

**RESOLUTION NO. 2017-**

**A RESOLUTION APPROVING THE TOWN OF CASTLE ROCK SERVICES AGREEMENT  
(RIDGE ROAD WIDENING PROJECT DESIGN)**

**WHEREAS**, Town staff solicited design proposals for the design of the Ridge Road Widening Project (“Project”); and

**WHEREAS**, the Project selection team has determined Stanley Consultants, Inc., was best qualified to complete the design of the Project; and

**WHEREAS**, the Town of Castle Rock and Stanley Consultants, Inc., have agreed to the terms and conditions by which Stanley Consultants, Inc., will provide design services for the Ridge Road Widening Project.

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:**

**Section 1. Approval.** The Town of Castle Rock Services Agreement between the Town of Castle Rock and Stanley Consultants, Inc., in the form attached as *Exhibit 1* is hereby approved. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town of Castle Rock, Colorado.

**Section 2. Encumbrance and Authorization for Payment.** In order to meet the Town's financial obligation under the Contract, the Town Council authorizes the expenditure and payment from the 2017 appropriation account 135-3175-431.78-84, in an amount not to exceed \$292,885, which includes a Town managed contingency of \$25,000, unless authorized in writing by the Town of Castle Rock.

**PASSED, APPROVED AND ADOPTED** this 2<sup>nd</sup> day of May, 2017 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_\_ against.

**ATTEST:**

**TOWN OF CASTLE ROCK**

\_\_\_\_\_  
Sally A. Misare, Town Clerk

\_\_\_\_\_  
Jennifer Green, Mayor

**Approved as to form:**

**Approved as to content:**

\_\_\_\_\_  
Robert J. Slentz, Town Attorney

\_\_\_\_\_  
Robert Goebel, P.E.  
Director of Public Works

**TOWN OF CASTLE ROCK  
SERVICES AGREEMENT  
(Ridge Road Widening Design)**

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**DATE:** April 17<sup>th</sup>, 2017.

**PARTIES:** **TOWN OF CASTLE ROCK**, a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 ("Town").

**STANLEY CONSULTANTS, INC.**, a Colorado corporation, 8000 South Chester Street, Suite 500, Englewood, Colorado 80112 ("Consultant").

**RECITALS:**

- A. The Town issued a Request for Proposals from qualified firms with expertise in professional engineering services.
- B. Consultant timely submitted its proposal.
- C. Town wishes to engage Consultant to provide the services more fully described in the following Agreement and Exhibits.

**TERMS:**

**Section 1. Scope of Services.** Consultant shall provide engineering services related to the Ridge Road Widening Project, in accordance with the scope of work attached as *Exhibit 1* ("Services").

**Section 2. Payment.** Consultant shall invoice Town for the Services rendered upon the completion of each task in accordance with the rate and fee scheduled identified in *Exhibit 1*. Town shall pay such invoices within 30 days receipt of such invoice. In no event shall the cumulative payment to Consultant exceed \$267,885, unless authorized in writing by Town.

**Section 3. Completion.** Consultant shall commence the Services upon execution of this Agreement and complete the Services not later than December 31, 2017. Consultant shall devote adequate resources to assure timely completion of the Services. Consultant shall perform the Services under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 30 days written notice to Consultant. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination. Consultant shall turn over all work product produced up to the date of termination.

**Section 4. Subcontractors.** Consultant may utilize subcontractors to assist with specialized works as necessary to complete the Services. Consultant will submit any proposed subcontractor and the description of their services to the Town for approval.

**Section 5. Assignment.** This Agreement shall not be assigned by Consultant without the written consent of the Town.

**Section 6. Notice.** Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.

**Section 7. Prohibition Against Employing Illegal Aliens.** Consultant shall not knowingly employ or contract with an illegal alien to perform work under this contract. Consultant shall not enter into a contract with a subcontractor that fails to certify to the Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this contract.

Consultant has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services through participation in either the E-verify program or the Department program, as defined in C.R.S. §§ 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively. Consultant is prohibited from using the E-verify program or Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed.

If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement for services knowingly employs or contracts with an illegal alien, Consultant shall:

A. Notify the subcontractor and the Town within three days that the Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

B. Terminate the subcontract with the subcontractor if within three days of receiving notice required pursuant to this paragraph the subcontractor does not stop employee or contracting with the illegal alien; except that the Consultant shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

Consultant shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. §8-17.5-102(5).

If Consultant violates a provision of this Agreement required pursuant to C.R.S. §8-17.5-102, Town may terminate the Agreement for breach of contract. If the Agreement is so terminated, the Consultant shall be liable for actual and consequential damages to the Town.

**Section 8. Insurance.** Consultant agrees to procure and maintain, at his own cost, the following policy or policies of insurance. Consultant shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

A. Consultant shall procure and maintain, and shall cause each subcontractor of the Consultant to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.

2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.

3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Consultant's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

4. Professional Liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000) per claim and ONE MILLION DOLLARS (\$1,000,000) aggregate.

B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as an additional insured. Every policy required above, except Workers' Compensation and Professional Liability insurance, if applicable, shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Consultant. The additional insured endorsement for the Comprehensive General Liability insurance required

above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

C. Certificates of insurance shall be completed by Consultant's insurance agent as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

D. Failure on the part of Consultant to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Consultant to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Consultant from the Town.

E. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$350,000 per person, \$990,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.

**Section 9. Indemnification.** Consultant expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Consultant or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Consultant.

**Section 10. Delays.** Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

**Section 11. Additional Documents.** The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.

**Section 12. Entire Agreement.** This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This

Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.

**Section 13. Time of the Essence.** Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.

**Section 14. Default and Remedies.** In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action.

**Section 15. Waiver.** A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

**Section 16. Governing Law.** This Agreement shall be governed by the laws of the State of Colorado.

**Section 17. Independent Contractor.** Consultant and Town hereby represent that Consultant is an independent contractor for all purposes hereunder. As such, Consultant is not covered by any worker's compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Consultant shall not create any indebtedness on behalf of the Town.

**Section 18. No Third Party Beneficiaries.** It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Consultant, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Consultant receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**ATTEST:**

**TOWN OF CASTLE ROCK**

\_\_\_\_\_  
Sally A. Misare, Town Clerk

\_\_\_\_\_  
Jennifer Green, Mayor

**Approved as to form:**

**Approved as to content:**

\_\_\_\_\_  
Robert J. Slentz, Town Attorney

\_\_\_\_\_  
Robert Goebel, P.E., Director of Public Works

**CONSULTANT:**

**STANLEY CONSULTANTS, INC.**  
a Colorado corporation

By: Maureenella L. Harhus  
Its: Transportation Group manager

4/11/2017

# Ridge Road Widening SCOPE OF SERVICES





The following Scope of Services identifies exclusions and assumptions upon which Stanley Consultants Inc. (Stanley) has relied upon in determining our effort, fee, scope and schedule for the project. A detailed workhour and fee estimate is provided as **EXHIBIT "A"**. Stanley and the Town of Castle Rock (Town) agree to renegotiate these terms in the event an assumption or exclusion becomes invalid. Stanley's scope includes the primary top tasks listed below:

- Task 1 – Project Management
- Task 2 – Data Collection
- Task 3 – Right-of-Way
- Task 4 – Environmental Coordination
- Task 5 – Conceptual Design
- Task 6 – Preliminary Design
- Task 7 – Final Design
- Task 8 – Post Design Services

It is assumed that the project design duration will be approximately seven (7) months.

## **Task 1 – Project Management**

### **1.1 Project Management**

Stanley will monitor and control the effort and progress of the proposed services as follows:

- Monitor subconsultant progress and review/approve invoices
- Prepare monthly Progress Reports and client invoices showing Earned Value
- Prepare, monitor and adjust CPM schedule monthly

*Deliverables: Monthly Progress Reports (including monthly updates to CPM schedule)  
CPM Schedule (MS Project)*

### **1.2 Progress Meetings**

Project design coordination meetings will serve as the primary forum for reviewing the status of the project and identifying and resolving project issues. Attendees will include Stanley's PM, consultant task leads as needed, Town staff, CDOT staff and other stakeholders as necessary. Stanley will provide meeting notices, prepare meeting materials and agenda, attend and facilitate the meeting, and prepare meeting minutes for a Kickoff Meeting/Pre-Design Meeting, and status meetings (up to 6). Stanley will consult with the Town's PM prior to each meeting to get input regarding the agenda.

*Deliverables: Meeting Notice, Agenda and Minutes (1 Kickoff/Pre-Design Meeting and up to 6 status meetings)*

### **1.3 Public Involvement**

Town staff may meet with adjacent HOA's and parcel owners as required. Stanley will provide PDF graphics for these meetings, but is not anticipated to attend these meetings at this time.

We anticipate attending up to three (3) public open house meetings. Stanley will assist the Town of Castle Rock in public involvement by attending the public meeting, providing graphics, answering questions and other activities that will facilitate the public involvement process. It is assumed that the Town will compile the mailing list and announcement for the public open house and will mail the notices to the appropriate interested parties. Stanley will provide PDF graphics for each public open house, but our scope excludes plotting the graphics. Stanley will provide up to two (2) staff members to assist the Town staff with conducting the open house.

## Task 2 – Data Collection

### 2.1 *Project Initiation / Data Collection*

Stanley will conduct a field reconnaissance and site review to document features and constraints specific to this project. Field information will be recorded using field notes and digital photos.

### 2.2 *Design Survey & Mapping*

Design Survey and Mapping activities will be performed by Daley Land Surveying, Inc. (Daley). These services will consist of the following activities:

#### Right of Entry Permitting

- Obtain necessary written permission to enter adjacent properties
- Submit signed permissions to the county/PM prior to entering property.

#### Survey Control

- Daley will establish horizontal and vertical control points and coordinates will be Colorado State Plane Central Zone modified to ground (matching Town of Castle Rock datum). Vertical Datum will be NAVD88 to match Town of Castle Rock datum.
- Set site control points away from traffic and construction.

#### Topographic Survey

- Field survey to locate all improvements and ground features within the survey limits.
- The survey limits are outlined in red on **Figure 1** below.
- All visible natural and improved features will be located including, roadways, sidewalks, curb & gutter, signs, striping, fences, buildings, walls, grade breaks, slopes, ditches, trees larger than 4" in diameter, etc.
- Survey all dry utility markings.
- As-built survey of sanitary and storm manholes, structures and inverts within the survey limits and extended to the next on line manhole or structure outside the limits.
- Prepare a topographic base map containing points, planimetrics, utilities, 1' contours and DTM.

### Underground Utility Locating

- Contract with a utility locating company to have the underground utilities marked within the mapping limits as outlined in red on **Figure 1** below. All known utilities that are capable of "Electronic Designation" will be located. Utilities must have a "Traceable" line in order to be deemed "Locatable". Any utilities without a "Traceable" line cannot be located.

### Pothole Staking

- Stake approximately 20 pothole locations and provide ground elevations.
- After potholing is complete Daley will return to the site to survey the potholed utility locations and existing ground elevations.

Figure 1 - Survey & Mapping Limits



### 2.3 *Geotechnical Investigation and Pavement Design*

Geotechnical Investigation and Pavement Design activities will be performed by Vivid Engineering Group. These services will consist of the following activities:

#### **Geotechnical Field Investigation**

- Obtain Permit(s) through Town of Castle Rock
- Mark boring locations and coordinate UNCC/811 utility locates around the borings prior to drilling. Fee does not include private locate services and/or potholing if required for utility locates
- Provide Traffic Control Services
- Mobilize a drill rig and coordinate drilling, sampling, and logging of 24 borings (18 to 5-feet deep, 6 to 10-feet deep, spaced approximately 250-feet apart within the intersection). Borings will be performed to obtain information on the subsurface profile, obtain samples for laboratory testing, and estimate groundwater and bedrock depths, if encountered.
- Perform a visual examination of the pavement surface, and obtain 7 cores of asphalt/concrete to evaluate the existing pavement conditions.

#### **Laboratory Testing**

- Testing will be performed in general accordance with CDOT and Town of Castle Rock pavement design specifications and will include, but not be limited to: Gradation Analysis, Atterberg Limits, Moisture Content/Unit Weight, Swell Testing, R-value, Proctor, and water soluble sulfates.

Prepare a report to summarize the site exploration data, laboratory test results, observations, and provide conclusions and recommendations. The field work and report preparation will be supervised by a registered professional engineer.

*Deliverables: Geotechnical Engineering Study and Pavement Thickness Design*

## **Task 3 –Right-of-Way**

Right-of-Way activities will be performed by Daley. These services will consist of the following activities:

### 3.1 *Right-of-Way Services*

- It is anticipated that eight (8) to twelve (12) right of way monuments may need to be set after construction
- It is anticipated that there may be four (4) legal descriptions and exhibits required
- It is anticipated that eight (8) O&E reports will be needed for each of the legs of the project.
- Include the preparation, certified mailing and compilation of permission to enter forms.
- Our estimate for mapping, boundary recovery, Right of Way determination and Plan creation is based on the limits depicted in Figure 1.
- Deliverable to include AutoCAD drawing of mapping, Surface files, Right of Way Plans and Exhibits and Legal descriptions for new R.O.W. takes and easements



### *Property Acquisition Assistance*

Property Acquisition Assistance is excluded from this scope of work. If these services are required, Stanley can provide at the request of the Town.

## **Task 4 – Environmental Coordination**

Pinyon Environmental, Inc. (Pinyon) will complete environmental services for the Ridge Road Widening Project.

### **4.1 *Environmental Coordination***

Pinyon will complete a site visit to assess the affected environment and write a brief Environmental Summary Memorandum to File to qualitatively discuss types and locations of impacts to vegetation. Because there is no federal nexus and no significant environmental resources are anticipated to be impacted, no formal environmental clearances are expected to be required. Pinyon will provide a 240 Special for MBTA compliance during construction.

## **Task 5 – Conceptual Design**

### **5.1 *Alternatives Analysis***

Stanley will identify up to two (2) widening alternatives in detail to determine potential design constraints, feasibility issues and the scope of the project. For the two conceptual design alternatives, we are assuming having to go with a modified major arterial typical section to avoid major utility conflicts with IREA electrical infrastructure that is in an easement.

### **5.2 *Conceptual Design Report & 30% Layout***

Stanley will prepare a Conceptual Design Report that evaluates the two widening alternatives that are studied in detail. The relative cost of each alternative, the impacts to right-of-way, the impacts to utilities, and balancing the needs of all modes of transportation will be taken into consideration in the selection of a preferred alternative. A draft version of the Conceptual Design Report will be submitted for review by Town. A final version of the Conceptual Design Report will be prepared in electronic and hard copy formats that incorporate the review comments.

Stanley will prepare the geometric layout for each conceptual alternative on a roll plot exhibit at a scale of 1"=100' depicting the horizontal layout. The following information will be depicted:

- North Arrow
- Control Lines
- Curve Data
- Laneage
- Project Limits and anticipated ROW impacts
- Existing Utilities & Constraints

Planning-level cost estimates will be prepared for each alternative as a basis to compare the relative costs of each. The plans and estimates will be prepared and submitted to the Town for review and approval along with the Draft Conceptual Design report.

It is assumed that Stanley will attend a coordination meeting to discuss the Conceptual Design Report with the Town prior to finalizing.

*Deliverables: Conceptual Design Report*

## Task 6 – Preliminary Design

### 6.1 Preliminary Roadway Design

Once a preferred alternative has been selected from the Conceptual Design phase, Stanley will perform the roadway design that will include:

- Refine the horizontal and vertical geometry of the preferred alternative.
- Refine and detail the cross-sectional elements including laneage, tapers and transitions, curb and gutter, sidewalk, shoulders, medians, islands, pedestrian facilities, retaining walls, fences, etc.
- Refine the layout of the proposed intersection improvements. Create a 3-dimensional model of the roadway that incorporates the elements noted above.
- Compute earthwork quantities. Stanley will model the horizontal and vertical alignment using the typical sections for the project and prepare cross sections every 50 feet for the length of the proposed improvements. After the cross sections are completed, Stanley will utilize the end area method to calculate the earthwork quantities.
- Prepare review drawings for a Preliminary Design Review Meeting with the Town.

The following plan sheets are assumed:

- |                                     |                                                                 |
|-------------------------------------|-----------------------------------------------------------------|
| ✓ Title Sheet                       | ✓ Curb Return Details                                           |
| ✓ Standard Plans List               | ✓ Miscellaneous Construction Detail Sheets                      |
| ✓ General Notes                     | ✓ Drainage Detail Sheets                                        |
| ✓ Summary of Approximate Quantities | ✓ Drainage Plan and Profile Sheets                              |
| ✓ Tabulation of Quantities          | ✓ Grading & Erosion Control Sheets<br>(Initial/Interim & Final) |
| ✓ Typical Sections                  | ✓ Lighting Plans                                                |
| ✓ Survey Tabulation                 | ✓ Landscape & Irrigation Plans                                  |
| ✓ Survey Control Diagram            | ✓ Construction Phasing Sheets                                   |
| ✓ Geometric Layout Sheets           | ✓ Traffic Signal Sheets                                         |
| ✓ Removal Sheets                    | ✓ Signing and Striping Sheets                                   |
| ✓ Roadway Plan and Profile Sheets   | ✓ Cross Sections                                                |
| ✓ Intersection Details              |                                                                 |

### 6.2 Preliminary Drainage Design

The drainage system design will follow the Town of Castle Rock Storm Drainage Design and Technical Criteria Manual.

#### 6.2.1 Review of Background Material, Information Collection, & Coordination

- All available reports and construction plans will be reviewed including adjacent development plans, master planning studies, and floodplain studies.
- All available mapping and survey data will be reviewed.

#### 6.2.2 Hydrologic and Hydraulic Analysis

- The hydrologic analysis for the project will be updated to reflect current conditions and the proposed work.
- Peak flows for cross culverts/storm sewer systems will be established from adjacent development and drainage reports where possible. The Town of Castle Rock will provide the reports summarizing the historical storm water crossings and existing roadway drainage.
- The Rational Method will be used to develop peak flows for local roadway drainage.
- Flow quantification for water quality detention will be determined.

#### 6.2.3 Preliminary Design Plans and Drainage Report

- Storm Sewer Systems including profile elevations, size, and locations will be designed using StormCAD software and storm sewer design methods.
- Water Quality detention considerations and design.
- Development of preliminary construction drawings and estimate.
- Development of Preliminary Drainage Report.

*Deliverables: Preliminary Drainage Report, Drainage plans/profiles*

### 6.3 Preliminary Grading, Erosion & Sediment Control Plans

Temporary erosion control will be designed and plans prepared for this work and will follow the Town of Castle Rock Grading, Erosion and Sediment (GESC) Control Manual. The GESC plans will be provided in two phases: Initial/Interim & Final for this project.

*Deliverables: GESC plans*

### 6.4 Preliminary Traffic Signal Design

Fehr & Peers will prepare a preliminary design for traffic signal modifications at the Ridge Road/750 N. Ridge Rd. intersection. We assume the following information will be shown on the traffic signal plans for the Preliminary Design submittal: New equipment to be installed, equipment to be removed, quantities and phase diagrams.

It is anticipated that the signal timing for the intersection will be completed by the Town. This scope of work only includes lighting for the light standards on traffic signal poles. Any other lighting design for the widening project is covered under Section 6.5.

*Deliverables: Traffic Signal plan*

#### **6.5 Preliminary Lighting Design**

Power Systems Analysis, Inc. (PSA) will provide the lighting design for this project.

We assume the lighting design for this project will consist of removing the existing lighting located on the west side of Ridge that will conflict with the roadway widening and installing new light fixtures along the east and west side of Ridge Road and provide power to both the light fixtures and irrigation controllers for median landscape areas.

PSA will coordinate with the Town of Castle Rock and IREA on the preferred lighting and power drop locations.

*Deliverables: Lighting plans*

#### **6.6 Preliminary Landscaping & Irrigation Design**

Stanley will prepare landscaping and irrigation plans for the widening project. Stanley will conduct a kick-off meeting with Town staff to understand the Town's direction for the overall landscaping concept including planting and irrigation details. We assume there will be two (2) proposed medians that will be landscaped; however, any planting areas on the east or west side of Ridge Road will not be landscaped. Native seeding will be planted within these areas as part of the GESC plans.

Stanley will develop a plant palette that blends the adjacent landscaping with other landscaped medians in Town. Salt tolerant perennials and deicer tolerant plants will be considered.

Stanley will develop preliminary sleeving plans and landscape plans that utilize the plant list from the approved Town plant palette for up to two (2) proposed medians.

The irrigation plans shall consist of providing a new irrigation system on the East side of Ridge Road supplying the two (2) proposed medians and ROW with irrigation.

*Deliverables: Landscaping & Irrigation plans*

#### **6.7 Preliminary Signing & Striping Plans**

Stanley will prepare the signing and striping plans for the proposed improvements and tabulate these items. Tabulation of these items will be included in the preliminary and final review plan set and construction documents. The latest edition of the manual on uniform Traffic Control devices (MUTCD) will be used to develop these plans.

*Deliverables: Signing & Striping plans*



## **6.8 Preliminary Construction Phasing Plans**

Stanley will develop a construction phasing plan which integrates the construction of all project work elements into a practical and feasible sequence. This plan shall accommodate the existing traffic movements during construction. The construction phasing plans for the preliminary design submittal will only consist of showing construction work zones, lane configurations, and temporary concrete barrier and/or channelizing device locations for each phase. Detailed Construction Traffic Control Plans are excluded from the Preliminary Design and will be prepared during Final Design once the construction phasing sequence is agreed upon.

We assume that the construction phasing will be limited to two (2) construction phases.

*Deliverables: Phasing plans*

## **6.9 Utility Plans**

### **6.9.1 Utility Coordination**

Stanley will contact the utility companies to obtain copies of their latest utility plans and contact information. Stanley will reconcile the utility mapping information and the survey files. Stanley will identify known utility conflicts and work with the Town in coordinating relocations and modifications. Our scope of work excludes any wet or dry utility design.

### **6.9.2 Utility Potholing**

Up to twenty (20) potholes will be conducted to define exact utility locations. It is anticipated that up to ten (10) potholes will be required within the existing pavement. Therefore, traffic control is included in this scope of work to complete any potholing operations. The potholing contractor will obtain a ROW Use Permit from the Town prior to commencing with the drilling operations. It is anticipated that this permit will be a "no fee" permit from the Town.

After the potholing information is obtained, Stanley will review the design and potential conflicts and determine if the design can be modified to avoid the appropriate utility.

### **6.9.3 Utility Plans**

Stanley will incorporate the utility potholing information received from the potholing vendor into the project files, prepare a utility potholing log sheet for incorporation into the construction documents, and show the utility locates/pothole information in the utility plans. Our scope of work excludes any dry or wet utility design.

### **6.9.4 Utility Coordination Meetings**

Stanley will attend up to two (2) utility coordination meetings.

*Deliverables: Utility plans*

#### **6.10 *Opinion of Probable Construction Cost Estimate***

Stanley will prepare a preliminary probable construction cost using CDOT format for Item Number, Description, Units and Quantities. The preliminary estimate will contain a 20% contingency.

*Deliverables: Opinion of Probable Construction Cost Estimate*

#### **6.9 *Preliminary Design Review Meeting***

Stanley will submit an electronic half-size set of plans to the Town a minimum of ten (10) working days prior to the Preliminary Design Review meeting. The Stanley team will attend the Preliminary Design Review meeting to discuss additions and/or revisions to the plans. The Stanley project manager will conduct the meeting in conjunction with the Town project manager. Stanley shall take meeting minutes and distribute to meeting attendees after the meeting.

*Deliverables: 1 electronic set of 11x17 Preliminary Design Review plans  
Preliminary Design Review Meeting minutes*

### **Task 7 – Final Design**

#### **7.1 *Final Roadway Design***

Prepare 90% review drawings for a Final Design Review submittal that will include:

- ✓ Finalize horizontal and vertical geometry as well as cross sectional elements from the preliminary design phase.
- ✓ Finalize earthwork quantities.
- ✓ Refine the design at the intersection
- ✓ Finalize quantities and tabulate

#### **7.2 *Final Drainage Design and Water Quality Analysis***

- Review comments received from the preliminary design set.
- Water Quality detention considerations and design.
- Sub-drainage and pumping requirement considerations
- Development of final drainage plans
- Development of Final Drainage Report

*Deliverables: Final Drainage Report*

#### **7.3 *Final Grading, Erosion & Sediment Control Plans***

Prepare 90% GESC plans for the Final Design Review submittal.

**7.4     *Final Traffic Signal Design***

Prepare 90% traffic signal plans and details for the Ridge Road/750 N. Ridge Rd. intersection for a Final Design Review submittal.

**7.5     *Final Lighting Design***

PSA will update the lighting design and prepare 90% lighting plans for the Final Design Review submittal.

**7.6     *Final Landscaping & Irrigation Design***

Stanley will finalize the landscape and irrigation plans for the medians within Ridge Road including any required details. This task includes any required project special provisions as well as developing an opinion of probable construction costs. Stanley will also finalize the plans for the sleeving for up to two (2) proposed medians.

**7.7     *Final Signing & Striping Plans***

Prepare 90% signing and striping plans for the proposed improvements and tabulate these items for the Final Design Review submittal.

**7.8     *Construction Phasing / Traffic Control Plans***

After the preliminary design review meeting and consensus is achieved on the preferred phasing concept, Stanley will develop detailed Construction Traffic Control Plans following the latest MUTCD and construction traffic control will be tabulated for the Final Design Review submittal.

The Construction Phasing/Traffic Control Plans will be limited to two (2) construction phases.

**7.9     *Utility Plans***

Stanley will finalize the utility coordination and prepare 90% utility plans for the Final Design Review submittal.

**7.10    *Opinion of Probable Construction Cost Estimate***

Stanley will update the construction cost estimate. The Final Design Review estimate will contain a 5-10% contingency.

**7.11    *Project Special Provisions***

Prepare project special provisions for the project to be included in the construction documents.

### **7.12 Final Design Review Meeting**

Stanley will submit an electronic half-size set of plans and project special provisions to the Town a minimum of ten (10) working days prior to the Final Design Review meeting. The Stanley team will attend the Final Design Review meeting to discuss additions and/or revisions to the plans and project special provisions. The Stanley project manager will conduct the meeting in conjunction with the Town project manager. Stanley shall take meeting minutes and distribute to meeting attendees after the meeting.

*Deliverables: 1 electronic set of 11x17 Final Design Review plans  
FOR Review Meeting minutes*

### **7.11 Construction Documents / Advertisement**

Stanley will make corrections to the plans and special provisions after the Final Design Review meeting and prepare the Final advertisement (AD) package.

*Deliverables: 1 electronic set of 11x17 Final AD plans  
2 stamped/signed sets of 24x36 Final AD plans  
Project Special Provisions (MS Word format)*

## **Task 8 – Post Design Services**

### **8.1 Bidding/Award Services**

We anticipate that the Town of Castle Rock will advertise the project for bidding and distribute the plans to prospective bidders. Stanley's project manager and project staff will be available during the bidding phase to assist the Town of Castle Rock in responding to contractor inquiries. Work associated with this task will included:

- Attending the pre-bid meeting to answer questions from prospective bidders.
- Supporting the Town of Castle Rock during the bidding process by providing answers to Contractor inquiries
- Issuing addenda (if required) to clarify issues in the bid documents.

The professional hours for this task are limited to those provided in the cost proposal.

### **8.2 Construction Support Services**

Stanley will be available during construction to respond to questions specifically related to the design plans and specifications and provide clarification when requested. This service shall include, but not be limited to, the following:

- Attend pre-construction meeting
- Review and approve all submittals and shop drawings.
- Respond to questions in the field that arise relative to the plans, details or special provisions.

- Provide engineering and drafting services for design revisions required due to changes in construction of field conditions.

The professional hours for this task are limited to those provided in the cost proposal.

### **Scope of Services - Assumptions/Exclusions**

The following are the Stanley team's assumptions and/or exclusions to the above scope of services:

- It is assumed that structural design will not be required for this contract. If it is determined that retaining walls are needed to mitigate ROW impacts, our scope will need to be amended to provide these services.

Ridge Road Widening Project

Date: 4/13/2017

Date: 4/13/2017														Stanley Total			Subconsultants								TOTAL	EXHIBIT A FEE SCHEDULE											
TASK / DELIVERABLE														Professional Service Hours	Professional Service Fee	Other Direct Costs	Vivid Engineering Group (Geotechnical)	Fehr & Peers (Traffic Signal Design)	Daley Land Surveying, Inc. (Survey/Mapping/ROW)	Pinyon Environmental, Inc. (Environmental)	Power Systems Analysis, Inc. (Lighting)	Smith Irrigation Design (Irrigation)	Diversified Underground, Inc. (Utility Potholing)	Total Professional Service Fee and Other Direct Costs	DESCRIPTION / ASSUMPTIONS												
SCOPE OF WORK	TASK 1 - PROJECT MANAGEMENT																																				
	1.1 Project Management														4	24											\$ 6,696	Postage / Reproductions / Misc. Assumes a pre-design/kickoff meeting and 6 progress meetings (not including review meetings) Attend three (3) public meeting and prepare meeting exhibit boards									
	1.2 Progress Meetings															18										\$ 7,944											
	1.3 Public Involvement															12										\$ 3,208											
	TASK 2 - DATA COLLECTION																																				
	2.1 Project Initiation / Data Collection															4											\$ 1,698	Mileage									
	2.2 Design Survey & Mapping																2										\$ 14,704										
	2.3 Geotechnical Investigation and Pavement Design																									\$ 16,950											
	TASK 3 - RIGHT-OF-WAY																																				
	3.1 Right-of-Way Services															2	4											\$ 14,519									
TASK 4 - ENVIRONMENTAL COORDINATION																																					
4.1 Environmental Coordination																										\$ 4,780											
TASK 5 - CONCEPTUAL DESIGN																																					
5.1 Alternatives Analysis															8	4											\$ 4,892										
5.2 Conceptual Design Report & 30% Layout															8	4											\$ 4,056										
TASK 4 - PRELIMINARY DESIGN (60%)																																					
6.1 Preliminary Roadway Design																																					
- Define the Horizontal and Vertical Geometry															2													\$ 1,250									
- Define and Detail Cross Section Elements															2												\$ 1,164										
- Layout Intersections															2												\$ 2,000										
- Create a 3-Dimensional Model															2												\$ 6,188										
- Compute Earthwork Quantities															2												\$ 914										
- Prepare 60% Construction Drawings															2												\$ 17,048										
- Tabulate Quantities															2												\$ 1,172										
- QA/QC															8	16											\$ 4,256										
6.2 Preliminary Drainage Design																																					
6.2.1 Review of Background Material, Information Collection & Coordination																											\$ 1,184										
6.2.2 Hydrologic and Hydraulic Analysis																											\$ 6,384										
6.2.3 Preliminary Drainage Plans and Drainage Report																											\$ 8,064										
- QA/QC																											\$ 696										
6.3 Preliminary Grading, Erosion & Sediment Control Plans																																					
- Prepare GESC Plans																											\$ 4,248										
- QA/QC																											\$ 1,024										
6.4 Preliminary Traffic Signal Design																											\$ 6,055										
6.5 Preliminary Lighting Design																											\$ 0										
6.6 Preliminary Landscaping & Irrigation Design																											\$ 4,400										
6.7 Preliminary Signing & Striping Plans																											\$ 5,120										
6.8 Preliminary Construction Phasing Plans																											\$ 3,512										
6.9 Utility Plans																											\$ 6,848										
6.9.1 Utility Coordination															1	4											\$ 1,572										
6.9.2 Utility Potholing																2											\$ 4										
6.9.3 Utility Base File															1	4											\$ 12										
6.9.4 Utility Coordination Meetings															4	8											\$ 17										
6.10 Opinion of Probable Construction Cost Estimate															2												\$ 12										
6.11 Preliminary Design Review Meeting															6												\$ 6										
TASK 7 - FINAL DESIGN																																					
7.1 Final Roadway Design																																					
- Finalize Roadway Elements																2												\$ 3,672									
- Prepare 90% Construction Drawings																2											\$ 12,868										
- Finalize Quantities and Tabulation Sheets																2											\$ 1,164										
- QA / QC																8	8									\$ 2,784											
7.2 Final Drainage Design and Water Quality Analysis																																					
- Finalize Drainage Plans and Details																1													\$ 39								
- Finalize Drainage Report																1													\$ 15								
- QA / QC																	2												\$ 10								
7.3 Final Grading, Erosion & Sediment Control Plans																																					
- Finalize GESC Plans																													\$ 20								
- QA/QC																	2												\$ 6								
7.4 Final Traffic Signal Design																													\$ 0								
7.5 Final Lighting Design																													\$ 16								
7.6 Final Landscaping & Irrigation Design																													\$ 38								
7.7 Final Signing & Striping Plans																													\$ 24								
7.8 Construction Phasing/Traffic Control Plans																													\$ 40								
7.9 Utility Coordination															1	4													\$ 9								
7.10 Opinion of Probable Construction Cost Estimate															1														\$ 5								
7.11 Project Special Provisions															4														\$ 10								
7.12 Final Design Review Meeting															6														\$ 20								
7.12 Construction Documents/Advertisement															4	4													\$ 104								
TASK 8 - POST DESIGN SERVICES																																					
8.1 Bidding/Award Services																4													\$ 2,640	Mileage to attend Pre-bid meeting and bid opening Mileage to attend misc. coordination meetings during construction							
8.2 Construction Support Services																4												\$ 2,640									
														6	150	76	26	64	80	84	160	120	144	244	364	46	1564	\$ 180,440	\$ 700	\$ 16,950	\$ 10,780	\$ 27,405	\$ 4,730	\$ 10,000	\$ 1,500	\$ 15,380	\$ 267,885