SCOPE OF WORK

Linder Road, Overland Road to Franklin Road
ACHD Project No. 522038
ACHD GIS No.

The Linder Road, Overland Road to Franklin Road project will expand Linder Road from two lanes to five lanes between Overland Rd and Franklin Rd and incorporate a new four-lane Interstate 84 overpass. The project will connect to both the existing intersections of Linder Rd and Overland Rd, and Linder Rd and Franklin Rd to accommodate the roadway expansion. Pedestrian and bicycle facilities will be in accordance with Livable Streets Performance Measures adopted by the ACHD Commission. Only the connect legs of intersections will be improved. The project includes Pedestrian Hybrid Beacons near Waltman Lane and at the Ten Mile Creek pathway. Alternate or additional enhanced crossing locations may be evaluated by the project team. The project will include continuous street lighting between Overland Road and Franklin Road. The project will include the replacement of ACHD bridges, #1200 over the Ten Mile Creek and #1537 over the Kennedy Lateral. Relocate irrigation facilities along the project. Two virtual public involvement meetings will be required.

Keller Associates, herein called the Consultant, will design the project and supply documentation in accordance with this scope of work, the current version of the ISPWC specifications with the current ISPWC updates as amended by ACHD adopted supplements, including the ACHD Supplemental Traffic Provisions. Precision Engineering, LLC will provide traffic signal design for the intersection of Overland and Franklin, along with the design of the two PHBs, herein called Sub-consultant. Forsgren will provide the structural design of the overpass and coordinate with ITD bridge section, herein called Sub-consultant. Terracon will conduct geotechnical field investigations, testing, calculations, and reporting for the project, herein called Sub-consultant.

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General

Consistent with professional standard of care, Consultant shall provide management, coordination and direction to project team and sub-consultants to complete project deliverables on time and within budget.

Definitions and Acronyms

404 Permit – Section 404 of the Clean Water Act which addresses permits for dredged or fill material in Waters of the US, administered by the U.S. Army Corps of Engineers
AASHTO – American Association of State Highway and Transportation Officials
ACHD – Ada County Highway District
ADT – Average Daily Traffic count
Agreement Administrator – The ACHD Project Manager is responsible for administering the contract and overseeing the design.
CAC – Community Advisory Committee
CAD – Computer Aided Design
COMPASS – Community Planning Association of SW Idaho
CPM – Critical Path Method
CSS – Context Sensitive Solutions
FA – Forsgren Associates (Sub-consultant to Keller Associates)
FHWA – Federal Highway Administration
EPA – Environmental Protection Agency
GIS – Geographic Information System
GSI – Green Stormwater Infrastructure
Holidays – ACHD recognized holidays occur on: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, Christmas Eve, and Christmas Day.
ITD - Idaho Transportation Department
Man-Hour – Hour(s) of time required for an individual to complete an itemized task designated by the project scope of work. Personnel functions shall be rounded up to the nearest Man-Hour.
MOU – Memorandum of Understanding
NEPA – National Environmental Policy Act
PIM – Public Involvement Meeting
PMG – Project Management Guide
PSA – Professional Service Agreement, or Professional Agreement. This is a written agreement or contract between ACHD and the Prime Consultant
Prime Consultant – The firm contracting with ACHD, for the performance of work prescribed in the contract.
Project Manager – (Also abbreviated as "PM"). The ACHD point of contact for the project.
ROW – Right of Way
SHPO – State Historic Preservation Office
Study Area – The expanded area of influence generated by the project area.
Sub-Consultant – Who the prime Consultant sublets part(s) of the design contract.
SOW – Scope of Work

SWPPP – Storm Water Pollution Prevention Plan

Implied Terms

In order to avoid confusing repetition of expressions in this Scope of Work, it is provided that whenever anything is to be required, directed, specified, authorized, furnished, given, designated, permitted, reserved, approved, disapproved, accepted, or rejected, it shall be understood as if the expression were followed by the words "by the Project Manager" or "to the Project Manager"

Whenever anything is to be performed, designed, computed, calculated, analyzed, determined, evaluated, surveyed, obtained, established, contacted, estimated, investigated, prepared, developed, delivered, collected, and/or recorded, it shall be understood as if the expression were followed by the words "by the Consultant (either prime or sub)" or "to the Consultant (either prime or sub)."

Coordination of Scope of Work

The Scope of Work and Professional Services Agreement are essential parts of the project, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete package.

Checkpoints or milestones have been established at various stages that require approval of specific project information. These checkpoints are:

30% Design Review Submitted on (10-27-2022)
75% Design Review Submitted on (03-23-2023)
95% Design Review Submitted on (07-20-2023)
99% Design (Right of Way Plans) Submitted on (10-26-2023)

1.0 GENERAL PROVISIONS

1.1 Progress Meetings & Meridian Task Force Meetings

Products and Deliverables

- Kick-Off Meeting
- Milestones Meetings and Agendas
- Draft Meeting Minutes/Summary
- Final Meeting Minutes/Summary

ACHD Responsibilities

- Schedule and provide facility for progress meetings
- Review and approve summary and action items

Assumptions

- The project is expected to be eighteen months in duration
- Eighteen progress meetings are assumed and additional meetings must be approved by ACHD. Each meeting will last one hour with an additional hour budgeted for each meeting for Consultant PM to prepare agendas and meeting minutes. Consultant PM and two other Consultant staff will attend progress meetings. Precision, Forsgren, Terracon, and Bionomics will attend as invited for specific meeting discussions, estimate effort is in the labor estimate.
- ACHD will review and approve summary within one week
- Four City of Meridian Task Force meetings are assumed. Each meeting to last two hours with additional hour for each meeting to prepare. Consultant PM and one subconsultant will attend.
- Action items will be completed by due date

1.2 Project Administration

Products and Deliverables

- Time-scaled logic diagram (Gantt Chart), updated monthly and submitted with monthly invoicing
- Monthly Project Status Report (updated monthly and included with invoice)
- Earned Value Report
- Invoice (PDF emailed to invoices@achdidaho.org) which includes a table on the first page dividing total invoice amount into project sub-numbers based on these percentages:

ACHD Responsibilities

- Review and approve Schedule, Invoice and Monthly Project Status Report

1.3 ACHD Standards

All projects shall follow the ACHD Policy Manual. Refer to section 3004 ROADWAY DESIGN STANDARDS. Where both minimum and desirable values are provided, every reasonable effort shall be made to achieve the desirable standards. Any design exception must be approved by ACHD in writing. The roadway widths adopted by ACHD and identified on the Master Street Map shall serve as the basis for beginning evaluation. If the proposed width or other standard is less than ACHD standards, it must be documented, justified, and approved by ACHD.

Additionally, the following standards shall be used:

- ACHD Livable Street Design Guide
- Ada County Master Streets Map
- ACHD Complete Streets Policy
- AASHTO Guide for Flexibility in Highway Design

- Roundabout Application Guidelines for Ada County
- ACHD CAD Standards
- Green Stormwater Infrastructure (GSI) Guidance Manual
- Stormwater Management Pond Revegetation Guidance Manual
- The I-84 Overpass Bridge is required to meet ITD requirements and will utilize the ITD Standards listed below. If any of the following ITD Standards conflict with ACHD Standards then ITD standards will take precedent and be utilized on the I-84 Overpass Bridge design, plans, and specifications:
    - ITD LRFD Bridge Design Manual
    - AASHTO LRFD Bridge Design Specifications, 9th Edition. Unless a more current version is adopted by ITD at time of the Situation & Layout approval.
    - The current version of the ITD Standard Specifications in use by ITD at time of Situation & Layout approval will be utilized for bridge construction.
    - Bridge plans will be prepared in accordance with ITD ORD format in MicroStation.

2.0 PUBLIC INVOLVEMENT

2.1 Outreach (Not in Scope of Work)

2.2 Virtual Public Meetings

Products and Deliverables

- Preparation for meetings including pre-PIM
- Meeting materials (agenda, display boards, etc.)
    - Any exhibits to be on project website must be ADA compliant for viewing online
- Plan view display board converted to 11”x17” PDF(s)
- Consultant will design public involvement notification mailers in Adobe InDesign or Illustrator and provide working files and links to ACHD once finalized.
- Consultant will prepare a brief comment summary outlining themes from what was heard from the public as well as an executive summary in an infographic format.

Assumptions

- Two virtual public meetings will be held. PIM 1 will be at concept and PIM 2 will be during the design phase.
- ACHD will review and approve all public involvement notification mailers;
- ACHD will provide the following advertising materials:
    - Sandwich boards, newspaper ads, social media posts
- ACHD will advertise meetings
- Consultant will prepare two (2) Esri ArcGIS Online StoryMap (StoryMap) or equivalent, meetings (including an online comment form) to present information to the public and gather feedback/comments.

- Exhibits:
  - Visualization exhibits/renderings/sliders will be created for public meetings that extend beyond the typical roll plots over an aerial.
  - Printable versions of exhibits/engagement effort and survey will be provided to ACHD for those that request printed information be mailed to them. The printable format will mirror what is seen online and will be high quality.
  - All materials will be ADA compliant.
- ACHD will be responsible for printing and postage of notification materials and follow-up letters

3.0 LOCATION SURVEYING AND MAPPING

3.1 Project Control

- Coordinates for all survey data including topographic data, Right of Way data, monuments, control points set and found, benchmarks, and all mapping shall be provided to ACHD on the Ada County GIS Coordinate System which is a modified state plane projection unique from standard Idaho State Plane Coordinate system.
- Calibration points shall be set outside of the construction limits to form a box around the length and width of the project. Four (4) calibration points shall be set for projects under 2,000 linear feet, two before the beginning of construction and two past the end of construction. On projects over 2,000 feet, an additional two monuments will be set near the middle of the project (outside the construction limits). Intersection projects will require placement of five (5) calibration points. One at the limits of each intersection leg and one near the center of the intersecting roadways. The calibration points shall be a minimum of a ½ inch rebar with control cap. The monuments must have Ada County GIS coordinates and the elevation shown for each monument. Elevation shall be based on the North American Vertical Datum (NAVD) 88.
- Temporary Benchmarks (TBM's) shall be set at intervals of approximately 500 feet. The TBM's shall be established in locations which minimize disturbance during construction and must be easily accessible to the contractor and/or surveyor. Monuments within the roadway, i.e. centerline monuments, and intersection monuments as well as chiseled "X" in curbs which will be destroyed during construction shall not be used as TBM's.
- Additional control will be set on the north and south sides of I-84 at the location of the proposed bridge.

3.2 Boundary Survey and Monument Preservation

- Right of Entry letters prepared and delivered to ACHD for review and approval. After ACHD approval, the letters shall be delivered to the property owners by the consultant at least 7 days before survey activities begin.
- Request Title Reports for approximately 36 parcels; parcel numbers and name of owners will be included in request.

- Perform research of ROW plans, records of surveys, subdivision plats, corner perpetuation and filing forms (CP&Fs), National Geodetic Survey (NGS) data records for use in determining existing right-of-way and monument preservation per Idaho Code (IC) 55-1313.
- Perform a boundary survey to determine existing rights-of-way and monuments of record and not of record to be used in right-of-way acquisition and monument preservation.
- Prepare descriptions and exhibits for approximately 36 property acquisitions.
- Monument property corners of property acquisitions and prepare and record, a record of survey per Idaho Code (IC) 55-19. Property corners will be monumented on acquired parcels. Permanent easements will be monumented at the discretion of the professional land surveyor. Record of Survey cannot be completed until ACHD provides copies of all the recorded documents.
- Provide a monument preservation control sheet with required actions.
- Prepare an existing Right of Way and property ownership base map including available easement data.
- Right of way/appraisal staking –Staking includes existing right of way lines, proposed right of way acquisitions and all easements including temporary easements. Lines shall be staked according to ACHD survey standards:
    - Existing Right of Way – Red flagging or paint
    - Proposed Right of Way – Orange flagging or paint
    - Permanent Easement – Yellow flagging or paint

  Temporary Easement – Blue flagging or paint

3.3 Topographic Survey and Base Map

- Request to ACHD and digline for utility locates. Hire private utility location company to mark existing underground utilities.
- Base mapping for design and digital terrain model of existing ground and features will be developed using LiDAR data collected for this project along an approximate 300-foot-wide corridor for the length of the project.
- Provide supplemental topographic surveying to include visible and marked utilities, two water crossings, minor canal cross sections, bridges, potholes, and items not able to be located with the LiDAR data.

Products and Deliverables

- All Surveyors, Consultants and Contractor personnel working on or near school property must fill out the National Sex Offender Registry.

ACHD Responsibilities

- Review, approve, sign, and deliver the right of entry letter back to the consultant.
- Supply Title Reports within 30 days of request, or as they are received, via ACHD's PWA site, notifying Consultant when uploaded.

- Provide utility facility maps to Consultants and transmit design review drawings to municipalities, utility companies, and irrigation districts.
- Provide additional title reports upon request.
- ACHD will provide consultant with all old right of way plans, if any.

Assumptions

- The roadway and Right of Way mapping limits consist of a corridor approximately 300-feet wide, centered on the section line. Additional survey width may be required to identify property features (i.e. fence lines) along project corridor. Features will be surveyed beyond the fence lines where feasible and relevant to the project and will be included in right of entry letters. Topographic survey for driveways will go back 100 feet or to the garage door, whichever occurs first.
- All survey data including found and set monuments shall be converted to the Ada County GIS Coordinate System which is a modified state plane projection unique from standard Idaho State Plane Coordinates. All mapping provided to ACHD shall be on the Ada County GIS Coordinate System. A list of physical monuments with the corresponding Ada County GIS coordinates is available at https://adacounty.id.gov/Development-Services/Surveying-Division/GPS-Control.
    - The feature location surveys for determination of x,y,z coordinate values, shall comply with FGDC Geospatial Positioning Accuracy Standards, Part 4: Standards for Architecture, Engineering, Construction (A/E/C), and Facility Management.
- This scope of work assumes 36 parcels may have Right of Way impacts and require legal descriptions and accompanying sketches, exhibits, and record-of-survey.
- All original field notes and computer files shall become the property of ACHD.
- No paper copies of the base map will be provided.
- The First Order National Geodetic Survey (NGS) monument located within the project will not be relocated as part of this project.

4.0 30% DESIGN

The minimum information required on 30% design review plans shall show existing facilities/features (including utilities) and location and general design features of planned facilities including existing and proposed right of way. This includes but is not limited to line and grade and other related items that will affect project design. These plans should be 30% complete at minimum.

4.1 Geotechnical Investigation

Terracon will perform field explorations and laboratory analyses of existing soils and will prepare geotechnical engineering reports for the foundations of the proposed bridges, MSE walls, embankments, drainage improvements, and pavements.

Field Exploration

Terracon's field exploration will include the following:

- New Overpass - A total of three borings (one at each abutment and one at the center pier) will be drilled to depths no greater than about 100 feet to provide information for the new bridge foundations.
- MSE Walls and Embankments - A maximum of eight borings will be drilled in areas of the proposed MSE walls at the approach embankments. These borings will be drilled at a horizontal spacing of approximately 200 feet to maximum depths of about 20 to 40 feet or to auger refusal, depending on the height of the wall at the boring location.
- 10-Mile Creek Bridge - A total of two borings (one at each abutment) will be drilled to depths no greater than about 20 to 30 feet, or to auger refusal, to provide information for the new bridge foundations.
- Pavement Improvements – Subsurface information from the borings drilled for the structures will also be used for design of the new pavements, as appropriate. In addition, four to five pavement borings will be drilled to a depth of about 5 feet to obtain samples of subgrade soils for pavement design. These borings will typically be spaced about 500 to 700 feet from other borings.
- Stormwater Management Areas – No more than three borings will be drilled in proposed stormwater management areas to explore the subsurface soil conditions and to construct piezometers for future groundwater measurement. The piezometers will be constructed in each boring using two-inch I.D. PVC and will be protected with a flush-mount vault and locking cap. The piezometers will extend to a maximum depth of about 17½ feet or to auger refusal, whichever occurs first. No more than three infiltration tests will be performed. See below for a discussion regarding infiltration testing services.

Terracon will use a subcontracted traffic control provider during our drilling operations. Terracon will submit permit applications to ACHD and ITD (including traffic control plans) for work to be performed in the right of way.

The borings will be logged by a field engineer or geologist, and samples will be collected during drilling. The borings will be backfilled in accordance with IDWR requirements.

Prior to drilling, Terracon will mark the proposed boring locations and contact Digline, the local "one-call" utility locate service, to coordinate the identification of buried utilities near the proposed boring locations. If there are existing on-site utility lines that will not be marked by this service, these utilities will need to be marked by the project or property owner prior to drilling activities. The services of a private utility locating subcontractor are not included in our services, and we cannot be responsible for utilities that are not marked.

Groundwater Measurements

In accordance with the ACHD Policy Manual, groundwater measurements will be taken twice monthly from approximately mid-April through the end of October 2022.

Infiltration Testing

Details regarding the project's stormwater management facilities have not yet been developed. Once details of specific stormwater management facilities are determined, up to three infiltration tests will be performed at specifically selected stormwater management locations using a method described in Appendix B of Section 8200 of the ACHD Policy Manual. The specific test method(s) will be selected once the type(s), depth(s), and locations of the stormwater facilities are known and considering access and public safety at the selected locations. For budgeting purposes, we assume the infiltration tests will consist of in-situ small-scale pilot infiltration test performed in backhoe test pits. We assume these infiltration tests will be outside of roadway and shoulder areas and that traffic control will not be required to construct or perform the tests.

Laboratory Testing

Laboratory testing will be conducted on representative samples of soil obtained from the field exploration, and may include: moisture content, gradation, Atterberg limits, pH, minimum resistivity, consolidation, R-value, and moisture-density relationships. The actual tests performed will depend on the specific soil conditions encountered. At the end of our services, samples will either be disposed of or picked up by ACHD for storage.

Geotechnical Engineering Analysis

Geotechnical engineering analyses that will be performed for the three bridges, MSE Walls, new pavements, embankments, and stormwater management testing include:

- Evaluate soil samples and laboratory data for variations in pavement subgrade support.
- Reduce traffic data to evaluate design traffic loading for pavement reconstruction.
- Develop a flexible pavement section design for the proposed roadway reconstruction using ACHD design procedures.
- Evaluate driven pile foundation lateral and axial capacities for the overpass structure. A spread footing foundation type and a pile foundation type will both be evaluated for the pier.
- Evaluate spread footing bearing capacities for the structures at the Kennedy Lateral and 10-Mile Creek.
- Evaluate bearing capacity for contractor design of MSE Walls.
- Evaluate settlement of spread footings, MSE walls, and embankments.
- Evaluate lateral earth pressures.
- Evaluate seismic site class based on the encountered soil conditions.

Geotechnical Engineering Reports

Terracon will prepare a total of two reports, as described below:

- A report meeting the requirements in the ITD Materials Manual for a Geotechnical Engineering Report will be prepared for the proposed overpass and associated MSE retaining walls and approach embankments.
- A report will be prepared that includes geotechnical engineering recommendations for the proposed structures at the Kennedy Lateral and Tenmile Creek, for the proposed new flexible pavements for Linder Road, and for the proposed stormwater improvements.

This report will not meet the requirements for an ITD Geotechnical Engineering Report or Roadway Materials Report.

A draft version of each report will be submitted for review by the design team and ACHD. Review comments will be addressed and incorporated, as appropriate, into a final version of the report. The scope and budget do not include additional revisions after submittal of the final report.

Preparation of Geotechnical Related Special Provisions

Terracon will develop geotechnical related special provisions, as needed for the project.

Review of Geotechnical Aspects of Plans and Special Provisions

Terracon will review the geotechnical aspects of the project plans and special provisions. Results of this review will be presented in a letter to Keller Associates, Inc.

Products and Deliverables

- Draft Geotechnical Engineering Report for the proposed overpass and associated MSE walls and approach embankments. (This report will meet the requirements in the ITD Materials Manual for a Geotechnical Engineering Report).
- Draft geotechnical engineering report for the proposed Kennedy Lateral and Tenmile Creek structures, pavements, and stormwater management improvements. (This report will not meet the requirements in the ITD Materials Manual for a Geotechnical Engineering Report or Roadway Materials Report).
- Final Geotechnical Engineering Report for the proposed overpass and associated MSE walls/embankments that incorporates ACHD and ITD review comments, as appropriate.
- Final geotechnical engineering report for the proposed Kennedy Lateral and Tenmile Creek structures, pavements, and stormwater management improvements that incorporates ACHD review comments, as appropriate.
- Groundwater measurements from the piezometers. Groundwater measurements taken after submittal of the final geotechnical engineering report will be reported via email.
- Geotechnical related special provisions will be prepared by Terracon for inclusion in the design submittals.
- Letter that includes Terracon's comments from review of the geotechnical aspects of the project plans and special provisions.

ACHD Responsibilities

- Obtain permission from owners for field exploration on private property, if applicable.
- Waive fees associated with the ACHD Temporary Highway Use Permit for borings drilled in ACHD right of way.
- Supply traffic volume information for pavement design.

Assumptions

- The boring and piezometer locations will be accessible with a truck-mounted drill rig.
- Drilling and other work within ACHD right of way will be performed during the daylight hours of 9:00 am to 4:00 pm. Fieldwork within ITD right-of-way will require nightwork between 10:00 pm and 5:00 am. We assume ITD will waive the permit fee for these services.
- Private utility location services are not included in this scope. If private utilities not identified by DigLine are located near the exploration locations, these should be located by the property owner. If a private utility locating contractor is needed to identify utility locations on private property, a supplemental agreement will be needed.
- MSE walls will be constructed at the overpass approaches on both sides of Linder Road. MSE walls will have lengths no greater than 500 feet.
- No more than three infiltration test locations will be required. Small-scale pilot infiltration tests will be performed in private property. If infiltration tests will be located in existing right of way, falling head borehole test methods will be used.
- After completion of drilling and infiltration testing, the boring and infiltration rate test locations will be surveyed by the project surveyor.
- The intersections of Linder Road with Franklin Road and Overland Road will not be included in this project.
- Rigid pavement section and pavement rehabilitation alternatives will not be provided, and a life cycle costs analysis will not be performed.
- The overpass bridge may be supported on pile foundations, so it can be designed with integral abutments. The Kennedy Lateral and Tenmile Creek structures will be supported on shallow foundations.
- ITD Materials Report formats will not be required for the Linder Road pavement improvements or the structures over the Kennedy Lateral and Tenmile Creek, and ITD will not review the report for these features.
- Keller will prepare the Foundation Investigation Plats for the overpass structure and associated MSE walls for inclusion in the ITD Geotechnical Engineering Report.

4.2 Not Used

4.3 I-84 Overpass Bridge Alternate Study

The Bridge Alternate Study for the I-84 Overpass will be completed as an ITD Type, Size & Location (TS&L) Report in accordance with applicable sections of ITD Bridge Design Manual. After approval of the TS&L Report, an ITD Situation & Layout (S&L) plan set will be prepared for approval by ITD.

Draft TS&L Report – A TS&L report shall be prepared that considers up to 4 prestressed concrete options. Steel plate girder options will not be considered given the higher cost per square foot listed in the published ITD bridge type costs. The anticipated options are:

- Option 1 – 2-span prestressed concrete girder bridge with cast-in-place deck and MSE wall abutments. This option has shorter length, thinner height girders than option 2.
- Option 2 – 2-span prestressed concrete girder bridge with cast-in-place deck and 2:1 fill slope abutments. This option will have longer length, deeper girder height than option 1 but eliminate the need for MSE walls.
- Option 3 – 2-span prestressed concrete deck bulb tee girder bridge with MSE wall abutments. This option is similar in length and configuration to Option 1. The deck bulb tee girders will allow for faster construction and have shorter length, thinner height girders than option 4.
- Option 4 – 2-span prestressed concrete deck bulb tee girder bridge and 2:1 fill slope abutments. This option is similar in length and configuration to Option 2. The deck bulb tee girders will allow for faster construction and have longer length, deeper height girders than option 3.

As part of the TS&L Report, prepare conceptual sketches of the 4 bridge options. The conceptual sketches will be basic S&L sheets. The plan views are anticipated to be outlines of the deck and piers with minimal dimensioning and detail (essentially outlines with no fine detailing). The elevation view will be similar with basic outline of the superstructure and approach fills/MSE walls with no fine detailing. A typical section of the bridge will also be included. 1 sheet per option is anticipated (total of 4 sheets). The conceptual sheets will be incorporated as an appendix into the report. After internal QAQC, the Draft TS&L Report will be submitted to ITD and ACHD for review and comment.

Final TS&L Report – A review meeting will be held to discuss comments by ACHD and ITD on the Draft TS&L Report. After this meeting, the comments from ITD and ACHD will be incorporated, and a stamped Final TS&L Report will be submitted to ITD and ACHD for approval.

Draft S&L Plans – Situation & Layout (S&L) plans will be prepared for the selected bridge alternative from the TS&L Report. The Preliminary S&L will be submitted for ITD and ACHD to review and comment. The anticipated sheet list is per the following table:

Anticipated Bridge Sheet List for S&L Submittal

Sheet Description	# of Shts
Situation and Layout	1
Sheet Index, Quantities, & Vicinity Map	1
Design and General Notes	1
Foundation Investigation (by Terracon)	2▲
MSE Wall Layout (if needed)	1

Pier Plan & Elevation		1
Typical Section & Details		1
	Total Sheets =	6▲

Final S&L Plans – A review meeting will be held to discuss comments by ACHD and ITD on the Draft S&L plan set. After this meeting, the comments from ITD and ACHD will be incorporated, and a Final S&L plan set will be submitted to ITD and ACHD for approval. Approval of the Final S&L Plan set will constitute approval to start 95% design for ACHD (Final Bridge Design for ITD's process).

Products and Deliverables

- Draft TS&L Report
- Final TS&L Report
- Draft S&L Plan Submittal
- Final S&L Plan Submittal

ACHD Responsibilities

- Review and Comment

Assumptions

- Perform a QC (check) and QA (Sr. Independent Review) of the TS&L Report and S&L Plans per ITD Bridge requirements and internal QAQC policies.
- Up to 4 bridge alternates will be evaluated.
- As this is a new crossing, the bridge will be constructed with no construction traffic accommodation and no need for any type of phased construction.
- The Roadway designers will provide appropriate end terminals that tie into the bridge railings at the end of the bridge. No modification to ITD bridge railing standards is anticipated.
- Horizontal and vertical alignment modeling and roadway related quantities for the TS&L and S&L submittals will be provided to roadway design team.

- I-84 roadway typical section, clear width, and height under the bridge is anticipated to be very similar to the recently constructed Cloverdale Overpass.
- MSE wall configuration, if used, is anticipated to be similar to the recently constructed Cloverdale Overpass.
- Terracon will provide a geotechnical report that meets the requirements of ITD's Geotechnical Engineering Report. Keller will provide the Foundation Investigation bridge plan sheets in accordance with ITD CAD standards.

4.4 Tenmile Creek and Kennedy Lateral Bridges

ACHD has determined both structures will be precast concrete structures. The Kennedy Lateral and Tenmile Creek will be replace with concrete box and concrete stiff-leg structures. A Situation & Layout (S&L) plan set will be prepared for approval by ACHD.

Draft S&L Plans – Situation & Layout (S&L) plans will be prepared for the in-kind structure. The Preliminary S&L will be submitted to the Irrigation District and ACHD for review and comment. The anticipated sheet list is per the following table:

Anticipated Sheet List for S&L Submittal

Sheet Description	# of Shts
Situation and Layout (Each Crossing)	2
Design and General Notes	1
Foundation Investigation (by Terracon) Tenmile Only	1▲
Total Sheets by =	4▲

Final S&L Plans – A review meeting will be held to discuss comments by the Irrigation District and ACHD on the Draft S&L plan set. After this meeting, the comments from the Irrigation District and ACHD will be incorporated and a Final S&L plan set will be submitted ACHD for approval. Approval of the Final S&L Plan set will constitute approval to start 75% design for ACHD .

Products and Deliverables

- Contact reports for meetings with Irrigation Districts
- Draft S&L Plan Submittal
- Final S&L Plan Submittal

ACHD Responsibilities

- Review and Comment

Assumptions

- No bridge alternates will be evaluated, replace in-kind.

4.5 Concept Roadway Design

Design conceptual roadway geometry for the proposed improvements. Consultant will prepare roll plot of the concept design based on the typical section showing lane widths for approval by ACHD. Consultant will prepare two (2) alternatives, one that is centered about the sections line and the other one with the centerline shifted west of section line. Roll plots will identify concept level right-of-way impacts, utility impacts, and other design constraints of each alternative. Attend review meeting with ACHD to discuss the alternatives.

Products and Deliverables

- Plan view roll plots of roadway alternatives

ACHD Responsibilities

- Transmitting plans sets to project team.
- Provide internal review of deliverables

Assumptions

- Preparing additional alignment and typical section alternative beyond this scope of work will be completed as additional services.
- No roadway lanes will be added at the existing intersections except for adding a lane for the south leg of the Linder/Franklin intersection.

4.6 Traffic

Precision will identify signal pole locations and mast arm lengths at the intersections and ensure sufficient right-of-way is provided to meet ADA requirements.

Keller will prepare a traffic operations report for the intersections of Linder Rd and Overland Rd, and Linder Rd and Franklin Rd. Use existing intersection counts and COMPASS travel demand model output to calculate opening-year and forecast-year turning movement projections by the Furness Method. Use Synchro to calculate delay, levels of service, and required turn bay lengths. Prepare the traffic report in technical memorandum format.

Products and Deliverables

- Draft Traffic Report
- Final Traffic Report

ACHD Responsibilities

- Provide COMPASS travel demand model projections for calibration year and forecast year (model runs with Linder Road overpass included)
- Provide existing traffic counts and acquire new counts as ACHD determines necessary.

Assumptions

- Neither signal warrant nor roundabout analyses will be needed since the traffic signal and PHB locations are already established.
  L2 will provide the existing AM and PM peak hour intersection turning movement counts at each major intersection, 24-hour directional counts at each intersection leg and vehicle classifications where possible.

4.7 Hydraulic/Stormwater Design

Project designs to comply with the Clean Water Act, NPDES requirements and the currently approved ACHD Section 8000 Stormwater policy and Section 8200 Stormwater Design Manual. All projects should use the GSI Guidance Manual to determine the feasibility of GSI for the project area.

Consultant will depict the findings of the preliminary stormwater analysis on a roll plot as part of the 30% design review package. Storm sewer networks, surface collection and discharge facilities, inlets, and culverts will be depicted on the plans. Stormwater report to be included in Task 5.3. The plans will include:

- Topographic map of existing contours
- Existing surface water features
- Existing stormwater and irrigation conveyance features within the project limits

Tenmile Creek Hydrologic/Hydraulic Analysis

Use existing FIRM map and study, obtain existing HEC-RAS model from the City and re-model with the proposed replacement structure. Prepare a no-rise certificate and floodplain development permit.

Kennedy Lateral Hydraulic Analysis

Nampa Meridian will provide the required flow. Use HY-8 to model the flows and size the structure.

Products and Deliverables

- Preliminary Stormwater layout

ACHD Responsibilities

- Review and Comment
- Review and approve all contact with irrigation districts

Assumptions

- Detailed drawings will not be prepared
- HEC-RAS electronic files will be provided by City of Meridian

4.8 Irrigation Facilities

Gravity irrigation conveyance systems exist on both sides of Linder Road for much, if not all, of the portion north of Interstate 84 to Franklin Road. The existing systems are old and in various levels of disrepair but seemingly still functional. Irrigation water is supplied by one or more irrigation canals and may flow north or south depending on the location along Linder Road. There are large, inverted siphon pipes in areas that connect irrigation box to irrigation box. Developed subdivisions on the east side of Linder Road would likely have pump stations supplied by this irrigation network. Shallower distribution pipes and ditches provide service to individual parcels on the west side of Linder Road.

Gravity irrigation coordination and design will require communication with the Nampa Meridian Irrigation District to fully understand the supply and distribution parameters of the existing systems. Coordination with individual property owners may be necessary for design of the new system. Preparation of separate gravity irrigation plan and profile sheets is not included in this scope..

Consultant shall complete an inventory of the existing irrigation facilities within the project limits and participate in a site visit with the appropriate irrigation district personnel. Consultant to identify drains and canals within project limits by onsite investigation and evaluation.

Products and Deliverables

- Irrigation District Site Visit Summary, PDF copy.
- Inventory of existing irrigation systems included with the 75% design review package.

ACHD Responsibilities

- Conduct all contact with irrigation districts or approve Consultant to make contact.

Assumptions

- One (1) Consultant staff will attend site visit with irrigation district, assume two (2) hours for visit and travel.
- Irrigation districts or owners will provide design flows and maximum flows for their facilities to be used in design. Will also provide dates the water should be out of the facilities to allow construction.
- An irrigation report will not be required.
- Irrigation facilities will be shown on plan and profile sheets.
- The existing irrigation pump station east of Linder and at the north side of I-84 will not be relocated.

4.9 Environmental Evaluation

Cultural Resources

Conduct background research and cultural resources field survey; prepare an Archaeological and Historical Survey Report (AHSR) to assist compliance with Section 106.

The Cultural Resources Survey will include background research, field survey and preparation of an archaeological and historic survey report. Sites Record Search and Literature Review will include request of a site record search from the Idaho State Historic Preservation Office (SHPO) regarding the project Area of Potential Effect (APE). This is a records review for previously recorded historic and prehistoric sites identified by the SHPO within a half mile of the project corridor. Conduct research in city and county records for information pertaining to prehistoric and historic properties within the APE.

Field Investigation and Intensive Survey

Conduct a field investigation for prehistoric and historic archaeological resources over the project area to identify, record, and evaluate cultural resources in or abutting the project APE and to evaluate their eligibility for the National Register of Historic Places (NRHP).

The intensive-level survey will be conducted in accordance with the standards of the Idaho State Historic Sites Inventory Manual and the Idaho Historic Sites Inventory Automated Database: Manual of Instruction for Data Entry.

Archaeological and Historic Survey Report (AHSR)

Prepare an AHSR that includes a discussion of pre-field research, field methods, survey results, and cultural resource survey maps. The AHSR will identify prehistoric and historic cultural properties, recommend NHRP eligibility and assess the project's effect on each. A draft report will be submitted for review and comment and then a final report will be submitted to ACHD, who will coordinate with SHPO for concurrence.

Deliverables

AHSR report for submittal to ACHD with PDF of report, site forms, GIS shape files, raw digital photos and ISHI database.

ACHD Responsibilities

- Identify parcels which will be impacted by the installation of any storm water controls.

Assumptions

- This scope of work will meet the requirements of the EPA Appendix E-Historic Property Screening Process.
- This scope of work will meet the requirements of Joint Application Submittal.
- In an effort to save time and costs, the environmental evaluation for the roadway project will be combined in the same report as the intersection companion project's report.

- Historic sites documentation will include Tenmile and Kennedy Lateral and up to three historic architectural sites.

Aquatic Resource Delineation

All such waters and wetlands will be mapped and delineated according to the 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Manual.

A. Background Research. Conduct and compile background information on aquatic resources from existing data sources such as U.S. Fish and Wildlife Service National Wetlands Inventory maps, topographic maps, aerial photographs, soil surveys, and previous studies conducted.

B. Aquatic Resource Survey and Delineation. Conduct formal wetland surveys and delineation of all wetlands within the project area. Include the data (wetland polygons, soil pits, streams/irrigation features, and bridge tie in locations) in a layer that can be utilized in the environmental GIS.

C. Wetland Data Forms. As required for inclusion in the Aquatic Resource Delineation Report, wetland data forms will be completed for each wetland delineated in the field. Wetland information will be recorded on the appropriate regional supplement.

D. Wetland Mapping/GIS. The Aquatic Resource Delineation Report will include vicinity map and aerial photographs of the project area with identified waters and wetlands clearly shown. Data collected in the field (including waters, wetlands, soil pits, and bridge structures over waters) will be provided to the client for incorporation into project files.

E. Aquatic Resource Delineation Report. Prepare an Aquatic Resource Delineation Report describing the methods used, jurisdictional and non-jurisdictional wetlands identified, and general characteristics of vegetation, soil, and hydrology in the vicinity. In addition, site photographs of each water and wetland identified will be included in a separate appendix. A Preliminary Aquatic Delineation Report will be prepared and submitted to ACHD for review. All issues and comments will be addressed and resubmitted. The Draft Aquatic Resource Delineation Report will then be forwarded by ACHD on to U.S. Army Corp of Engineers (USACE) for review and comment. After all comments have been addressed, a Final Aquatic Resource Delineation Report will be submitted to USACE for issuance of the Jurisdictional Determination.

F. Technical Review QA/QC. Prior to submitting any aquatic resource delineation documents, internal QA/QC shall be completed by Bionomics staff.

G. Comment Response. The draft report will be submitted to the client and ACHD will submit USACE for review. Comments will be addressed, and the revised report will be resubmitted for review and concurrence. Should either agency staff require report edits or revisions of the project area, the review cycle for each is renewed at the time of the submitted report changes.

H. Coordination and Consultation. Personal and telephone meetings will be held and documented throughout the duration of the project.

Minimum Deliverables

- Aquatic Resource Delineation Data
- Draft Aquatic Resource Delineation Report
- Final Aquatic Resource Delineation Report

Assumptions

- The Aquatic Resource Survey and Delineation will be completed during the growing season (approximately May – September) as required by the USACE.
- This scope of work does not include potential mitigation.

Joint Permit Application

The consultant shall prepare the application for a joint permit including application, narrative, graphics with dimensions, quantities, ordinary high-water mark, plan and cross sections as needed per current guidelines. Pages shall be numbered and labeled with appropriate title blocks. Preparation of the application shall follow the current Joint Applications for Permits – Applicant Information Guide.

Assumptions

- This scope of work assumes a Nationwide Permit will be completed. If an individual permit is necessary, a new scope of work will be necessary to complete those services.
- Plan and cross section layouts to support the application will be prepared by Keller. In addition, Keller will assist Bionomics in determining the quantity of impacts associated.

Minimum Deliverables

- Draft Joint Permit Application
- Final Joint Permit Application

4.10 30% Design Submittal

This task includes performing an internal review of all deliverables and preparing the submittal documents. The Consultant will deliver one paper and one PDF copy.

Products and Deliverables

- All deliverables will be uploaded to ACHD's PWA site
  - *PWA File Folder: 13 30 Percent Design-CPD20/Design Submittal-CPD20.20*
- Roll Plot style PDF with typical section
  - Including utilities in color (use ITD standards) – At Utility Coordinator's Direction
- Request for design exceptions
- Cultural/Historic/Threatened & Endangered Species Memo *[*
- 30% Cost Estimate on the ACHD Spreadsheet and uploaded into B2W per ACHD User Guide

- 30% ROW Required Square Footage (ROW, TE, PE) in Excel
- PDFs of all deliverables (no hard copies of any deliverable required)
- All native files including CAD files (insert and bind all x-refs into one CAD file)

ACHD Responsibilities

- Transmitting plan sets to project team
- Perform internal review of all deliverables
- Utilize BlueBeam for the review

Assumptions

- The engineer will adhere to the ISPWC item number process, as well as the Special Provisions (SP), and ACHD's Standard Special Provisions (SSP).

4.11 30% Review Meeting

Products and Deliverables

- Review Meeting Notes
- Maintain Comment/Response Matrix

ACHD Responsibilities

- Schedule and Host Meeting
- Provide Comments – One (1) week prior to the meeting

Assumptions

- ACHD will complete the review within two (2) weeks of receiving the 30% Design Submittal.

5.0 75% DESIGN

The minimum information required on a 75% design review plans shall show existing facilities/features, locations, and general design features of planned facilities. This includes but is not limited to line and grade and other related items that will affect project design. These plans should be at 75% complete at minimum.

Products and Deliverables

- Utility conflict evaluation
- Potholing. This scope of work assumes 24 potholes will be required. Additional potholing will be provided as a supplemental service.
- Pothole location map – to be reviewed and approved by ACHD Utility Coordinator prior to potholing commencing.

5.1 75% Traffic Signal Design

Precision will conduct traffic signal field inventories and design the initial layout of the traffic signals at the Linder Rd / Overland Rd and Linder Rd / Franklin Rd intersections. The design will also include two (2) PHB signals located on Linder Rd at the Tenmile Creek path crossing and the intersection of Waltman St. The plans will be drafted showing new signal poles, mast arms, and luminaires as necessary for the proposed improvements

5.2 Roadway Design

The minimum information on the 75% design review plans to show existing facilities/features and location and general design feature of planned improvements.

5.3 Hydraulic/Stormwater Design

Stormwater Calculations

Consultant will use the preliminary information from Task 4.7 and advance calculations, including delineating existing, pre-development drainage basins, identifying post-development drainage basins, hydrologic values, inlet spread and capture for each inlet structure, seepage bed sizes and locations, and estimate pipe sizes and culvert sizes for minor crossings for the selected option. The drainage infrastructure will be designed in compliance with ACHD standards

Stormwater Report

Consultant will prepare the Draft Stormwater Report, including Design Life and Cost Analysis, for submittal to ACHD. After ACHD's review, Consultant will address all comments received and prepare the Final Stormwater Report.

5.4 Gravity Irrigation

Show the existing and proposed irrigation facilities.

5.5 Signing, Pavement Marking, Illumination

Consultant will develop signing and pavement marking plans in accordance with MUTCD and applicable state and local laws and ordinances. Consultant will develop illumination plans for the project, including continuous approach lighting on Linder Rd outside of the ITD bridge per ANSI/IES RP-8-14 and identifying a power source with Idaho Power. Consultant will design the interconnect improvements and coordinate with ACHD Congestion Management.

ACHD Responsibilities

- ACHD will coordinate and verify electrical service locations, beacons, and illumination with Idaho Power.

5.6 Agency and Utility Coordination

Consultant will coordinate with affected utility companies and appropriate agencies.

Requirements for Agency Agreements

Consultant will identify potentially needed cooperative agreements to address maintenance of landscaping, waterway crossings, design considerations, and other issues. Consultant will discuss tentative agreement with these agencies in cooperation with ACHD. Consultant will develop exhibits for interagency agreements.

Products and Deliverables

- Exhibits (2) for cooperative agreements, PDF copy

ACHD Responsibilities

- ACHD will set up and participate in meetings with all agencies regarding cooperative agreements.

5.7 Utility Plans

Consultant shall include existing utility information on the plans. Consultant will also review horizontal field survey designating subsurface utilities to the extent known as well as utility location updates.

Consultant will prepare final utility plans showing the locations of existing utilities and identifying conflicts. Design of relocated utilities will be provided by the utility owner if the utility is within the ROW.

Separate final utility plans will be prepared in color. Letter(s) and final utility plans will be prepared and submitted to the utility companies for review approval. ACHD and ITD will be copied on all correspondence with the utility companies.

Products and Deliverables

- Utility locations in base mapping
- Utility Plans, PDF copy

Assumptions

- Design of relocated utilities will be provided by utility owner if located within the ROW.
- ACHD will prepare utility waivers and/or final utility agreements, if required.
- Estimates of work will be provided by utility owner.

5.8 Temporary Traffic Control

Consultant will develop temporary traffic control plans for both Linder Road and I-84. Scope based on keeping the same number of existing lanes open during construction.

5.9 Pedestrian Detour Plan

Consultant will develop the temporary pedestrian detour plans.

5.10 Quantities and Construction Estimate

Team will tabulate quantities and prepare 75% construction estimates for the project.

5.11 75% Design Submittal

This task includes performing an internal review of all deliverables and preparing the submittal documents. Deliverable shall be in PDF format and set up a BlueBlue review session

ACHD Responsibilities

- Transmitting plan sets to irrigation districts, utility companies, and local agencies.
- Perform internal review of all deliverables in BlueBeam.

Products and Deliverables

- All deliverables will be uploaded to ACHD's PWA site
    - *PWA File Folder: 14 75 Percent Design-CPD90/Preliminary Design Submittal-CPD90.10*
- Title Sheet
- Typical Sections (4 sheets)
- Roadway Plan and Profile Sheets – Including stormwater/irrigation profiles and pothole information (30 sheets)
    - Include measurement on roadway plans from structure to new ROW line if less than 20'
- Total Ownership Map
- Total Ownership Table
- Signal Plan Sheets (6 sheets)
    - Consult with Utility Coordinator regarding power supply
- Signal Interconnect & Lighting Plans – Including ITS (15 sheets)
    - Consult with Utility Coordinator regarding power supply
- Signing and Pavement Marking Sheets (15 sheets)
- General Construction Staging/Phasing Plans/Utility Phasing Plans, (8 sheets)
- Advanced Construction Signing (2 sheets)
- Temporary Pedestrian Plans (2 sheets)
- I-84 Temporary Traffic Control Plans (25 sheets)
- I-84 Typical Section (1 sheet)
- I-84 Plans Sheets (2 sheets)
- I-84 Barrier Details (1 sheet)
- Concrete Joint Details (1 sheet)
- MSE Wall (Roadway) (12 sheets)
- Tenmile Structure (8 sheets)
- Kennedy Lateral Structure (8 sheets)
- 75% Utility Plans (use ITD standards) (15 sheets)

- 75% Cost Estimate on the ACHD Spreadsheet and uploaded into B2W per ACHD User Guide
- Cultural/Historic/Threatened & Endangered Species Memo
- 75% ROW Required Square Footage (ROW Fee, TE, PE) by Parcel (ROW Requirements Table) – on plans and Excel
- PDF's of all deliverables – PDF plans need to be to scale at 11"x17"
    - No hard copies of any deliverable required
- All native files including **One CAD File** (insert and bind all x-refs into One CAD File)

Assumptions

- The engineer will adhere to the ISPWC item number process, as well as the Special Provisions (SP), and ACHD's Standard Special Provisions (SSP) for roadway work and ITD item number process, as well as the Special Provisions (SP), and ITD's Standard Special Provisions (SSP) for overpass bridge and I-84 work.

5.12 75% Review Meeting

ACHD will provide comments and the review plan sets to the Consultant prior to the meeting. The Consultant shall compile comments on the Comment/Response Matrix and send draft to Project Manager prior to the meeting. The Consultant will attend the 75% Design Review meeting to discuss review comments. ACHD will make final decisions for conflicting review comments. Consultant will complete the Comment/Response Matrix after the 75% Design Review and submit to ACHD.

The Consultant will attend a plan-in-hand field review meeting and prepare notes summarizing field review comments and decisions made.

Products and Deliverables

- Review Meeting Minutes/Notes
- Maintain Comment/Response Matrix
- Plan-in-Hand Field Review Meeting Notes

ACHD Responsibilities

- Schedule and host Plan-in-Hand meeting
- Schedule and host Meeting
- Provide Comments – One (1) week prior to the meeting

Assumptions

- ACHD will complete the review within three (3) weeks of receiving the 75% Design Submittal

6.0 95% DESIGN

6.1 Roadway Design

Team will make modifications based on the 75% design review comments and prepare the 95% design. Roadway cross sections at 50-foot interval will be shown and include elevation changes at each driveway.

6.2 95% Design Submittal

This task includes performing an internal review of all deliverables and preparing the submittal documents. Deliverable shall be in PDF or electronic format. ACHD will be responsible for transmitting plan sets to irrigation districts, utility companies, and local agencies.

Plans	Number of Sheets
Title Sheet	*1*
Total Ownership Map	*2*
Vicinity Map/Survey Control	*8*
Roadway Plan (15) & Profile (15)	*30*
Intersection Details	*10*
Roadway Details	*10*
Drainage Details	*2*
Pond Details	*4*
SWPP Plans	*8*
Signing & Pavement Marking Plans	*15*
Sign Details	*2*
Traffic Signal Material Quantities	*2*
Traffic Signal Plans	*12*
Illumination Material Quantities	*2*
Illumination Plans	*15*
Illumination Details	*2*
Construction Staging Plans	*4*
Traffic Control Plans (Linder Rd))	*10*
Traffic Control Plans (I-84)	*25*
I-84 Plan Sheets	*2*
Concrete Joint Details	*1*
I-84 Typical Section	*1*
I-84 Barrier Details	*1*

Utility Plans	*30*
MSE Plans	*12*
Kennedy Lateral Plans	*8*
Tenmile Creek Plans	*8*
Project Control W/ Mon Perpetuation)	*4*
ROW Plans	*17*
Linder Overpass Bridge Plans (shown below)	*33*
Total Sheet Count	*281*

Products and Deliverables

- All deliverables will be uploaded to ACHD's PWA site
  - *PWA File Folder: 15 95 Percent Design-CPD50/Draft Final Design Submittal-CPD50.10*
- Title Sheet
- Typical Sections
- Roadway Plan and Profile Sheets
- Approach/Driveway Profile Sheets
- Detail Sheets
- Stormwater Plan and Profile Sheets
  - Including pond revegetation as outlined in the Stormwater Management Pond Revegetation Guidance Manual
- Irrigation Profiles
- Structure Plans (other than the I84 Overpass Bridge)
  - Initial Load Rating in accordance with ITD LRFD Design Manual Article 0.03. If the 2 canal crossings are precast structures, the load rating shall be done after shop drawings are approved. If the 2 canal crossings are cast-in-place structures, the initial load rating shall be done at the 95% design submittal.
  -
- I84 Overpass Bridge Plans
  - Final Design Structure Plans and Calculations: Design calculations shall be prepared on 8½"x11" sheets and shall be numbered and indexed. Plans shall be prepared in accordance with the guidelines of the ITD Bridge Design LRFD Manual. Forsgren will utilize a check print process to check design calcs and plan sheets as part of this task. Plans and Calculations shall be submitted to the ITD Bridge Section and ACHD for review. The following bridge sheets are anticipated:

I-84 Overpass Bridge Sheet List	
Plan Sheet Type	**No. of Sheets**
Situation & Layout	1
Sheet Index, Quantities, & Vicinity Map	1
Design & General Notes	1
Foundation Investigation	2
Footing Layout & Pile Notes	1
Abutment Details	3
MSE Wall Details	2
Pier Details	5
Girder Framing Plan	1
Deck Typical Section & Details	2
Prestressed Girder Sheet	1
Prestressed Girder Details	1
Future Utility Details (power & communication)	1
Approach Slab Details	2
42" Single Slope Concrete Parapet	1
Concrete Parapet for Combination Railing	2
Protective Pedestrian Fence for Comb Rail	2
Combination Rail Light Pole Support	1
Bridge Name Signage	1
Date Panel	1
Metal Reinforcement	1
Total Bridge Plan Sheets	**33**

- Assumptions for I-84 Overpass Bridge Design:
  - Bridge will be a 2 span prestressed girder bridge with cast-in-place concrete deck. MSE walls will be utilized at the abutments and span lengths will be approximately 96 feet (similar to the recent Cloverdale Overpass).
  - Substructure foundations will consist of a single pier on spread footing and integral abutments with a single row of piles in CMPs through the MSE walls.
  - Bridge will have no skew, be on a horizontal tangent section, and have a constant width from one end to the other.
  - No phased construction needed
  - No raised sidewalk
  - Prestressed girder depth will be less than 66 inches and temporary diaphragms will not be required.
  - Permanent metal deck forms will not be utilized.

        - Grade or vertical curvature will be sufficient to keep drainage spread minimized to avoid the need for deck drainage system on the bridge. All drainage from deck will be captured by inlets located off the bridge. Drainage design across the bridge and for any storm drainage will be provided by others.
        - Conduits for future power and communication utilities will be provided via 4 inch conduits carried between girders on both sides of the bridge (likely located within the 1st or 2nd interior girder bays).
        - No water, sewer, gas, or other large utilities are anticipated.
        - Seismic zone is anticipated to be zone 1, with no seismic analysis required.
    - Deliverables for I-84 Overpass Bridge Design
        - Final Structure Plans on 11x17 (PDF)
        - Final Design Calculations (PDF)
        - Construction Time
        - Special Provisions
        - Quantities
        - Cost Estimate
        - Initial Load Rating in accordance with ITD LRFD Design Manual Article 0.03 for the I-84 Bridge.
- Signal Plans and Detail Sheets
    - Sub-consult with Utility Coordinator regarding power supply
    - Precision will prepare the use tax tables for the signal materials
- Signal Interconnect and Lighting Plans
    - Consult with Utility Coordinator regarding power supply
- Signing and Striping Sheets
- Temporary Traffic Control Plan (including bicycle, pedestrian, and transit facilities)
- Pedestrian Temporary Traffic Control
- General Construction Staging/Phasing Plans/Utility Phasing Plans, if required
- Advanced Construction Signing
- SWPPP
- 95% Utility Plans (use ITD standards)
- Special Provisions
- 95% Cost Estimate on the ACHD Spreadsheet and uploaded into B2W per ACHD User Guide
- 95% Color ROW Plans
    - Include measurement from structure to new ROW line if less than 20’
- 95% ROW Required Square Footage (ROW Fee, TE, PE) by Parcel (ROW Requirements Table) – on plans and Excel
- List on the plans, in table form, all monuments found within the project limits, identifying Station and Offset from control line and monument type found (I.C. 55-1613).

- List on the plans, in table form, all calibration points, including northing, easting, elevation and monument type.
- Show on the plan sheets, the locations of TBM's and provide TBM information (Station, Offset, Northing, Easting, Elevation, and monument type).
- 95% Stormwater Report (including calculations & Runoff Reduction Feasibility Analysis Documentation Form as required)
- 75% design Plans and estimate with ACHD comments
- 75% Comment/Response Matrix
- PDFs of all deliverables in BlueBeam– PDF plans need to be to scale at 11"x17"
    - No hard copies of any deliverable required
- All native files including **One CAD File** (insert and bind all x-refs into One CAD File)

Assumptions

The engineer will adhere to the ISPWC item number process, as well as the Special Provisions (SP), and ACHD's Standard Special Provisions (SSP) for the roadway work and ITD item number process, Special Provisions (SP), and Standard Special Provisions (SSP) for the bridge and I-84 work.

6.3 95% Review Meeting

Products and Deliverables

- Review Meeting Minutes/Notes
- Maintain Comment/Response Matrix

ACHD Responsibilities

- Schedule and host Meeting
- Provide Comments – One (1) week prior to the meeting in BlueBeam.

Assumptions

- ACHD will complete the review within two (2) weeks of receiving the 95% Design Submittal

7.0 99% DESIGN SUBMITTAL

The Consultant will incorporate comments from the 95% Design review meeting into the 99% Design submittal documents and perform an internal review. The plans will be finalized for Right of Way acquisition and legal descriptions and accompanying sketches will be prepared.

The Consultant will provide support during Right of Way acquisition and make changes to construction and right of way plans as requested by ACHD Project Manager.

7.1 Finalize Plans for Right of Way Acquisition

Products and Deliverables

- All deliverables will be uploaded to ACHD's PWA site
  - *PWA File Folder: 16 99 Percent Designl-CPD65*
- -84 Overpass Bridge Plans package to meet ITD Bridge PS&E requirements will include the following:
  - I-84 Overpass Bridge plans (33 sheets) signed and sealed by a Professional Engineer registered in the State of Idaho.
  - Final Structure Plans (33 sheets) on 11x17 (PDF) signed and sealed by a Professional Engineer registered in the State of Idaho.
  - Final design Calculations (PDF) signed and sealed by a Professional Engineer registered in the State of Idaho.
  - Construction Time
  - Special Provisions
  - Quantities
  - Cost Estimate
  - Load Rating based on the 99% (ITD PS&E) plans will be performed and submitted with the submittal in accordance with the ITD Bridge Design Manual Art. 0.03.
- 11"x17" color Right of Way plans (17 sheets), signed and sealed by a **Professional Land Surveyor** registered in the State of Idaho;
  - Parcels which have acquisition(s), ROW plans shall show the station and offset of each angle point of the acquisition, including angle points along the existing ROW and at the intersections with property lines of the affected property.
- 99% ROW Required Square Footage (ROW Fee, TE, PE) by Parcel (ROW Requirements Table) – on plans and Excel
  - Include column for subproject numbers in ROW table if applicable.
- PDF of construction plans (281 sheets) signed and sealed by a Professional Engineer registered in the State of Idaho – PDF plans need to be to scale at 11"x17".
- PDF of color Right of- Way plans (15 sheets), signed and sealed by a Professional Land Surveyor registered in the State of Idaho – PDF plans need to be to scale at 11"x17".
- One PDF set of legal descriptions with exhibits for takes and permanent easements, signed and sealed by a **Professional Land Surveyor** registered in the State of Idaho.
- ACHD ROW Checklist
- One PDF set of cross sections to include elevation changes at each driveway.
- PDF Special Provisions, signed and sealed by a Professional Engineer registered in the State of Idaho
- Completed "ACHD Supplied SWPPP Information"
- List on the plans, in table form, all monuments found within the project limits, identifying Station and Offset from control line and monument type found (I.C. 55-1613).

- List on the plans, in table form, all calibration points, including northing, easting, elevation and monument type.
- Show on the plan sheets, the locations of TBM's and provide TBM information (Station, Offset, Northing, Easting, Elevation and monument type).
- 99% Cost Estimate on the ACHD Spreadsheet and uploaded into B2W per ACHD User Guide
- 95% Design plans and reports with ACHD comments
- 95% Comment/Response Matrix
- 95% Right of Way Plans with ACHD comments
- All final permits
- PDFs of all deliverables – no hard copies of any deliverable required
- All native files including **One CAD File** (insert and bind all x-refs into **One CAD File**)
- Contingency Item: Design support during ROW acquisition

Assumptions

The engineer will adhere to the ISPWC item number process, as well as the Special Provisions (SP), and ACHD's Standard Special Provisions (SSP)for the roadway work and ITD item number process, Special Provisions (SP), and Standard Special Provisions (SSP) for the overpass bridge and I-84 work.

8.0 CONSTRUCTION ENGINEERING

This task addresses engineering support during the construction phases of the project and the record of survey which occurs after construction is complete. This work is not included in this contract and will be included in a separate contract if required.

Linder Road, Overland to Franklin

Keller Associates Labor Estimate

	Work Tasks	QA/QC	Project Manager	Project Engineers	Designers	Surveyor PLS	Survey Tech	Clerical	Total Hours	% Total Hours
1.0	**GENERAL PROVISIONS**									
1.1	Progress Meetings								0	
	Progress Meetings		40	40				4	84	
	Meridian Task Force Meeting		12					2	14	
1.2	Project Administration									
	Monthly Invoicing	4	18					14	36	
	Monthly Progress Report and Schedule	4	9						13	
	Internal Coordination Meetings and Admin.	5	18	36	8	5			72	
	Coordination with Team - Every month	5	36	36		4			81	
1.3	ACHD Standards			2					2	
	Sub-Total	**18**	**133**	**114**	**8**	**9**	**0**	**20**	**302**	**3.19%**
2.0	**PUBLIC INVOLVEMENT**									
2.1	Outreach (Not in scope of work)									
2.2	Virtual Public Meetings (30% & 75%)									
	Prepare Exhibits (ArcGIS Storymap)	3	24	28	32			4	91	
	Attend Meetings		6	6					12	
	Meeting Notes		2	12				4	18	
	Sub-Total	**3**	**32**	**46**	**32**	**0**	**0**	**8**	**121**	**1.28%**
3.0	**LOCATION SURVEYING AND MAPPING**									
3.1	Project Control		4	12		40	40	1	97.0	
3.2	Boundary Survey, Monument Preservation, Legal Descriptions	40	12	16	40	120	180	4	412.0	
3.3	Topographic Survey & Base Map (Utilities, Irrigation, Drainage)		4	12		24	50	2	92.0	
	Sub-Total	**40**	**20**	**40**	**40**	**184**	**270**	**7**	**601**	**6.35%**
4.0	**30% DESIGN**									
4.1	Geotechnical Investigation		4	8	16				28	
4.2	Not Used								0	
4.3	I-84 Overpass Bridge Alternative Study	16	16	12					44	
4.4	Tenmile Creek and Kennedy Lateral Bridges	6	8	32	32				78	
4.5	Concept Roadway Design									
	Develop the Design for Two Alternatives	8	32	60	80				180	
	Roll Plots with Typical Sections		4	16	24				44	
	Cultural/Historic/Threatened & Endangered Species Memo		2	4	2			2	10	
	30% Cost Estimate		2	12	6				20	
	30% ROW Required Square Footage in Excel			2		4	12		18	
4.6	Traffic								0	
	Traffic Operations Report Linder/Overland		4	70	12				86	
	Traffic Operations Report Linder/Franklin		4	70	12				86	
4.7	Hydraulic/Stormwater Design	4	12	68	24			2	110	
4.8	Irrigation Facilities		4	32	12			2	50	
4.9	Environmental Evaluation		6	4				2	12	
4.10	30% Design Submittal									
	Internal Review and Prepare Submittal	32	8	16	8			2	66	
4.11	30% Review Meeting		8	4	4			2	18	
	Sub-Total	**66**	**114**	**410**	**232**	**4**	**12**	**12**	**850**	**8.98%**
5.0	**75% DESIGN**									
5.1	75% Traffic Signal Design		4	6	4				14	
5.2	Roadway Design (113 sheets)									
	Prepare Roadway Design			50	40				90	
	Title Sheet					3			3	
	Typical Section (4 sheets)		4	16	32				52	
	Roadway Plan and Profile Sheets – (30 sheets)		24	160	240				424	
	Total Ownership Map					6	12		18	
	Project Control (1 Sheet)				6	8	12		26	
	75% ROW Required Square Footage on Plans and Excel				4	4	14		22	
	Signal Plan Sheets (6 sheets)		1		4				5	
	I-84 Typical Section (1 sheet)			4	8				12	
	I-84 Plans (2 sheets)		1	8	16				25	
	I-84 Barrier Details (1 sheet)			4	8				12	
	Concrete Joint Details (1 sheet)			2	6				8	
	MSE Wall (Roadway Plans) (12 sheets)		4	48	56				108	
	Tenmile Creek Structure		2	32	20				54	
	Kennedy Lateral Structure		1	12	8				21	
5.3	Hydraulic/Stormwater Design		12	60	32				104	

Linder Road, Overland to Franklin

Keller Associates Labor Estimate

Work Tasks	QA/QC	Project Manager	Project Engineers	Designers	Surveyor PLS	Survey Tech	Clerical	Total Hours	% Total Hours
5.4 Gravity Irrigation		12	48	24				84	
5.5 Signing, Pavement Marking, Illumination (15 Sheets)		4	32	48				84	
5.6 Agency and Utility Coordination		12	28				1	41	
5.7 Utility Plans (15 Sheets)		3	12	24			1	40	
5.8 Temporary Traffic Control									
Linder Road (12 Sheets)		8	24	24				56	
I-84 (25 Sheets)		48	160	120				328	
5.9 Pedestrian Detour Plan		1	8	8				17	
5.10 Quantities and Construction Estimate		6	24	16				46	
5.11 75% Design Submittal								0	
Internal Review and Prepare Submittals	60	32	24				4	120	
Plan-in-hand field review and meeting notes		8	4	4			2	18	
5.12 75% Review Meeting		8	4	4			2	18	
Sub-Total	**60**	**195**	**770**	**756**	**21**	**38**	**10**	**1850**	**19.55%**
6.0 95% DESIGN									
6.1 Roadway Design									
Update Roadway Design		4	10	24				38	
Title Sheet				2				2	
Total Ownership Map (2 Sheets)					12	12		24	
Vicinity Map/Survey Control (8 Sheets)			4	12	8	16		40	
Roadway Plan (15 Sheets) & Profile (15 Sheets)		30	100	180	8	8		326	
Intersection Details (10 sheets)		6	16	24				46	
Roadway Details (10 Sheets)		12	24	48				84	
Drainage Details (2 Sheets)		4	18	12				34	
Pond Details (4 Sheets)		6	24	36				66	
SWPP Plans (8 Sheets)		2	8	16				26	
Signing & Pavement Marking Plans (15 Sheets)		6	16	32				54	
Sign Details (2 Sheets)			4	14				18	
Traffic Signal Material Quantities (2 Sheets)		1						1	
Traffic Signal Plans (12 Sheets)		1						1	
Illumination Material Quantities (2 Sheets)			4	12				16	
Illumination Plans (15 Sheets)			12	28				40	
Illumination Details (2 Sheets)			3	6				9	
Construction Staging Plans (4 Sheets)		4	8	24				36	
Traffic Control Plans (Linder Rd, 10 Sheets)		6	24	32				62	
Traffic Control Plans (I-84, 25 sheets)		24	68	96				188	
I-84 Plan Sheets (2 Sheets)		1	8	16				25	
Concrete Joint Details (1 Sheet)			1	2				3	
I-84 Typical Section (1 Sheet)			1	2				3	
I-84 Barrier Details (1 Sheet)			1	3				4	
Utility Plans (30 Sheets)		4	12	16				32	
MSE Wall (Roadway, 12 Sheets)		8	40	48				96	
Tenmile Creek Plans		4	20	30				54	
Kennedy Lateral Plans		1	6	10				17	
Project Control W/ Mon Perpetuation (4 Sheets)				8	16	16		40	
ROW Plans (17 Sheets)		8	16	32	42	24		122	
Linder Road Overpass Bridge	32	8	12	8				60	
6.2 95% Design Submittal									
Internal Review and Prepare Submittal	40	16	24	8	16	16		120	
6.3 95% Review Meeting and Notes									
Prepare for and Attend Meeting, Take Notes		6	8					14	
Summarize Comments and Prepare Responses		4	4				2	10	
Sub-Total	**72**	**166**	**496**	**781**	**102**	**92**	**2**	**1711**	**18.08%**

Linder Road, Overland to Franklin

Keller Associates Labor Estimate

	Work Tasks	QA/QC	Project Manager	Project Engineers	Designers	Surveyor PLS	Survey Tech	Clerical	Total Hours	% Total Hours
7.0	**99% DESIGN**									
7.1	Finalize Plans for Right-of-Way Acquisition	30	40	120	100	20	20	4	334	
	Sub-Total	**30**	**40**	**120**	**100**	**20**	**20**	**4**	**334**	**3.53%**
	100% BID DOCUMENTS - To be included later if needed									
	Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
8.0	**CONSTRUCTION ENGINEERING - To be included later**									
	Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
9.0	**ADDITIONAL SERVICES AS NEEDED - To be included later if needed**									
	Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
	GRAND TOTAL	**289**	**700**	**1996**	**1949**	**340**	**432**	**63**	**5769**	**60.96%**
		5.0%	12.1%	34.6%	33.8%	5.9%	7.5%	1.1%		
	Terracon								439	4.64%
	Precision								582	6.15%
	Forsgren								2,386	25.21%
	Bionomics								288	3.04%
	Subconsultant Sub-Total Hours								**3,695**	**39.04%**
	Total Labor Hours								**9,464**	**100.00%**

CONSULTANT NAME: ***Keller Associates, Inc.***
PROJECT NAME: Linder Road, Overland to Franklin

A. SUMMARY ESTIMATED LABOR COSTS

	Man-Days		Man-Hours		Hrly Rate			Raw Labor Cost
Principal/QC	36.13	=	289.00	@	$63.97	=	$	18,487.33
Project Manager	87.50	=	700.00	@	$63.80	=	$	44,660.00
Project Engineers	249.50	=	1996.00	@	$46.66	=	$	93,133.36
Designers	243.63	=	1949.00	@	$48.90	=	$	95,306.10
Surveyor PLS	42.50	=	340.00	@	$49.10	=	$	16,694.00
Survey Technician	54.00	=	432.00	@	$39.75	=	$	17,172.00
Clerical	7.88	=	63.00	@	$23.17	=	$	1,459.71
			TOTAL RAW LABOR COST			=		**$286,912.50**

B. PAYROLL, FRINGE BENEFIT COSTS & OVERHEAD

Total Raw Labor Cost		Approved Rate			
$286,912.50	X	**171.26%**	=	$	491,366.35

C. NET FEE

Total Raw Labor & Overhead		NET FEE			
$778,278.85	X	**12.5%**	=	$	97,284.86
		SUB-TOTAL (A + B + C)	=	**$**	**875,563.70**

D. OUT-OF-POCKET EXPENSE SUMMARY

	Estimated Amount		Unit Cost			Estimated Expense
1 MILEAGE (miles)	1600	@	$ 0.585	=	$	936.00
2 AIR TRAVEL	0	@	$ 300.00	=	$	-
3 LODGING (Days)	5	@	$ 147.00	=	$	735.00
4 MEALS (ME&I Days)	5	@	$ 74.00	=	$	370.00
5 CAR RENTAL	0	@	$ -	=	$	-
6 CAR RENTAL FUEL	0	@	$ -	=	$	-
7 EXTERNAL PRINTING	0	@	$ -	=	$	-
8 TITLE REPORTS	0	@	$ -	=	$	-
9 SURVEY TRAFFIC CONTOL	0	@	$ -	=	$	-
10 3D SCANNER FEE	0	@	$ -	=	$	-
	TOTAL ESTIMATED EXPENSE			=	**$**	**2,041.00**

E. ESCALATION

A+B		**Ratio (months)**				
$778,278.85	**X**	**11/18**	**X**	**7.0%**	**$**	**33,293.04**

F. SUBCONSULTANTS

1	Terracon	**$ 123,706.50**	=	**$**	**123,706.50**
2	Precision	$79,050	=	**$**	**79,050.00**
3	Forsgren	$420,496	=	**$**	**420,496.10**
4	Bionomics	$39,459	=	**$**	**39,459.10**
5	Badger Daylighting Corp (Utility Potholing)	$20,338	=	**$**	**20,337.84**
6	L2-Traffic Counts	$1,600	=	**$**	**1,600.00**
7	GeoTerra LiDAR	$24,875	=	**$**	**24,875.00**
8	Gem Locating	$2,400	=	**$**	**2,400.00**
Subconsultant Sub-Total				**$**	**711,924.54**

TOTAL = $1,622,822.28

TERRACON
GEOTECHNICAL ENGINEERING SERVICES

Linder Rd, Overland Rd to Franklin Rd
Meridian, Idaho

LABOR HOUR ESTIMATE
May 10, 2022

Terracon Proposal No. P62215138

TASK #	TASK DESCRIPTION	TOTAL	SR. GEOTECHN GINEER	GEOTECH ENGINEER	FIELD ENGINEER	SR. ADMIN STAFF
4.1	**Geotechnical Investigation**					
	Administration and Invoicing	18		6		12
	Underground Utilities Digline and Permits	24	2	4	18	
	Soil Borings	121	4	12	105	
	Groundwater Measurements (14 visits)	27		6	21	
	Infiltration Testing	33		3	30	
	Laboratory Testing (Soil Classification and Lab Assignment)	14	2	10	2	
	Engineering Analysis (I-84 Overpass, MSE Walls)	44	8	36		
	Engineering Analysis (Bridge at Ten Mile Creek, Pavements, Drainage)	20	4	16		
	Draft Geotechnical Engineering Report - ITD Format (I-84 Overpass, MSE Walls)	39	6	24	8	1
	Final Geotechnical Engineering Report - ITD Format (I-84 Overpass, MSE Walls)	10	3	6		1
	Draft Geotechnical Engineering Report (Bridge at Ten Mile Creek, Pavements, Drainage)	34	6	22	5	1
	Final Geotechnical Engineering Report (Bridge at Ten Mile Creek, Pavements, Drainage)	9	2	6		1
	Preparation of Geotechnical Special Provisions	10	2	8		
	Review of Plans and Special Provisions	12	4	8		
	Meetings	24	24			
	TOTAL LABOR HOURS	439	67	167	189	16

TERRACON
GEOTECHNICAL ENGINEERING SERVICES

Linder Rd, Overland Rd to Franklin Rd
Meridian, Idaho

COST ESTIMATE

A. SUMMARY ESTIMATED LABOR DAY COSTS

		Labor Hours		Hrly Rate		Cost
1	Sr. Geotechnical Engineer (R. Olsen)	67	@	$57.69	=	$3,865.23
2	Geotechnical Engineer (L. Marsh)	167	@	$42.31	=	$7,065.77
3	Field Engineer (M. Amirmojahedi)	189	@	$32.36	=	$6,116.04
4	Sr. Admin. Staff (J. Schmalhorst)	16	@	$28.00	=	$448.00
				SUBTOTAL RAW LABOR COST	**=**	**$17,495.04**

* See Attached Labor Hour Estimate

B. PAYROLL, FRINGE BENEFIT COSTS & OVERHEAD

Total Raw Labor Cost		Approved Overhead Rate		
$17,495.04	X	185.17%	=	**$32,395.57**

C. FIXED FEE

Total Raw Labor & Overhead		Approved Fixed Fee Rate		
$49,890.61	X	12.0%	=	**$5,986.87**

D. FCCM

Total Raw Labor Cost		Approved FCCM Rate		
$17,495.04	X	0.53%	=	**$92.72**

E. ESCALATION

Total Raw Labor & Overhead		Esc. Ratio		Annual Esc.		
$55,970.20	X	20%	X	4.0%	=	**$447.76**

F. OUT-OF-POCKET EXPENSE SUMMARY

		Estimated Amount		Unit Cost		Expense
1	Mileage[x]	624	@	$0.585	=	$365.04
2	Printing, Maps, UPS, etc (estimate)	1	@	$100.00	=	$100.00
				TOTAL ESTIMATED EXPENSE	**=**	**$465.04**

G. SUBCONSULTANTS AND TERRACON LABORATORY TESTING

		Estimated Quantity		Unit Cost		Expense
1	Drilling Contractor (estimate)	xx			=	$36,598.50
2	Coring Contractor (estimate)	xx			=	$1,350.00
3	Excavation Contractor (estimate)	xx			=	$8,525.00
4	Traffic Control Contractor (estimate)	xx			=	$12,920.00
5	Terracon Laboratory Testing					
	Moisture Content	45	@	$19.00	=	$855.00
	Atterberg Limits	18	@	$90.00	=	$1,620.00
	Sieve Analysis, SPT Samples	32	@	$70.00	=	$2,240.00
	Sieve Analysis, Bulk Samples	3	@	$95.00	=	$285.00
	pH	4	@	$20.00	=	$80.00
	Minimum Resistivity	4	@	$70.00	=	$280.00
	Proctor Tests	3	@	$180.00	=	$540.00
	R-value Tests	3	@	$510.00	=	$1,530.00
				TOTAL ESTIMATED SUB/LAB EXPENSE	**=**	**$66,823.50**

[x] As per the "FEDERAL PER DIEM RATES FOR IDAHO"
^^ See Attached Subconsultant's Summary

TOTAL	=	$123,706.50

HAZ-TECH DRILLING, INC.
1798 E. PLAZA LOOP
NAMPA, ID., 83687
PH: (208) 461-7277 OR (800) 359-1502
FAX: (208) 461-5211

PROPOSAL

TO: TERRACON
ATTN: RYAN

DATE : 3/7/2022
INVOICE # : XX
PROJECT: LINDER ROAD EXTENTION
FROM FRANKLIN TO OVERLAND
MERIDIAN, ID.

MOB 1, REVISED

TERMS : ***NET 30 DAYS***

DESCRIPTION	UNITS EST	UNIT PRICE	AMOUNT EST
MOB & DEMOB, PER DAY	2.00	$350.00	$700.00
AUGER DRILLING, PER FOOT	60.00	$25.00	$1,500.00
5' PAVEMENT BORINGS, EACH	6.00	$150.00	$900.00
MOVING / WATER HAUL / STANDBY, PER HOUR	3.00	$200.00	$600.00
SUPPORT EQUIPMENT, PER DAY	2.00	$150.00	$300.00
BENTONITE CHIPS, PER BAG	18.00	$8.00	$144.00
ASPHALT PATCH, PER BAG	6.00	$27.50	$165.00
MOB 1 OFF-SITE CUTTING DISPOSAL	1.00	$200.00	$200.00
		TOTAL AMOUNT EST:	**$4,509.00**

TEN MILE CREEK & PAVEMENT BORINGS

2 AUGER BORINGS TO 30'
6 PAVEMENT BORINGS TO 5'

SCOTT CORN

Haztech Total Costs

Mob 1 = $4,509.00
Mob 2 = $10,180.00
Mob 3 = $16,990.00
Mob 4 = $4,919.50

Total = $36,598.50

HAZ-TECH DRILLING, INC.
1798 E. PLAZA LOOP
NAMPA, ID., 83687
PH: (208) 461-7277 OR (800) 359-1502
FAX: (208) 461-5211

PROPOSAL

TO: TERRACON
ATTN: RYAN

DATE : 1/17/2022
INVOICE # : XX
PROJECT: LINDER ROAD EXTENTION
FROM FRANKLIN TO OVERLAND
MERIDIAN, ID.

MOB 2

TERMS : ***NET 30 DAYS***

DESCRIPTION	UNITS EST	UNIT PRICE	AMOUNT EST
MOB & DEMOB, PER DAY	3.00	$350.00	$1,050.00
AUGER DRILLING, PER FOOT	260.00	$25.00	$6,500.00
MOVING / WATER HAUL / STANDBY, PER HOUR	5.00	$200.00	$1,000.00
SUPPORT EQUIPMENT, PER DAY	3.00	$150.00	$450.00
BENTONITE CHIPS, PER BAG	60.00	$8.00	$480.00
ASPHALT PATCH, PER BAG	0.00	$27.50	$0.00
PLYWOOD TO PROTECT GRASSY AREAS	1.00	$400.00	$400.00
MOB 2 OFF-SITE CUTTING DISPOSAL	1.00	$300.00	$300.00
		TOTAL AMOUNT EST:	**$10,180.00**

RETAINING WALL BORINGS
****

4 AUGER BORINGS TO 40'
2 AUGER BORINGS TO 30'
2 AUGER BORINGS TO 20'

SCOTT CORN

Haztech Total Costs

Mob 1 = $4,509.00
Mob 2 = $10,180.00
Mob 3 = $16,990.00
Mob 4 = $4,919.50

Total = $36,598.50

HAZ-TECH DRILLING, INC.
1798 E. PLAZA LOOP
NAMPA, ID., 83687
PH: (208) 461-7277 OR (800) 359-1502
FAX: (208) 461-5211

PROPOSAL

TO: TERRACON
ATTN: RYAN

DATE : 3/7/2022
INVOICE # : XX
PROJECT: LINDER ROAD EXTENTION
FROM FRANKLIN TO OVERLAND
MERIDIAN, ID.

MOB 3, REVISED

TERMS : ***NET 30 DAYS***

DESCRIPTION	UNITS EST	UNIT PRICE	AMOUNT EST
MOB & DEMOB & DRILLING, PER SHIFT	5.00	$2,800.00	$14,000.00
NIGHT WORK SURCHARGE, PER SHIFT	2.00	$200.00	$400.00
SUPPORT EQUIPMENT, PER DAY	5.00	$150.00	$750.00
BENTONITE CHIPS, PER BAG	30.00	$8.00	$240.00
BENTONITE POWDER, PER BAG	15.00	$15.00	$225.00
BARITE, PER BAG	15.00	$35.00	$525.00
RAPID-SET CONCRETE, PER BAG	9.00	$50.00	$450.00
MOB 3 OFF-SITE CUTTING DISPOSAL	1.00	$400.00	$400.00
		TOTAL AMOUNT EST:	**$16,990.00**

OVERPASS BORINGS
****

2 AUGER BORINGS TO 100' DAYTIME WITH NO HOUR RESTRICTIONS
1 AUGER BORING TO 100' IN ITD ROW DURING NIGHT TIME HOURS 10PM TO 5AM

TERRACON HIRES A-CORE FOR 16" DIAMETER CORES IN ANY CONCRETE PAVEMENT AREAS

SCOTT CORN

Haztech Total Costs

Mob 1 = $4,509.00
Mob 2 = $10,180.00
Mob 3 = $16,990.00
Mob 4 = $4,919.50

Total = $36,598.50

HAZ-TECH DRILLING, INC.
1798 E. PLAZA LOOP
NAMPA, ID., 83687
PH: (208) 461-7277 OR (800) 359-1502
FAX: (208) 461-5211

PROPOSAL

TO: TERRACON
ATTN: RYAN

DATE : 1/17/2022
INVOICE # : XX
PROJECT: LINDER ROAD EXTENTION
FROM FRANKLIN TO OVERLAND
MERIDIAN, ID.

MOB 4

TERMS : ***NET 30 DAYS***

DESCRIPTION	UNITS EST	UNIT PRICE	AMOUNT EST
MOB & DEMOB, PER DAY	1.00	$350.00	$350.00
AUGER DRILLING, PER FOOT	52.50	$25.00	$1,312.50
2" PIEZO'S INSTALLED, EACH	3.00	$575.00	$1,725.00
MOVING / WATER HAUL / STANDBY, PER HOUR	1.50	$200.00	$300.00
SUPPORT EQUIPMENT, PER DAY	1.00	$150.00	$150.00
BENTONITE CHIPS, PER BAG	9.00	$8.00	$72.00
SAND, PER BAG	18.00	$20.00	$360.00
FLUSH MOUNT SURFACE COMPLETIONS, EACH	3.00	$150.00	$450.00
MOB 4 OFF-SITE CUTTING DISPOSAL	1.00	$200.00	$200.00
		TOTAL AMOUNT EST:	**$4,919.50**

PIEZOMETERS
****
3 PIEZO'S TO 17.5'

Haztech Total Costs

Mob 1 = $4,509.00
Mob 2 = $10,180.00
Mob 3 = $16,990.00
Mob 4 = $4,919.50

Total = $36,598.50

SCOTT CORN

January 13, 2022

Terracon Engineers
ATTN: Ryan Olsen
11849 West Executive Dr. Suite G
Boise, Idaho 83713
Office (208) 387-2938
Fax (208) 323-9592

QUOTATION

Syman Project Number: 220061

Estimator: Brad Simpson
Estimator Phone: (208) 401-5989
Estimator Email: b.simpson@symancompany.com

Project Name: Linder Road, Overland to Franklin Test Pits
Project Location: Ada County, ID

Quote Date: 01/13/2022

ITEM	QUANTITY	UNITS	DESCRIPTION	UNIT PRICE	TOTAL
Backhoe 420 E	30	HR	Rubber Tired 4x4 Backhoe W / Operator	$ 125.00	$ 3,750.00
				ESTIMATED EXCAVATION TOTAL	$ 3,750.00
Water Truck	30	HR	Water Truck with Driver	$ 145.00	$ 4,350.00
				ESTIMATED WATER TRUCK TOTAL	$ 4,350.00
Mob Fee	1	EA	Mob & Demob of equipment to Jobsite	$ 425.00	$ 425.00
				ESTIMATED MOB TOTAL	$ 425.00
					$ 8,525.00

** Quantities listed above are estimate only actual quantities may vary*
** Mob fee applied to water truck and equipment*
** It is assumed excavation will occur on first day*
** Labor rate is port to port per man*
** Charges associated with refilling water truck not included in quote*
** It is assumed project will take up to four days to complete*
** Tax not included in price*
** It is assumed by Syman LLC that Terracon will provide traffic control*
** Price good for 65 days from bid date*
** Syman assumes Terracon will locate all utilities*
** Water truck will be used to fill infiltration pits*

It is understood by Syman, LLC that we are to excavate three infiltration test pits on Linder Road between Overland and Franklin in Meridian. Once pit is excavated Syman will provide a water truck and water for Terracon to perform the infiltration test per ACHD methods. It is assumed 9 hours onsite for each test pit for both the backhoe and water truck to complete infiltration tests.

Quote: 06348

Date: 24 Jan 2022
Expires: 23 Feb 2022

A-Core Concrete Specialists of Boise | 6531 Business WayBoise ID 83716
Phone# (208) 384-0500 | Fax # | License#

Customer	Contact	Job Information	Quoted By
TERRACON INC. 3006 S. 96TH ST Lakewood, ID 98499 (253) 573-9939	RYAN OLSEN (208) 387-2938 ryan.olsen@terracon.com	I-84 I-84 & LINDER RD MERIDIAN, ID 83642	Jeff Stewart (208) 573-6877 jeff@a-core.com

Qty	Description			Price	Adj	Total
1	Core Drill	Quantity: Diameter:	1 16"	1,350.00	Each	1,350.00

CORE DRILL A 16" HOLES THROUGH 5.5" OF ASPHALT ON TOP OF 11" THICK CONCRETE SLAB. ALL WORK TO BE DONE AT NIGHT (CORE DRILLING AT NIGHT WILL BE AN HOURLY RATE OF $225.00 PER HOUR WITH A 6 HOUR MINIMUM CHARGE)

Total 1,350.00

TERRACON
GEOTECHNICAL ENGINEERING SERVICES

Linder Rd, Overland Rd to Franklin Rd
Meridian, Idaho

Terracon Proposal No. P62215138

Traffic Control			
ITEM	**Quantity**	**Unit Price**	**Estimated Cost**
Traffic Control Flagging (4 flaggers x 9 hours/day x 4 days), per hour	144	$ 45.00	$ 6,480.00
Traffic Control Shoulder Closures, per day	4	$ 500.00	$ 2,000.00
Night Lane Closures on I-84, per shift	2	$ 1,500.00	$ 3,000.00
Mobilization/Delivery (assumes 4 separate mobilizations), each	4	$ 360.00	$ 1,440.00
TOTAL			**$ 12,920.00**

Based on traffic control unit rates provided by Specialty Construction Supply

TERRACON
GEOTECHNICAL ENGINEERING SERVICES

Linder Rd, Overland Rd to Franklin Rd

Meridian, Idaho
Terracon Proposal No. P62215138

MILEAGE ESTIMATE			
NO. TRIPS	**DESTINATION**	**ROUNDTRIP MILEAGE**	**TOTAL MILEAGE**
25	Project: Boring Layout, Utility Clearance, Drilling, Excavation and Infiltration Testing	16	400
14	Project: Groundwater Measurements	16	224
		ESTIMATED PROJECT TOTAL MILEAGE	**624**

MAN-HOUR ESTIMATE
LINDER ROAD OVERLAND TO FRANKLIN - TRAFFIC SIGNALS
ACHD PROJECT NO.
ACHD GIS N0.
May 9, 2022

LABOR HOURS	TOTAL	Principal Eng (PE, PTOE)	Project Eng (PE)
TASK 1 GENERAL PROVISIONS - PROJECT MANAGEMENT			
1.1 Progress Meetings			
Kick-off Meeting	4	2	2
Progress Meetings (Assume 4)	6	4	2
1.2 Project Administration (18 Month Design)			
General Project Management	50	40	10
Monthly Invoices	12	12	
TASK 1 TOTAL	**72**	**58**	**14**
TASK 4 30% DESIGN			
4.6 Concept Intersection and Roadway Design			
Traffic Signal Initial Layout	24	8	16
4.11 30% Review Meeting			
Prepare for and Attend Meeting, Summarize Comments and Prepare Responses	4	2	2
TASK 4 TOTAL	**28**	**10**	**18**
TASK 5 75% DESIGN			
5.1 Traffic Signal Design			
Prepare Traffic Design Base Files	50	10	40
Traffic Signal at Linder and Franklin Road (3 sheets)	48	8	40
Traffic Signal at Linder and Overland Road (3 sheets)	48	8	40
PHB Signal at Linder and Tenmile Creek Path (2 sheets)	36	24	12
PHB Signal at Linder and Waltman St (2 sheets)	36	24	12
Quantities	6	2	4
5.10 75% Internal Design Review Submittal			
Internal Review and prepare Submittals	20	8	12
5.11 75% Review Meeting			
Prepare for and Attend Meeting, Prepare Signal Meeting Notes, Summarize Comments and Prepare Responses	6	2	4
Plan in Hand Field Review Meeting	2	2	
TASK 5 TOTAL	**252**	**88**	**164**
TASK 6 95% DESIGN			
6.5 Traffic Signal Design			
Revise Traffic Design Base Files	28	4	24
Traffic Signal at Linder and Franklin Road (6 sheets)	46	6	40
Traffic Signal at Linder and Overland Road (6 sheets)	46	6	40
PHB Signal at Linder and Tenmile Creek Path (3 sheets)	16	12	4
PHB Signal at Linder and Waltman St (3 sheets)	16	12	4
Quantities	6	2	4

MAN-HOUR ESTIMATE
LINDER ROAD OVERLAND TO FRANKLIN - TRAFFIC SIGNALS
ACHD PROJECT NO.
ACHD GIS N0.
May 9, 2022

LABOR HOURS		TOTAL	Principal Eng (PE, PTOE)	Project Eng (PE)
6.12	**Special Provisions**			
	Prepare Special Provisions and Use Tax	10	2	8
6.14	**95% Internal Design Review Submittal**			
	Internal Review and prepare Submittals	18	8	10
6.15	**95% Review Meeting**			
	Prepare for and Attend Meeting, Prepare Meeting Notes, Summarize Comments and Prepare Responses	4	2	2
	TASK 6 TOTAL	**190**	**54**	**136**
TASK 7	**99% DESIGN**			
7.1	**Finalize Plans for Right-of-Way Acquisition**	40	16	24
	TASK 7 TOTAL	**40**	**16**	**24**
TASK 8	**100% DESIGN** - *Additional Services*			
	TASK 8 TOTAL	**0**	**0**	**0**
TASK 9	**CONSTRUCTION ENGINEERING** - ***Additional Services***			
	TASK 9 TOTAL	**0**	**0**	**0**
TOTAL LABOR HOURS		**582**	**226**	**356**

BUDGET

LABOR	HOURLY RATE		TOTAL COST
Principal Engineer	$145.00	$	32,770.00
Project Engineer	$130.00	$	46,280.00
	TOTAL LABOR	**$**	**79,050.00**
TOTAL BUDGET		**$**	**79,050.00**

Linder Road, Overland to Franklin

FORSGREN Associates Inc.

TASK #	TASK DESCRIPTION		TOTAL HOURS	Project Manager	QA Review (SIR)	Sr. Bridge Engineer	Bridge Engineer	Bridge CADD	Clerical	...
1.0	**Project Management**		**278.00**	**188.00**	**9.00**	**18.00**	**18.00**	**9.00**	**36.00**	**0.00**
1.1	Progress Meetings & Meridian Task Force Meetings									
	Progress Meetings (includes travel to Meridian)		36.00	36.00						
	Meridian Task Force Meetings (includes travel)		8.00	8.00						
1.2	Project Administration									
	Monthly Invoice/Review Budget		63.00	36.00					27.00	
	Monthly Progress Report & Schedule Review		18.00	18.00						
	Internal Coordination Meetings & Misc. Admin.		117.00	54.00	9.00	18.00	18.00	9.00	9.00	
	Coordination with ITD Bridge		36.00	36.00						
2.0	**Public Involvement**		**32.00**	**16.00**	**0.00**	**8.00**	**4.00**	**4.00**	**0.00**	**0.00**
2.1	Outreach									
	Kickoff Field Meeting		4.00	4.00						
2.2	Virtual Public Meetings									
	Preparation for meeting (Pre-PIM)		10.00	4.00		4.00		2.00		
	Two Public Information Meetings (Virtual)		18.00	8.00		4.00	4.00	2.00		
4.0	**30% Design (ITD TS&L/S&L)**		**513.00**	**9.00**	**22.00**	**126.00**	**222.00**	**134.00**	**0.00**	**0.00**
4.3.1	Draft TS&L Report									
	Options 1 - 2 span PS w/CIP Deck with MSE Walls		57.00	1.00	2.00	16.00	24.00	14.00		
	Options 2 - 2 span PS w/CIP Deck; No MSE walls		56.00		2.00	16.00	24.00	14.00		
	Options 3 - 2 span PS Deck BT & with MSE Walls		56.00		2.00	16.00	24.00	14.00		
	Options 4 - 2 span PS Deck BT; No MSE Walls		56.00		2.00	16.00	24.00	14.00		
4.3.2	Final TS&L Report		18.00	1.00	1.00	2.00	6.00	8.00		
4.3.3	Draft S&L Plans	# Shts								
	Situation and Layout	*1*	31.00	1.00	2.00	4.00	8.00	16.00		
	Sheet Index, Quantities, & Vicinity Map	*1*	13.00		1.00	2.00	6.00	4.00		
	Design and General Notes	*1*	15.00		1.00	2.00	8.00	4.00		
	MSE Wall Layout	*1*	54.00		2.00	16.00	16.00	20.00		
	Pier Plan & Elevation	*1*	37.00		1.00	8.00	20.00	8.00		
	Typical Section & Details	*1*	19.00		1.00	2.00	8.00	8.00		
	Preliminary Girder Calculation		42.00		2.00	16.00	24.00			
4.3.4	Final S&L Plans		35.00	1.00	2.00	8.00	16.00	8.00		
4.10	30% Design Submittal									
	30% Estimate		11.00		1.00	2.00	8.00			
	Package & Upload files		5.00	1.00			2.00	2.00		
4.11	30% Review Meeting		8.00	4.00			4.00			
5.0	**75% Design**		**9.00**	**4.00**	**0.00**	**0.00**	**4.00**	**1.00**	**0.00**	**0.00**
5.12	75% Review Meeting		9.00	4.00			4.00	1.00		
	FA will resubmit S&L from 30% for reference by reviewers and attend review meeting.									

TASK #	TASK DESCRIPTION		TOTAL HOURS	Project Manager	QA Review (SIR)	Sr. Bridge Engineer	Bridge Engineer	Bridge CADD	Clerical	...
6.0	**95% Design (ITD Final Design)**		**1454.00**	**29.00**	**74.00**	**271.00**	**568.00**	**512.00**	**0.00**	**0.00**
6.2	95% Design Submittal									
	Bridge Plans (Redlines, CAD, QAQC)	# Shts								
	Situation & Layout	*1*	11.00	1.00	1.00	1.00	4.00	4.00		
	Sheet Index, Quantities, & Vicinity Map	*1*	11.00	1.00	1.00	1.00	4.00	4.00		
	Design & General Notes	*1*	11.00	1.00	1.00	1.00	4.00	4.00		
	Foundation Investigation (by Terracon)	*2*	9.00	1.00	1.00	1.00	2.00	4.00		
	Footing Layout & Pile Notes	*1*	47.00	1.00	2.00	4.00	8.00	32.00		
	Abutment Details	*3*	83.00	1.00	2.00	8.00	16.00	56.00		
	MSE Wall Details	*2*	43.00	1.00	2.00	8.00	16.00	16.00		
	Pier Details	*5*	129.00	1.00	8.00	16.00	24.00	80.00		
	Girder Framing Plan	*1*	46.00	1.00	1.00	4.00	8.00	32.00		
	Deck Typical Section & Details	*2*	38.00	1.00	1.00	4.00	8.00	24.00		
	Prestressed Girder Sheet	*1*	43.00	1.00	2.00	8.00	16.00	16.00		
	Prestressed Girder Details	*1*	43.00	1.00	2.00	8.00	16.00	16.00		
	Future Utility Details (power & communication)	*1*	15.00	1.00	1.00	1.00	4.00	8.00		
	Approach Slab Details	*2*	34.00	1.00	1.00	4.00	4.00	24.00		
	42" Single Slope Concrete Parapet	*1*	23.00	1.00	1.00	1.00	4.00	16.00		
	Concrete Parapet for Combination Railing	*2*	39.00	1.00	1.00	1.00	4.00	32.00		
	Protective Pedestrian Fence for Comb Rail	*2*	47.00	1.00	1.00	1.00	4.00	40.00		
	Combination Rail Light Pole Support	*1*	51.00	1.00	1.00	1.00	16.00	32.00		
	Bridge Name Signage	*1*	7.50	0.50	1.00	1.00	1.00	4.00		
	Date Panel	*1*	7.50	0.50	1.00	1.00	1.00	4.00		
	Metal Reinforcement	*1*	61.00	1.00	4.00	8.00	16.00	32.00		
	Bridge Design Calculations									
	Light pole support design (on side of Comb. Rail)		49.00		1.00	16.00	32.00			
	Design of aesthetic metal Ped. Rail on Comb. Rail		17.00		1.00	8.00	8.00			
	Sizing of exp. Jt. In approach slab		7.00		1.00	2.00	4.00			
	Utility support design/spacings		7.00		1.00	2.00	4.00			
	Emp. deck design + Overhang design + Neg. over piers		44.00		4.00	16.00	24.00			
	Prestressed Girder Design		28.00		4.00	8.00	16.00			
	Design of SREP bearing pad at pier		21.00		1.00	4.00	16.00			
	Pier Design (traditional cast-in-place on spread footing)		100.00		4.00	32.00	64.00			
	Abutment/Pile Design		192.00		8.00	64.00	120.00			
	Rebar Dev./Laps/Lengths		37.00		1.00	4.00	16.00	16.00		
	Bridge Quantities		39.00	1.00	2.00	4.00	16.00	16.00		
	Bridge Cost Estimate		15.00	1.00	2.00	4.00	8.00			
	Bridge Construction Time Schedule		23.00	1.00	2.00	4.00	16.00			
	Bridge Special Provisions		35.00	1.00	2.00	8.00	24.00			
	Perform Load Rating based on design plans		33.00	1.00	4.00	12.00	16.00			
6.3	95% Review Meeting		8.00	4.00			4.00			

TASK #	TASK DESCRIPTION	TOTAL HOURS	Project Manager	QA Review (SIR)	Sr. Bridge Engineer	Bridge Engineer	Bridge CADD	Clerical	...
7.0	**99% Design (ITD PS&E Initial Submittal)**	**100.00**	**7.00**	**8.00**	**17.00**	**33.00**	**35.00**	**0.00**	**0.00**
7.1	Finalize Plans (update per 95% Review comments)								
	update bridge plans	59.00	1.00	2.00	8.00	16.00	32.00		
	update bridge quantities	7.00	1.00	1.00	2.00	2.00	1.00		
	update bridge cost estimate	5.00	1.00	1.00	1.00	2.00			
	update construction time schedule	6.00	1.00	1.00	2.00	2.00			
	update bridge special provisions	8.00	1.00	1.00	2.00	4.00			
	Stamp/sign bridge plans	8.00	1.00	1.00	1.00	3.00	2.00		
	Stamp/sign final design calculations	7.00	1.00	1.00	1.00	4.00			
8.0	**100% Bid Documents (ITD PS&E Revisions)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Not in this scope of work								

Summary of Hours Per Task

1.0	**Project Management**	**278.00**	**188.00**	**9.00**	**18.00**	**18.00**	**9.00**	**36.00**	**0.00**
2.0	**Public Involvement**	**32.00**	**16.00**	**0.00**	**8.00**	**4.00**	**4.00**	**0.00**	**0.00**
4.0	**30% Design (ITD TS&L/S&L)**	**513.00**	**9.00**	**22.00**	**126.00**	**222.00**	**134.00**	**0.00**	**0.00**
5.0	**75% Design**	**9.00**	**4.00**	**0.00**	**0.00**	**4.00**	**1.00**	**0.00**	**0.00**
6.0	**95% Design (ITD Final Design)**	**1454.00**	**29.00**	**74.00**	**271.00**	**568.00**	**512.00**	**0.00**	**0.00**
7.0	**99% Design (ITD PS&E Initial Submittal)**	**100.00**	**7.00**	**8.00**	**17.00**	**33.00**	**35.00**	**0.00**	**0.00**
8.0	**100% Bid Documents (ITD PS&E Revisions)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
TOTAL LABOR HOURS		**2386.00**	**253.00**	**113.00**	**440.00**	**849.00**	**695.00**	**36.00**	**0.00**

A. SUMMARY ESTIMATED MAN-DAY COSTS

		Man-Hours		Hourly Rate	Raw Labor Cost
1)	Project Manager	253.00	@	$75.75	$19,164.75
2)	QA Review (SIR)	113.00	@	$106.73	$12,060.49
3)	Sr. Bridge Engineer	440.00	@	$62.89	$27,671.60
4)	Bridge Engineer	849.00	@	$48.75	$41,388.75
5)	Bridge CADD	695.00	@	$45.00	$31,275.00
6)	Clerical	36.00	@	$23.00	$828.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	---	0.00	@	$0.00	$0.00
	Total Man-Hours =	2386.00		**Labor Cost =**	**$132,388.59**

B. PAYROLL, FRINGE BENEFIT COSTS & OVERHEAD

Total Raw Labor Cost		Approved Overhead Rate		
$132,388.59	X	**169.88%**	=	**$224,901.74**

C. NET FEE

Total Raw Labor & Overhead		NET FEE[1]		
$357,290.33	X	**13.5%**	=	**$48,234.19**

D. FCCM

Total Raw Labor Cost		Approved FCCM Rate	
$132,388.59	X	**0.48%**	**$635.47**

TOTAL LABOR **$406,159.99**

(This is not the final total, see next page)

E. OUT-OF-POCKET EXPENSE SUMMARY

	Out-of-Pocket Expense Description	Unit	Estimated Amount		Unit Cost		Estimated Expense
1)	Company Vehicle Mileage[2]	Miles	415	@	$ 0.585	= $	242.78
2)	Rental Car	Days	---	@	$ 120.00	= $	-
3)	Fuel for Rental Car[3]	Miles	---	@	$ 0.300	= $	-
4)	Per Diem[2]	Days	---	@	$ 74.00	= $	-
5)	Lodging[2]	Days	---	@	$ 147.00	= $	-
6)	Taxes on Lodging[4]	Days	---	@	$ 19.11	= $	-
7)	---	---	---	@	$ -	= $	-
8)	---	---	---	@	$ -	= $	-
9)	---	---	---	@	$ -	= $	-
10)	---	---	---	@	$ -	= $	-
11)	---	---	---	@	$ -	= $	-
12)	---	---	---	@	$ -	= $	-
		TOTAL ESTIMATED EXPENSE				= **$**	**242.78**

F. WAGE ESCALATION (See Note 5)

A+B+D		Ratio (Months)		% Raise		
$357,925.80	X	9/16	X	7.00%	= **$**	**14,093.33**

G. SUBCONSULTANTS

1)	---	= $	-
2)	---	= $	-
3)	---	= $	-

TOTAL = $420,496.10

Footnotes

1) Negotiated % Fee
2) As per the "FY22 FEDERAL PER DIEM RATES FOR IDAHO"
3) Fuel for rental cars assumes $6.00/Gallon at 20 MPG = $0.300/Mile
4) Based on approximate lodging taxes of 13% x Lodging Rate.
5) Forsgren anticipates an annual raise in wages to tentatively go into effective on 1/26/2023. This is ratioed to account for estimated portion of time raises are in effect for this project. Net Fee is excluded from the wage escalation calculation.

Employee Rates

FORSGREN Associates Inc.

		Project Manager		QA Review (SIR)		Sr. Bridge Engineer		Bridge Engineer		Bridge CADD		Clerical		---	
EMPLOYEE NAME	CERT. WAGE RATE	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage	% of Cat. Time	Adj. Wage
Brent Schiller	$ 75.00	95%	$71.25		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Stephen Waldinger	$ 90.00	5%	$4.50		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Jason Wolfe	$ 62.89		$0.00		$0.00	100%	$62.89		$0.00		$0.00		$0.00		$0.00
Ryan Sherman	$ 60.00		$0.00		$0.00		$0.00	25%	$15.00		$0.00		$0.00		$0.00
Kayla Jacobsen	$ 45.00		$0.00		$0.00		$0.00	75%	$33.75		$0.00		$0.00		$0.00
Tracy Ghan	$ 45.00		$0.00		$0.00		$0.00		$0.00	100%	$45.00		$0.00		$0.00
Deanna Johnston	$ 23.00		$0.00		$0.00		$0.00		$0.00		$0.00	100%	$23.00		$0.00
Larry Evans	$ 106.73		$0.00	100%	$106.73		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
---	$ -		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
HOURLY RATE		$75.75		$106.73		$62.89		$48.75		$45.00		$23.00		$0.00	

Bionomics Environmental, Inc.

Linder Road, Overland to Franklin

	TASK	Principal	Environmental Program Manager	Senior Environmental Scientist	Principal Investigator	Senior Archaeologist	Cultural Resource Specialist	Public Involvement Specialist	TOTAL
	Environmental Evaluation Administration	**18**	**18**	**0**	**2**	**0**	**0**	**0**	**38**
	Project Coordination	6	12		2				**20**
	Monthly Invoices/Progress Reports	12	6						**18**
	Cultural Resources	**4**	**0**	**0**	**80**	**20**	**8**	**0**	**112**
	Project Management	4			4				**8**
	Research				4				**4**
	Field Work				8	8			**16**
	Site Forms				32	4	4		**40**
	Cultural Resource Survey Report				24	8	4		**36**
	Technical Review/QA/QC				4				**4**
	Comment Response				4				**4**
	Wetlands	**0**	**86**	**12**	**0**	**0**	**0**	**0**	**98**
	Background Research		4						**4**
	Wetland Survey and Delineation		8	8					**16**
	Wetland Data Forms		6						**6**
	Wetland Mapping/GIS		12						**12**
	Draft Wetland Delineation Report		32						**32**
	Final Wetland Delineation Report		8						**8**
	Technical Review/QA/QC			4					**4**
	Comment Response		12						**12**
	Coordination and Consultation		4						**4**

BIONOMICS ENVIRONMENTAL, INC.

Linder Road, Overland to Franklin

A. SUMMARY ESTIMATED MAN-HOUR COSTS

		Man-Hours		Hrly Rate		Labor Cost
1	PRINCIPAL	22	@	**$193.00**	=	$ 4,246.00
2	ENVIRONMENTAL PROGRAM MANAGER	144	@	**$135.00**	=	$ 19,440.00
3	SENIOR ENVIRONMENTAL SCIENTIST	12	@	**$113.00**	=	$ 1,356.00
4	ENVIRONMENTAL SCIENTIST	0	@	**$65.00**	=	$ -
5	ENVIRONMENTAL SCIENTIST	0	@	**$105.00**	=	$ -
6	PRINCIPAL INVESTIGATOR	82	@	**$135.00**	=	$ 11,070.00
7	SENIOR ARCHAEOLOGIST	20	@	**$117.00**	=	$ 2,340.00
8	CULTURAL RESOURCE SPECIALIST	8	@	**$84.00**	=	$ 672.00
10	PUBLIC INVOLVEMENT SPECIALIST	0	@	**$84.00**	=	$ -
		TOTAL LABOR COST			=	**$ 39,124.00**

B. ESCALATION

Anticipated Start Date:
Project duration: 0 months

	Total Raw Labor & Overhead		Esc Ratio		Annual Esc		
Out Year 1	$39,124.00	X	0%	X	4.0%	=	**$0.00**
Out Year 2	$39,124.00	X	0%	X	8.1%	=	**$0.00**

C. OUT-OF-POCKET EXPENSE SUMMARY

		Estimated Amount		Unit Cost		Estimated Expense
1	* MILEAGE (Miles)	60	@	**$ 0.585**	=	$ 35.10
3	* LODGING (Nights)	0	@	**$ 96.00**	=	$ -
4	* MEALS (Days)	0	@	**$ 59.00**	=	$ -
5	CAR RENTAL (Days)	0	@	**$ 100.00**	=	$ -
6	GAS (Gallons)		@	**$ 3.50**	=	$ -
2	AIR TRAVEL (Tickets)	0	@	**$ -**	=	$ -
6	AIRPORT PARKING		@	**$ -**	=	$ -
		TOTAL ESTIMATED EXPENSE			=	**$ 35.10**

30 cultural 30

D. SUBCONSULTANTS/OUTSIDE SERVICES

1	STATE HISTORIC PRESERVATION OFFICE REQUEST	**	$300.00	=	**$ 300.00**
2	CONSULTANT 1 / IDAHO FISH AND WILDLIFE	**	$0.00	=	**$ -**

TOTAL = $39,459.10

Pricing Updates: Pricing is updated at least annually, as appropriately determined by Bionomics Environmental, Inc. Services and supplies will be billed at current standard rates, which may be different than the unit prices listed.

COVID-19 Update: To the best of our abilities, Bionomics Environmental, Inc. (Bionomics) will try to meet the requirements outlined in the project scope, schedule, and budget as delineated in the contract. As our response to the COVID-19 pandemic, Bionomics is committed to engaging in safety procedures in hopes to protect clients, staff, their families, and the public. Since by definition the COVID-19 impacts are beyond Bionomic's control and are considered a force majeure impact, we cannot be responsible for any delays in delivery or subsequent project delays which could result in related claims, costs, or damages. Should circumstances related to the COVID-19 issue impact our scope, schedule, or budget, we will notify you of the circumstances and mutually agree to an adjustment.

* As per the "FEDERAL PER DIEM RATES FOR IDAHO"
** See attached Subconsultant's Summary

	TASK	Principal	Environmental Program Manager	Senior Environmental Scientist	Principal Investigator	Senior Archaeologist	Cultural Resource Specialist	Public Involvement Specialist	TOTAL
	Joint Permit Application	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**40**
	Draft Joint Application for Permit		32						**32**
	Final Joint Application for Permit		8						**8**
	Total Task Hours	**22**	**144**	**12**	**82**	**20**	**8**	**0**	**288**

GeoTerra

Date: 1/12/2022

Proposal for Aerial Mapping Services

Job # 220019

Submitted to:

Barry Whitson
Keller Associates
3153 McNeil Drive
Idaho Falls, ID 83401

Franklin to Overland Corridor:
Planimetric feature mapping with DTM, contours, and new color orthophotography. Corridor will be flown with new aerial photography and lidar to support 1/2' contours.

Project Name: **Franklin to Overland Corridor**
Location: **Meridian, Idaho**

Specifications	***40-scale, 1/2' ctrs***	**Notes**
Project Description	Corridor	*Client provided route, 1.1 miles*
Acres	100	*Mapping AOI with 50' buffer*
Map Scale	1" = 40'	*Horizontal Accuracy Standard*
Contour Interval	1/2'	*Vertical Accuracy Standard*
DTM	Yes	*Mass points and Break Lines*
Vertical Accuracy, photography	0.15'	*RMSEv Accuracy Calss per ASPRS Map Accuracy Standards (2014)*
Feature Data Collection	Full	*Full feature layers*
Image GSD / Photo Scale	4cm	*Ground Sample Distance (GSD) in cm's*
Estimated Flight Lines	1	*60% forward lap*
Estimated Aerial Exposures	18	*30% side lap*
Orthophoto Resolution	0.15'	*0 to 3 pixel horizontal accuracy*
Orthophoto Delivery	RGB	*3-Band, 8-bit/band RGB*
Ground Control Points H-V	**8**	*Targeted or Photo ID - ground control is responsibility of client*
Ground Control Points V	**6**	*Verical shots throughout corridor*
Airborne GPS / IMU	yes	*Exposure Location / Orientation*
Primary Delivery via	UPS	*Ground Delivery*
Secondary Delivery via	FTP/Email	*Internet Download or Attachment*
Project Map	Yes	*Attached*

Project Deliverables:

* Features and Contours in AutoCAD format
* DTM data in AutoCAD format
* Terrain surface in Civil3D AutoCAD format
* Lidar data in LAS format classified (ground/non-ground)
* Flight Index in AutoCAD format
* 3-band imagery to RGB Color Orthophoto Tiles in TIF/TFW Uncompressed Format
* 3-band imagery to RGB Color Orthophoto Tiles & Mosaic in 20:1 SID/SDW Compressed Format
* Project Metadata (technical details) in standard GeoTerra PDF Format

Media Type: Standard Media (CD-ROM, DVD)

Schedule: CAD Data will be delivered 5 to 6 weeks from receipt of imagery and ground control coordinates. Orthophoto data will follow within 1 week.

* Recommend flying during leaf off conditions early spring

PROJECT TOTAL	***40-scale, 1/2' ctrs***
Aerial Mapping Services	**$24,875**

Submitted by:

Scott Wilson, CP

GeoTerra

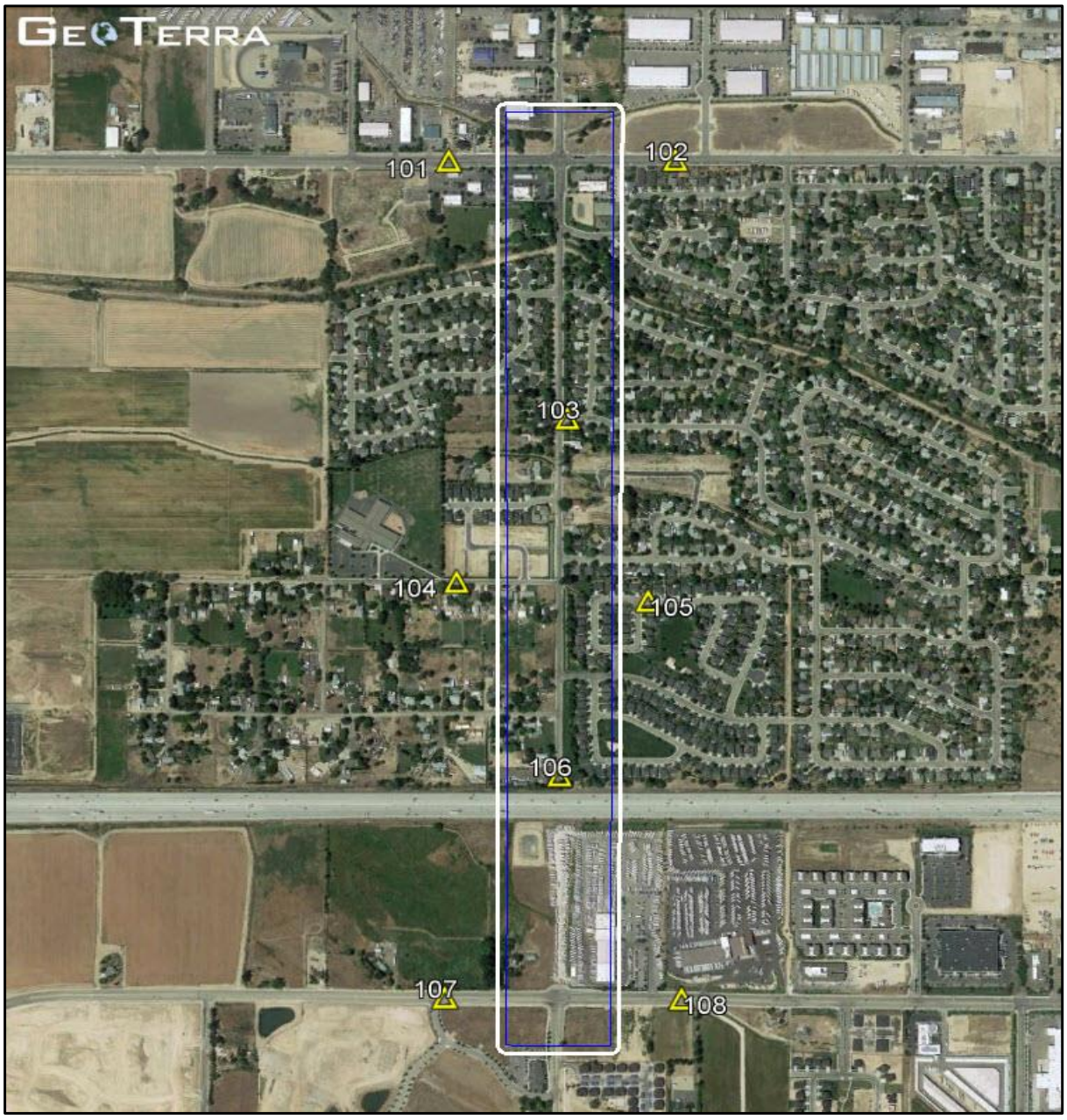
www.GeoTerra.us
208-336-2430

Approved by:

Amount Approved:

Date Approved:

Franklin to Overland Corridor: White Boundary-Mapping AOI (8 Targets)



Badger Hydrovac Service Proposal

United States

Prepared By:	Zachary Funk
Email:	zfunk@badgerinc.com
Date	2022/01/11

Badger Daylighting Corp

15977 Gunfire Rd
Caldwell, ID 83607
ID License #RCE-38047 and #020208
"An equal opportunity employer"

ESTIMATE

DATE:	**2022/01/11**
Reference #:	**QT-011122-83790**
PREPARED BY:	**Zachary Funk**

Customer Information			
Company:	KELLER ASSOCIATES INC	**Contact Name**	Eric Hulslander
Contact Phone #	(208) 288-1992	**E-mail:**	ehulslander@kellerassociates.com
Billing Address:		**Title:**	Project Engineer
Bill City/State		**Account #**	26198
Service Address			

Scope of Work

Quote for Pothole budget planning on Linder overpass project. Numbers subject to change as new information is received.

Pothole dimensions are calculated at 12" diameter X 6' deep. Any excessive digging or exploratory trenching outside of pothole dimensions will be billed at hourly rate.

Service Item	Item Description	Price	UOM	Qty	Amount
Badger Hydrovac With Operator		$ 255.00	HR		$ 0.00
Pothole - in dirt - Depth to 0 - 6 Ft		$ 450.00	EA		$ 0.00
Pothole - in pavement - Depth to 0 - 6 Ft		$ 600.00	EA	24	$ 14,400.00
3rd Party Service (TRAFFIC CONTROL)		$ 2,200.00	DAY	2	$ 4,400.00
3rd Party Service (CONTRACTOR)	Pavement Panel Replacement, if needed	$ 1,500.00	EA		$ 0.00
Fluctuating Fuel Recovery					$ 1,537.84
				Total:	**$ 20,337.84**

This proposal contains the budgetary estimate to complete the work as described above under the heading "Scope of Work".
If any part of the work varies from that described in Scope of Work, or if unexpected digging conditions are encountered (eg rocks, rubble, roots, etc...), then additional charges shall apply. All work will be done on a time and material basis. All work will be done in accordance with the terms and conditions contained in Badger Daylighting Corp.'s standard terms and conditions (USA) attached hereto.

Company: _____ PO#: _____

Name (please print): _____ Title: _____

Signature: _____ Date: _____

I am authorized to bind the Company