water hydrology and geology of the Sierra Nevada and Great Basin regions, technical writing and community outreach. Ms. Zonge’s environmental permitting projects have primarily included small site and linear rights of way across federally managed lands in Nevada and northern California including NEPA, CEQA, Endangered Species Act, and Clean Water Act compliance. Projects include utilities, trails, and recreational facilities. Ms. Zonge’s watershed analyses have focused on large developments or areas devastated by fire and/or flooding. She provides Properly Functioning Condition (PFC) analyses, Rosgen classification, and other geomorphic characterizations. Ms. Zonge coordinates the analyses teams, prepares the assessment reports, and coordinates the community outreach. Ms. Zonge prepares open space plans, habitat conservation plans, river recreation plans, and other land management plans in conjunction with an excellent interdisciplinary RCI team. Ms. Zonge is a successful grant writer and grant manager. Ms. Zonge is certified by the Soil and Water Conservation Society as a Professional Soil Erosion and Sediment Control Specialist, and by the State of California as a Professional Geologist.

Recent Representative Projects:

Management Plan for Carson City Open Space and Parks in the Carson River Area. Ms. Zonge assisted Carson City Parks, Recreation and Open Space Department in creating a management plan for more than 5,300 acres along the Carson River. The plan included open space, parks, and conservation easement lands. The plan was adopted in 2016 and is being used to actively manage these properties.

Carson City Waterfall Assessment and Recommendation Project. Ms. Zonge was the project manager for this comprehensive interdisciplinary assessment of over 8,000 acres and five watersheds. Lynn led the design for the assessment strategy and coordinated the implementation for this project on the west side of Carson City, Nevada.

Source Water Protection Project for Washoe County. Ms. Zonge is assisting the municipal agencies and public water systems in the Truckee Meadows and greater Washoe County area in developing a Community Source Water Protection and Watershed Management Plan. The projects focus on delineation of protection areas around each public drinking water source and identification of management strategies to protect those sources in the future. Ms. Zonge coordinates community technical teams and assists with delineating the source water protection areas.

Meadow Valley Wash Environmental Assessment. Ms. Zonge was the project manager to write and expedited Environmental Assessment (EA) for the impacts of restoring four altered sites in Meadow Valley Wash, Lincoln County, Nevada. The EA was completed in four weeks to initiate and complete repairs late in the construction season, prior to the upcoming runoff period. Working closely with the BLM, RCI was successful in meeting the time constraints and finished the EA in this very short timeframe.

Shoban Tribe PFC. Ms. Zonge assisted with the PFC assessments as a member of the RCI watershed team for numerous perennial streams within 300,000 acres of the Fort Hall Indian Reservation in Idaho.

Wellhead Protection Plans for Minden and Gardnerville. Ms. Zonge developed each plan working closely with stakeholders and included well capture delineations, public education and management strategies for potential contaminant sources. These plans were endorsed by the State of Nevada in 2004.

Education

MS Hydrology
BS Geology

Registrations/Certifications

Certified Professional in Erosion & Sediment Control (CPESC) #3844
California Rapid Assessment Method (CRAM) Practitioner
Professional Geologist (PG) CA #8924

Professional Affiliations

American Water Resources Association
International Erosion Control Association

Community Service

Truckee River Foundation
Director 2005 – present

Awards

2019 Andy Aldax Carson River Watershed Award for Exemplary Service in Conservation & Protection of the Carson River Watershed

CARSON CITY

340 North Minnesota St.
Carson City, NV 89703-4152
775 / 883-1600

ZEPHYR COVE

212 Elks Pt. Rd., Ste. 443
PO Box 11796
Zephyr Cove, NV 89448-8020
775 / 588-7500



K. Lynn Zonge, CPESC, PG / Geomorphologist

Truckee River Recreation Plan. Ms. Zonge was the lead for this plan which presents a vision for a recreation corridor over approximately 20 miles of the Truckee River centered in Reno, Nevada. The plan involved numerous stakeholders and included descriptions of instream improvements, economics, and liability. As a result of this plan, two whitewater parks have been constructed on the Truckee River.

Carson River Aquatic Trail Plan. Ms. Zonge prepared this plan funded by Carson City, Lyon County and the Nevada Commission on Tourism. The plan identifies specific access and in-stream improvements needed to attain the long-term vision for the river corridor.

Lincoln County Open Space Plan. Ms. Zonge managed development of this plan in conjunction with numerous stakeholders in the county. The Plan identified strategies for the conservation of private and public lands slated for future sale. The Plan also contains a policy framework for management of parks and trails countywide.

Mineral County Open Space Plan. Ms. Zonge led the RCI team in preparation of an Open Space Plan for Mineral County. The project involved extensive input from the community and includes historic resources and water resources.

Wilson Canyon Natural Trail. Ms. Zonge worked closely with Lyon County and several community members. RCI designed and permitted a 3-mile walking trail in the Wilson Canyon area between Wellington and Yerington, Nevada.

Carson River Morgan Mill River Access. Ms. Zonge worked closely with RCI staff for a sustainable user-friendly river access facility. The project is within a Superfund Site and Ms. Zonge prepared all permitting documents for the Army Corps of Engineers and the State of Nevada. The project was constructed in fall 2009 on the Carson River in Carson City, Nevada.

Nevada Hospital Association Nevada Broadband Telemedicine Initiative. Ms. Zonge was the project manager for all of the environmental permitting and compliance documents required for over 1000 miles of new fiber optic cable and appurtenances across the State of Nevada from Las Vegas to Reno and Carson City to Ely. The National Telecommunications & Information Administration (NTIA) was the lead federal agency and the USFS and BLM were cooperating agencies.

Kirkwood Meadows Power Line Environmental Impact Statement. Ms. Zonge was on the NEPA/ CEQA team to prepare the EIS/EIR for a 28-mile buried and overhead power line between Salt Springs Reservoir and Kirkwood Meadows. The project is within three county jurisdictions, the Eldorado National Forest, and Caltrans ROW.

Vista Towers EA and Environmental Permitting. Ms. Zonge was the project manager for completion of an environmental assessment, for three cell tower sites and associated access roads and power lines in northern Nevada and California.

Coyote Springs Habitat Conservation Plan and EIS. Ms. Zonge was the RCI project manager and worked closely with other consultants in developing a habitat conservation plan and associated EIS for 30,000 acres in Lincoln County, Nevada.

Meadow Valley Wash Damage Assessment. Ms. Zonge was the project manager to write and expedited Environmental Assessment (EA) for the impacts of restoring four altered sites in Meadow Valley Wash, Lincoln County, Nevada. The EA was completed in four weeks to initiate and complete repairs late in the construction season, prior to the upcoming runoff period. Working closely with the BLM, RCI was successful in meeting the time constraints and finished the EA in this very short timeframe.

Coyote Springs ACOE Individual Permit. Ms. Zonge was the project manager and worked closely with consultants in designing the field reconnaissance plan for jurisdictional waters of the United States for 49,000 acres of land in Lincoln and Clark counties, Nevada.

Bagley Valley. Ms. Zonge completed the NEPA and CEQA documentation required for a large watershed restoration project in Bagley Valley, a tributary watershed to the East Fork of the Carson River in California.

Reno Sparks Indian Colony. Ms. Zonge was project manager to assist the Reno Sparks Indian Colony transfer five acres of land in South Reno from tribal ownership to federal trust. Ms. Zonge wrote the EA to obtain the FONSI from the BIA.

Lincoln County Habitat Conservation Plan. Ms. Zonge assisted Lincoln County in preparation of a habitat conservation plan for the desert tortoise. The plan encompassed the southern portion of the County.

Winnemucca Mountain Trail EA. Ms. Zonge prepared an EA for a 7.5 mile hiking and biking trail on Winnemucca Mountain in central Nevada. The project faced several challenges because it was located in an active mining district as well as active cattle allotments. RCI worked closely with the County and the Great Basin Institute to route the trail and develop mitigation and minimization measures to avoid conflicts with these existing land uses.