

SCOPE OF WORK
FOR
VALLEY REGIONAL
TRANSIT

**NEPA, R/W SURVEY, DESIGN, BIDDING &
CONSTRUCTION ENGINEERING**

FOR

**FY20 ADA COUNTY BUS STOP IMPROVEMENTS
(MERIDIAN, EAGLE AND ADDITIONAL BOISE STOPS)**

FEBRUARY 12, 2020

Prepared By:
Paragon Consulting, Inc.
157 W. 4th Street
Kuna, Idaho 83634



Project Manager:
Joe Barton, P.E.
(208) 921-8486

Scope of Work

Date: February 12, 2020

Project Name: FY20 Ada County Bus Stop Improvements (Meridian, Eagle and Additional Boise Stops)

Consultant Company Address:

PARAGON Consulting, Inc.
157 W. 4th Street
Kuna, ID 83634

Consultant Project Manager/Contact Information:

W. Joe Barton, P.E.
(208) 921-8486 (Cell)
jbarton@paragonfbk.com

Contract Amount: \$66,630.00 (T/M NTE)

Duration: March 2, 2020 thru September 30, 2020 (212 Calendar Days)

Project Description and Assumptions:

Valley Regional Transit (VRT) desires to upgrade multiple bus stop locations throughout Ada County, Idaho. VRT has a limited budget available to implement planning, survey, design, bidding and construction of bus stop improvements in fiscal year 2020 (October 1, 2019 thru September 30, 2020).

Paragon and VRT entered into an agreement in October, 2019 to complete the NEPA document for various bus stop improvement work and to complete the design, bidding and construction administration for a limited number of bus stop improvements in the Boise area. Additional funding has become available and VRT desires to increase the number of bus stop improvements to accommodate the project's total budget. The approximate budget for each area (including engineering, construction and construction administration) is as follows:

- Boise area - ± \$440,000
- Meridian area - ± \$110,000
- Eagle area - ± \$50,000

The additional bus stop improvement locations in Boise, Eagle and Meridian will be incorporated into the NEPA document for the original bus stop list and then evaluated by our survey sub-consultant to confirm the existing right-of-way. Following right-of-way confirmation, the additional bus stop locations will be designed and incorporated into the design plans and contract bid documents.

The bus stop locations will then be bid and awarded to the lowest bid contractor. Following the bidding process, the various bus stop improvements will be constructed and the construction contract will be closed out.

Major Project assumptions include the following:

- The VRT Project Budget includes funds in fiscal year 2020 for planning, NEPA, right-of-way evaluation, design, bidding and construction.
- Additional bus stop improvement locations to be developed under this scope of work will be incorporated into the NEPA document prepared for the original 57 bus stops.
- Right-of-Way verification will be completed for up to 25 bus stop locations under this scope of work.
- Each of the bus stop locations with sufficient right-of-way will be presented to VRT for approval to include in the Project bid package, in an effort to match the current project budget.
- No special permitting is required for the Project. VRT will present the design plans to the Ada County Highway District for applicable construction permits.
- No topographic survey will be completed for the bus stop designs. Designs will be simplified typical drawings applied over an aerial photograph. No vertical design or grading will be included as each bus stop will be setup for a construction field fit.
- VRT will provide review of all survey, design plans and contract documents.
- VRT may elect to complete some items of work identified in this scope of work with VRT resources.
- No public involvement is required.
- Construction contract time is limited to 60 calendar days.
- VRT will present applicable information to the VRT Board or Executive Board as appropriate.

PARAGON Consulting will complete the Project coordination and Professional Engineering through the NEPA, R/W Survey, design, bidding, and construction engineering phases of the Project, at the request of VRT. Work tasks related to right-of-way verification surveying will be completed by Sawtooth Land Surveying. See “Exhibit B” for Sawtooth Land Surveying’s Scope of Work. Work tasks related to assisting with the NEPA process will be completed by Axiom Points. Axiom Points scope items and labor costs are incorporated within this Paragon Consulting scope of work.

1. NEPA (Categorical Exclusion Worksheet)

The NEPA evaluation will cover up to an additional 60 potential bus stop improvement locations, over the original 60 bus stops, increasing the total number of bus stops in the NEPA document to 120. The final Categorical Exclusion Worksheet will cover all the bus stops from the evaluation that fit within the Categorical Exclusion criteria (bus stop locations not meeting the requirements for a Categorical Exclusion will be removed prior to completing the Categorical Exclusion Worksheet).

- 1.1. Data Collection – PARAGON and Axiom Points will review each of the 60 potential bus stop improvement locations and use online tools (Google Earth, County Assessor’s Data, FEMA Mapping, Hazardous Materials Mapping Tools, etc.) to identify potential environmental conditions that may impact Categorical Exclusion eligibility.
- 1.2. Research – PARAGON and Axiom Points will complete the necessary research to complete the FTA Region 10 Categorical Exclusion Worksheet, including the following:
 - Ada County Air Quality information
 - Environmental Justice areas identified by COMPASS
 - Floodplain Mapping
 - Hazardous Material Mapping
 - Historic & Cultural – No historical and cultural resources search will be completed. A broad statement of minimal visual impact due to nature of work will be included on the Categorical Exclusion Worksheet.
 - Endangered Species List
- 1.3. Categorical Exclusion Worksheet – PARAGON and Axiom Points will incorporate the additional 60 bus stop locations into the FTA Region 10 Categorical Exclusion Worksheet and supporting data. The Worksheet will be provided to VRT for review and submission to the FTA for approval.
- 1.4. Categorical Exclusion Worksheet Revisions – PARAGON and Axiom Points will address comments and questions presented by VRT and the FTA throughout the NEPA approval process.

2. Right-of-Way Verification

PARAGON and Sawtooth Land Surveying will complete right-of-way verification of up to 25 bus stop locations with potential for improvement. Sawtooth Land Surveying will complete the right-of-way research, field survey and office computations to identify the right-of-way at the bus stop locations (See “Exhibit B” for Sawtooth Land Surveying’s Scope of Work).

- 2.1. Sub-Consultant Support – PARAGON will provide support and guidance to the survey sub-consultant throughout the right-of-way verification process. PARAGON will collect photos at each site for use in developing the right-of-way verification drawing and for use in the design phase of the project.

3. Design Services

3.1. Bus Stop Improvement Design – PARAGON will prepare a simplified design layout for each bus stop improvement to be included in the contract bid package. Designs will be drafted over an aerial photograph in order to show the design intent at each location without specific grading and dimensional details. Where applicable, standard details from the Idaho Standards for Public Works Construction (ISPWC) will be referenced. The complete design plans will be incorporated with the plans developed for the original bus stop improvements to include:

- Title Sheet
- General Notes
- Vicinity Map
- Plan Sheets (anticipate one plan sheet for each bus stop location)
- Miscellaneous Details
- Construction Traffic Control (typical traffic control scenarios will be included – no site-specific traffic control plans are anticipated and required pedestrian detours will be the responsibility of the contractor)
- Erosion and Sediment Control Plan (typical erosion control scenarios will be included – no site-specific erosion control plans are anticipated)

Plans will be developed in two phases, including a “Final Design” and a “PS&E” phase. VRT will provide design review of the Final Design plans prior to PARAGON finalizing and preparing the PS&E plans.

3.2. Contract Documents – PARAGON will update the contract documents that are being prepared under a prior scope of work to include provisions for the additional bus stop improvements being developed under this scope of work. The updated contract documents will include the following sections:

- Project Advertisement
- Bid Form & Instructions to Bidders
- Bid, Performance & Payment Bonds
- Naming of Subcontractor(s)
- Federal Contract Provisions
- Contract Agreement
- Notice of Award & Notice to Proceed
- Supplementary Conditions
- Special Provisions

Draft contract documents will be completed for review at the Final Design stage of the project development and then finalized for publication during the PS&E stage of the project development.

A single set of contract documents will be prepared to cover all the bus stop improvement sites. Separate bid schedules or bid items will be developed to differentiate each bus stop improvement site.

3.3. Construction Cost Estimate – PARAGON will prepare a project construction quantity estimate and associated cost estimate at critical milestones, including the following:

- Final Design
- PS&E

4. Bid Administration & Support

Included under a prior scope of work.

5. Construction Engineering and Inspection, Administration Assistance

Construction Engineering and Inspection services are anticipated for a construction contract up to a maximum of 60 calendar days.

5.1. Pre-Construction Meeting – Included under a prior scope of work.

5.2. Construction Inspection – PARAGON will observe construction activities as needed and/or requested by VRT. Inspection will be performed with qualified inspection staff, including the following major tasks:

- Inspector Diaries – Daily reports will be prepared to record the CONTRACTOR’s work on the site, weather conditions, data relative to questions of change orders, field orders, or changed conditions, site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures. CONTRACTOR inspections, tests, and approvals required by the Contract Documents will be received and reviewed.
- Identify and Recommend Corrections – Any omissions, substitutions, defects and deficiencies in the work of the CONTRACTOR will be identified and documented with recommendations reported to VRT. Change Orders and Work Change Directives will be prepared as appropriate. It is assumed that a maximum of 2 Change Orders and 4 Work Change Directives will be required.
- Pay Quantity Collection – Pay quantities and quantity measurements will be checked for accuracy and prepared for processing for payment to the CONTRACTOR.

5.3. Filing & Records Verification - Project files will be maintained at PARAGON’s office in Kuna, Idaho. Copies of design, bidding and construction files will be delivered to VRT. An on-going process of periodic checks of the files will occur during the Project to ensure that all records are being accurately kept and the filing system is up to date. Major tasks under this scope of work item include:

Scope of Work

*FY20 Ada County Bus Stop Improvements
(Meridian, Eagle and Additional Boise Stops)*

- Progress Estimate Preparation – For each scheduled progress estimate, documentation will be prepared for and presented to VRT. Progress Estimates will contain the quantities and justification for each bid item payment with a summary sheet showing the amounts to be paid.
- Materials Certifications – Certifications, as required by bid item, will be requested for all materials incorporated into the Project. No materials will be accepted for payment until the certifications are received and reviewed for acceptance. Minimum Testing Requirements (MTR's) submitted by the Contractor will be reviewed and approved.
- Bi-Weekly Progress Meetings – Bi-Weekly progress meetings will be held at VRT. A bi-weekly update memo including project progress, schedule, budget and other critical items will be provided.
- Contractor Submittal Review – PARAGON will provide Contractor Shop Drawing and submittal coordination and review. It is anticipated that each submittal will have an initial submittal for review and a final submittal for approval. Anticipated submittals include Contractor's CPM Schedule, Traffic Control Plan and Material Certifications. It is expected that PARAGON will perform routine interpretations and clarifications on the Project.

5.4. Wage Compliance – PARAGON will complete the required federal wage compliance reporting for the project. Major tasks under this scope of work item include:

- Review certified payrolls.
- Conduct on-site inspections, perform employee interviews, and identify additional classes if applicable.
- Address all non-compliance, complaints and issues.

5.5. Project Closeout - At Project close-out, all records will be finalized and quantity calculations verified. A final package of records will be submitted to VRT for the official Project files. Major tasks under this scope of work item include:

- Verify that all necessary documents have been received for final payment to the Contractor and Project completion.
- Receive bonds, certificates, or other evidence of insurance not previously submitted and required by the Contract Documents, including certificates of inspection, tests and approvals, shop drawings, samples, and the annotated record documents which are to be assembled by the Contractor in accordance with the Contract Documents to obtain final payment.
- Promptly conduct an inspection after notice from the Contractor that the entire work is ready for its intended use, in the company of VRT and the Contractor, to determine if the work is Substantially Complete. If there are no objections from VRT, PARAGON will deliver a certificate of substantial completion to VRT and the Contractor.

- Coordinate and conduct a final inspection, to include representatives from VRT and Contractor, to determine if the completed work is acceptable so that PARAGON may recommend final payment to the Contractor. PARAGON will also provide a notice that the work is acceptable to the best of their knowledge, information and belief, based on the extent of the services provided under this agreement.

Furnish to VRT a project close out file including critical contractor correspondence, inspection diaries, change orders, payment applications, contractor quality acceptance test results and contractor submittals

Project Schedule

PARAGON proposes to implement its services under this scope of work from March 2, 2020 thru September 30, 2020.

Cost of Services

Services will be on a time and materials not-to-exceed (NTE) basis, with the following estimated breakdown:

NEPA (Categorical Exclusion): \$4,680.00
Right-of-Way Verification: \$22,170.00
Design Services: \$18,440.00
Bid Support: \$0.00
Construction Engineering and Inspection: \$21,340.00

Total Cost of Services (NTE amount): \$66,630.00

Attached is the labor estimate and cost summary (see attached "Exhibit A").



FY20 Ada County Bus Stop Improvements
NEPA, R/W Survey, Design, Bidding & Construction Engineering (Meridian, Eagle and Additional
Boise Stops)
Valley Regional Transit

A. SUMMARY ESTIMATED LABOR-HOURS

	Labor Category	Labor-Hours		Hrly Rate		Labor Cost
1	Project Manager	94	@	\$140.00	= \$	13,160.00
2	Engineer	188	@	\$115.00	= \$	21,620.00
3	CADD	124	@	\$95.00	= \$	11,780.00
4	Axiom	12	@	\$110.00	= \$	1,320.00
TOTAL LABOR COST						= \$ 47,880.00
PARAGON TOTAL						= \$ 47,880.00

B. SUB-CONSULTANTS & EXPENSES

1	Sawtooth Land Surveying		= \$	18,750.00
2	Axiom Points	See Axiom Labor on Section A, Line 4	= \$	-
3	N/A		= \$	-
SUB-CONSULTANT & EXPENSE TOTAL				= \$ 18,750.00

TOTAL	=	\$	66,630.00
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TIME AND MATERIALS NOT TO EXCEED



FY20 Ada County Bus Stop Improvements

NEPA, R/W Survey, Design, Bidding & Construction Engineering (Meridian, Eagle and Additional Boise Stops)

Valley Regional Transit

1 NEPA (Categorical Exclusion Worksheet)

		Total L-Hrs	PM L-Hrs	Engineer L-Hrs	CADD L-Hrs	Axiom L-Hrs
1.1	Data Collection	12	8			4
1.2	Research	12	8			4
1.3	Categorical Exclusion Worksheet	8	4			4
1.4	Categorical Exclusion Worksheet Revisions	4	4			
1	TOTAL - NEPA (HOURS)	36	24	0	0	12
	TOTAL - NEPA (LABOR COST)		\$	4,680.00		

2 Right-of-Way Verification

		Total L-Hrs	PM L-Hrs	Engineer L-Hrs	CADD L-Hrs	Axiom L-Hrs
2.1	Sub-Consultant Support	28	8	20		
2	TOTAL - Right-of-Way Verification (HOURS)	28	8	20	0	0
	TOTAL - Right-of-Way Verification (LABOR COST)		\$	3,420.00		

3 Design Services

		Total L-Hrs	PM L-Hrs	Engineer L-Hrs	CADD L-Hrs	Axiom L-Hrs
3.1	Bus Stop Improvement Design	152	8	24	120	
3.2	Contract Documents	16	8	8		
3.3	Construction Cost Estimate	10	2	4	4	
3	TOTAL - Design Services (HOURS)	178	18	36	124	0
	TOTAL - Design Services (LABOR COST)		\$	18,440.00		

4 Bid Administration & Support

		Total L-Hrs	PM L-Hrs	Engineer L-Hrs	CADD L-Hrs	Axiom L-Hrs
4	TOTAL - Bidding (HOURS)	0	0	0	0	0
	TOTAL - Bidding (LABOR COST)		\$	-		

5 Construction Engineering and Inspection, Administration Assistance

		Total L-Hrs	PM L-Hrs	Engineer L-Hrs	CADD L-Hrs	Axiom L-Hrs
5.1	Pre-Construction Meeting	8	4	4		
5.2	Construction Inspection	96	16	80		
5.3	Filing & Records Verification	24	8	16		
5.4	Wage Compliance	24	8	16		
5.5	Project Closeout	24	8	16		
4	TOTAL - CE&I (HOURS)	176	44	132	0	0
	TOTAL - CE&I (LABOR COST)		\$	21,340.00		



Sawtooth Land Surveying, LLC

P: (208) 398-8104 F: (208) 398-8105
2030 S. Washington Ave., Emmett, ID 83617

Ground Survey- Work Plan For:

GROUND BASED MAPPING

Valley Regional Transit Bus Stops

Proposal No.: P19-209

Prepared for



Updated February 11, 2020
October 21, 2019

Valley Regional Transit Bus Stop Mapping

Purpose

The following work plan is prepared to outline the GPS Control Survey services to be provided for the Geospatial Data Development Support for the VALLEY REGIONAL TRANSIT (VRT) BUS STOPS Mapping project. SAWTOOTH LAND SURVEYING, L.L.C. (SLS) will make GPS field observations, subsequently reduce, and then provide geodetic control values and semi-permanent GPS base Station control points. The location of the ground features to be surveyed was determined by Paragon Consulting in their work plan.

Scope

SAWTOOTH LAND SURVEYING, L.L.C., (SLS) will make GPS field observations, subsequently reduce, and provide geodetic control values on field located monuments and existing features as needed per Paragon's instruction. SLS's field crews will use GPS RTK methodology to observe the aforementioned feature points as well as using NAD83 and NAVD88 for controlling the points.

The following are SLS's surveying services to be performed:

Research

- Review the requested location of the existing site features prior to mobilization.
- Compile all research and provide approximate GPS coordinates to the field crews for navigational purposes.
- Request additional information from the designated survey coordinator (Joe Barton) as needed prior to mobilization (and if necessary while on-site).

Mobilization

- Mobilization will be scheduled for the site upon acceptance of this proposal and is included in the lump sum.
- Make arrangements for personnel and equipment to be at specific sites on schedule.
- Mobilization will begin after all necessary research has been completed.

Data Collection

- SLS will use Topcon dual frequency (L1/L2) GPS, GLONASS & GALILEO capable receivers. MAGNET Office software, will be used to post-process all control data.
- When using GPS, the coordinate system and initialization should be verified at the beginning of each survey setup or day by checking a known point.
- Field survey information shall be documented daily in a standard field notebook. Minimum information should include the date, temperature, wind speed, crew member initials, type of survey, instruments used, observed control points and check shots. Sketches shall be provided when applicable. The use of electronic field file notes is acceptable only for feature-specific notes.
- Verify the integrity of all primary and secondary control monuments and benchmarks to be used before commencement of surveying or mapping tasks. Identify areas that would require additional verification at regular intervals during the project.
- Routinely inspect instrumentation and equipment to ensure it is properly maintained and adjusted.
- Understand and be cognizant of the local survey environment such as coordinate systems, control monuments, laws and regulations, topography, culture, hazards and access issues.

Project Datum and Coordinate System

SLS will provide site control and Temporary Benchmarks derived from NAD83 and NAVD88 datums.

Horizontal: The horizontal coordinate system for this project will be the UTM (Universal Transverse Mercator) Zone 11, North, and will be referenced to the NAD83(1999) datum derived from OPUS Solutions.

Vertical: The vertical datum used will be NAVD88 derived from OPUS Solutions.

SLS will provide all survey coordinates of all points X, Y & Z to the nearest 0.001 feet. All distances are expressed in feet unless otherwise directed. A project adjustment factor for grid to ground coordinates and distances shall be provided for this work. Coordinate values for mapping shall be delivered at ground values unless directed otherwise.

Quality Control

- A senior review will be performed on all field activities, procedures, data collection efforts, network adjustments, calculations and deliverables. A performance and lessons learned summary shall be completed and archived for future reference for future projects.

Deliverables

- SLS will prepare and provide to Paragon Consulting a point report that will include point descriptions for each point as well as a digital file of the coordinate values for each point referenced to the appropriate UTM zone, NAD83(1999) datum, both units of measurement will be in US Survey Feet.
- SLS will provide all survey coordinates of all points X, Y & Z to the nearest 0.01 feet. All distances are expressed in US Survey Feet unless otherwise directed. A project adjustment factor for grid to ground coordinates and distances shall be provided for this work.
- An AutoCAD file containing the topographic data in the designated area and a representation of the existing features and the existing Right of Way per Paragon’s instructions shall be provided in AutoCAD version 2018 unless otherwise directed.
- Items collected shall be based on the email received on 10/14/19 from Joe Barton:
 - a) Office research of existing R/W
 - b) Field work
 - i. Collect control from research
 - ii. Collect a couple ground reference points to scale in an aerial photo
 - iii. Collect a couple topo shots adjacent to the stop (like two cross sections of the curb/gutter/sidewalk)
 - c) Draw in adjacent R/W line in the office relative to the control collected in the field

Schedule

- One two-man fully equipped survey crew will begin mobilization within 14 days of NTP, as directed.
- Delays due to weather or other circumstances outside the control of SLS are not factored in the above-mentioned schedule of deliveries.

Fee Schedule:

Site Total:	\$750.00 per site (Individual bus stop locations)
	\$1,125.00 per site (two bus stops at/near the same intersection/location)

**Sawtooth Land Surveying, LLC
2019 Rate Sheet**

Field Rates

1 Man Field Survey Crew with GPS	\$90.00/hr.
1 Man Field Crew (HDS Scanning)	\$275.00/hr.
2 Man Field Survey Crew with GPS	\$135.00/hr.
2 Man Field Crew (Bathymetric)	\$220.00/hr.
3 Man Field Survey Crew with GPS	\$150.00/hr.
Mileage	\$0.56 /mi.
ATV & Trailer	\$40.00/hr.

Office Rates

Professional Land Surveyor	\$120.00/hr.
Project Manager	\$95.00/hr.
AutoCAD Technician II	\$75.00/hr.
AutoCAD Technician I	\$65.00/hr.
Cyclone Office Scan Technician	\$95.00/hr.
Administration	\$30.00/hr.

Per Diem

Lodging per person	\$60.00/day
Meals per person	\$38.00/day

Pricing is valid for 30 days. Terms are Net 30 days.