

**INVITATION FOR BID**  
**UmaBirch Project Area 3**  
**Existing Irrigation Pump and Well Enhancement**  
**&**  
**Installation of New Irrigation Pipeline**

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**Confederated Tribes of the Umatilla Indian Reservation**

*Umatilla Basin Fish Habitat Restoration Project*  
*Department of Natural Resources*

CONTRACTORS INVITED TO BID THE PROJECT: **All individuals with and without Indian preference.**

**DATE ISSUED:** January 23, 2024  
IFB No. 2024/01-430.017

**Administrative Contact:**

Julie Burke  
Office/Fax: (541)429-7292  
Email: [julieburke@ctuir.org](mailto:julieburke@ctuir.org)

**Technical Contact:**

Jude Love  
Office: (541) 429-7283  
Cell: (208) 940-0229  
Email: [judelove@ctuir.org](mailto:judelove@ctuir.org)

**Critical Dates:**

Site Visit	<b>February 15, 2024</b>
Request for Clarification Deadline:	<b>February 20, 2024</b>
Response to Clarification Deadline:	<b>February 23, 2024</b>
Bid Submission Deadline:	<b>February 28, 2024– 4:00 pm PST</b>
Tentative Award	<b>March 1, 2024</b>
Selection (est.):	<b>March 4, 2024</b>
Contract Award (est.):	<b>March 8, 2024</b>
Project Initiation (est.):	<b>March 18, 2024</b>
Project Completion (est.):	<b>June 15, 2024</b>

## *Invitation for Bid*

### *Part I- Project Information and Scope of Work*

#### *UmaBirch PA-3*

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#### **1.1 *Project Purpose and Location:***

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) is accepting bids for the enhancement of irrigation infrastructure including pump and buried irrigation pipeline. Infrastructure will be for usage the Point of Appropriation (POA) for water right 41254. The project is located on Birch Creek, about 1 miles upstream of its confluence with the Umatilla River near the town of Reith, approximately 3 miles west of City of Pendleton, Oregon along Birch Creek Road (Township 2 North, Range 31 East, Section 13). The project site is located entirely on private property.

See Attachment B for Project Map

#### **1.2 *Scope of the IFB***

This Invitation for Bid (“IFB”) provides the specific services to be contracted as well as information concerning the preparation and submittal of Bids, an explanation of how bids will be evaluated, and terms and conditions of the contract that may be awarded as a result of the IFB.

#### **1.3 *Project Timeline:***

A Pre-Bid Site Showing for Contractors is scheduled on **February 15, 2024** from 9:00 AM to 12:30 PM PDT. Contractors are encouraged to attend the Pre-Bid Site Showing to inform their bid. Interested contractors should meet at the CTUIR Governance Center at 46411 Timíne Way, Pendleton, Oregon, 97801. Contractors planning to tour the project site are encouraged to confirm attendance with the contacts by 4:00 pm the day before the tour is scheduled. The “tentative” project work dates are between **March 18, 2024 and May 31, 2024**. Project start dates are dependent upon securing appropriate permits from applicable agencies.

#### **1.4 *Closing Date for Submissions***

Bids are to be submitted via e-mail to [julieburke@ctuir.org](mailto:julieburke@ctuir.org) by the date and time indicated on page one of this solicitation. Bids must be submitted in pdf format.

By submission of a bid, the contractor agrees, if his/her bid is accepted, to enter into a contract with the Confederated Tribes of the Umatilla Indian Reservation, Department of Natural Resources and to complete all work as specified in the contract at the bid price and to complete all work within the time frame indicated in the attached IFB.

## **1.5 Bids**

Bids shall be prepared by computer. No oral, handwritten, telephone or facsimile bids will be accepted.

A bid bond guarantee **IS** required if the bid amount exceeds CTUIR simplified acquisition threshold of \$100,000.

Payment and Performance Bonds **ARE** required if the bid amount exceeds CTUIR simplified acquisition threshold of \$100,000.

All bids must be signed and dated; if a joint venture is submitting the bid, each joint venture must sign the bid. All bids must include **IFB No. 2024/01-430.017**.

## **1.6 Necessary Information**

Bids must contain all information requested in the IFB. The CTUIR will not consider additional information submitted after the closing date and may reject incomplete bids.

## **1.7 Cost of Bids**

The CTUIR will not be liable for any expenses incurred by contractors in either preparing or submitting bids, evaluation/selection, or contract negotiation process, if any.

## **1.8 Request for Clarification**

Questions regarding the solicitation and project must be submitted to the Technical Contract on page 1, as per date/time instructions. The CTUIR is not obligated to answer any questions submitted after the due date.

## **1.9 Response to Requests for Clarification**

Responses to questions received by the request for clarification deadline will be provided no later than **February 20, 2024**. Questions sent after the deadline will not receive a response.

## **1.10 Bids Constitute Firm Offers**

Submission of a bid constitutes contractor's affirmation that all terms and conditions of the bid constitute a binding offer that shall remain firm for a period of ninety (90) days from the bid opening.

## **1.11 Signature Required; Proposer Affirmations**

An authorized representative of the contractor must sign the original bid in ink. Contractor's signature and submission of a signed bid in response to the IFB constitute contractor's affirmation that the contractor agrees to be bound by the terms and conditions of the IFB and by all terms and conditions of the contract awarded.

### **1.12 Type of Contract**

The CTUIR will execute a subcontract for well enhancement and irrigation services.

### **1.13 Confidential Information**

Bids are confidential until the public opening. any information a contractor submits in response to the IFB that the contractor considers a trade secret or confidential proprietary information, and contractor wishes to protect from public disclosure, must be clearly labeled with the following:

“This information constitutes a trade secret or confidential proprietary information and is not to be disclosed except in accordance with applicable public disclosure laws.”

### **1.14 Requests for Further Clarification of Bids**

The CTUIR may request additional clarification from contractors on any portion of the bid.

### **1.15 Cancellation of IFB**

The CTUIR may cancel this IFB at any time upon finding that it is in the CTUIR’s best interest to do so.

### **1.16 Rejection of Bids**

The CTUIR may reject a particular bid or all bids upon finding that it is in the CTUIR’s best interest to do so.

### **1.17 Tentative Award**

The CTUIR will provide a written tentative award notice to the lowest responsive and responsible bidder.

Final award will be contingent upon successful execution of a contract within 7 days after the tentative award.

### **1.18 Protest of Tentative Award Selection**

A notification of tentative award to the lowest responsive and responsible contractor will be mailed to all contractors that submitted a bid in response to this IFB. A contractor who claims to have been adversely affected by the selection of a competing contractor shall have seven (7) calendar days after receiving the notice of selection to submit a written protest of the selection to the IFB contacts listed in part 1.4. The CTUIR will not consider protests submitted after the date established in this part. The protest must specify the grounds upon which the protest is based.

### **1.19 Award**

After expiration of the seven (7)-calendar day selection protest period and resolution of all protests, the CTUIR will proceed with final award.

### **1.20 Investigation of References**

The CTUIR reserves the right to investigate the references and past performance of any contractor with respect to its successful performance of similar services, compliance with IFB and contractual obligations, and its lawful payment of suppliers, sub-contractors, and employees. The CTUIR may postpone award or execution of the contract after the announcement of the apparent successful contractor in order to complete its investigation. The CTUIR reserves the right to reject any proposal at any time prior to the execution of any resulting contract.

### **1.21 Amendments**

The CTUIR reserves the right to amend the resulting contract from this IFB. Amendments could include but are not limited to, changes in the statement of work, extension of time and consideration changes for the contractor. All amendments shall be in writing and signed by all approving parties before becoming effective. Only the CTUIR has the final authority to execute changes, notices or amendments to contract.

### **1.22 Disclosure of the Magnitude:** This project estimated to be between \$100k - \$250k.

## Part II - Services to Be Provided

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### 2.1 *Scope of Work*

Provide the technical design and construction implementation of existing irrigation well on the UmaBirch Project Area 3 site. This would include the well casing upgrade as needed, a new well pump, and the installation of a new buried irrigation line as per specification in Attachment A. The new pump and casing must meet standards of Oregon Water Resources Department. Required equipment to complete the scope of work shall be determined by the contractor upon site visit and questioning period.

1. The scope of work for this project includes all of the following items:
  - a. *Designs for proposed pump, casing for existing well, and buried irrigation system*
  - b. *Install New Irrigation Pump*
    - i. Install new irrigation pump capable of supplying a maximum of 85 GPM. To irrigate approximately 8 acres. Exact location to be approved by CTUIR and landowner.
  - c. *Install new Irrigation Line*
    - i. Installation of  $\pm$  1,790 ft. of new irrigation line with diameter of 2" or meets requirements of delivery system.
  - d. *Installation of new casing for existing well*

Existing Casing Specs:

- 16" diam. From 0 ft. to 341 ft. standard gage
- Depth of seal 34' 4"
- Diameter of well bore to bottom of seal 20 in.

Please see Attachment C for well log.

### 2.2 *Deliverables and Timeline*

The following are expected minimum deliverables and a proposed partial timeline. Final deliverables and timeline will be negotiated in the contracting process. Communication is highly encouraged throughout the design process.

- a. The scheduled date for completion of the Project is **June 15, 2024**. The Contractor must complete all aspects of the work on, or before this date, unless completion is delayed due to conditions mutually agreed upon and designated in writing by the Contractor and the CTUIR.
- b. Once work is commenced, project work shall be ongoing. Work shall commence on a Monday-Friday schedule unless prior arrangements are made with the CTUIR. Any delay in daily production will be discussed and agreed upon through the CTUIR.

- c. Work shall not commence until the work schedule is approved, then shall be continuous, unless weather conditions or circumstances beyond Contractor's control prevent working. The CTUIR must approve deviation from the approved work schedule in writing.

### **2.3 Payment**

Progress payments may be submitted per bid item to the CTUIR upon successful completion. The Contractor shall contact the CTUIR to request final inspection of work for payment. The CTUIR will make the final payment within 30-days of receipt of an invoice following a final inspection that approves all work.

## Part III – Bid Requirements

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For the purpose of this IFB, each interested Contractor will submit a bid package to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources, Fisheries Program that includes the following sections and tabbed as follows:

- I) Cover letter
- II) Project schedule
- III) Completed bid sheet (Attachment A)
- IV) Completed responsibility certification (Attachment B)

### ***1. Cover Letter***

A cover letter must express the Contractor's interest in the project and commitment to the obligations expressed in the IFB. This letter should include the original signature of an authorized representative of the Contractor and indicate that the Contractor accepts all of the terms and conditions contained in the IFB.

### ***2. Project Schedule***

Provide a detailed schedule describing when individual tasks will be completed, as well as a schedule for the overall project.

### ***3. Completed Bid Sheet***

Complete the provided bid sheet to provide a lump sum line-item cost for 1) well casing and associated upgrades; 2) installation of new well pump; and, 3) installation of irrigation pipeline.

### ***4. Completed Responsibility Certification***

Complete the provided responsibility certification to certify that the Contractor or any of its Principals are not presently debarred, have not been convicted of a relevant civil or criminal offense within 7 years, and has not had a contract terminated for default within 7 years. **This must be submitted with the bid.**



## Part IV – Selection Criteria

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The contract will be awarded to the responsive and responsible bidder that submits the lowest bid. Indian preference shall apply to Indian-Owned Business that timely bids on the project and falls within 6% of the lowest bid.

Indian Preference definition:

Must meet these factors in order to secure Indian Preference status

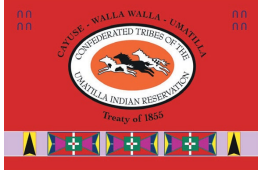
1. Membership in a Federally recognized Tribe
2. Indian Ownership of 51% or more
3. Indian Control
4. Indian Management
5. Financing obtained by Indian person
6. Equipment obtained by Indian person.

## Part V – Attachments

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Attached are the CTUIR Supplemental Specifications that are incorporated into this solicitation and any resultant contract.

- **Attachment A:** Bid Sheet (Pg. 11)
- **Attachment B:** Responsibility Certification (Pg. 12-13)
- **Attachment C:** Project Vicinity Maps (Pg. 14-15)
- **Attachment D:** Well Log (Pg. 16)
- **Attachment E:** CTUIR GIS Standards and Requirements (Pg. 17-20)



## Attachment A: Bid Sheet

Confederated Tribes of the Umatilla Indian Reservation  
 Department of Natural Resources  
**Fisheries Program**

### BID SHEET

IFB No. 2024/01-430.017

#### Project: Birch Creek Well Enhancement and Irrigation Line

Item No.	DESCRIPTION	Hours/ Quantity	Cost	Total Cost
1	Design of well upgrade and buried irrigation pipeline	1 design		
2	Installation of new irrigation pump capable of delivering approximately 85 GPM to irrigate approximately 8 acres.	1 pump/ approximately 85 GPM		
3	Installation of new buried irrigation pipeline	±1,790 ft		
4	Installation of new well casing identical to existing specs – 16” Diam. From 0 ft. to 341 ft. Gage standard	1 each		
<b>BID TOTAL</b>				

<b>CONTRACTOR’S FULL LEGAL NAME: (PLEASE PRINT OR TYPE):</b>	
<b>AUTHORIZED SIGNATURE:</b>	
<b>PRINTED NAME AND TITLE OF PERSON SIGNING:</b>	
<b>DATE:</b>	
<b>COMPANY ADDRESS:</b>	
<b>FAX NUMBER:</b>	
<b>EMAIL ADDRESS:</b>	
<b>BID PRICES VALID FOR</b>	<b>DAYS</b>

## Attachment B: Responsibility Certification

Attach to Bid

### Certification Regarding Debarment, Suspension, Proposed Debarment, and other Responsibility Matters

(a)

(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

(A) Are ( ) are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal, State agency, or any Tribal government;

(B) Have ( ) have not ( ), within a 7-year period preceding this offer, been convicted of or had a civil judgement rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, Tribal, or local) contract or subcontract; violation of Federal or state antitrust statutes related to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a Governmental entity with, commission of any of the offenses enumerated in section (1)(a)(ii) of this provision.

(D) Have ( ) have not ( ), within a 7-year period preceding this offer, had a civil or criminal judgement rendered against them by a Tribal court for any offense related to Indian Preference laws (including TERO provisions) or had a civil judgement rendered against them relating to the firms status as an Indian contractor.

(ii) The Offeror has ( ) has not ( ), within a 7-year period preceding this offer, had one or more contracts terminated for default by any Federal agency, State agency, or any Tribal Government.

(2) Principals, for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of false, fictitious, or fraudulent certification may render the maker subject to prosecution under Section 1001, Title 18, United States Code.

- (b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
  
- (c) A certification that any of the items in paragraph 1 of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information requested by the Contracting Officer may render the Offeror non-responsible.
  
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph 1 of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
  
- (e) The certification in paragraph 1 of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Tribe, the Contracting Officer may terminate the contract resulting from this solicitation for default.

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Printed name and title of Authorized Representative

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Signature of Authorized Representative

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Date

## Attachment C– Project Vicinity Map







## PA- 3 Irrigation Pump and Line Enhancement

Proposed Pump enhancement and Irrigation Line Installation for Cert. G-3742 (T2N, 31E, Sec. 13, WM).

# Attachment D: Well Log

**NOTICE TO WATER WELL CONTRACTOR**  
 The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM 10, OREGON within 30 days from the date of well completion.

UMAT  
391

**RECEIVED**  
JUN 17 1967

2N/31-13R

**STATE ENGINEER**  
 STATE OF OREGON  
 (Please type or print) SALEM, OREGON State Well No. 1N/34-7  
 State Permit No. G-3965

**(1) OWNER:**  
 Name JOHN, SMITH & KRAMER INC  
 Address Athens, Oregon

**(11) WELL TESTS:** Drawdown is amount water level is lowered below static level.  
 Was a pump test made?  Yes  No If yes, by whom? FARMONE INC  
 Yield: 537 gal./min. with 235 ft. drawdown after 24 hrs.  
 " good recovery " " "

**(2) LOCATION OF WELL:**  
 County Umatill Driller's well number \_\_\_\_\_  
NW 1/4 Section 7 T. 1N R. 34E W.M.  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

Baller test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water 54 Was a chemical analysis made?  Yes  No

**(3) TYPE OF WORK (check):**  
 New Well  Deepening  Reconditioning  Abandon   
 Abandonment, describe material and procedure in Item 12.

**(12) WELL LOG:** Diameter of well below casing 16  
 Depth drilled 451 ft. Depth of completed well 451 ft.  
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

**(4) PROPOSED USE (check):** Domestic  Industrial  Municipal  Irrigation  Test Well  Other   
**(5) TYPE OF WELL:** Rotary  Cable  Dug  Driven  Jetted  Bored

MATERIAL	FROM	TO
Soil	0	8
Gravel	8	9
Broken basalt & clay	9	34
Broken brown basalt (Static 10')	34	96
Black basalt	96	113
Broken brown basalt (Static 88')	113	150
Broken black basalt	150	180
Black basalt (Static 71' - 80PM)	180	205
Porous black basalt	205	240
Black basalt	240	252
Broken black basalt (some caving)	252	300
Black basalt	300	352
Dark grey basalt	352	365
Dark grey basalt clay seams	365	408
Grey basalt	408	420
Conglomerate, red, brown, & black	420	451
Black basalt broken (Static 71')	451	451

**(6) CASING INSTALLED:** Threaded  Welded   
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
16 " Diam. from 0 ft. to 34ft.4" ft. Gage Standard  
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

Work started 1/10/67 19 Completed 5/16/67 19  
 Date well drilling machine moved off of well 5/17/67 19

**(7) PERFORATIONS:** Perforated?  Yes  No  
 Type of perforator used \_\_\_\_\_  
 Size of perforations in. by \_\_\_\_\_ in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) SCREENS:** Well screen installed  Yes  No  
 Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
 \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(13) PUMP:**  
 Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P.

**(9) CONSTRUCTION:**  
 Well seal—Material used in seal Cement  
 Depth of seal 34' 4" ft. Was a packer used? \_\_\_\_\_  
 Diameter of well bore to bottom of seal 20 in.  
 Were any loose strata cemented off?  Yes  No Depth \_\_\_\_\_  
 Was a drive shoe used?  Yes  No  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_

**Water Well Contractor's Certification:**  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 NAME D. K. "DON" SMITH (Type or print)  
 Address P.O. BOX 179  
 Drilling Machine Operator's License No. 121  
 [Signed] D.K. Smith (Water Well Contractor)  
 Contractor's License No. 204 Date 6/5/67, 19\_\_\_\_\_

**(10) WATER LEVELS:**  
 Static level 75 ft. below land surface Date 5/16/67  
 Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

(USE ADDITIONAL SHEETS IF NECESSARY)



## Attachment E: GIS Standards and Requirements

The CONTRACTOR shall provide the TRIBES with a digital copy of all finished products that include geographic information. All geographic information shall be delivered in a digital, georeferenced format. Metadata shall be included with all deliverables. The TRIBES use ESRI ArcGIS software as its standard GIS platform, SQL server as its primary database software. This schedule provides a minimum set of requirements for the delivery of GIS files being created for CTUIR. Further requirements may be included in the project implementation plan. All geographic data shall be expected to meet these minimum levels of standards.

If attribute information are collected in addition to geographic positions the CONTRACTOR shall provide a digital data dictionary file that has been approved by the persons responsible for the contract for CTUIR in terms of expected content and format. The data dictionary file must describe all the associated attribute information. Included in the data dictionary must be a definition of each table and each column within the table. The table definition must include the purpose, structure, and a list of any associated features. The column definition must include the data type, data precision, and a brief description of each of the values that may be included in the column (including an explanation of any abbreviations or codes that are utilized). If an extensive number of abbreviations or codes will be utilized to populate a column, a separate domain list shall be provided. All domain list values must be accompanied by a description especially in the case of abbreviations. The preferred delivery format for all GIS attribute tables is a comma delimited, ASCII text file format with all column headings specified.

### 1. Data Collection Standards.

#### 1.1. Survey Data Standards. CONTRACTOR shall:

- 1.1.1. use known Tribal survey monuments if working within the reservation boundary,
- 1.1.2. meet a minimum level or accuracy for all survey work (1/100<sup>th</sup> of a foot),  
and
- 1.1.3. submit a digital file of all survey points and a digital file of their associated attribute descriptions.

#### 1.2. GPS Data Standards. CONTRACTOR shall ensure:

- 1.2.1. all geographic features collected have a unique identification which links it with its attribute information in an associated table,
- 1.2.2. all attribute tables have a digital data dictionary file,
- 1.2.3. horizontal coordinates are documented and meet a minimum level of accuracy as is appropriate for the scope of work. To determine appropriateness, the following guidelines shall be used:
  - 1.2.3.1. Survey Grade are the most accurate and most commonly used in situations where accuracy is essential (engineering applications, property boundary determinations, etc.), as such they are the preferred method. They typically provide true positional accuracy within a centimeter in the horizontal direction and elevation accuracies within 10 centimeters.
  - 1.2.3.2. Mapping Grade receivers must be differentially corrected GPS to reduce positional errors. Differential correction is the process of improving fixed positions utilizing data from a base station. With differential correction, horizontal accuracies from one to two meters can be achieved, while vertical accuracy is around 3 meters. These receivers are most commonly used by GIS professionals for gathering data for inventories, resource mapping, environmental management and infrastructure management. This method is permissible if Survey Grade cannot be provided.

1.2.3.3. Recreational Grade are the least accurate units, and are not permitted without express authorization from the TRIBES' Office of Information Technology. This is typically used for outdoor recreational activities, these receivers can have up to 20 meters in positional error.

### 1.3. Georeferencing.

1.3.1. Survey grade information must be georeferenced to the approved coordinate system as adopted by the Oregon Legislature in the Oregon Revised Statute 93.330:

Oregon State Plane North  
Projection: Lambert\_Conformal\_Conic  
False\_Easting: 8202099.737533  
False\_Northing: 0.000000  
Central\_Meridian: -120.500000  
Standard\_Parallel\_1: 44.333333  
Standard\_Parallel\_2: 46.000000  
Latitude\_Of\_Origin: 43.666667  
Linear Unit: Foot (0.304800)

Geographic Coordinate System: GCS\_North\_American\_1983  
Angular Unit: Degree (0.017453292519943299)  
Prime Meridian: Greenwich (0.000000000000000000) Datum:  
D\_North\_American\_1983  
Spheroid: GRS\_1980  
Semimajor Axis: 6378137.000000000000000000  
Semiminor Axis: 6356752.314140356100000000  
Inverse Flattening: 298.257222101000020000

1.3.2. Geographic data including data other than survey grade information, such as CAD, GIS, Aerial Imagery, and Photography must be georeferenced using the following coordinate system:

NAD83 UTM Zone 11 North Projection:  
Transverse\_Mercator False\_Easting:  
500000.000000  
False\_Northing: 0.000000  
Central\_Meridian: -117.000000  
Scale\_Factor: 0.999600  
Latitude\_Of\_Origin: 0.000000  
Linear Unit: Meter (1.000000)

Geographic Coordinate System: GCS\_North\_American\_1983  
Angular Unit: Degree (0.017453292519943299)  
Prime Meridian: Greenwich (0.000000000000000000) Datum:  
D\_North\_American\_1983  
Spheroid: GRS\_1980

1.3.3. All aerial photography and satellite imagery must be georeferenced and orthographically rectified unless otherwise authorized by the TRIBES' Office of Information Technology.

## 2. Data Development Requirements.

### 2.1. ArcGIS data.

- 2.2.1. All intersecting lines shall be processed to remove overshoots and undershoots.
- 2.2.2. Lines, polygons, points and annotation must not be duplicated.
- 2.2.3. Polygons must have only one label per feature.
- 2.2.4. Polygons must edge match without slivers.
- 2.2.5. Polygons must not overlap.
- 2.2.6. Polygons must close without overshoots or undershoots

### 2.2. CAD data.

- 2.2.1. Zero length segments shall be removed.
- 2.2.2. Different feature types shall not share a common line segment.
- 2.2.3. Snapping shall be set such that lines intersect.
- 2.2.4. All block definitions shall be provided.
- 2.2.5. A detailed layer list shall be provided.

### 2.3. LiDAR data. CTUIR follows the Oregon Airborne LiDAR Data Standard

### 2.4. A project report describing the processing steps shall be provided.

## 3. Data Delivery Requirements:

3.1 Vector Data. Points, polygons and lines (parcels, roads, streams, buildings, etc.) shall be delivered in the following formats: ESRI Shape file format, ESRI File Geodatabase format,

3.2 CAD data. Electronic files of all developed CAD data as DWG shall be provided including a PDF of survey or as-built.

3.3 Raster Data. (aerial photos and other remote sensing imagery) shall be in the following formats: TIFF, JPEG, ERDAS IMAGINE, GRID, GEOJPG.

3.4 LiDAR Data. CTUIR follows the Oregon Airborne LiDAR Data Standard. All LiDAR data collections must meet those standards. Unless otherwise stated in the project implementation plan CONTRACTOR shall provide:

- 3.4.1 LAS files, containing classification values.
- 3.4.2 Intensity grid.
- 3.4.3 Highest hits grid.
- 3.4.4 Bare earth digital terrain model as a DEM

3.5 Metadata. A metadata file shall be submitted for each digital file delivered to CTUIR. Metadata must provide sufficient information to allow a reasonable understanding of the source, accuracy, modifications to, and applicability of the data provided. All submitted metadata shall follow Federal Geographic Data Committee (FGDC) Standards specified in *Content Standard for Digital GeoSpatial Metadata (FGDC-STD-001-1998)* (FGDC 1998). All metadata should be submitted in text (\*.txt), Microsoft Word (\*.doc), or the ESRI compatible XML format.).

- 3.5.1 Minimum metadata standards for geographic information. The CONTRACTOR shall:
- 3.5.1.1 Provide a purpose statement identifying the project for which the data was created,
  - 3.5.1.1 Identify the original source of the data,
  - 3.5.1.2 Identify the creator of the data,
  - 3.5.1.3 Indicate the date that the data was input into a GIS system,
  - 3.5.1.4 Provide confidence of attribution data,
  - 3.5.1.5 Provide positional confidence of the object location (horizontal and vertical),
  - 3.5.1.6 Identify hardware used to collect and process the data,
  - 3.5.1.7 Identify software used to collect and process the data,
  - 3.5.1.8 Identify the attributes associated with the data.

**END OF SECTION**