

WORK AUTHORIZATION NO. 6
PROJECT: Utility Coordination for CR 201 from Umbrella Sky to CR 200

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated July 16, 2019 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Cobb, Fendley & Associates, Inc. (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is \$81,701.50.

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on September 30, 2023. The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the cost of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. Its is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this ____ day of _____, 20__.

ENGINEER:

Cobb, Fendley & Associates, Inc.

By: Sandra G. Khoury
Signature

Sandra G. Khoury, P.E.
Printed Name

Sr. Vice President
Title

October 20, 2021
Date

COUNTY:

Williamson County, Texas

By: _____
Signature

Printed Name

Title

Date

LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Rate Schedule

ATTACHMENT A

SERVICES TO BE PROVIDED BY COUNTY

Williamson County and/or its Designated Representative(s) will provide project direction, review and oversight of utility coordination and engineering services for all Road and Bridge Projects and will provide all project related design files, topographic survey and right-of-way data to assist with coordination efforts.

Williamson County and/or its Designated Representative(s) will negotiate and secure Interlocal Agreements (ILA), when applicable, and provide copies to Utility Coordinator upon execution.

ATTACHMENT B

SERVICES TO BE PROVIDED BY ENGINEER

Scope of Services provided by Cobb, Fendley & Associates, Inc. (the *Utility Coordinator*), involves utility coordination and engineering services in Williamson County, Texas, (the County) for Williamson County Road and Bridge as described below:

This scope includes the following major tasks:

1. UTILITY PROGRAM MANAGEMENT
2. PROJECT MANAGEMENT AND COORDINATION
3. UTILITY ADJUSTMENT COORDINATION
4. SUBSURFACE UTILITY ENGINEERING (SUE)
5. UTILITY ENGINEERING
6. UTILITY DESIGN
7. UTILITY PLANNING & RESEARCH
8. FIELD SURVEYING
9. RIGHT-OF-WAY (ROW) COORDINATION

1. UTILITY PROGRAM MANAGEMENT.

- 1.1. The *Utility Coordinator*, in association with the County and its Designated Representatives, will be responsible for the Utility Program Management for all assigned County Projects.
- 1.2. The *Utility Coordinator* will provide Utility Program Management services during any one, or combination, of the following phases of a project: Planning, Design, and/or Construction.
- 1.3. Annual Utility Meeting. The *Utility Coordinator*, in association with the County and its Designated Representative, will conduct an annual Utility Meeting with all Utility Representatives within the County to outline the projects anticipated for design and/or construction during that Fiscal Year, upon request. The *Utility Coordinator* will send out a quarterly email update to all Utility Representatives that reflect any changes that have occurred in the project list since the Annual Utility Meeting.
- 1.4. Utility Agreements. The *Utility Coordinator*, in association with the County and its Designated Representatives, will review and update all Utility Agreements of the County's Road and Bridge and associated attachments on an annual basis, or as needed.

2. PROJECT MANAGEMENT AND COORDINATION.

- 2.1. The *Utility Coordinator*, in association with the County and its Designated

Representatives, will be responsible for managing, directing, and/or coordinating all activities associated with utility coordination for all assigned projects.

The **Utility Coordinator's** Project Manager is:
Ms. Sandra G. Khoury, P.E.
Cobb, Fendley & Associates, Inc.
505 East Huntland Drive, Suite 100
Austin, Texas 78752
Telephone: 512-834-9798

The **Utility Coordinator's** Deputy Project Manager is:
Ms. Amanda Begg, PMP
Cobb, Fendley & Associates, Inc.
505 East Huntland Drive, Suite 100
Austin, Texas 78752
Telephone: 512-834-9798

- 2.2. Project Quality Assurance / Quality Control (QA/QC). The **Utility Coordinator** will provide internal and comprehensive quality assurance/quality control reviews throughout the Project development to appraise design, technical and business performance and provide real-time direction and objective solutions. All reports, agreements, and supporting documents, (“utility coordination work products”) submitted to the County shall undergo QC reviews prior to submittal. A project manager/engineer will perform the QA/QC function. All QA/QC support documents will be provided with each submittal and uploaded to design project folder in ProjectWise. A copy of the **Utility Coordinator's** QA/QC Manual will be provided to the County and its Designated Representative.
- 2.3. Utility Status Report. The **Utility Coordinator** will create and maintain a utility status report on all assigned projects and submit on a weekly basis. The status report will include, at a minimum:
 - 2.3.1. Project with Limits
 - 2.3.2. Roadway Design Engineer
 - 2.3.3. Roadway Design Status
 - 2.3.4. Roadway Construction Advertisement Date
 - 2.3.5. Utility Owners within Project
 - 2.3.6. Utility Design Status
 - 2.3.7. Utility Agreement or Permit Status
 - 2.3.8. Utility Relocation Status (color coded)
 - 2.3.9. Parcel Status
 - 2.3.10. Williamson County Utility Cost
 - 2.3.11. Utility Billing Status
- 2.4. Weekly Project Status Meetings. The **Utility Coordinator** will participate in weekly project status meetings with the County and its Designated Representatives.

- 2.5. Project Documentation. The **Utility Coordinator** will document all attachments and files sent to utilities and will upload all project related documents including, but not limited to, utility as-builts, utility conflict tracker spreadsheets, utility conflict strip maps at design milestone (i.e., schematic, 30%, 60%, 90%, etc.), utility agreement packages, meeting minutes, phone call records, Utility Certifications, etc. in designated project folders in ProjectWise, or other approved County documentation system.

3. UTILITY ADJUSTMENT COORDINATION

Utility Adjustment Coordination activities include, but are not limited to, meeting and contact with utilities on the project, initial project notifications, providing progress reports, preparation of contact lists, preparation of master utility agreements, assistance with permits, reviewing conflicts between the utilities and the Project, resolutions of utility conflicts, creating a utility tracking report, review of the proposed utility adjustments, and recommending the proposed locations of the utility adjustments. The above list of services is general in nature and should not be considered inclusive to the **Utility Coordinator's** responsibilities, as listed in the following scope.

- 3.1. **Utility Coordinator** shall perform utility coordination and liaison activities with involved utility owners, their consultants, Designated Representative, and the County to achieve timely project notifications, formal coordination meetings, conflict analysis and resolution.
- 3.2. **Utility Coordinator** shall coordinate all activities with the County and/or Designated Representative to facilitate the orderly progress and timely completion of the utility coordination phase. The **Utility Coordinator** will be responsible for the following:
- 3.2.1. Initial Project Meeting Attend an initial meeting with county or designated representative, after on-site inspection (when appropriate), to ensure familiarity with existing conditions, governing utility criteria for the project, project requirements or concerns and/or critical deadlines. The **Utility Coordinator** will prepare a written report of the meeting.
- 3.2.2. Project Notifications: Prepare written notification letters at each design milestone, (i.e., schematic, 30%, 60%, 90%, etc.) with associated project information and files, and send to Utility Representatives.
- 3.2.3. Group & Individual Meetings with Utility Companies, as required, to facilitate utility conflict identification and resolution.
- 3.2.3.1. Establish contact with existing Utility Companies within and adjacent to the Project and set up utility coordination meetings to discuss concepts and options for conflict mitigation or relocation construction.
- 3.2.3.2. Schedule and conduct design milestone utility meetings and include the roadway designer (Kick-Off and 60% Design Milestone group meetings, at a minimum).
- 3.2.4. External Communications: The **Utility Coordinator** will coordinate all activities with the County, Designated Representative, County contracted design firms, County utility providers, or other contractors or representatives, as authorized by the County or Designated Representative. The **Utility Coordinator** will also provide

copies of reports, correspondence and other documentation of work-related communications between the **Utility Coordinator**, utility owners and other outside entities when requested by the County.

- 3.3. The **Utility Coordinator** shall determine which utilities will conflict with proposed construction and make the utility company aware of these conflicts based on governing utility criteria established in Initial Project Meeting. The **Utility Coordinator** shall assist the utility companies in the preparation of required agreements associated with the funding of adjustments and the occupation of public right of way.
- 3.4. Utility Agreement Assemblies: A packaged agreement consisting of (if Applicable) a Standard Utility Adjustment Agreement along with the following attachments, Attachment “A” Plans, Specifications, and Estimated Cost, Attachment “B” Utility’s Schedule of Work and Estimated Date of Completion, Attachment “C” Eligibility Ratio, Attachment “D” Betterment Calculation and Estimates, Attachment “E” Proof of Property Interest, Quitclaim, Joint-Use Agreement and/or Permit, and Field Notes for quitclaim portion of easement.
 - 3.4.1. The **Utility Coordinator**, in coordination with the County and its Designated Representative, shall determine the appropriate forms to be used on each assigned project and which utilities will be installed by “Agreement”, by “Permit”, or by “ILA”. The **Utility Coordinator** shall review and process all agreement and permit requests and forward to the County or its Designated Representative or TxDOT if the project is on-system project for final approval.
 - 3.4.2. Utility Agreements: If a utility is located within an easement, the **Utility Coordinator** shall determine whether a compensable interest exists and the owner’s degree of eligibility. The **Utility Coordinator** shall assist the utility company with adjustment plans and cost estimate for these adjustments. The **Utility Coordinator** shall review plans to ensure compliance with the County Utility Design Criteria Guidelines or governing agency utility criteria, if applicable, and to ensure that the proposed adjustments will not conflict with roadway construction. The **Utility Coordinator** will submit 4 original Standard Utility Agreement packages along with attachments to the County or its Designated Representative by letter recommending approval.
 - 3.4.3. Non-Reimbursable Utility Adjustments. The **Utility Coordinator** will furnish the appropriate Utility Installation Permit form to the utility company and assist them with adjustment plan preparation. The **Utility Coordinator** shall review plans to ensure compliance with the County Utility Design Criteria Guidelines or the governing agency utility criteria, if applicable, and to ensure that the proposal will not conflict with roadway construction. The **Utility Coordinator** will submit the permit to the County or its Designated Representative by letter recommending approval.
 - 3.4.4. Interlocal Agreements (ILA): If it is determined that the utility will be adjusted as part of the roadway contract, the County or its Designated Representative shall be notified immediately. The **Utility Coordinator** shall determine what funding amount is required based upon the applicable betterment or eligibility ratio and

provide that information to the County and its Designated Representative. The County or its designated representative will negotiate and secure the ILA with each respective Utility Owner. A copy of the final ILA will be provided to the **Utility Coordinator** upon execution.

- 3.5. Utility Tracking Reports. The **Utility Coordinator** will prepare and maintain a utility tracking report for each assigned project. The tracking report must be in an Excel spreadsheet format and will be updated monthly. The utility tracking report will include the following:
 - 3.5.1. Utility Owner and Contact Information
 - 3.5.2. Meetings and Written Notifications
 - 3.5.3. Agreement Information
 - 3.5.4. Utility Billings
- 3.6. Utility Billings. The **Utility Coordinator** will receive and review all invoices sent by reimbursable utilities for accuracy and compliance with the executed utility agreements and as per Williamson County Vendor Policy. If needed, the **Utility Coordinator** will request any missing documentation required to support the invoice from the Utility Owner. After five (5) business days, the **Utility Coordinator** will process the invoice with the documentation provided, even as a short pay, until all support documentation is secured. The invoice submittal will include all supporting documentation received to date, recommendation for payment, partial payment form and a payment summary and will be forwarded to the County or its Designated Representative for approval and payment.
- 3.7. Utility Certification/Special Provisions: The **Utility Coordinator's** Project Manager or P.E. shall submit upon request from the County, a Utility Clearance Certification. Utility Clearance Certification will certify that utilities are clear for roadway construction. However, if the utility adjustments are not complete prior to roadway project letting, a letter will be required outlining all outstanding utility conflicts and their effects on roadway construction.

4. SUBSURFACE UTILITY ENGINEERING.

Subsurface Utility Engineering services includes utility investigations subsurface and above ground prepared in accordance with AASHTO standards and Utility Quality Levels as defined in the Utilities Section of the Design Criteria Manual.

Based on the review of existing utilities and proposed roadway design, bridge design, drainage design, and other potential conflicts for utilities, the **Utility Coordinator** will recommend required test holes after completion of 60% conflict assessment. The **Utility Coordinator** will coordinate with the appropriate Utility Owner to utilize internal work forces to perform required test holes for verification of its facilities.

If requested, the **Utility Coordinator** will coordinate with the County and/or its Designated Representative to provide the required test holes. A sketch of the area to be included for the proposed test hole locations "Level A" will be provided prior to the start of the work and must

be approved by the County and/or its Designated Representative. The County or its Designated Representative will provide comments or approval of test hole plan within five (5) business days.

- 4.1. Subsurface Utility Designate Service (Quality Level B). Designate means to indicate the horizontal location of underground utilities by the application and interpretation of appropriate non-destructive surface geophysical techniques and reference to established survey control. Designate (Quality Level B) Services are inclusive of Quality Levels C and D. The **Utility Coordinator** shall:
 - 4.1.1. As requested by the County, compile "As Built" information from plans, plats and other location data as provided by the utility owners.
 - 4.1.2. Coordinate with utility owner when utility owner's policy is to designate their own facilities at no cost for preliminary survey purposes. The **Utility Coordinator** will examine utility owner's work to ensure accuracy and completeness.
 - 4.1.3. Designate, record and mark the horizontal location of the existing utility facilities and their service laterals to existing buildings using non-destructive surface geophysical techniques. No storm sewer facilities are to be designated unless authorized by the County. A non-water base paint, utilizing the APWA color code scheme, must be used on all surface markings of underground utilities.
 - 4.1.4. Correlate utility owner records with designating data and resolve discrepancies using professional judgment. A color-coded composite utility facility plan with utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations, if applicable will be prepared and delivered to the County or its Designated Representative. It is understood by both the **Utility Coordinator** and the County that the line sizes of designated utility facilities detailed on the deliverable are from the best available records and that an actual line size is normally determined from a test hole vacuum excavation. A note must be placed on the designate deliverable only that states "line sizes are from best available records". All above ground appurtenance locations must be included in the deliverable to the County. This information will be provided in Microstation, Geopak or other applicable County/County's Design Consultant CADD system. The electronic file will be uploaded to Project Wise. A hard copy is required and must be sealed and dated by the **Utility Coordinator**. When requested by the County or its Designated Representative, the designated utility information must be overlaid on the County design plans.
 - 4.1.5. Determine and inform the County of the approximate utility depths at critical locations as determined by the County or its Designated Representative. This depth indication is understood by both the **Utility Coordinator** and the County and its Designated Representative to be approximate only.
 - 4.1.6. Clearly identify all utilities that were discovered from quality levels C and D investigation but cannot be depicted in quality level B standards. These utilities must have a unique line style and symbology in the designate (Quality Level B) deliverable.
- 4.2. Subsurface Utility Locate (Test Hole) Service (Quality Level A). Locate means to obtain precise horizontal and vertical position, material type, condition, size and other data that may be obtainable about the utility facility and its surrounding environment through exposure by nondestructive excavation techniques that ensures the integrity of the utility facility. All

test holes will be tied to project survey control provided by the County or its Designated Representative.

Subsurface Utility Locate (Test Hole) Services (Quality Level A) are inclusive of Quality Levels B, C, and D. The **Utility Coordinator** shall:

- 4.2.1. Review requested test hole locations and advise the County and/or its Designated Representative in the development of an appropriate locate (test hole) work plan relative to the existing utility infrastructure and proposed highway design elements.
- 4.2.2. Coordinate with utility owner inspectors as may be required by law or utility owner policy
- 4.2.3. Neatly cut and remove existing pavement material, such that the cut not exceed 1 square foot unless unusual circumstances exist.
- 4.2.4. Measure and record the following data, as required, on an appropriately formatted test hole data sheet and upload to design project folder in ProjectWise.
 - 4.2.4.1. Elevation of top and/or bottom of utility tied to the datum of the furnished plan.
 - 4.2.4.2 Identify a minimum of two benchmarks utilized. Elevations shall be within an accuracy of 0.05 feet of utilized benchmarks.
 - 4.2.4.3. Elevation of existing grade over utility at test hole location.
 - 4.2.4.4. Horizontal location referenced to project coordinate datum.
 - 4.2.4.5. Outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems.
 - 4.2.4.6. Utility facility material(s).
 - 4.2.4.7. Utility facility condition.
 - 4.2.4.8. Pavement thickness and type.
 - 4.2.4.9. Coating/Wrapping information and condition.
 - 4.2.4.10. Unusual circumstances or field conditions.
 - 4.2.4.11. Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, cathodic protection or other protective coverings and features.
- 4.2.5. Be responsible for any damage to the utility during the locating process. In the event of damage, the **Utility Coordinator** shall stop work, notify the appropriate utility facility owner, the County, Designated Representative and appropriate regulatory agencies. The regulatory agencies include but are not limited to the Texas Railroad Commission and the Texas Commission on Environmental Quality. The **Utility Coordinator** will not resume work until the utility facility owner has determined the corrective action to be taken. The **Utility Coordinator** shall be liable for all costs involved in the repair or replacement of the utility facility.
 - 4.2.5.1. Backfill all excavations with appropriate material, compact backfill by mechanical means and restore pavement and surface material. The **Utility Coordinator** shall be responsible for the integrity of the backfill and surface restoration for a period of three (3) years.
 - 4.2.5.2 Provide complete restoration of work site and landscape to equal or better condition than before excavation. If a work site and landscape is not

appropriately restored, the **Utility Coordinator** shall return to correct the condition at no extra charge to the County.

4.2.5.3. Plot utility location position information to scale and provide an updated Utility Layout. This information will be provided in PDF, Microstation or other CADD System format used by the County.

- 4.3. Ground Penetrating Radar. Subsurface utility investigation using Ground Penetrating Radar (GPR) can be provided in locations where conventional electromagnetic pipe and cable locators are not successful, dependent on soil conditions. A typical example of this would be when non-conductive utility features require investigation (i.e., PVC water line without trace wires). Soil conditions in Williamson County are not ideal for GPR use, but it has been used successfully in certain areas to assist with utility designating.
- 4.3.1. GPR services include providing physical designation of horizontal locations of the subject utility line that is then surveyed to project control.
- 4.3.2. GPR data does not provide vertical locations to the standard required for design purposes.
- 4.3.3. Post processing of GPR data and submittal of GPR image files are not included in this scope.

5. UTILITY ENGINEERING.

Utility Engineering includes the identification of utility conflicts, coordination and resolution of utility conflicts, preparation of utility layouts and exhibits, review of utility relocation plans and estimates, and assisting in the utility adjustment coordination effort. The **Utility Coordinator** shall coordinate all activities with the County and/or Designated Representative to facilitate the orderly progress and timely completion of the utility coordination phase. Coordination of utility engineering activities includes:

- 5.1. Utility Layout: The **Utility Coordinator** shall maintain a utility layout in the latest version of Microstation V8 or AutoCAD. This layout shall include all existing utilities which are to remain in place, be relocated, or be abandoned. This layout will be utilized to confirm and evaluate alternatives. The **Utility Coordinator's** Project Manager or registered Professional Engineer (P.E.) will utilize the layout of existing utilities and determine the following:
- 5.1.1. Facilities in conflict with the proposed project that are to be relocated.
- 5.1.2. Facilities to be abandoned in place.
- 5.1.3. Facilities to remain in service and in place.
- 5.1.4. As part of the QA/QC process, the **Utility Coordinator's** Project Manager or P.E. shall make reasonable effort, per industry standards, for identifying all utilities and conflicts within the project corridor. In the event there are any unidentified utilities discovered during the project which will require relocation, the **Utility Coordinator** shall notify the County and/or its Designated Representative immediately upon discovery.
- 5.2. Conflict Assessment. The **Utility Coordinator** will utilize the Utility Layout and prepare a Utility Conflict Matrix that summarizes the list of utility conflicts by owner, conflict type and station limits. This conflict assessment will be forwarded to the utility owners within the

- project limits, along with the Utility Layout, within a two (2) week turnaround from received design milestone submittal. The utility layout and conflict matrix will be sent with written notification to all utility owners and uploaded to ProjectWise.
- 5.2.1. The **Utility Coordinator** will secure the latest version of the Road and Bridge's electronic file release waiver from each utility requesting electronic design files. Upon approval of release form by the County or its Designated Representative, the **Utility Coordinator** will provide the requested files to the utility and upload a *.zip file of the submittal to ProjectWise.
- 5.3. Group & Individual Meetings with Utility Companies, as required, to facilitate utility conflict identification and resolution.
 - 5.3.1. Establish contact with existing Utility Companies within and adjacent to the Project and set up utility coordination meetings to discuss concepts and options for construction.
 - 5.3.2. Set agenda and sign-in sheet for all coordination meetings.
 - 5.3.3. Evaluate alternatives in the adjustment of utilities balancing the needs of both the County and the Utility.
 - 5.3.4. Establish and promote the desired agenda and methodologies for utility construction within the project.
 - 5.3.3 Provide meeting minutes within five (5) business days to all attendees.
 - 5.4. Proposed Utility Corridor Typical Section. The **Utility Coordinator** will prepare a Proposed Utility Corridor Typical Section in the latest version of Microstation or AutoCAD, as needed, when cross sections are made available by the design engineer. The Proposed Utility Corridor Typical Section will be presented at the 60% Design Milestone Meeting for review and concurrence by utility owners. The section will help identify and establish sequence of construction for all utility relocation work, whether it is included as a part of the Project construction or not. The section will incorporate the following information:
 - 5.4.1. Existing and proposed utility alignments in cross-sectional view
 - 5.4.2. Existing and proposed roadway features in cross-sectional view
 - 5.4.3. Identify which utilities will be built as part of the contract
 - 5.4.4. Identify which facilities will be relocated prior to construction
 - 5.5. Review of Utility's Proposed Adjustments
 - 5.5.1. Evaluate Alternatives: The **Utility Coordinator** will evaluate relocation plans and consider alternatives in the adjustment of utilities that balances the needs of both the County and the Utility.
 - 5.5.2. Review Estimates and Schedules: The **Utility Coordinator** will review the utility adjustment estimates for reasonableness of cost and the timely scheduling of the adjustment.
 - 5.5.3. Review Plans to confirm all conflict locations have been addressed and relocations comply with County Utility Design Criteria Guidelines or governing agency utility criteria, if applicable. The responsibility for quality and accuracy of Utility adjustment plans will remain with the Utility Company.
 - 5.5.4. Review Traffic Control Plans. The **Utility Coordinator** shall ensure traffic control

plans meet with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices". The *Utility Coordinator* must coordinate approval from the County or its Designated Representative concerning the proposed method of handling traffic prior to allowing commencement of work.

6. UTILITY DESIGN.

The *Engineer* will coordinate and develop PS&E for utilities to be included in the construction contract for the County upon written request by the Utility Owner and/or the County. All joint bid utility plan requests are to be approved by the County or Designated Representative prior to commencing work.

- 6.1. The *Engineer* shall develop PS&E and special details to accommodate or adjust utilities, including but not limited to fiber optic, communications, gas, water or wastewater. Prior to developing any special utility detail or PS&E set, the *Engineer* shall notify the County and its Designated Representative in writing regarding each utility conflict that may require an accommodation. As directed by the County or its Designated Representative, the *Engineer* shall coordinate with each utility to develop each PS&E package and special details. The *Engineer* shall develop each utility detail or PS&E package in compliance with the County or governing agency guidelines.
- 6.2. The *Engineer* shall prepare General Notes and shall provide a list of governing specifications and special provisions. The *Engineer* shall prepare each plan sheet, detail sheet, special specification, special provision, and special note required to incorporate the utility designs into the County's plans. If necessary, the *Engineer* shall provide any required Utility Certifications. The *Engineer* shall prepare a Construction Time Determination schedule for each utility relocation design required to incorporate into the County's construction schedule.
- 6.3. The *Engineer* shall provide quantities for construction bid items, as well as estimate of probable costs, starting at the 60% design submittal.
- 6.4. The *Engineer* should submit plans at each respective design milestone to the Utility Owner, the *Utility Coordinator* and the County or Designated Representative for review. The *Utility Coordinator* and the County or Designated Representative shall provide written comments on the plan submittal within five (5) business days from receipt.
- 6.5. The *Engineer* cannot perform utility design if that individual had a role in utility coordination on the project.

7. UTILITY PLANNING AND RESEARCH.

Planning services consist of performing research, identifying potential conflicts and preparing estimates of the costs of utility avoidance, protection, and/or relocation to assist with the development of the County's Road and Bridge. Utility data collection will be based on information provided on proposed projects, from schematic or conceptual-level design drawings to project location with scope of proposed improvements. Research — Utility Data Collection

(Planning) services include:

- 7.1. Initial Project Meeting. The *Utility Coordinator* will meet with the County or its Designated Representative to obtain project information and establish communication and documentation requirements.
- 7.2. Utility Data Collection. The *Utility Coordinator* will research records of properties and utilities within the estimated limits of the project area and:
 - 7.2.1. Identify all utility service providers within the project area
 - 7.2.2. Determine the existence and approximate location of utilities and easement.
 - 7.2.3. Perform a visual inspection of the project area on-site and/or using available GIS map, aerial photography, and utility records to identify conflicts.
- 7.3. Evaluation of Utility Data. The *Utility Coordinator* will summarize utility conflicts and relocation responsibilities, cost estimates, and alternatives for the proposed project
 - 7.3.1. Utilities within easement (compensable interest):
 - 7.3.1.1. Present and discuss alternatives with the County and its Designated Representative for redesign options to avoid utility relocations or to minimize utility relocation costs.
 - 7.3.1.2. Provide utility relocation cost estimates for those utilities that will have to be relocated or require additional protection measures to remain in place.
 - 7.3.2. Utilities within existing right-of-way:
 - 7.3.2.1. Present and discuss alternatives with the County and its Designated Representative for utility relocation options, including redesign.
 - 7.3.2.2. Obtain utility service providers' relocation policies and procedures and estimated duration for completing relocation design and construction.
- 7.4. Summary Report. The *Utility Coordinator* will prepare a summary report of all utility documentation and findings obtained and developed and provide copies to the County and its Designated Representative upon completion of the research.

8. FIELD SURVEYING.

The *Utility Coordinator* will provide field surveying, at the request of the County or its Designated Representative, to assist in utility coordination during any phase of a County Project—planning, design, and/or construction. The *Utility Coordinator* will only provide such services to the County when requested and authorized in writing. Field surveying services include, but are not limited to:

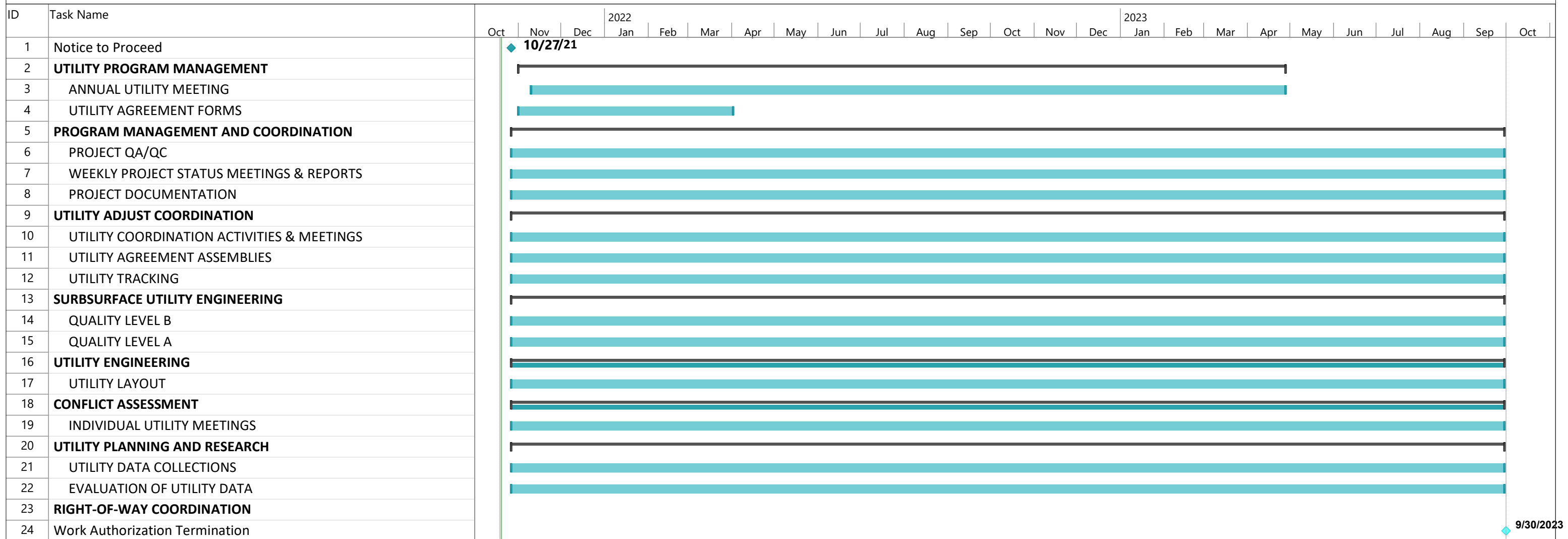
- 8.1. Metes and Bounds Descriptions. The *Surveyor* will prepare metes and bounds descriptions and exhibits for utility easements, as requested and authorized by the County and/or its Designated Representatives.
- 8.2. Right-of-Way (ROW) Staking. The *Surveyor* will provide ROW staking services for Utility Relocations, as requested and authorized by the County and/or its Designated Representatives.

- 8.3. Utility Relocation Verification. The *Surveyor* can provide survey of utility relocations at critical locations, as requested and authorized by the County and/or its Designated Representatives.

9. RIGHT-OF-WAY (ROW) COORDINATION.

The *Utility Coordinator* will coordinate with the County or its Designated Representative regarding right-of-way and easement acquisitions for each project assigned. This coordination will include, but is not limited to:

- 9.1. Status of utility easement acquisitions
- 9.2. Clearance of structures for utility relocations as a part of ROW acquisition
- 9.3. ROW acquisition schedule and priorities for utility relocations
- 9.4. Preparation of exhibits to assist in ROW or easement acquisition process
- 9.5. Meetings with the County of its Designated Representative, as needed, to review ROW Acquisition and utility status
- 9.6. Right-of-way or easement acquisition services, as needed



Williamson County Road & Bridge Utility Coordination & Engineer	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			

Utility Coordination & Engineering Services

Description of Work Task	Senior Project Manager	Senior Engineer	Project Engineer III	Project Engineer II	Project Engineer I	Senior Utility Specialist	Utility Specialist	Senior Technician	Technician III	Technician II	Technician I	Right-of-Way Project Manager	Right-of-Way Agent	Registered Professional Land Surveyor	2-Person Field Services Crew	1-Person Field Services Crew	Two-Man Designating Crew (4 hr min)	One-Man Designating Crew (4 hr min)	Vacuum Ex Truck w/ 2 Techs (Vac 3000 & 4000) (4 hr min)	Vacuum Ex Truck w/ 2 Techs (Vac 6000) (4 hr min)	Ground Penetrating Radar w/ 1 Tech (4 hr min)	Administrative	Clerical	Total Hours	Total Cost
	\$235.00	\$195.00	\$170.00	\$150.00	\$125.00	\$155.00	\$125.00	\$145.00	\$125.00	\$115.00	\$95.00	\$235.00	\$140.00	\$170.00	\$145.00	\$120.00	\$170.00	\$110.00	\$295.00	\$315.00	\$260.00	\$105.00	\$80.00		
UTILITY PROGRAM MANAGEMENT	4	6	0	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	21	\$ 3,440.00
PROJECT MANAGEMENT AND COORDINATION	15	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	33	\$ 5,755.00
UTILITY ADJUSTMENT COORDINATION	4	6	0	0	15	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	56	\$ 8,040.00
UTILITY ENGINEERING	4	6	6	6	12	5	8	10	15	5	10	0	0	0	0	0	0	0	0	0	0	0	5	92	\$ 12,555.00
RESEARCH - UTILITY DATA COLLECTION (PLANNING)	2	5	0	6	12	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	45	\$ 6,270.00
RIGHT-OF-WAY (ROW) COORDINATION	2	4	0	0	0	5	12	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	5	40	\$ 6,175.00
SUBSURFACE UTILITY ENGINEERING (SUE)	2	15	0	0	0	0	10	6	6	15	15	0	0	6	10	8	8	8	15	15	8	0	5	152	\$ 26,715.00
Total Hours	33	48	6	12	43	30	56	16	21	20	25	6	6	6	10	8	8	8	15	15	8	4	35	439	
Cost	\$7,755	\$9,360	\$1,020	\$1,800	\$5,375	\$4,650	\$7,000	\$2,320	\$2,625	\$2,300	\$2,375	\$1,410	\$840	\$1,020	\$1,450	\$960	\$1,360	\$880	\$4,425	\$4,725	\$2,080	\$420	\$2,800		\$ 68,950.00

Other Direct Expenses

Description	Unit Cost	Units	CobbFendley	
			Quantity	Total
In-House Reproduction:				
Copies (up to 11"x17")	\$ 0.15	each	120	\$18.00
Color Prints (up to 11"x17")	\$ 1.50	each	45	\$67.50
Color Prints (Larger than 11"x17")	\$ 3.00	sq. ft.	90	\$270.00
Standard Postage	\$ 0.50	each	30	\$15.00
Express Mail (billed at cost - estimated cost shown)	\$ 25.50	each	9	\$229.50
Local Deliveries (billed at cost - estimated cost shown)	\$ 25.00	each	3	\$75.00
Mileage (billed at IRS approved rate - estimated cost shown)	\$ 0.585	mile	900	\$526.50
Designation & Traffic Control Vehicle	\$ 3.50	mile	150	\$525.00
Location Vehicle (Vac Truck)	\$ 6.50	mile	150	\$975.00
Traffic Control (Lane Closures, etc.) (billed at cost - estimated cost shown)	\$ 1,500.00	each	6	\$9,000.00
Permits (Local, State, etc.) (billed at cost - estimated cost shown)	\$ 350.00	each	3	\$1,050.00
				\$12,751.50

Work Authorization Total \$ **81,701.50**