

# PROPOSED SCOPE OF WORK

Dewberry has developed the following detailed scope of service to ready the Snell Street Roadway Improvement Project for construction. We have indicated within our scope the firm (Dewberry or subconsultant) that will be taking the lead the effort on the work described in each task. Our proposed schedule is provided at the end of our scope.

## **Task 1 – Project Implementation (Dewberry)**

### **1.1 Project Management**

Dewberry will manage project tasks including work needed to:

- Lead, direct, coordinate, and monitor Dewberry’s team
- Prepare for, attend, and document a project kick-off meeting, field review meetings, monthly team meetings, utility coordination meetings, and other meetings as required. Dewberry will provide City of Sonora with meeting notes for each meeting.
- Prepare, coordinate, and maintain (update) a critical path method schedule using MS Project including identifying major delivery milestones and tasks (to be reviewed at all monthly meetings). Dewberry will maintain an updated schedule as needed.
- Prepare monthly progress reports (to be submitted with monthly invoices) including discussions of critical items or decisions, recommendations to address items, work accomplished during that month and anticipated work for the following month
- Miscellaneous coordination and support including assisting City of Sonora with meetings and coordination efforts with property owners
- Prepare monthly invoices including a summary of specific work completed including breakdown of hours by task to assist City of Sonora with budget tracking

It is anticipated that project development team (PDT) meetings will be held if/when needed between Dewberry, City of Sonora, and sub-consultants (if needed). This scope assumes a total of 6 meetings will be needed. Meetings will be held virtually, except for 2 meetings that will be held in person at the City’s office. Dewberry will prepare and distribute the meeting agenda, make sure all necessary participants are invited and have access to join the meeting (for virtual meetings), and arrange all meeting times, locations, etc. Dewberry will prepare and distribute meeting minutes to all participants within five working days after the meeting. The meeting minutes will include a list of “Action Items” explaining the action, when it is due, who is responsible, and the date it was completed.

### **1.2 Quality Control/Quality Assurance**

Dewberry will prepare and utilize a quality control plan for the project to make certain the design calculations, exhibits, plans, reports, etc. are independently checked, corrected, and “back- checked” for accuracy, completeness, and constructability.

### **1.3 Existing Document Review**

Dewberry will review available information regarding the existing site including data provided by the City of Sonora.

### **1.4 Property Owner Outreach**

Dewberry will assist the City by leading the effort to inform and communicate the project improvements and temporary impacts during construction with the adjacent property owners along Snell Street. Prior to construction, a flyer will be prepared describing the purpose of the project, project improvements, and what to expect during construction. Dewberry will be available to respond to property owner questions and concerns.

#### **TASK 1 DELIVERABLES:**

- Meeting Minutes
- Progress Reports
- Schedule Updates
- Monthly Invoices
- Miscellaneous Project Correspondence
- Property Owner Flyer

## **Task 2 – Surveys and Mapping (UNICO)**

As a subconsultant to Dewberry, UNICO will provide the full scope survey and mapping services needed for this project. UNICO will perform horizontal and vertical control surveys derived from City approved California State Plane horizontal coordinates and NAVD88 vertical benchmarks. UNICO will coordinate with the City to attain the necessary permitting, access, and traffic control.

UNICO will perform the following tasks:

### **2.1 Topographic Surveying and Mapping**

UNICO will research and review existing City information and utilize as necessary. UNICO will perform design level (non-aerial) topographic surveying and base mapping along an approximately 1600 linear foot long portion of Snell Street from Bonanza Road to Spring Hill Road, including the full intersections. UNICO will locate road cross-sections at 50' intervals or closer including all grade breaks, angle points and curve points. UNICO will locate curbs, gutters, sidewalks, dikes, edge of pavement, centerline of pavement, striping, shoulders, ditches, banks, fences, walls, trees, visible utilities, drainage, culverts, inlets, manholes, valves, poles, signs and driveways along the project alignment and intersecting roadways. The survey width will cover the limits of the existing right of way and out to a point approximately 15 feet beyond the right of way where accessible. UNICO will dip all sewer and storm drain structures for invert, pipe size and flow direction, including all upstream and downstream structures. UNICO will map all topography into an AutoCAD base file. Mapping will include full planimetric, 1' contours and 3D surface file. UNICO will set durable control points to be preserved for utilization of surveys and for future construction control.

#### **TASK 2.1 DELIVERABLES:**

- AutoCAD Base File
- AutoCAD Point Files
- Project Control Table

### **2.2 Right of Way Surveys**

UNICO will perform right of way surveying and mapping along the project limits. This will involve research of maps and deeds, field surveys to locate right of way and boundary markers and mapping resolution. UNICO has identified approximately 20 properties that are adjacent to the right of way along the project alignment. UNICO will map the record right of way and adjacent parcels along the project limits from readily available public records. Where mapping is incomplete or lacking right of way clarity, UNICO will request the City to provide current title reports to fully understand property constraints, easements, dedications, or encumbrances. All monuments that are found within the project footprint will be mapped into the base file for future monument preservation/perpetuation activities.

#### **TASK 2.2 DELIVERABLES:**

- AutoCAD Right of Way Base File
- AutoCAD Point Files

## **Task 3 – Preliminary Engineering (35% PS&E)**

This task includes work required to develop roadway and drainage improvements to define the project limits, improvements, and preliminary construction costs as further described:

### **3.1 Preliminary Utility Coordination (Dewberry)**

Dewberry will prepare the Utility Information Request and Claim letters ("A" letters) on City of Sonora letterhead for the known utilities that operate in the vicinity of the project. Dewberry will map the existing utilities based on as-built plans, utility maps, field observation, and topographic surveys of above-ground utilities. Dewberry will continue to coordinate with utility agencies through final design as described in Task 6.2.

#### **TASK 3.1 DELIVERABLES:**

- Utility Information and Request Claim Letters ("A" Letters)

### **3.2 Preliminary Design**

#### **3.2.1 Preliminary 35% Road Design**

Dewberry will develop the 35% roadway design. The 35% road design is intended to show the proposed roadway scope for the project. The 35% roadway design submittal will include plans prepared in conformance with AASHTO design standards. Project improvements

The proposed structural sections will be developed based on pavement design methods from Caltrans Highway Design Manual and input from the project Geotechnical Engineer. The proposed pavement sections will be based on a 20-year ADT, a truck percentage within the ADT based on available information and agreed to by the project team, and native material R-values based on gathered geotechnical information.

### 3.2.2 Preliminary 35% Plans and Cost Estimate

As part of the preliminary design effort, Dewberry will prepare a set of 35% plans and associated preliminary construction cost estimate of the proposed road improvements. The preliminary plans will consist of:

- Title Sheet
- Preliminary Typical Sections
- Preliminary Roadway Plan and Profile Sheet
- Preliminary Utility Plans

These preliminary plans will provide enough data to convey the complete scope of the project. All plans will be prepared in accordance with the AASHTO design standards.

Concurrent with the development of the 35% plans, Dewberry will prepare a preliminary construction cost estimate. Costs will be estimated based on approximate quantities of roadway materials and items. Dewberry will prepare the final PS&E based on the submitted, reviewed, and approved 35% Preliminary Plans and Estimate.

#### TASK 3.2 DELIVERABLES:

- 35% Preliminary Plans
- Preliminary Construction Cost Estimate

## Task 4 – Geotechnical Field Exploration and Engineering (Crawford)

As a subconsultant to Dewberry, Crawford & Associates, Inc (Crawford) will perform a geotechnical investigation. The following is a task breakdown of the proposed work:

### 4.1 Preliminary Review, Coordination, and Permits

Crawford will perform the following tasks:

- Meet with the design team to review project goals and schedule.
- Obtain an encroachment permit.
- Mark locations for USA; and
- Coordinate our fieldwork with traffic control.

### 4.2 Subsurface Exploration

To measure the existing structural pavement sections, Crawford will perform up to 6 pavement cores at various locations along Snell Street. An Engineer/Geologist will direct the coring and sampling. At each core location, Crawford will use a diamond tipped core bit 4 to 6 inches in diameter to core through the existing pavement. Crawford will use hand auger equipment to auger through the aggregate base, measure the aggregate base section thickness, and collect disturbed native bulk samples below ground surface. The HMA pavement section will be measured; and the core photographed, identified, and collected.

The coring locations will be backfilled with dyed black quick setting concrete. Hot mix asphalt patching is not included in our scope of services. We expect our coring locations will require road work ahead signs, lane shifts, and lane closures with flaggers.

### 4.3 Laboratory Testing

Crawford will perform R-value testing on representative subgrade soil samples.

### 4.4 Pavement Design Memorandum

Crawford will prepare a Pavement Design Memorandum containing; scope of services; existing pavement conditions; laboratory test results; conclusions and recommendations including existing material assessment, pavement recommendations for

traditional remove and replace, and recommendations for strategies to recycle the existing pavement; risk management and limitations.

**TASK 4 DELIVERABLES:**

- Pavement Design Memo

## **Task 5 – CEQA CE (Dewberry)**

### **5.1 CEQA CE**

Dewberry will perform record searches for biological resources, cultural resources (Central California Information Center and Native American Heritage Commission), and hazardous materials (Geotracker) and conduct a desktop survey of the project area. Dewberry will then prepare a CEQA Categorical Exemption (CE) Memorandum for the City’s administrative record. The CE Memorandum will include the project description, project objectives, a summary of the above listed record searches, and will provide documentation and justification for a CEQA CE, confirming that the project does not include exceptions to approving a CE as described in CEQA Guidelines Section 15300.2.

Dewberry will prepare the Notice of Exemption (NOE) and the Office of Planning and Research (OPR) Summary Form, provided on the OPR State Clearinghouse website. Dewberry will provide the CE Memorandum, NOE, and Summary Form to the City for review and approval. Once finalized, Dewberry will submit the final documents to the City to upload to the State Clearinghouse website. The City will file the NOE at the City Clerk’s Office and pay the filing fee (\$50).

**TASK 5 DELIVERABLES:**

- CEQA Memorandum

## **Task 6 – Final Design (Plans, Specifications, Estimates) (Dewberry)**

### **6.1 Final Design (65% PS&E)**

Upon approval of 35% PS&E by the City, Dewberry will prepare and submit the draft plans, specifications, and estimate to City of Sonora.

#### **6.1.1 Approach Roadway Design**

Dewberry will prepare the approach roadway design in general conformance with City of Sonora Standards, AASHTO “A Policy on Geometric Design of Highways and Streets,” Caltrans Highway Design Manual, and the latest version of the Caltrans Standard Specifications and Standard Plans. Final grading and drainage details will be developed as well as new/existing roadway conformance details, as required.

#### **6.1.2 Engineer’s Estimate of Probable Construction Cost**

The Dewberry team will provide cost estimates at the 65% PS&E design submittal. Dewberry will prepare detailed quantities in accordance with the latest version of the Caltrans Standard Specifications and payment items. The engineer’s estimate of probable construction cost (“Marginal Estimate”) for the project will be prepared using the most recent and relevant Caltrans Cost Data, Dewberry’s cost data.

#### **6.1.3 Contract Specification / Special Provisions**

The Dewberry team will prepare the contract Special Provisions for the project based in General on the latest version of the Caltrans Standard Special Provisions and Caltrans Standard Specifications.

**TASK 6.1 DELIVERABLES (ELECTRONIC SUBMITTAL ONLY):**

- Half-size set of 65 percent plans (11x17)
- Annotated Special Provisions
- Copy of Cost Estimate

## 6.2 Utility Coordination

Dewberry will perform the necessary utility coordination to eliminate or avoid conflicts with the existing utilities, proposed storm drain pipeline, and road pavement improvements. Dewberry's utility coordination approach will prioritize utility conflict avoidance. If a conflict can't be avoided, the scope below will be used to coordinate the required relocation work.

### 6.2.1 Utility Conflict Exhibits

Using the existing facility maps that were assembled and incorporated into the base mapping and using the 65% plan package, Dewberry will prepare conflict exhibits for City of Sonora to review. The conflict exhibits will include at a minimum the proposed project improvement, horizontal alignment, and existing right of way limits.

### 6.2.2 Utility Field Meetings

Once Dewberry has received responses from the Utility Information Request Letters, Dewberry will schedule field review meetings with the necessary utilities to go over the project, the project limits and relocation options. Dewberry assumes one (1) field meeting will be required to meet with all the utilities and determine the necessary relocations.

### 6.2.3 Utility Conflict / Request Conflict Resolution Plan Letters

Dewberry will prepare the Utility Conflict/Request Conflict Resolution Plan letters ("B" letters) on City of Sonora letterhead, to be delivered by Dewberry on behalf of the City to all utility owners with utility conflicts within the project vicinity. The "B" letters will request each utility to initiate their relocation design and prepare their relocation plans. Each utility company will be requested to provide copies of their relocation plans to alleviate the conflicts and a cost estimate of the relocation. Dewberry will coordinate with each utility company during their relocation design, plan preparation, and cost estimating effort.

### 6.2.4 Notice to Owner Packages

Once relocation plans are reviewed and approved by Dewberry, Dewberry will send a copy of the Final Plans along with the approved Notice to Owner to each utility directing them to initiate relocation construction.

#### TASK 6.2 DELIVERABLES:

- Utility Conflicts Exhibits
- Utility Information Request Letters
- Utility Conflict/Request Conflict Resolution Plan Letters
- Notice to Owner Packages

## 6.3 90% PS&E

Following the reviews by City of Sonora, the Dewberry team will make agreed-upon revisions to the 65% PS&E. Dewberry will prepare and submit the draft plans, specifications, and estimate to City of Sonora.

### 6.3.1 Response to Comments

Dewberry will provide written responses to the City of Sonora comments on the 65% PS&E.

### 6.3.2 Update Roadway PS&E

Dewberry will update the PS&E based on the agreement and resolution of comments for final submittal to the City. This submittal will represent a draft of the final contract documents that will be issued for bid and construction.

#### TASK 6.3 DELIVERABLES (ELECTRONIC SUBMITTAL ONLY):

- Half-size set of plans (11 x 17)
- Annotated Special Provisions
- Cost Estimate

## 6.4 100% Design

Following the reviews by the City of Sonora, the Dewberry team will make agreed-upon revisions to the 90% PS&E. The specifications, plans, and other bid documents will be submitted to the City of Sonora for final approval.

#### **TASK 6.4 DELIVERABLES (ELECTRONIC SUBMITTAL ONLY):**

- Updated comment/response matrix
- One half-size set of Plans (11 x 17)
- Completed set of Special Provisions
- Cost Estimate
- All updated Design Calculations

### **6.5 Deliver Final PS&E**

After receipt of final approval of the 100% PS&E from City of Sonora, a set of stamped and signed plans and an engineer's estimate will be submitted to City of Sonora for its use in soliciting construction bids. Dewberry will provide the quantity calculations, roadway design sections, and RE Pending files to City of Sonora for use in administering the construction contract.

#### **TASK 6.5 DELIVERABLES (ELECTRONIC SUBMITTAL ONLY):**

- Final Plans in AutoCAD 2023 format. CAD files to be prepared using City of Sonora CAD standards
- Bidding Documents in MS Word format
- Engineers Estimate in MS Excel format

### **Task 7 – Assistance During Bidding**

Dewberry will assist the City during the bidding process. The work may include answering questions, providing consultation and interpretation of the construction documents, and assisting City of Sonora in the preparation of addenda to the PS&E, if needed, during the advertisement period. Dewberry will also attend the pre-bid meeting and bid opening. Dewberry will also assist City of Sonora with the analysis of bids if requested.

### **Task 8 – Construction Support Services**

Dewberry will provide construction support services for this project as described below:

#### **8.1 Engineering Support Services**

Dewberry will provide the following engineering support services during the construction period:

- Attend the pre-construction meeting
- Attend periodic construction progress meetings
- Provide ongoing consultation to City of Sonora during construction.
- Review and respond to request for information regarding the project PS&E.
- Review, comment, and approve design related contractor submittals and shop drawings.

Dewberry will also be available to provide periodic on-site inspections if requested by City of Sonora.