

RM
7/12/20

RESOLUTION NO. 2020- 23

A RESOLUTION ACCEPTING AND APPROVING A CONTRACT FOR PROFESSIONAL SERVICES WITH JFC ENGINEERING SURVEYORS FOR THE 2020 KILLPECKER CREEK HEC-RAS MODELING PROJECT IN THE AMOUNT OF \$28,489.00, AND AUTHORIZING TIMOTHY A. KAUMO, AS MAYOR, AND MATTHEW L. MCBURNETT, AS CITY CLERK, TO EXECUTE SAID CONTRACT ON BEHALF OF THE CITY OF ROCK SPRINGS.

WHEREAS, JFC Engineering Surveyors presented to the City of Rock Springs a Contract for Professional Services for the 2020 Killpecker Creek HEC-RAS Modeling Project in the amount of \$28,489.00; and,

WHEREAS, the Governing Body of the City of Rock Springs has said contract before it and has given it careful review and consideration.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF ROCK SPRINGS, STATE OF WYOMING:

Section 1. That the Contract for Professional Services for the 2020 Killpecker Creek HEC-RAS Modeling Project, with JFC Engineering Surveyors, attached hereto and by this reference made a part hereof, is hereby accepted and approved by the Governing Body of the City of Rock Springs, Wyoming.

Section 2. That the Mayor of said City be, and he is hereby, authorized, empowered and directed to execute said contract on behalf of said City; and that the City Clerk of said City, be and he is hereby, authorized and directed to attach to said contract a certified copy of this resolution.

PASSED AND APPROVED this _____ day of _____, 2020.

President of the Council

Mayor

Attest:

City Clerk



CONTRACT

FOR

PROFESSIONAL SERVICES

***2020 Killpecker Creek
HEC-RAS Modeling Project***

Submitted to:
Paul D. Kauchich, PE
Director of Engineering/Operations & Public Services
City of Rock Springs
212 D Street
Rock Springs, WY 82901

February 11, 2020
JFC Project No. 10346-19E
Daniel R. Kennedy, PE
dkennedy@jfc-wyo.com

Phone (307) 362-7519
Fax (307) 362-7569
email@jfc-wyo.com



PO Box 2026
Rock Springs, WY 82902
Phone (307) 362-7519
Fax (307) 362-7569

11 February 2020
JFC Proposal No. 10346-19E

Mr. Paul Kauchich, PE
Director of Engineering/Operations & Public Services
City of Rock Springs
212 D Street
Rock Springs, WY 82901

Subject: Contract for 2020 Killpecker Creek HEC-RAS Modeling Project

Dear Mr. Kauchich:

Enclosed please find three (3) contract document originals entitled *Contract for Professional Services for 2020 Killpecker Creek HEC-RAS Modeling Project* pursuant to the City's request. The Contract is submitted subsequent to JFC's January 29, 2020 Proposal for Professional Services including the alternate listed in the Cost Proposal.

Thank you for selecting our firm for this Project and we look forward to working with you, your staff, and the City of Rock Springs. Please feel free to call if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel Kennedy", written over a horizontal line.

Daniel R. Kennedy, PE
Project Manager/Principal

Enclosures

**SHORT FORM OF AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES**

SHORT FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of _____ ("Effective Date") between

City of Rock Springs ("Owner")

and JFC Engineers & Surveyors ("Engineer")

Engineer agrees to provide the services described below to Owner for 2020 Killpecker Creek
HEC-RAS Modeling Project ("Project").

Description of Engineer's Services: Providing a HEC-RAS model, mapping, and surveying for the 2020 Killpecker Creek

HEC-RAS Modeling Project, as described in JFC's attached Scope of Services and the City of Rock Springs' Request for

Proposal, dated December 18, 2019.

Owner and Engineer further agree as follows:

1.01 Basic Agreement

A. Engineer shall provide, or cause to be provided, the services set forth in this Agreement, and Owner shall pay Engineer for such Services as set forth in Paragraph 9.01.

2.01 Payment Procedures

A. *Preparation of Invoices.* Engineer will prepare a monthly invoice in accordance with Engineer's standard invoicing practices and submit the invoice to Owner.

B. *Payment of Invoices.* Invoices are due and payable within 30 days of receipt. If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day. In addition, Engineer may, without liability, after giving seven days written notice to Owner, suspend services under this Agreement until Engineer has been paid in full all amounts due for services, expenses, and other related charges. Payments will be credited first to interest and then to principal.

3.01 Additional Services

A. If authorized by Owner, or if required because of changes in the Project, Engineer shall furnish services in addition to those set forth above.

B. Owner shall pay Engineer for such additional services as follows: For additional services of Engineer's employees engaged directly on the Project an amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class; plus reimbursable expenses and Engineer's consultants' charges, if any.

4.01 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the Agreement's terms through no fault of the terminating party.

b. By Engineer:

1) upon seven days written notice if Engineer believes that Engineer is being requested by Owner to furnish or perform services contrary to Engineer's responsibilities as a licensed professional;
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2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control.

3) Engineer shall have no liability to Owner on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under paragraph 4.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon the receipt of notice by Engineer.

B. The terminating party under paragraphs 4.01.A.1 or 4.01.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Project site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

5.01 Controlling Law

A. This Agreement is to be governed by the law of the state in which the Project is located.

6.01 Successors, Assigns, and Beneficiaries

A. Owner and Engineer each is hereby bound and the partners, successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by paragraph 6.01.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but

without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

7.01 General Considerations

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services. Engineer and its consultants may use or rely upon the design services of others, including, but not limited to, contractors, manufacturers, and suppliers.

B. Engineer shall not at any time supervise, direct, or have control over any contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for safety precautions and programs incident to a contractor's work progress, nor for any failure of any contractor to comply with laws and regulations applicable to contractor's work.

C. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work in accordance with the contract between Owner and such contractor.

D. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any contractor's agents or employees or any other persons (except Engineer's own employees) at the Project site or otherwise furnishing or performing any of construction work; or for any decision made on interpretations or clarifications of the construction contract given by Owner without consultation and advice of Engineer.

E. The general conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition).

F. All design documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed.

2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control.

3) Engineer shall have no liability to Owner on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under paragraph 4.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon the receipt of notice by Engineer.

B. The terminating party under paragraphs 4.01.A.1 or 4.01.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Project site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

5.01 Controlling Law

A. This Agreement is to be governed by the law of the state in which the Project is located.

6.01 Successors, Assigns, and Beneficiaries

A. Owner and Engineer each is hereby bound and the partners, successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by paragraph 6.01.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but

without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

7.01 General Considerations

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services. Engineer and its consultants may use or rely upon the design services of others, including, but not limited to, contractors, manufacturers, and suppliers.

B. Engineer shall not at any time supervise, direct, or have control over any contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for safety precautions and programs incident to a contractor's work progress, nor for any failure of any contractor to comply with laws and regulations applicable to contractor's work.

C. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work in accordance with the contract between Owner and such contractor.

D. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any contractor's agents or employees or any other persons (except Engineer's own employees) at the Project site or otherwise furnishing or performing any of construction work; or for any decision made on interpretations or clarifications of the construction contract given by Owner without consultation and advice of Engineer.

E. The general conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition).

F. All design documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed.

G. To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project, and (2) agree that Engineer's total liability to Owner under this Agreement shall be limited to \$50,000 or the total amount of compensation received by Engineer, whichever is greater.

H. The parties acknowledge that Engineer's scope of services does not include any services related to a Hazardous Environmental Condition (the presence of asbestos, PCBs, petroleum, hazardous substances or waste, and radioactive materials). If Engineer or any other party encounters a Hazardous Environmental Condition, Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (i) retains appropriate specialist consultants or contractors to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the Site is in full compliance with applicable Laws and Regulations.

8.01 Total Agreement

A. This Agreement (consisting of pages 1 to 4 inclusive together with any expressly incorporated appendix), constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

9.01 Payment (Hourly Rates Plus Reimbursable Expenses)

A. Using the procedures set forth in paragraph 2.01, Owner shall pay Engineer as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class for all services performed on the Project, plus reimbursable expenses and Engineer's consultants' charges, if any.

2. Engineer's Standard Hourly Rates are attached as Appendix 1.

3. The total compensation for services and reimbursable expenses is **Not to Exceed** \$ 28,489.00

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER:

ENGINEER:

By: _____

By: 

Title: _____

Title: Project Manager/Principal

Date Signed: _____

Date Signed: 2/11/2020

License or Certificate No. and State 12740 Wyoming

Address for giving notices:

Address for giving notices:
PO Box 2026
Rock Springs WY 82902-2026

SCOPE OF SERVICES

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APPENDIX A

JFC Engineers & Surveyors

- **Resumes of Key Personnel**
- **Firm Description and Services**
- **2020 Schedules of Rates, Fees, and Charges**

Hansen, Allen & Luce, Inc.

- **Resumes of Key Personnel**
- **Statement of Qualifications**
- **Standard Fee Schedule 2020**

APPENDIX B

Project Area Map

SCOPE OF SERVICES

2020 KILLPECKER CREEK HEC-RAS MODELING PROJECT

I. INTRODUCTION

JFC Engineers & Surveyors (JFC) has prepared this Scope of Work in response to the City of Rock Springs Request for Proposals dated December 18, 2019 and entitled ***2020 Killpecker Creek HEC-RAS Modeling Project***.

It is our understanding that the Project consists of developing a hydraulic model for the Project area with added attention to the areas at the Industrial Road Bridge, Yellowstone Bridge, and areas in which the creek channel has been modified. This Model will utilize the requirements of FEMA with the intent it will be used for a Letter of Map Revisions (LOMR) for the area. An accurate topographic survey will be completed to assure that the model represents the current conditions of Killpecker Creek. The survey data and model information will be sufficient to prepare the needed mapping and supporting information to satisfy FEMA's requirements of a LOMR.

In an effort to provide the most efficient and cost-effective project, JFC will utilize the services of Hansen, Allen & Luce, Inc. (HAL) to perform the HEC-RAS modeling. JFC will provide surveying and will prepare the modeling report. JFC and HAL have worked together on many projects including several projects for the City of Rock Springs.

II. QUALIFICATIONS

A. Firm Qualifications

JFC has been providing professional services in southwest Wyoming and the surrounding areas since 1964. Our firm of 24 people includes three licensed Engineers, three Engineers-in-Training, four licensed Surveyors, one licensed Geologist, as well as surveying and engineering technicians. JFC has a wide range of experience in storm sewer design and modeling, geotechnical analysis, and civil design projects. We have designed and managed several storm water management projects in the recent past and have successfully completed them within the city of Rock Springs and Sweetwater County.

Most recently, Daniel R. Kennedy, PE, was the Project Manager for the Northeast Rock Springs Detention Basin Preliminary Design Project. Mr. Kennedy has performed flood plain analysis and mapping for the City of Rock Springs as well as FEMA submittals consisting of Letters of Map Amendments (LOMA) and LOMR. Mr. Kennedy has prepared multiple No-Rise Certifications using HEC-RAS and prepared the 2009 Tributary 1 LOMR using HEC-RAS. Mr. Kennedy also performed the storm sewer modeling for the City of Rock Springs' system on SewerGEMS software and is well versed on storm water modeling which was used for the 2014 Storm Sewer Improvements Project.

Other projects JFC has completed that lend experience to this Project include the City of Rock Springs – Foothill, Reagan, and Scott Detention Basins Project; geotechnical investigations for the Bitter Creek Enhancement Project; and Summit Drive Storm Water Drainage Channel design. JFC assisted HAL with the storm sewer modeling on the west side of Rock Springs, which eventually led to FEMA removing several areas west of Foothill Boulevard from the flood plain.

JFC has extensive experience in boundary surveys for all types of properties and has also completed several easements for the City of Rock Springs. Projects include the Bitter Creek Restoration and Flood Control Project and the College View Commercial Park Project that incorporated the Gateway Boulevard Extension and the Summit Drive Channel.

Established in 1974, HAL has been serving the needs of the water community for 45 years. It is a regional engineering firm specializing in drinking water, secondary water, storm water, wastewater, water quality, and environmental disciplines.

HAL has completed thousands of studies, designs, master plans, and other projects for a variety of clients throughout the intermountain west. They maintain a highly educated technical staff of B.S., M.S., M.Eng., and Ph.D. graduates who specialize in water resources. Their team consists primarily of licensed professional engineers, many of whom have additional credentials in project management or public administration. Over the past five years, HAL has maintained a staff of approximately 30 persons and currently has 35 employees.

HAL appreciates the long-term relationships it has established in government and industry throughout the region.

B. Individual Qualifications

Key professional personnel for this Project are listed below and resumes are included in Appendix A of this Proposal.

JFC Engineers & Surveyors

Daniel R. Kennedy, PE – Project Manager

Mr. Kennedy graduated from the University of Wyoming with a BS in Civil Engineering and began working for JFC in March 2006. Mr. Kennedy acquired his registration as a Professional Engineer in June 2010. His experience includes site design, grading plans, subdivision design, water distribution design, storm sewer design and modeling, open channel/drainage design, and water shed analysis. Most importantly, Dan has completed several hydraulic models using HEC-RAS for FEMA LOMR and No-Rise Certifications. Dan has done extensive storm water modeling for the City of Rock Springs on the SewerGEMS model and is well versed in applying the model for practical applications.

Kent E. Felderman, PLS – Senior Project Surveyor-Principal

Mr. Felderman is a new addition to JFC since the merger of his surveying firm, Rocky Mountain Survey, Inc., in November 2019. He brings over 40 years of land surveying experience and holds professional licensures in Wyoming, Utah, and Colorado. He also has an extensive background in the design, development, implementation, and management of Geographic Information Systems (GIS), including project experience for the City of Rock Springs and

Sweetwater County, Wyoming. With his fluency in a number of mapping software applications, technologies and practices, he has brought to JFC a comprehensive GIS skillset that is unique to our community. As a former County Surveyor and small business owner, Mr. Felderman managed all aspects of field and office operations and developed expertise in maintaining effective workflows in both land surveying and GIS.

Hansen, Allen & Luce, Inc.

Gregory J. Poole, MS, PE – Project Engineer, Modeling

For more than 38 years, Mr. Poole has served as Project Manager, Project Engineer, or Technical Advisor on a broad spectrum of water resources-related engineering projects. He has specialized in complex analyses and studies in surface and groundwater hydrology, hydraulics, and water quality. Mr. Poole has participated in many of HAL's significant master planning, design, and construction related projects involving culinary and irrigation water supply, wastewater disposal, storm drainage and flood control, water quality protection, watershed management, and wetlands permitting. Because of his in-depth understanding of technical issues, he serves as a Special Advisor for Engineering Excellence on many of his firm's more complex projects. He has served as President of the Utah Society of Professional Engineers, and is a member of the Program Committee for APWA-Utah Section. He received the Silver Beaver Award from the Boy Scouts of America. Mr. Poole is a recipient of the HAL Service with Integrity Award and the HAL Technical Leadership Award. He received the Utah Floodplain Managers and Stormwater Management Association "Denis D. Stuff Award of Excellence".

Kayson M. Shurtz, PE – Engineer, Modeling

Mr. Shurtz has more than 10 years of experience working on hydrologic and hydraulic modeling studies, water distribution system modeling, reservoir operations modeling, sediment transport and scour studies, storm drain design, and numerous radar rainfall analysis projects. He has worked on several large-scale reservoir operation models including reservoirs located on the Columbia River, Alabama River, Apalachicola River, and San Joaquin River systems. Mr. Shurtz has worked extensively with the Corps Water Management System (CWMS) successfully implementing the software for eight different watersheds for various Corps Districts. These models required intensive customized scripts to model the complex operations found on those systems.

Mr. Shurtz recently performed several water distribution studies focused on helping clients operate their systems more efficiently. He has experience in multi-dimensional modeling including HEC-RAS 2-D, Flo-2D and GSSHA. He has been an instructor for a three-day HEC-RAS course sponsored by the Floodplain Management Association. Mr. Shurtz received B.S. and M.S. degrees in Civil Engineering from Brigham Young University.

III. PROJECT EXPERIENCE

Representative projects that JFC has completed and gained experience and knowledge from, in which we believe specifically relate to this Project, are listed below:

- The preliminary design for the City of Rock Springs – Northeast Detention Basins. JFC completed the preliminary design; however, completion of the Project is pending due to funding. This Project consisted of locating and designing detention basins with outlet

control so that the existing storm water system is better able to carry the flows generated by a flood event. The Project included evaluation of the downstream infrastructure modeling to determine allowable flows.

- The design for the City of Rock Springs – 2014 Storm Sewer Project. JFC completed the design and is currently administering construction of this Project. The Project consisted of upgrading existing undersized and aged storm sewer systems, in six areas, that were prone to flooding due to the condition of the storm sewer system. This Project included modeling the proposed system and incorporating it into the City's storm water model. JFC analyzed utilization of a detention basin to eliminate replacing undersized storm sewers and provided sedimentation prevention design.
- The 2006 Storm Sewer Master Plan & Modeling Project for the City of Rock Springs encompassed the projected growth of the City of Rock Springs, including hydrologic analysis of areas outside the city limits that drain into the city limits and the Bitter Creek drainage. This comprehensive study for the City of Rock Springs has been ongoing since 2006. Mr. Kennedy has performed the modeling for this Project and was instrumental in locating several of the areas that were identified as undersized within the City. Many of the Project's areas were identified by Mr. Kennedy and the City of Rock Springs from this modeling. Also, under this Project, the area west of Foothill Boulevard was analyzed to determine what areas could be removed from the floodplain. Along with HAL, JFC successfully modeled the effects that the installed Summit Drive Storm Water Drainage Channel had on storm sewer flow and successfully removed several areas from the floodplain.
- JFC, and its subconsultants, completed the design and contract administration for the Rock Springs West Detention Basins consisting of the Foothill Wetlands Park basin, located at Foothill Boulevard, the detention basin located at Reagan Avenue, and a detention basin located at Scott Drive.
- Preserve Apartments – LOMR. JFC provided engineering analyses evaluation and modeling of the Tributary No. 1 from Jackson Street, near Overland Elementary, to the crossing of Reagan Avenue using HEC-RAS. This review of the drainage was utilized for the revision of the FEMA Flood Map over this area. All mapping, modeling, surveying, and engineering for this FEMA submittal was provided by JFC.

IV. PROJECT REFERENCES

- Mr. Larry Lloyd
Executive Director
Sweetwater County Events Complex
3320 Yellowstone Road
Rock Springs, WY 82901
307-352-6789
llloyd@sweetwaterevents.com

- Mr. Chace Tavelli, PE
Project Officer
Wyoming Water Development Office
6920 Yellowtail Road
Cheyenne, WY 82002
307 777-7626
chace.tavelli@wyo.gov
- Mr. George Lemich, PC
Lemich Law Center
205 C Street
Rock Springs, WY 82901
307-382-6600
Fax: 307-382-4989
george_lemich@sweetwaterhsa.com

V. PROJECT SCOPE/DESIGN CONSIDERATIONS

JFC will develop a successful project for the City of Rock Springs based on the following Scope of Work.

A. Surveying

JFC will perform an aerial survey of the Project area and supplement the data with ground surveys of the bridges. Ground control targets will be established for GPS translation and data conversion to the State Plane Coordinate System. The Project area is approximately 400 acres and is shown on the Project Area Map in Appendix B of this Proposal. A survey of the area will be performed using a UAS drone fixed-wing aircraft to prepare digital terrain data for input into the model. The channel at the Yellowstone and Industrial Drive bridges, over Killpecker Creek, will be scanned using the Trimble SX10 Scanning Total Station for addition into the digital terrain data.

B. Modeling

Perform a site visit to confirm roughness values and field conditions. A HEC-RAS model will be prepared from the digital terrain data and the bridge/road crossing data. The HEC-RAS model will use the Flood Insurance Study flowrates for the 100-year and 500-year flood events. Comparison of the HEC-RAS and the existing effective HEC-2 predicted water surface elevations will be performed. Delineate the 100-year floodplain and floodway with existing conditions. Prepare a technical memorandum summarizing the flood plain modeling study and results.

VI. SCHEDULE

The team is prepared to perform the work in order to meet the August 30, 2020 Project completion date. A Project kick-off meeting will be held as soon as possible after award of the Project and JFC will perform the survey as soon as the area is free of snow cover and is

accessible. A schedule for the 25%, 50%, and 75% complete meetings and a Project Completion and Presentation meeting will be provided once the survey start date is known.

VII. COST PROPOSAL

JFC's proposed not-to-exceed cost to provide the services as set forth in this Proposal is **\$25,489.00**. This cost includes preparing for and attending the Project kick-off meeting, the 25%, 50%, and 75% complete meetings, and the Project Completion and Presentation meeting.

As an alternate, JFC can provide the floodplain and floodway mapping based on the HEC-RAS model for submittal of the LOMR in accordance with FEMA guidelines for a not-to-exceed cost of **\$3,000.00**.

The above not-to-exceed cost is based on the Scope of Work described above. Additional costs may be incurred due to services rendered beyond the defined Scope of Work. Services requested beyond the Scope of Work will be charged on an hourly basis and on an agreed to cost stated in writing.

VIII. CONCLUSIONS

JFC has performed numerous storm water projects in the City of Rock Springs. We are a local firm that is involved in and concerned about the success and safety of our community. Our interaction with local clients has been long and ongoing and we strive to make a successful Project for all entities involved because we look forward to the opportunity of working with these individuals in the future.

Our interaction with Rock Springs' citizens and our extensive work experience in this area shows a proven track record of concern and involvement; and, in turn, will produce a successful Project for the City of Rock Springs and its citizens. JFC continually strives to maintain a good relationship with the City of Rock Springs and is extremely dedicated to making this Project successful. We look forward to working with the City of Rock Springs. Thank you for your consideration.

APPENDIX A

JFC Engineers & Surveyors:

- **Resumes of Key Personnel**
- **Firm Description and Services**
- **2020 Schedules of Rates, Fees,
and Charges**

Hansen, Allen & Luce, Inc.:

- **Resumes of Key Personnel**
- **Statement of Qualifications**
- **Standard Fee Schedule 2020**

JFC ENGINEERS & SURVEYORS
RESUMES OF KEY PERSONNEL

JFC ENGINEERS SURVEYORS

EDUCATION

*Bachelor of Science in Civil Engineering
University of Wyoming
December 2005*

*Associate of Applied Science in Engineering
Western Wyoming Community College
May 2003*

Short Courses MSHA Certified

(Mine Safety and Health Administration)

REGISTRATION

*Professional Civil Engineer
Wyoming No. 12740*

YEARS OF EXPERIENCE

JFC since 2006

DANIEL R. KENNEDY, PE PRINCIPAL



Mr. Kennedy graduated from the University of Wyoming and began working for JFC in March 2006. His design experience includes subdivision, highway, water distribution, sanitary sewer, storm sewer, soil investigation. He has experience in flood plain analysis/mapping;

hydraulic modeling for FEMA LOMR and closed conduit networks; and modeling for sanitary sewer and storm sewer systems. Mr. Kennedy acquired his registration as a Professional Engineer in June 2010.

RELATED EXPERIENCE

CIVIL ENGINEERING

- Grading Plans
- Site Design
- Construction Inspections
- Subdivision Design

STRUCTURAL

- Structural Concrete Design
- Rebar Inspection

TRANSPORTATION

- Highway Design

WATER RESOURCES

- Water Distribution Design and Modeling
- Sanitary Sewer Collection Design and Modeling
- Sanitary Sewer Treatment
- FEMA
- Open Channel and Drainage Design
- Flood Plain Analysis, Mapping, and Modeling
- Storm Sewer Design, Detention Design, and Modeling
- Water Treatment Design and Analysis

SOILS ENGINEERING

- Foundation Design
- Soils Investigation and Analysis
- Slope Stability Analysis

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DANIEL R. KENNEDY, PE
PRINCIPAL

PROJECT SPECIFIC EXPERIENCE

CIVIL ENGINEERING

- Subdivision Plans for Fairway Estates, Phases 4 and 5 and Canyon View Estates
- Septic Design for Cudd Pressure Control
- Site Design for Desert Development, Aspen Village, The City of Rock Springs M Street Enhancement Project, Western Wyoming Community College, Wexpro, FracTech, and Holiday Inn Express
- Engineering Design Reports for WYDEQ
- Soils Investigations
- Open Hole Inspections
- Construction Inspections and Project Management – Foothill Wetlands Park, Black Butte Access Road, City of Rock Springs M Street Enhancement Project, Sweetwater County Events Complex National High School Rodeo Finals Upgrades, and Bridger Coal County Road 4-15 Upgrade
- Grading and WYDEQ Chapter 3 Permit for OCI Rail Spur

TRANSPORTATION ENGINEERING

- Auxiliary Lanes and Entrance Design for Frac Tech
- Road Design for Above-Mentioned Subdivisions
- Black Butte Coal Company Access Road
- Jim Bridger Power Plant Road Design – Fog Route and Contractor Parking Access Road

WATER RESOURCE ENGINEERING

- UIC Permit – Farson School Lagoon Reclamation, Water Treatment, and Sewer Treatment
- Domestic Water and Sewer Analysis for Above-Mentioned Subdivisions, Western Wyoming Community College, City of Rock Springs, and Sweetwater County Events Complex
- 2014 Storm Sewer Improvements for City of Rock Springs Drainage Reports for Numerous Subdivisions
- Drainage Reports for Numerous Subdivisions
- WWDC Eden Valley Master Plan Level II

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PROJECT SPECIFIC EXPERIENCE

DANIEL R. KENNEDY, PE
PRINCIPAL

WATER RESOURCE ENGINEERING (CONTINUED)

- Flood Management/Detention Design for City of Rock Springs Foothill Wetlands Park, Scott/Reagan Detention Basin, and Rock Springs Northeast Detention Basin
- No-Rise Certifications for Crum Electric Supply Company, DeBernardi Construction Company, Honnen Partners of Wyoming, Pacific Steel, and CenturyLink
- Flood Plain Analysis and Mapping for the City of Rock Springs
- Citywide Modeling of Sanitary Sewer Main Trunk Lines for The City of Rock Springs
- Water Distribution Design and Modeling for the City of Rock Springs and Sweetwater County Events Complex
- Water Treatment Plant Analysis and Design
- FEMA Submittals Including:
 - LOMA (Letter of Map Amendments) for Canyon Court Mobile Home Park
 - LOMR (Letter of Map Revisions) for The Preserve at Rock Springs
 - LOMA-F (Letter of Map Amendments Based on Fill) for West Winds Development
- Army Corp of Engineers Permitting:
 - CenturyLink Utility Crossing
- City of Rock Springs – Stormwater Master Plan

GEOTECHNICAL ENGINEERING

- Soils Investigations for Imperial Plaza Apartments, Sweetwater County Events Complex, Silverado Subdivision, and The City of Green River Sewer Plant Storage Building
- Slope Stability Analysis for Cimerex
- Foundation Designs
- Retaining Structures for Bridger Coal Company and The Village at Silver Ridge

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KENT E. FELDERMAN, PLS
PRINCIPAL

EDUCATION

*Professional Career Diploma
Surveying and Mapping
University of Scranton – ICS
Scranton, PA
May 1985*

Short Courses

*Geographic Information Systems (GIS) Management
GIS Workflows and Analysis
Western Wyoming Community College
Technical Writing
Writing/Interpreting Land Descriptions
Database Management Systems
Computer Aided Drafting
MicroStation, AutoCAD, and Carlson Software
Law of Easements and Encumbrances
Subdivisions of Land Deeds,
Descriptions, and the Law Survey
Business Management - Policies and Practices
Drone Pilot Ground School*

LICENSING

*Professional Land Surveyor
Wyoming PLS 6147
Colorado PLS 26956
Utah PLS 261799
FAA Part 107
Unmanned Aircraft Pilot*

YEARS OF EXPERIENCE

*Sweetwater County Surveyor 1993-2005
Business Owner 2005-2019
Other 14 Years*

AFFILIATIONS

*Professional Land Surveyors of Wyoming
Member and Current Chapter Vice President
Former Chapter President/Director
National Society of Professional Surveyors
Member
WYGWO - Wyoming Geospatial Organization
Member*

Mr. Felderman began working at JFC in 2019 as a Professional Land Surveyor and Principal. He has over forty years of land surveying experience and twenty-five years of mapping expertise. He holds current Professional Land Surveyor licenses in Wyoming, Colorado, and Utah and is highly skilled in the practice and application of land surveying as well as the legal and ethical aspects of the profession. His diverse background and the ancillary expertise in cartography and digital mapping complements the services offered by JFC and our ability to provide a more comprehensive surveying and mapping solution to our clients.

Mr. Felderman began his career in the 1970s, working as support staff for a land surveying firm in southwest Wyoming. Within the first year there he had advanced to the positions of instrument man and party chief. Over time he became the assistant survey manager for the firm and was responsible for the direction of their daily field operations. In addition to heavy involvement in oil and gas related surveys, this employment provided Kent with exposure to many other markets and to many aspects of field surveying and the related office practices.

In the 1990s, Kent was appointed as County Surveyor for Sweetwater County, Wyoming where he gained specific knowledge in a position of professional authority. Here, he refined his expertise and gained knowledge in subdivisions of land, the laws of easements, and regulatory affair. He worked extensively with county officials and federal, state, and municipal agencies in development and implementation of policies related to land development and infrastructure expansion. Also, during this tenure Mr. Felderman was the director of the county's mapping division where he was charged with oversight of all cartographic operations including the design and execution of the county's premier Geographic Information System and land use database.

Prior to his collaboration with JFC, Kent served as president and owner of a local survey firm where he honed his professional talents and attained first-hand understanding of business practices and their application relating to a full array of land surveying and GIS markets.

RELATED EXPERIENCE

- Land Boundary Surveys
- Roadway Design, Layout, and Construction Surveys
- Subdivision Development and Platting
- Commercial Industrial Development
- 3D Control Surveying
- Subdivision/Development Plan Review
- Construction and Quality Control Surveys
- American Land Title Association (ALTA) Surveys
- Topographic Surveys and Analysis
- Oil and Gas – Well Location Surveying
- Pipeline and Utility Alignment Surveys
- Land Title, Technical, and Legal Research
- Geographic Information Systems (GIS) Design and Implementation
- Computer Aided Drafting Projects

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**KENT E. FELDERMAN, PLS
PRINCIPAL**

PROJECT SPECIFIC EXPERIENCE

ROUTE SURVEYS

Enterprise Products – Well tie and mainline pipeline alignments throughout the Jonah Gathering System

Union Telephone Company – Numerous Powerline Construction Projects throughout Wyoming and Colorado

BOUNDARY SURVEYS

FedEx – Rock Springs Complex ALTA Survey

Union Telephone Company – Various Communications Parcels throughout Wyoming and Colorado

1st Arrow Corporation – City Centre at Rock Springs, 100 Acre Planned Development

ROADWAY SURVEYS

Sweetwater County

- *County Road Easement Mitigation Project* – Research and rectify easement deficiencies on over 130 miles of county roads
- *Farson/Eden Roads* – Survey and acquire easements for 30-mile road network
- *Wamsutter/Crooks Gap Road* – Route selection, survey, right-of-way acquisition, construction staking, and as-built of county road realignment
- *McKinnon Road Realignment/Reconstruction* – Survey, right-of-way acquisition, construction staking, and as-built of paved county road realignment under WYDOT contract requirements

Union Wireless

- Numerous industrial road construction projects throughout Wyoming and Colorado

SUBDIVISIONS

Paul Zancanella – Zancanella Subdivision, North of Rock Springs

Smith & Smith Rentals – Mountain Springs Subdivision, North of Rock Springs

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**KENT E. FELDERMAN, PLS
PRINCIPAL**

PROJECT SPECIFIC EXPERIENCE

CONSTRUCTION SURVEYS

Questar –

- Gobbler's Knob Compressor Station
- Blacks Fork Compressor Station Expansion

Anadarko – Red Desert Compressor Facility Expansion

CONTROL SURVEYS

Sublette County, WY – 2009 Control Densification and Aerial Mapping Project

Sweetwater County, WY – 1996 GPS Control Densification and NGS Blue-Booking

GIS DEVELOPMENT PROJECTS

Sweetwater County – County-wide digital mapping system development and implementation

City of Rock Springs, WY – City GIS System Installation

Enterprise Products – Opal to Pinedale Gas Gathering System GIS

Sweetwater County Conservation District and Wyoming Coalition of Local Governments – Southwest Wyoming Comprehensive GIS Mapping Utility Development and Management

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JFC ENGINEERS & SURVEYORS

**FIRM DESCRIPTIONS
AND
SERVICES**



FIRM DESCRIPTION

JFC has been providing professional services to the residents of Wyoming and the surrounding states since 1964. We are a multi-disciplinary firm consisting of an Engineering Department including Civil and Structural Engineers and a full-service professional Surveying Department utilizing GNSS, robotic, scanning, and UAV equipment. JFC's Engineering Department also provides geotechnical services, inspections including AWS certified weld inspection, and materials testing.

At **JFC**, we look at each project as a challenge with unique and distinct goals and objectives. Each new project is managed individually with respect to client needs and schedules. We strive to provide original, efficient, sensitive, and reasonable design and engineering solutions by taking advantage of knowledge gained from our previous experiences.

We have extensive experience with every aspect of project development and construction. Our involvement on numerous projects begins with programming and site selection/analysis and then followed through with the design, construction, and operation phases. We also have first-hand knowledge of Wyoming's environment, economy, construction industry, and unique factors that relate to each geographic region.

Our staff of 24 includes seven professional individuals registered in a total of six states as well as a full complement of well-trained and experienced technical and support personnel.

"Committed to Your Success"



Engineering:

-
- | | | |
|----------------------------------|-----------------------------------------------------|---------------------------------------------|
| • Civil & Structural Design | • Water Supply Projects | • Environmental Studies |
| • Footings & Foundations | • Water Rights | • Landfills |
| • Site Development & Design | • Instream Flow Studies | • Master Planning |
| • Road & Route Design | • Hydrology/Hydraulic Studies | • Mine Reclamation & Mine Backfill Projects |
| • Public/Recreational Facilities | • Irrigation / Drainage | • Compliance Monitoring / Reporting |
| • Wastewater Facilities | • Storm Water Pollution Prevention Planning (SWPPP) | |
| • Septic Systems | | |

Surveying & Mapping:

-
- | | | |
|-------------------------|---------------------------------------------------------|---------------------------|
| • ALTA/ACSM | • Industrial | • Topographic |
| • Aerial Ground Control | • LiDAR | • Water Rights |
| • As-Built | • Monitor Well | • Well Pad |
| • Boundary | • Pipeline | • Wind Energy |
| • Cell Tower | • Road/Highway | • CAD Services |
| • Construction | • Route (all utilities) | • FEMA Flood Certificates |
| • Control | • Subdivisions: Residential, Commercial, and Industrial | • P&ID |
| • Drainage | | • Traffic Survey Data |

Geological:

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- | | | |
|-------------------------------------|------------------------|-------------------------|
| • Domestic Water Wells | • Interpretive Geology | • Subsidence Abatement |
| • Geological & Hydrological Studies | • Irrigation Wells | • Subsidence Mitigation |
| | • Mine Reclamation | • Cultural Surveys |

Geotechnical:

-
- | | | |
|-----------------------------------------------|------------------------------------------------------------------------------|------------------------------------|
| • Field & Laboratory Investigative Techniques | • Investigations for Commercial, Special Projects, Industrial, & Residential | • Ground Stabilization |
| • Forensic Investigations | | • Retaining Structure Design |
| | | • Shallow & Deep Foundation Design |

Materials Testing & Inspection:

-
- | | | |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| • AASHTO Accredited Materials Lab | • Bituminous Materials | • Specialty Testing of Cementitious Materials including Shrinkage & Expansion |
| • WYDOT Certified Testing Technician for Asphalt, Aggregate & Concrete | • Epoxy Grouts | • Various Inspections including: |
| • Laboratory & Field Testing of Soils & Aggregates for QA/QC | • Reinforced Masonry & Grout Inspection | Construction |
| • Wide Range of Cementitious Materials including Mortar, Grout, Light Weight & Normal Weight Concrete, & CMU Masonry Testing | • Investigative Testing: Permeability, CBR, Atterberg Limits, Swell/Consolidation Potential, Collapse Potential, Classifications, etc. | Foundation |
| | | Open Hole |
| | | Structural |
| | | Waterline |
| | | Weld (AWS Certified) |

GIS:

-
- | | | |
|--------------------------------------|---------------------------------------|---------------------------------------|
| • Data Dictionary Creation | • Thematic Map Creation | • Spatial Analysis of Geographic Data |
| • Geodatabase Creation & Maintenance | • Projection & Transformation Support | |

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JFC ENGINEERS & SURVEYORS

**2020 SCHEDULES OF
RATES, FEES, AND CHARGES**



PO Box 2026
Rock Springs, WY 82902
Phone (307) 362-7519
Fax (307) 362-7569

SCHEDULE OF RATES, FEES, AND CHARGES

Effective 1 January 2020 – 31 December 2020

ENGINEERING

Principal.....	\$160.00/hr.
Project Manager / Senior PE	\$132.00/hr.
Registered Professional Engineer II.....	\$122.00/hr.
Registered Professional Engineer I	\$111.00/hr.
Professional Geologist	\$110.00/hr.
Engineer Intern/Staff Engineer/Certified Weld Inspector.....	\$103.00/hr.
Field Engineer II / Geologist II.....	\$ 88.00/hr.
Field Engineer I / Geologist I	\$ 84.00/hr.
Technician III	\$ 84.00/hr.
Technician II.....	\$ 74.00/hr.
Technician I.....	\$ 62.00/hr.
Laboratory Testing Technician.....	\$ 56.00/hr.

SURVEYING

Principal/Professional Land Surveyor.....	\$160.00/hr.
Professional Land Surveyor.....	\$122.00/hr.
Land Surveyor Intern / Staff Surveyor.....	\$103.00/hr.
Party Chief.....	\$ 98.00/hr.
Survey Crew Technician.....	\$ 72.00/hr.
Drone Pilot.....	\$122.00/hr.
Drone Spotter	\$ 72.00/hr.

Note: Survey crew rates include personnel and normal equipment. Vehicle expenses and specialized equipment are additional.

EXPERT WITNESS

Consultant for Expert Witness.....	\$190.00/hr.
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SUPPORT PERSONNEL

GIS Technician.....	\$103.00/hr.
Drafter/CAD III.....	\$ 95.00/hr.
Drafter/CAD II	\$ 71.00/hr.
Drafter/CAD I	\$ 60.00/hr.
Construction Site Representative III	\$ 93.00/hr.
Construction Site Representative II.....	\$ 79.00/hr.
Construction Site Representative I	\$ 69.00/hr.
Clerical:	
Administrative Professional II / Technical Editor	\$ 70.00/hr.
Administrative Professional I	\$ 60.00/hr.

- Stipulated rates include fringe benefits, overhead, and profit.
- A rate of 1.5 times the rate stipulated above shall be charged for work requested by Client over eight hrs./day on holidays or on weekends to cover payroll and payroll related charges incidental to overtime pay.
- A rate of 1.5 times the rates shall be charged for rush services.
- All hourly rate charges begin within the hour of departure and terminate at the hour of return to the point of origin, and/or place of lodging while away from the principal office, less time off for the convenience of the personnel.
- Lump Sum Fee or other arrangements may be negotiated based upon a *detailed* Scope of Services.
- An annual escalation rate will be applied to rates shown on multi-year contracts.

EQUIPMENT EXPENSES

VEHICLES:

Four-Wheel Drive / Survey Vehicle	\$20.00/hr.
Mileage: Four-Wheel Drive/Survey Vehicle (<i>subject to change without notice</i>)	IRS Rate \$0.575/mile
ATV's with Trailer	\$200.00/day
Snow Machine with Trailer	\$200.00/day
Boat.....	\$250.00/day

SPECIALIZED EQUIPMENT:

Digital Level	\$ 60.00/hr.
Electronic Total Station / Data Collection	\$ 65.00/hr.
Electronic Total Station/SX10 Scanner	\$ 90.00/hr.
GPS Survey System	\$ 65.00/hr.
Pipeline Locator	\$ 30.00/hr.
Pipe / Cable Locator.....	\$ 90.00/hr.
UAV/Drone	\$ 90.00/hr.
Aerial Mapping / LiDAR / Imagery.....	<i>Pricing available upon request.</i>

REIMBURSABLE EXPENSES

All incidental expenses (such as telephone, photographs, copies, plots, etc.) are included in fees shown above. Any extensive documents, expenses, or costs of special maps, special survey supplies, and other similar items required for the execution of a project will be billed at **Direct Expense + 10%**

Subconsultant Services **Direct Expense + 15%**

Per Diem for personnel required for lodging away from the principal office:

Meal Per Diem	Direct Expense + 10%
Lodging and Board.....	Direct Expense + 10%
Travel Mileage (<i>subject to change without notice</i>)	IRS Rate \$0.575/mile

CERTIFIED LAND CORNER RECORDATION

Processing and Filing Fee.....\$20.00/each

SURVEYING SUPPLIES PRICE LIST

Field Staking Supplies (units of 10 – 1-unit minimum)	\$25.00/unit
Lot/Property Corners (with accessories).....	\$15.00/corner
Berntsen / BLM Type Corners (with accessories)	\$90.00/corner

Note: Field staking supplies include items such as nails, stakes, lath, flagging, paint, etc. Rebar/caps and fence posts are also included in nominal quantities per unit. Substantial supplies or special supplies will be charged at Direct Cost +10%.



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Phone (307) 362-7519
Fax (307) 362-7569

SAMPLING & TESTING
Schedule of Rates, Fees and Charges
Effective 1 January 2020 – 31 December 2020

PERSONNEL

Principal.....	\$160.00/hr.
Project Manager/Senior PE	\$132.00/hr.
Registered Professional Engineer II	\$122.00/hr.
Registered Professional Engineer I	\$111.00/hr.
Professional Geologist	\$110.00/hr.
Engineer Intern/Staff Engineer/Certified Weld Inspector	\$103.00/hr.
Field Engineer II / Geologist II	\$88.00/hr.
Field Engineer I / Geologist I	\$84.00/hr.
Field Testing Technician III	\$84.00/hr.
Field Testing Technician II	\$74.00/hr.
Field Testing Technician I	\$62.00/hr.
Laboratory Testing Technician	\$56.00/hr.

- *Stipulated rates shown include fringe benefits, overhead and profit.*
- *A rate of 1.5 times the rates stipulated above shall be charged for work done on holidays or weekends to cover payroll and payroll related charges incidental to overtime pay.*
- *A rate of 1.5 times the rates shall be charged for rush services.*
- *All hourly rate charges begin at the time of departure and terminate at the hour of return to the office.*
- *An annual escalation rate will be applied to rates shown on multi-year contracts.*

FIELD TESTING

Moisture Density Testing (Tech time and vehicle additional).....	\$35.00/hr. (1 hr. minimum)
Dynamic Core Penetrometer Testing (DCP)	\$35.00/hr. (1 hr. minimum)
Concrete, Mortar and Grout Testing (Tech time and vehicle additional) ...	\$35.00/hr. (1 hr. minimum)
Coring Machine (1/2 day minimum and requires two Technicians to operate. If rebar is hit during coring, replacement bit costs will be charged to Client.)	\$100.00/day

LABORATORY TESTING

All laboratory tests will be conducted using the Laboratory Technician Rate plus applicable equipment charge.

Group A Tests

Specific Gravity, Particle Size Analysis (Gradations),
Hydrometer Analysis, Standard Proctor, Modified Proctor,
Atterberg Limits, Natural Moisture..... \$50.00/test equipment charge

Group B Tests

Permeability, FHA Expansion, Unit Weight of Cores,
Specialty Grout Shrinkage & Expansion Testing..... \$150.00/test equipment charge

Group C Tests

Consolidation, Direct Shear, California Bearing Ratio,
Unconfined Compressive Strength, Collapse Potential,
Swell Potential..... \$300.00/test equipment charge

Concrete Cylinder Compression Testing..... \$18.00/test equipment charge

VEHICLE USE

Vehicle Use \$20.00/hr.

Mileage (*subject to change without notice*) IRS Rate \$0.575/mile

Note: Additional testing quotes are available upon request. Other engineering and surveying services are also available.

HANSEN, ALLEN, & LUCE, INC.

RESUMES OF KEY PERSONNEL

Gregory J. Poole, M.S., P.E.

Principal, Chief Engineer

Professional Experience

Summary

For more than 38 years, Mr. Poole has served as Project Manager, Project Engineer or Technical Advisor on a broad spectrum of water resources related engineering projects. Greg has specialized in complex analyses and studies in surface and groundwater hydrology, hydraulics and water quality. He has participated in many of HAL's significant master planning, design and construction related projects involving culinary and irrigation water supply, waste water disposal, storm drainage and flood control, water quality protection, watershed management, and wetlands permitting. Because of Greg's in-depth understanding of technical issues, he serves as a Special Advisor for Engineering Excellence on many of the Firm's more complex projects. He has served as President of the Utah Society of Professional Engineers, and is a member of the Program Committee for APWA-Utah Section. He received the Silver Beaver Award from the Boy Scouts of America. Greg is a recipient of the HAL Service with Integrity Award and the HAL Technical Leadership Award. He received the Utah Floodplain Managers and Stormwater Management Association "Denis D. Stuff Award of Excellence".

Experience

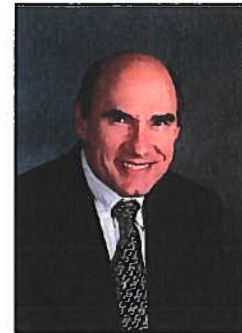
1981 – Present: Project Engineer, Project Manager – Hansen, Allen & Luce

Water & Wastewater

- Clearfield - HAFB Well and Reservoir (APWA Public Works Design by a Consultant Award)
- Fairbourne Wastewater Pump Station - Alternatives Analysis & Design
- Murray City - Cimarron Wastewater Pump Station
- Murray City - Cottonwood Bypass Sewer (APWA PW Design by a Consultant Award)
- Murray City - Sanitary Sewer Master Plan
- Murray City - State Street Bypass Sewer
- Murray City - West Side Trunk Sewer
- Price City - Culinary Water Transmission Pipeline Replacement

Storm Drainage and Flood Control

- Draper City - Storm Drainage Master Plan
- Draper City - Storm Water Management Plan & UPDES Phase II Application
- Elko City, Nevada - Culleys Gully Flood Control Dam Analysis
- Elko City, Nevada - Fifth Street Flood Control Facilities
- Elko City, Nevada - Metzler Wash Flood Control Facilities including successful FEMA CLOMR & LOMR Applications
- Farmington City - Storm Drainage Master Plans
- Florida Canyon Mine Diversions and Sediment Pond Design
- Layton City - Storm Drainage Master Plans
- Midvale City - Storm Water Funding Program Development
- Midvale City - Storm Water Management Plan & UPDES Phase II Application
- Murray City - Jefferson Storm Drainage Facilities Design
- Murray City - Storm Drain Master Plans
- Orem City - Storm Drainage Master Plan
- Rock Springs - Bitter Creek Flood Control
- Rock Springs - Dead Horse Canyon Creek Flood Control Detention Basins and Conveyance Improvements
- Salt Lake City - East Side Canals Study
- Salt Lake County - Corner Canyon Creek Master Plan
- Salt Lake County - East Side Canal Study
- Salt Lake County - Neff Canyon Master Flood Control Plan
- South Ogden City - Burch Creek Detention Basin (APWA Public Works Design by a Consultant Award)
- U.S. Army Corps of Engineers - Wasatch Front Flood Assessment Study - Specific Responsibility Assessing Flood Damage and Developing Cost Estimates for Required Improvements for the Weber River Drainage System
- South Weber City - Storm Drainage Plan



Education

Masters of Science
Multi-Disciplinary Engineering with
Emphasis in Water Resources
Utah State University

Bachelors of Science
Irrigation Engineering and Agricultural
Utah State University

Associate of Science
Engineering
Ricks College

Registrations

Professional Engineer
Utah, Nevada, and Wyoming

Affiliations

American Public Works Association

Utah Society of Professional Engineers

President 1991

Utah Flood Plain Management
Association

Awards

Magna Cum Laude
Utah State University 1978
Senior of the Year

Agricultural and Irrigation Engineering
Utah State University 1978

APWA Public Works Design by a
Consultant Awards

Utah Floodplain and Stormwater
Management Association "Denis D.
Stuhff Award of Excellence"

Storm Drainage & Flood Control (cont'd)

- Springville City - Storm Water Management Plan & UPDES Phase II Application
- Tooele County - Middle Canyon Creek Master Plan
- West Jordan City - Storm Water Funding Program Development

Hydrology

- EnergySolutions - PMF Study
- Kennecott Copper - Flow Verification/Calibration of Cutthroat Flume
- Murray City - McGhie Springs Rehabilitation
- North Davis County Sewer District - West Outfall Replacement Evaluation
- PacifiCorp - Analysis and Design of Boulger Creek and Upper Huntington Creek Flow Measuring Stations
- Park City - Open Channel Flow Monitoring Review and Evaluation
- Park City - Spiro Tunnel Flow Monitoring Analysis and Design of the Replacement of a Parshall Flume
- Salt Lake County - East Side Canal Study
- Salt Lake County - Neffs Canyon Creek Master Plan
- Tooele County - Middle Canyon Creek Master Plan
- Wasatch County - Heber Valley Retention Basin Mass Balance Analysis
- Rock Springs - Dead Horse Canyon Creek Flood Hydrology

Hydraulics

- Central Utah Water Conservancy District - Hydraulic Transient Analysis, Geneva Well Field Pump Stations and Aqueduct
- Bear River Canal Company - Malad River Crossing Hydraulic Analysis
- Central Weber Sewer Improvement District - Weber River Sewer Crossing Rehabilitation near Riverdale City
- Central Weber Sewer Improvement District - Weber River Sewer Crossing Rehabilitation near South Weber
- Elko City, Nevada - Culeys Gully Flood Control Dam Analysis
- Elko City, Nevada - Fifth Street Flood Control Facilities
- Elko City, Nevada - Metzler Wash Flood Control Facilities
- Jordan Valley Water Conservancy District - 3600 West and 5700 West Pump Station Hydraulic Transient Analysis and Surge Control Design
- Jordan Valley Water Conservancy District - 13400 South Pump Station Hydraulic Transient Analysis and Surge Control Design
- Jordan Valley Water Conservancy District - Utah Lake Saratoga Pump Station - Hydraulic Analysis and Preliminary Design
- Layton City - Chelsie Park and Fox Run Park Storm Water Detention Basin Analysis
- Murray City - 900 East Pressure Reducing Station - Analysis of Cavitation Problem
- Murray City - Cimarron Wastewater Pump Station
- Murray City - Fairbourne Wastewater Pump Station - Alternatives Analysis & Design
- Murray City - Jefferson Storm Drainage Complex - Detention Basin and Outlet Structure
- Murray City - State Street Bypass Sewer
- Murray City - Willow Pond Park - Drain Intake Structure
- Price City - Culinary Water Transmission Pipeline Replacement

Water Resources & Irrigation

- Price City - Water Depletion and Recovery Study
- Provo River Recreation Study and Conceptual Plan
- Salt Lake City - Flow Gaging Stations Evaluation
- Salt Lake City - Watershed Master Plan Update
- Wasatch County - Hydrogeologic / Water Quality Study
- West Cache Irrigation Company - Bear River Pumped Diversion
- Murray City Cemetery Irrigation System

Water Quality

- Draper City - Storm Water Quality Management Plan & UPDES Phase II Application
- Midvale City - Storm Water Quality Management Plan & UPDES Phase II Application
- Springville City - Storm Water Quality Management Plan & UPDES Phase II Application

1979 – 1981 Civil Engineer for Wright-McLaughlin

While working for Wright-McLaughlin Engineers, Mr. Poole's experience included the modeling and analysis of municipal water systems, layout and design of water distribution systems, and preliminary and final surface and subsurface drainage plans for multiple developments, final design of sanitary sewer and water extensions, analysis of pipeline transients (water hammer) and hydraulic design related to bridges.

Kayson M. Shurtz, P.E.

Civil Engineer

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Professional Experience

Summary

Mr. Shurtz has more than 10 years of experience working on hydrologic and hydraulic modeling studies, water distribution system modeling, reservoir operations modeling, sediment transport and scour studies, storm drain design, and numerous radar rainfall analysis projects. Kayson has worked on several large-scale reservoir operation models including reservoirs located on the Columbia River, Alabama River, Apalachicola River, and San Joaquin River systems. He has worked extensively with the Corps Water Management System (CWMS) successfully implementing the software for 8 different watersheds for various Corps Districts. These models required intensive customized scripts to model the complex operations found on these systems.

Kayson has also recently performed several water distribution studies focused on helping clients operate their systems more efficiently. Kayson has experience in multi-dimensional modeling including HEC-RAS 2-D, Flo-2D and GSSHA. He has been an instructor for a three day HEC-RAS course sponsored by the Floodplain Management Association. Kayson received B.S. and M.S. degrees in Civil Engineering from Brigham Young University.

Experience

2015–Present: Project Engineer – Hansen, Allen & Luce

2010–2015: Hydraulic Engineer – WEST Consultants

2008–2009: Research Assistant – Brigham Young University

2006–2008: Engineering Technician – Uinta National Forest

Mr. Shurtz has gained extensive experience in various forms of computer modeling on projects throughout the United States. The following projects are representative of his experience:

Master Plan and Water System Studies

- Collinston Water System Impact Fee Analysis, Collinston, Utah
- Bear River Water Conservancy District Conservation Plan Update, Brigham City, Utah
- Saratoga Springs Master Plan and Impact Fee Updates, Saratoga Springs, Utah
- State of Utah Water Use Data Collection Program Study, Utah
- Honeyville Drinking Water Impact Fee Analysis, Honeyville, Utah
- Highland Secondary Water Master Plan Highland, Utah
- Weber Basin Water Conservancy District water rate study, Layton, Utah
- Blanding Drinking Water and Wastewater Impact Fees, Blanding, Utah
- Salt Lake City Storm Water Master Plan, Salt Lake City, Utah
- Salem Storm Water Master Plan, Salem, Utah
- Blanding Storm Water Master Plan Update, Blanding, Utah

Hydrologic and Hydraulic Modeling

- Omaha District Corps of Engineers CWMS Model Implementation, Omaha, Nebraska
- Utica Probable Maximum Flood Study, Bear Valley, California
- Queen Valley Hydrology and Hydraulic models, Queen Valley, Arizona
- LIFESIM modeling for Sacramento District Corps of Engineers, Sacramento, California
- Central Valley Floodplain Evaluation & Delineation, Stockton, California
- Central Valley Floodplain Evaluation & Delineation, Stockton, California
- Missouri River Hydraulic Modeling, Omaha District Corps of Engineers, Northwestern Division, Omaha, Nebraska
- Libby Dam PMF Study, Seattle District Corps of Engineers, Seattle, Washington
- Dry Creek FEMA Study, Galt, California
- Napa Storm Drain Evaluation, Napa, California
- ACT/ACF CWMS Implementation, Mobile District Corps of Engineers, Mobile, Alabama
- Basic HEC-RAS Course Instructor – Floodplain Management Association, Sacramento, California
- Pascagoula River CWMS Implementation, Mobile District Corps of Engineers, Mobile, Alabama
- Tenn-Tom Waterway CWMS Implementation, Mobile District Corps of Engineers, Mobile, Alabama
- LOMR Submittal for Great Basin Estates and Silver Street Developments, Elko, Nevada



Education

Master of Science
Civil and Environmental Engineering
Brigham Young University

Bachelor of Science
Civil and Environmental Engineering
Brigham Young University

Registrations

Professional Engineer – Utah, California

Affiliations

American Society of Civil Engineers

Awards

Sterling Scholar
Nichols Scholarship
Civil Engineering Department
Scholarship
Eagle Scout

Hydrologic and Hydraulic Modeling (Cont.)

- CLOMR Submittal for Sports Park Complex, Elko, Nevada
- Humboldt River Flooding of 2017 Hydraulic Modeling, Elko, Nevada
- Surplus Levee Canal Study, Salt Lake City, Utah
- Gordon Creek Floodplain Delineation, Mountain Green, Utah
- Western Acres 2-D floodplain analysis, Tooele, Utah
- Hauoli Street Drainage Basin hydraulic force calculations, Maui County, Hawaii
- Butterfield Creek CLOMR, Herriman, Utah
- Hydrologic and Hydraulic modeling for 2UD and I-Area, Kemmerer, Wyoming
- SITLA hydrologic model and hydraulic analysis including alluvial fan floodplain mapping, Spanish Valley, Utah
- Blanding City water supply forecast model and rate study, Blanding, Utah
- MPRC development drainage and detention basin sizing, Herriman, Utah
- Northwest Canal and Creeks Study, Salt Lake County, Utah

Wastewater

- Quarterly YDM inspections for South Valley Water Reclamation Facility, West Jordan, Utah
- RSL Sewer Flume Inspection, Herriman, Utah
- Inspection and Evaluation of all Timpanogos Special Service District sewer measurement flumes, Utah County
- Inflow and Infiltration analysis for Springville City, Springville, Utah
- Mount Olympus Special Service District Wastewater Master Plan Salt Lake County, Utah

Selected Publications

Shurtz, Kayson M., "Automated Calibration of the GSSHA Watershed Model: A Look at Accuracy and Viability for Routine Hydrologic Modeling", M.S. Thesis, Brigham Young University, 2009.

Curtis, David C. and Kayson Shurtz, "Gage Network Design for Radar-Rainfall Estimation," Floodplain Managers Association Annual Conference: Flood Risk Management in the 21st Century, San Diego, CA, Sept 6-9, 2011

Shurtz, Kayson, "Corps Water Management System for the Alabama-Coosa-Tallapoosa River System: A Comprehensive and Integrative Tool for the Water Management Toolbox." The NHCW Transmission. February 2015

Shurtz, Kayson M.; Jones, Steven C.; Sowby, Robert B.; Hill, D. Scott; Woodbury, Daniel "K", "Hydraulic Modeling Finds, Fixes Chlorine Residual Gaps." Opflow. June 2017 Volume 42 No. 6.

HANSEN, ALLEN, & LUCE, INC.

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

ABOUT HAL :

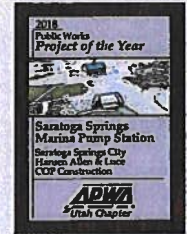
Hansen, Allen & Luce (HAL) is a regional engineering firm specializing in drinking water, secondary water, storm water, wastewater, water quality, and environmental disciplines.

HAL has completed thousands of studies, designs, master plans, and other projects for a variety of clients throughout the Intermountain West. We maintain a highly educated technical staff of B.S., M.S., M.Eng., and Ph.D. graduates who specialize in water resources. Our team consists primarily of licensed professional engineers, many of whom have additional credentials in project management or public administration. Over the past 5 years HAL has maintained a staff of about 30 persons. HAL currently has 35 employees.

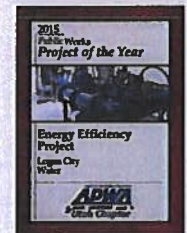
Established in 1974, HAL has been serving the needs of the water community for 45 years. We appreciate the long-term relationships we have established in government and industry throughout the region.

HAL has been recognized as an industry leader in water resources engineering with several awards including those shown to the right.

2018 Public Works Project of the Year – Awarded by the American Public Works Association (APWA) Utah Chapter for excellence in design and construction of the City of Saratoga Springs Marina Pump Station.



2015 Public Works Project of the Year – Awarded by the American Public Works Association (APWA) Utah Chapter for HAL's innovative engineering work with Logan City's water system.



2015 Energy Innovator of the Year – Awarded by Utah Governor Gary R. Herbert in the 2015 Governor's Excellence in Energy Awards for HAL's advancement of water and energy efficiency in water utilities.



OFFICE LOCATION



Hansen, Allen, and Luce, Inc. (HAL)
859 W. South Jordan Pkwy. Ste. 200
South Jordan, Utah 84095
801.566.5599
www.hansenallenluce.com

Greg Poole, PE
Managing Principal
O: 801.566-4873
M: 801.718.1866

STATEMENT OF QUALIFICATIONS

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HAL EXPERIENCE, TECHNICAL CAPABILITIES, AND EXPERTISE :.

HAL specializes in drinking water projects, secondary water projects, sanitary sewer projects, and storm water projects, for cities, counties, and other government entities. By choice, over 85 percent of our work is for municipal clients; water, sewer, or storm water special districts; or county or state agencies. Most of the other 15 percent of our work is for agricultural and industrial clients in providing similar services.

Our entire history has been dedicated to meeting the specialized needs of our many repeat water clients. The following list presents HAL's selected Areas of Practice and Professional Services offered within the general water area.

Areas of Practice :.		Professional Services :.	
Drinking Water	Surface Water	Complex Analysis & Studies	Litigation Support
Ground Water	Waste Water	Computer Modeling	Master Planning
Hazardous Waste	Water Conservation	Construction Management	Project Leadership
Hydraulics &	Water Quality	Design	Public Involvement
Hydrology	Water Resources	Development Reviews	Regulatory Coordination
Irrigation Water	Water Reuse	Development Standards	Source Water Protection
Our Environment	Water Rights	Environmental Permitting	Surveying
Storm Water		Funding Assistance	Water Systems Optimization
		GIS Applications	

HANSEN, ALLEN, & LUCE, INC.

STANDARD FEE SCHEDULE 2020

STANDARD FEE SCHEDULE 2020

PERSONNEL CHARGES

Client agrees to reimburse Hansen, Allen & Luce, Inc. (HAL), for personnel expenses directly related to the completion of the project, in accordance with the following:

Senior Managing Professional	\$194.55/hr
Managing Professional	\$169.75/hr
Senior Professional II	\$155.85/hr
Senior Professional I	\$140.45/hr
Professional III	\$135.45/hr
Professional II	\$121.60/hr
Professional I	\$113.00/hr
Professional Intern.....	\$102.05/hr
Engineering Student Intern	\$52.95/hr
Senior Designer	\$109.05/hr
Senior Field Technician	\$109.05/hr
Field Technician	\$88.60/hr
CAD Operator	\$88.60/hr
Public Relations Specialist	\$135.45/hr
Administrative Assistant	\$65.00/hr
Professional Land Surveyor	\$125.25/hr
1 Man GPS Surveying Services – PLS	\$148.00/hr
Expert Legal Services	\$300.00/hr

DIRECT CHARGES

Client also agrees to reimburse HAL for all other costs directly related to the completion of the project. Direct charges shall include, but not be limited to, the following:

Communication, Computer, Reproduction	\$6.00 per labor hour
Out-of-town per diem allowance (lodging not included)	\$46.00 per day
Vehicle	\$0.65 per mile
Outside consulting and services	Cost plus 10%
Other direct expenses incurred during the project	Cost plus 10%
Trimble GPS Unit	\$130.00 per day
Drone Unit	\$500.00 per day plus data conversion costs
Data Logger/Transducer	\$125.00 per week

INTEREST CHARGE AFTER 30 DAYS FROM INVOICE DATE 1.5% per month

Note: Annual adjustments to personnel and direct expense charges will occur in January of each year. Mileage rate changes are based on fuel prices.



APPENDIX B

Project Area Map



Approximate Location of
FIRM Section R - Northern
Limit of Model

City Limits

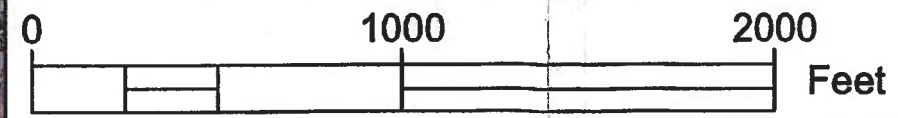
Yellowstone Rd. Bridge

Killpecker Creek

Previously Modified
Channel Section

Industrial Dr. Bridge

Approximate Location of
FIRM Section L - Southern
Limit of Model



	CITY OF ROCK SPRINGS		212 D STREET ROCK SPRINGS, WY 82901 PHONE (307) 352-1542 FAX (307) 352-1545
	PROJECT TITLE: 2020 KILLPECKER CREEK HEC-RAS MODELING PROJECT		
DRAWING TITLE: MODELING LIMITS			DRAWN BY: RJS
DATE: 12/16/19			SCALE: See Drawing
SHEET NO: 1 OF 1			