

WORK AUTHORIZATION NO. 1



**PROJECT: CORRIDOR E1**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated \_\_\_\_\_ and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Brown & Gay Engineers, 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 \$997,356.59.

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 December 31, 2017. 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 costs 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. It 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:

Brown & Gay Engineers, Inc.

By: Wesley E. Jasek, P.E.

Signature

Wesley E. Jasek, P.E.

Printed Name

Director of Transportation Systems

Title

COUNTY:

Williamson County, Texas

By: \_\_\_\_\_

Signature

Printed Name

Title

#### 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 - Fee Schedule

OK  
3/1/2017

EXECUTED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ENGINEER:

Brown & Gay Engineers, Inc.

By: Wesley E. Jasek, P.E.  
Signature

Wesley E. Jasek, P.E.  
Printed Name

Director of Transportation Systems  
Title

COUNTY:

Williamson County, Texas

By: [Signature]  
Signature

Dan A. GATTI  
Printed Name

County Judge  
Title

#### 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 - Fee Schedule

OK  
3/1/2017

**ATTACHMENT A**  
**SERVICES TO BE PROVIDED BY THE COUNTY**  
**PRELIMINARY ENGINEERING FOR CORRIDOR E1**

In general, Williamson County and its representatives to their best efforts will render services as follows:

1. Name, business address and phone number of County's project manager.
2. Assistance to the Engineer, as necessary, with obtaining data and information from other local, regional, State and Federal agencies required for this project.
3. Obtain Rights of Entry from landowners that are unwilling to grant access to the Engineer.
4. Provide available appropriate County data on file, plans and specifications that are deemed pertinent to the completion of the work required by the scope of services (including previous hydraulic studies, models, previous reports and studies, available existing traffic counts, and design year traffic projections).
5. Provide available criteria and full information as to the client's requirements for the project. Provide examples of acceptable format for the required deliverables.
6. Provide timely reviews and decisions necessary for the Engineer to maintain the project work schedule. Review recommendations offered by the Engineer, progress of work, and final acceptance of all documents.
7. Submittal of documentation to regulatory agencies for review and comment, when specified.
8. Support project development efforts with stakeholders, coordinate meetings and interface with stakeholders, as needed.
9. Post and maintain project information for public consumption on the County website.
10. Assist with Coordination between the Engineer and the County's other subconsultants.
11. Negotiate with all utility companies for any agreements and/or relocations required.
12. Provide an agent as necessary to secure proposed ROW.
13. Provide construction observation and review contractor pay applications and progress.

14. Provide Engineer with Contractor submittals, Requests for Information (RFI's), shop drawings, and correspondence.
15. Review Engineer progress, submittals, and plan changes.

**ATTACHMENT B**  
**SERVICES TO BE PROVIDED BY THE ENGINEER**  
**PRELIMINARY ENGINEERING FOR CORRIDOR E1**

**PROJECT DESCRIPTION**

**Existing Facility**

County Road (CR) 101 and FM 3349 are currently 2-lane, north-south rural roads. The surrounding area consists of flat farm and ranch land.

**Proposed Facility**

A full access controlled freeway with 4 to 6 main lanes and 4 to 6 frontage road lanes, with approximately 350 feet of right of way (ROW). This includes an ultimate interchange at US 79 and at the intersection with Corridor B. Future extension to Phase E2 will be considered.

**Design Criteria**

Project-specific design criteria (typical sections, design speed, functional classification, geometric criteria, etc.) shall be identified and documented and shall be in accordance with the latest version of Williamson County design criteria, the Texas Department of Transportation (TxDOT) Roadway Design Manual, American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, Highway Capacity Manual - Transportation Research Board, AASHTO - A Policy on Design Standards Interstate System, and other associated local and State Manuals, as applicable.

**1. PROJECT MANAGEMENT**

**a. COMMUNICATION:**

- Shall designate one Licensed Professional Engineer (Texas) to be responsible for the project management, and all communications with the County and its representatives.

**b. MONTHLY PROGRESS REPORTS, INVOICES, AND BILLINGS:**

- Submit monthly progress status reports to the GEC. Progress reports will include: tasks completed, tasks/objectives that are planned for the upcoming periods, lists or descriptions of items or decisions needed from the County and its representatives. Subconsultant progress will be incorporated into the monthly progress report. A copy of the monthly progress report will be uploaded to ProjectWise.
- Prepare correspondence, invoices, and progress reports on a monthly basis in accordance with current County requirements.

- c. QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PLAN:**
- Prepare a project specific QA/QC plan and submit to the County within thirty (30) days of notice to proceed.
  - For each deliverable, provide evidence of their internal review and mark-up of that deliverable as preparation for submittal and in accordance with submitted project specific QA/QC plan.
  - Provide continuous QA/QC throughout the duration of the scheduled services included herein to appraise both technical and business performance and provide direction for project activities.
- d. PROJECT COORDINATION & ADMINISTRATION:**
- Prepare and maintain routine project record keeping including records of meetings.
  - Correspondence and coordination will be handled through and with the concurrence of the GEC.
  - Manage project activities (including documenting emails, phone and conference calls, maintain project files for the length of the project, meeting agendas, meeting minutes, and schedule meetings), direct Engineer's team/staff, correspond with the County and its representatives, and assist the County and its representatives in preparing responses to project-related inquiries.
  - Coordinate with City of Hutto and City of Taylor Engineers, as applicable.
  - Coordinate with Design Engineer developing interchange at intersection of Corridor E1 and Corridor A1.
- e. PROGRESS/COORDINATION MEETINGS ([7] external meetings assumed):**
- Attend a kickoff meeting and coordination/progress meeting with the County and its representatives and stakeholders, as necessary to communicate development of the project and design issues.
  - Prepare agenda and sign-in sheets for external coordination/progress meetings.
  - Prepare meeting minutes for review via email within three (3) business days of the external coordination/progress meeting.
  - Conduct internal coordination meetings as required to advance the development of the project.

**f. PROJECT SCHEDULE:**

- Maintain a project schedule indicating tasks, subtasks, critical dates, milestones, and deliverables.

**DELIVERABLES:**

- Monthly Invoices and Progress Reports
- Project Specific QA/QC Plan
- Meeting Minutes, Sign-In Sheets, and Agendas
- Project Schedule

**2. ROUTE AND DESIGN STUDIES**

**a. DATA COLLECTION:**

- Perform record research and obtaining existing information, including but not limited to: as-built plans, construction plans, ROW maps, studies, future land use maps, floodplain data, floodplain and drainage models and analyses. Obtain construction plans for projects within the project limits and abutting TxDOT and County roads. Obtain drainage studies, reports, and mapping for the Study Area, including reports for developments affecting the drainage area.
- Conduct a field investigation of the proposed roadway alignment and the surrounding area to determine field conditions including photographic record of notable existing features.
- Develop and maintain adjacent property ownership information (including owner's name, mailing address, property address, property id number) spreadsheet to be used for disseminating project information.
- Review the data collected and organize the information.

**b. STUDY AREA MAP:**

- The Engineer shall establish a Study Area boundary for the route study based on previous studies, existing roadway corridors, and collected traffic evaluations and projections. The established Study Area will be presented at the first public meeting and used as the basis for the Constraints Map.

**DELIVERABLES:**

- Preliminary Study Area Map



- Refined Study Area Maps (up to four versions)
- Final Study Area Map

**c. STAKEHOLDER COORDINATION ([15] meetings assumed):**

- Prepare agendas, sign in sheets, meeting minutes, discussion topics, presentations, overall exhibits, and maps of the project limits for stakeholder coordination meetings.
- Coordinate with affected local agencies, County's consultants, and affected property owners.

**d. CONSTRAINTS MAP ([6] preliminary alignments assumed):**

- Develop a constraints map and technical memorandum that includes environmental concerns, known constraints (structures, floodplain), aerial photography, contour information, utility information, based on research of public databases and sources and details screening measures and decision practices for eliminating non-viable corridors.

**DELIVERABLES:**

- Preliminary Study Area Map
- Refined Study Area Maps (up to four versions)
- Final Study Area Map
- Preliminary Constraints Map and Technical Memorandum (pdf and hardcopies)
- Refined Constraints Map and Technical Memorandum Recommendation (pdf and hardcopies)
- Design Summary Form (pdf and hardcopies)

**e. TRAFFIC EVALUATIONS AND PROJECTIONS**

- The Engineer shall conduct traffic evaluations, studies and projections to determine the effects of an alternative on network operations and to determine the most effective alternative. Evaluation shall include a planning Level of Service (LOS) analysis for the current and design year in accordance with the latest version of Williamson County criteria, the TxDOT Roadway Design Manual, Highway Capacity Manual - Transportation Research Board, and other associated State Manuals or guidance, as applicable. The work shall include the following tasks:
  - a. A review of previous traffic studies;

- b. Obtaining and analyzing crash data for the last three years on record on the highways. The crash data will be summarized in tabular format; collision diagrams may be used for critical intersections;
- c. Obtaining and reviewing the 2040 MPO travel demand model for the roadways in the Study Area;
- d. Obtaining and analyzing historical traffic volumes for the highways in the Study Area and calculating growth rates to be used in traffic projections;
- e. Developing traffic projections for the roadways in the Study Area;
- f. Performing a planning level capacity analysis and LOS analysis of critical roadways and critical intersections for current and design year;
- g. Performing a planning level capacity analysis and LOS analysis of critical roadways and critical intersections for Build and No-Build conditions;
- h. Preparing a traffic study draft report that will contain the data collected, the analysis, conclusions and recommendations.
- i. Address comments from the County;
- j. Prepare a final report.

**DELIVERABLES:**

- Draft Traffic Study Report (up to four versions)
- Final Traffic Study Report

**f. DESIGN CRITERIA:**

- The Engineer shall analyze and identify project-specific design criteria (typical sections, design speed, functional classification, geometric criteria) in accordance with the latest version of Williamson County criteria, the TxDOT Roadway Design Manual, AASHTO Policy on Geometric Design of Highways and Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, Highway Capacity Manual -Transportation Research Board, AASHTO – A Policy on Design Standards Interstate System, and other associated local and State Manuals, as applicable. Independent DSRs will be developed for varying types of facilities.

**DELIVERABLES:**

- Draft Design Summary Report (DSR) (up to three versions)
- Final Design Summary Report (DSR) (up to three versions)

- 5 Typical Sections

**g. ROUTE LOCATION STUDIES:**

- The Engineer shall develop and evaluate preliminary route alternatives that are feasible and reasonable in terms of construction and operation. The preliminary route alternatives will also and satisfy the project purpose and need, and be developed in accordance with the latest version of Williamson County criteria, the TxDOT Roadway Design Manual, AASHTO Policy on Geometric Design of Highways and Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, Highway Capacity Manual - Transportation Research Board, AASHTO – A Policy on Design Standards Interstate System, and other associated local and State Manuals, as applicable.
- Initial Screening and Evaluation Criteria: Within the Study Area, the Engineer shall develop an evaluation criteria to screen and evaluate a range of alternatives for the route study. Land use/land cover calculations shall be performed using desktop analysis and published Geographic Information Systems (GIS) databases. This activity will result in a working list of evaluation criteria that shall be used in refining up to six identified alternatives. This task will be structured to encourage a consensus on the measures to be used in the evaluation and selection of the route alternatives. It will further include categories such as transportation benefits, cost effectiveness, public support, environmental impacts, and constructability. The least viable alternatives, based on this level of analysis, shall be eliminated from further consideration. The remaining two to three alternatives will become the Reasonable Alternatives.
- Reasonable Screening and Evaluation Criteria: The Engineer shall pursue comments and ideas for modification of the Reasonable Alternatives. This will take place with input from stakeholder meetings. The Engineer shall present a general description of each alternative, the general alignment, overall operating scenarios, and the viability of each alternative to respond to the project's purpose and need.
- The Engineer shall revise the initial screening and evaluation criteria for use in analyzing the Reasonable Alternatives based on the input received at the stakeholders and agency scoping meetings. These criteria will focus on engineering and environmental constraints. The Reasonable Alternatives will be established using these criteria as well as the stated purpose and need. Reasonable Alternatives will be selected and advanced for detailed analysis in the corridor study. It is anticipated that a maximum of three Reasonable Alternatives will be evaluated at this revised screening.

- **Recommended Alternative:** The Engineer shall identify the Recommended Alternative based on the revised screening and evaluation criteria and route study analysis. The Engineer shall solicit comments on the Recommended Alternative from the County and other stakeholders. The Recommended Alternative shall be revised to address comments received through public involvement and stakeholder input.

**DELIVERABLES:**

- Draft Alternatives Evaluation Screening Matrix (up to four versions)
- Final Alternatives Evaluation Screening Matrix
- Draft Alternatives Evaluation Technical Report (up to four versions)
- Final Alternatives Evaluation Technical Report

**h. PRELIMINARY COST ESTIMATES:**

- Preliminary cost estimates shall be developed utilizing the most current TxDOT Statewide and District bid tabs, as applicable. Estimates shall be developed in present day dollars and escalated to the projected year of construction. The Engineer shall develop cursory ("rule of thumb") construction cost estimates for comparison and evaluation of the Reasonable Alternatives developed under the route study. The Engineer shall refine the cost estimate for the Recommended Alternative. The refined cost estimate for the Recommended Alternative shall include significant construction elements such as structures, retaining walls, pavement structures, and approximate cut and fill quantities. The Engineer shall provide ROW cost estimates, including compensable and non-compensable utility relocations, for the Reasonable Alternatives and the Recommended Alternative based upon per-acre/utility type costs.

**DELIVERABLES:**

- Draft Preliminary Cost Estimates (up to four versions)
- Final Preliminary Cost Estimates

**i. PRELIMINARY RIGHT OF WAY REQUIREMENT:**

- Preliminary ROW requirements and associated costs shall be determined for the Reasonable Alternatives in accordance with the latest version of Williamson County criteria, the TxDOT Roadway Design Manual, AASHTO Policy on Geometric Design of Highways and

Streets, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges, Highway Capacity Manual - Transportation Research Board, AASHTO – A Policy on Design Standards Interstate System, TxDOT ROW and Survey Manuals, and other associated local and State Manuals, as applicable. Determine current ROW widths based on TxDOT as-built plans and the Williamson County Appraisal District published information.

**DELIVERABLES:**

- 5 Proposed Typical Sections with estimated ROW
- Estimated ROW location on alignment maps
- Estimated ROW Cost

**j. CONCEPTUAL DESIGN ALIGNMENT:**

- The Engineer shall develop conceptual design schematics in MicroStation format to evaluate various methods of handling traffic while providing access in key areas. It is anticipated that a single design alternative that optimizes traffic flow and access shall be produced. The conceptual schematics will be plan view only. Profile work will be done only to the extent necessary to lay out the proper horizontal geometry.
- The alignment layout will adhere to a design scale of 1 inch = 100 feet and developed in English units. All Microsoft Office and Microstation V8 or V8i – Geopak computer graphic files furnished to the County must be submitted in electronic format by means of a CD media that will be compatible to the County. Design will follow the State and Federal Highway Administration (FHWA) standards, and follow the CADD standards used by the County. The alignment layout shall be submitted as an original document, accompanied with an original with an original Microstation V8 or V8i formatted graphic file.
- The schematics shall contain the following design elements:
  - a. Mainlane roadway alignment
  - b. Typical sections of existing and proposed roadways
  - c. Proposed structure locations
  - d. Preliminary ROW requirements
  - e. Existing and projected traffic volumes

**DELIVERABLES:**

- Draft Roll Plot (up to four versions)

- Final Roll Plot
- Preliminary cross sections
- KMZ file of conceptual alignment(s)

### **3. PUBLIC INVOLVEMENT**

#### **a. PUBLIC ENGAGEMENT PLAN:**

- The Engineer will develop a Public Engagement Plan, which outlines the objectives, strategies, tools and timeline of the engagement process. The overall approach will be to inform, update, and define methods of collecting input from stakeholders. The Plan may include elements such as: general public meetings, one-on-one meetings with affected property owners and businesses and outlined communication tools to be used. Development of the plan will start with thorough research of the Study Area, areas of concern, and identification of stakeholders.

#### **DELIVERABLES:**

- Draft Public Engagement Plan
- Final Public Engagement Plan

#### **b. OUTREACH TOOLS:**

- A database will be developed and maintained in Excel format which includes nearby property owners and residents, businesses, churches, educational/community organizations, elected/public officials, County contacts, and any interested individuals. The Engineer will identify and reach out to key stakeholders that may be interested and will collect contact information for updates. Project Status Updates, meeting notices, and notices of opportunities to participate will be emailed to stakeholders in the database. The Engineer will set up and monitor a project email address and be the point of contact to reply to questions and comments in a timely manner. All communication will be logged and team members and County staff will be involved in development of messages.

#### **DELIVERABLES:**

- Development and continuous updates of stakeholder database
- Up to 4 Email Updates (Outside of meeting notices)
- Communications and responses to stakeholders

**c. STAKEHOLDER OUTREACH AND MEETINGS:**

- The Engineer will identify and reach out to key stakeholders to set up one-on-one meetings. These meetings will allow the project team an opportunity to visit about concerns and needs of the affected property owners and businesses.
- The Engineer will arrange, facilitate, and document meetings. It is assumed that there will be up to three rounds of outreach to key stakeholders, the project introduction, proposed alternatives and preferred alternative solution.

**DELIVERABLES:**

- Identification and contact with stakeholders
- Coordination and Facilitation of meetings (up to 3 rounds of outreach)
- Documentation of meetings

**d. PUBLIC MEETING/OPEN HOUSE ([2] public meetings assumed):**

- The Engineer will plan, schedule, conduct, and facilitate 2 public meetings to share project information with and collect feedback from citizens and stakeholders. The first meeting will introduce the project and review the environmental constraints of the project to the community, and allow for initial general input. The second meeting will be held to share findings and the proposed alternatives to the community and gather feedback. The third public meeting will present the preferred alternative to the community and collect input.
- The Engineer will develop handout materials, presentation, and exhibits for public viewing. Develop an invitation list of affected property owners, elected officials, stakeholders, school districts, local affected agencies, utility owners, and any other individuals who have showed interest in the project.
- The Engineer will plan, schedule, conduct, and facilitate public meeting(s) to share project information with and collect feedback from citizens and stakeholders. Tasks may include, but not limited to: calling and/or visiting potential meeting sites; reserving meeting space; announcing the meetings by distributing meeting information and coordinating with attendees; holding and participating in meeting rehearsals; and facilitating meetings. The Engineer will coordinate meeting announcements such as letters, email notices, signage, media releases, and postings.

- In addition, the Engineer will provide experienced meeting facilitators and attend public open house meetings to solicit input from the public. For each public meeting a summary analysis and responses to any comments or questions will be provided to the County.

**DELIVERABLES:**

- Meeting planning (logistics, location, facility prep)
- Meeting announcements such as email notices, signage, calling civic group contacts, etc.
- Meeting facilitation
- Meeting materials (notification flyer, PPT, exhibits, appropriate signage)
- Electronic version of meeting materials for virtual open house
- Summary report

**e. PROJECT MATERIALS AND TOOLS:**

- The Engineer will develop and coordinate materials for consistency and project branding. Materials will relay project information and provide opportunities to give input during the project. The approach to materials will be to tell the story of why these improvements are needed, explain the approach the County is taking to address transportation needs, and encourage involvement. Materials may include but are not limited to a handouts, fliers, or fact sheets.

**DELIVERABLES:**

- Illustrations to share project information
- Handouts, flyers, FAQs, or factsheets

**f. WEBPAGE:**

- The Engineer will develop content and coordinate with the County for posting the County website. It will include project information, information on how to get involved and share input, project contact information, project materials and materials from public meetings.

**DELIVERABLES:**

- Draft content for project webpage
- Coordination with County for posting
- Updates to content



**g. MEDIA OUTREACH:**

- The Engineer will develop and implement additional media outreach strategies. Drafts of media releases will be developed for the County to distribute to announce project launch and public meetings.
- Social media posts will be drafted and sent to the appropriate contacts for posting to existing County and other relevant groups social media accounts. The Engineer will develop a message and plan for sharing information on Facebook, Twitter, and Nextdoor.
- The Engineer will identify opportunities for, and place advertisements for public meetings in local media outlets. Print and digital advertisements allow the message to be broadcast to a broader audience in the county and promote the public meetings.

**DELIVERABLES:**

- Up to 2 media releases
- Content for social media posts on Facebook, Twitter, and Nextdoor
- Development of up to 2 display advertisements for print or digital placement

**4. RIGHT OF WAY (ROW) MAPPING**

NONE

**5. SURVEYING**

**a. RIGHT OF ENTRY ([20] letters assumed):**

- Prepare and mail right of entry letters per the County's standard for the project team including environmental, geotechnical, and environmental. Send a second follow up letter to non-responsive property owners.

**b. GROUND SURVEY:**

- Locate and verify aerial LiDAR mapping control to ground targets in the immediate area.
- Establish horizontal and vertical control using 3 inter-visible monument pairs at locations near both ends and near the center of the project study area.
- Survey a sample of ground data (cross sectional) in areas not requiring right of entry e.g., crossing roadways, watercourses, etc.

- Perform coordinate system translations for existing file integration and to generate a homogenous project coordinate system.

**DELIVERABLES:**

- DGN file of ground verification data and crossing roadway information. This will NOT be a DTM or have associated TIN files.
- Control Monument data in ASCII format. ASCII file of ground verification data.
- Tiled LiDAR data files of classified points in LAS format.

**c. DESIGN SURVEY:**

- The Engineer will establish horizontal and vertical control including a minimum of 8 points within the survey limits. The survey control points will be set in locations that will likely be undisturbed by construction or State maintenance. The project control will be placed on horizontal and vertical datums [NAD83/93/NAVD88 values (Texas State Plane, South Central Zone)] with a scale factor of 1.00011 or as provided by the County. Elevations will be derived from GPS observations using Geoid 2012A model. Digital levels will be run through all control points to confirm the established elevations.
- The Engineer will supplement the aerial mapping design survey with conventional on-the-ground surveying in areas that are obscured from the LiDAR sensors field of view. Exact location of trees is not included in this scope of services.
- Supplemental design survey data will be merged and appended to the aerial mapping 2D and DTM to create seamless 2D, DTM and TIN files for the BBI section of Studabove.

**DELIVERABLES:**

- None

**d. FIELD SURVEYING:**

NONE

**6. SCHEMATIC DEVELOPMENT**

NONE

## **7. DRAINAGE STUDY**

NONE

## **8. ENVIRONMENTAL SERVICES**

### **a. PRELIMINARY ENVIRONMENTAL ANALYSIS:**

- This task will include data collection and field reconnaissance for the Study Area and up to six alternative corridors. Assume no right of entry for the alternative corridors. All field reconnaissance for this task will be conducted from public ROW. Right of entry is reserved for the Recommended Alternative corridor.
- Utilize previous studies conducted for the CR 101 project and identify environmental, community, cultural, and other features. Resources evaluated in the analysis will be in accordance with current Federal and State statutes, regulations and guidelines and the State's latest codes, practices, criteria, specifications, policies, procedures, and Statement of Understanding including but not limited to National Environmental Policy Act (NEPA) (42 U.S.C. 4371, as amended) and TAC Title 43 Part 1, Chapters 2 and 16.
- Obtain environmental data from publically available sources and purchased through GeoSearch. The information will be collected in GIS format and incorporated in the Constraints Map for the Study Area.
- Update periodically publicly available information including but not limited to: locations of public buildings (schools, churches, parks), aerial photography, National Wetland Inventory data, Soil Survey data, TCEQ & EPA hazardous materials database information, FEMA floodplain information, vegetation information, and habitat for Federal and State protected species known to occur in Williamson County.
- Conduct a regulatory records review of the Study Area to identify recorded hazardous waste generators, treatment, storage and disposal facilities; solid waste landfills, unauthorized sites; documented spills; oil and gas exploration and production sites; and underground storage tank sites within the proposed site location.
- Complete the TxDOT Scope Development Form to document potential environmental risks and identify studies required for the Recommended Alternative corridor.

### **DELIVERABLES:**

- Draft & Final Scope Development Form (electronic submission of up to 3 drafts and 1 final in PDF format)

9. GEOTECHNICAL SERVICES

NONE

10. PLAN PREPARATION

NONE

11. PERMITS

NONE

12. BIDDING PHASE SERVICES

NONE

13. CONSTRUCTION PHASE SERVICES

NONE

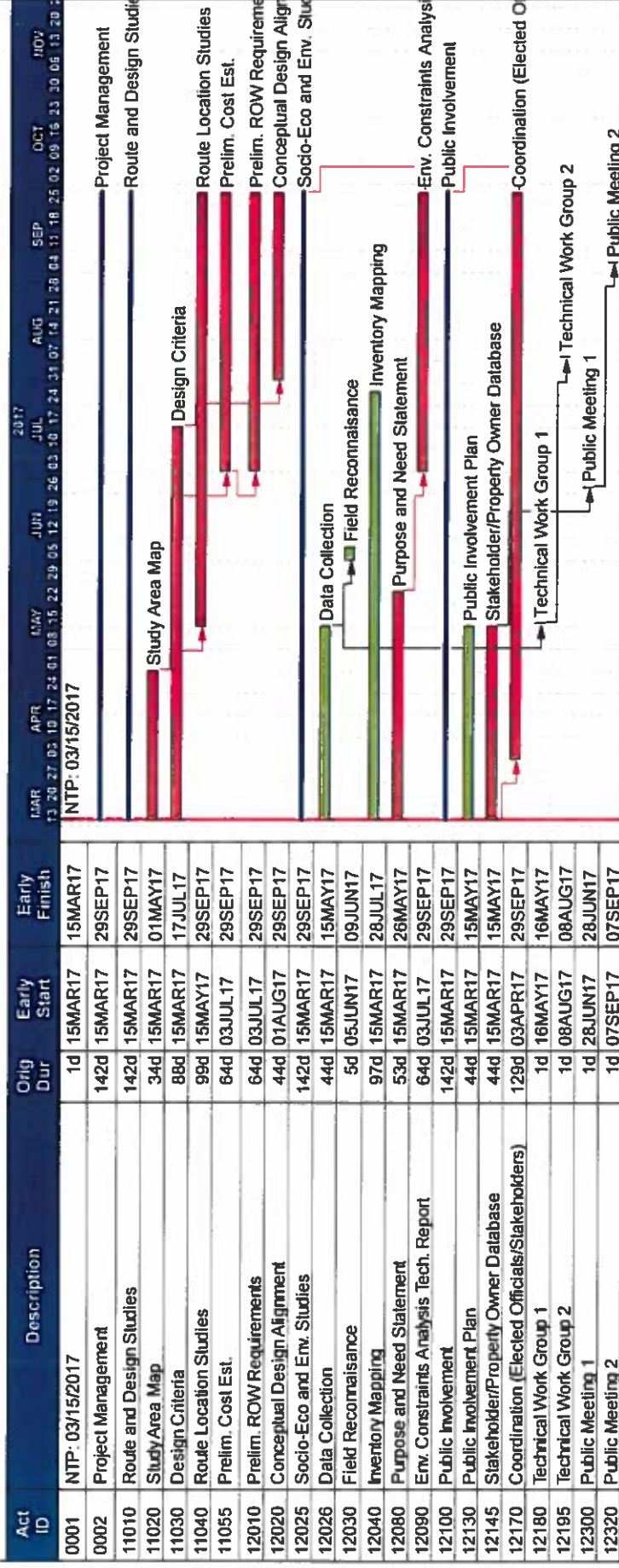
14. DELIVERABLES

SEE OTHER TASKS

15. EXCLUSIONS

SEE OTHER TASKS. WORK NOT SPECIFIED IN THIS CONTRACT IS EXCLUDED.

# ATTACHMENT C - WORK SCHEDULE



Start date

15MAR17

Finish date

29SEP17

Data date

15MAR17

Run date

01MAR17

Page number

1A

© Primavera Systems, Inc.

Corridor E1 - WA 1

Work Schedule

BGE, Inc.

Early bar

Progress bar

Critical bar

Summary bar

Start milestone point

Finish milestone point

PRIME PROVIDER NAME: BROWN & GAY ENGINEERS, Inc.  
Williamson County  
PROJECT NAME: Corridor E1

**LEGEND:**  
Brown and Gay Engineers, Inc.  
Alliance Transportation Group  
Inland Geodetics  
Puzosetti-Carnanilo, Inc.  
Arns Terra Environmental, Inc.  
Cambrian Environmental  
Concept Development & Planning  
HWJ Associates, Inc.









**PRIME PROVIDER NAME, Brown & Gay Engineers, Inc.**

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PRIME PROVIDER NAME: Brown & Gay Engineers, Inc.

SUMMARY OF TASKS										TOTAL INH BY FC										TOTAL COSTS BY FC									
1. PROJECT MANAGEMENT																													
2. FIELD INVESTIGATIONS																													
3. PUBLIC INVOLVEMENT																													
4. RIGHT OF WAY GRABBING																													
5. SURVEYING																													
6. SCHEMATIC DEVELOPMENT																													
7. DRAINAGE STUDY																													
8. ENVIRONMENTAL SERVICES																													
9. GEOTECHNICAL SERVICES																													
10. PLAIN PREPARATION																													
11. PERMITS																													
12. BACKLOG PHASE SERVICES																													
13. CONSTRUCTION PHASE SERVICES																													
14. DELIVERABLES																													
SUBTOTAL LABOR EXPENSES																													
OTHER DEDUCTIBLE EXPENSES (SEE INSTRUCTIONS ON YOUR CONTRACT)																													
Air Travel																													
Lodging (if at motel) (forward date too)																													
Per diem																													
City of Bristol																													
SECURITY (B&T)																													
CitySearch																													
Farm Based Livestock (MSL&B)																													
Photographers BW (11 X 17)																													
Dyer (11 X 17)																													
City of Bristol																													
Photographers Color (8.5 X 11)																													
Photographers Color (11 X 17)																													
SUBTOTAL DIRECT EXPENSES																													
SUMMARY																													
TOTAL COSTS FOR ATG ONLY																													
NON-SALARY (OTHER DIRECT EXPENSES) FOR ATG ONLY																													

# ATTACHMENT D-FEE SCHEDULE (10)

POISE PROVIDER NAME: Blower & Gay Engineers, Inc.

TASK DESCRIPTION	2 MAN CREW	3 MAN CREW	SURVEY PM	RPLS	1 MAN WGPPS	TECH	OPS TECH	ADMIN	TOTAL LABOR HRS & COSTS	NO OF DWGS	LABOR HRS PER SHEET
1. RIGHT OF WAY MAPPING											
2. ROUTE AND DESIGN STUDIES											
3. PUBLIC INVOLVEMENT											
4. RIGHT OF WAY MAPPING											
5. SURVEYING											
6. SCHEMATIC DEVELOPMENT											
7. ENVIRONMENTAL SERVICES											
8. GEOTECHNICAL SERVICES											
9. PLAN PREPARATION											
10. PERMITS											
11. BRIDGING PHASE SERVICES											
12. CONSTRUCTION PHASE SERVICES											
13. DELIVERABLES											
SUBTOTAL LABOR EXPENSES											
CONTRACT RATE PER HOUR	142	185	180	11	4	18	0	4	0	0	0
TOTAL LABOR COSTS	\$20,080	\$34,025	\$32,300	\$1,165	\$480	\$1,840	\$0	\$1,720	\$0	\$0	\$0
% DISTRIBUTION OF STAFFING	9.0%	0.0%	8.5%	25.0%	9.0%	40.5%	0.0%	9.0%	0.0%	0.0%	0.0%
SUBTOTAL 4 RIGHT OF WAY MAPPING									\$4,833.00		
									\$4,833.00		

TASK DESCRIPTION	2 MAN CREW	3 MAN CREW	SURVEY PM	RPLS	1 MAN WGPPS	TECH	OPS TECH	ADMIN	TOTAL LABOR HRS & COSTS	NO OF DWGS	LABOR HRS PER SHEET
1. SURVEYING											
2. ROUTE AND DESIGN STUDIES											
3. PUBLIC INVOLVEMENT											
4. RIGHT OF WAY MAPPING											
5. SURVEYING											
6. SCHEMATIC DEVELOPMENT											
7. ENVIRONMENTAL SERVICES											
8. GEOTECHNICAL SERVICES											
9. PLAN PREPARATION											
10. PERMITS											
11. BRIDGING PHASE SERVICES											
12. CONSTRUCTION PHASE SERVICES											
13. DELIVERABLES											
SUBTOTAL LABOR EXPENSES											
CONTRACT RATE PER HOUR	142	185	180	11	4	18	0	4	0	0	0
TOTAL LABOR COSTS	\$20,080	\$34,025	\$32,300	\$1,165	\$480	\$1,840	\$0	\$1,720	\$0	\$0	\$0
% DISTRIBUTION OF STAFFING	9.0%	0.0%	8.5%	25.0%	9.0%	40.5%	0.0%	9.0%	0.0%	0.0%	0.0%
SUBTOTAL 4 RIGHT OF WAY MAPPING									\$4,833.00		
									\$4,833.00		

SUMMARY OF TASKS	TOTAL MH BY FC	TOTAL COSTS BY FC
1. PROJECT MANAGEMENT	0	\$0.00
2. ROUTE AND DESIGN STUDIES	0	\$0.00
3. PUBLIC INVOLVEMENT	0	\$0.00
4. RIGHT OF WAY MAPPING	44	\$4,833.00
5. SURVEYING	70	\$7,560.00
6. SCHEMATIC DEVELOPMENT	0	\$0.00
7. ENVIRONMENTAL SERVICES	0	\$0.00
8. GEOTECHNICAL SERVICES	0	\$0.00
9. PLAN PREPARATION	0	\$0.00
10. PERMITS	0	\$0.00
11. BRIDGING PHASE SERVICES	0	\$0.00
12. CONSTRUCTION PHASE SERVICES	0	\$0.00
13. DELIVERABLES	0	\$0.00
SUBTOTAL LABOR EXPENSES	114	\$12,393.00

ATTACHMENT D-FEE SCHEDULE (6)

PRIME PROVIDER NAME Brown & Gay Engineers, Inc.

OTHER DIRECT EXPENSES (COMPLETE IN ACCORDANCE WITH YOUR CONTRACT)										# OF UNITS	COST/UNIT
As Travel											\$0.00
Meals (if not included in travel rates)											\$0.00
Per diem											\$0.00
Hotel											\$0.00
CPG Rental											\$0.00
DE-COST (flat)											\$0.00
Construction											\$0.00
Auto Rental (each \$25.00)											\$0.00
Auto Rental (each \$11 X 17)											\$0.00
Auto Rental (each \$11 X 17)											\$0.00
CD Archive											\$0.00
Professional Color (8 X 11)											\$0.00
Professional Color (11 X 17)											\$0.00
SUBTOTAL DIRECT EXPENSES											\$0.00
SUMMARY											
TOTAL COSTS FOR PRIME ONLY										\$10,528.00	
NON-SALARY (OTHER DIRECT EXPENSES) FOR PRIME ONLY										\$0.00	
GRAND TOTAL										\$10,528.00	

PLEASE PRINT OR TYPE: Graham & Gay Engineers, Inc.

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ATTACHMENT D-FEE SCHEDULE (CAM)

PRIME PROVIDER NAME: Brown & Gay Engineers, Inc.

SUMMARY	
TOTAL COSTS FOR CAM ONLY	\$0.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR CAM ONLY	\$0.00
GRAND TOTAL	\$0.00



# ATTACHMENT D-FEE SCHEDULE (Concept Development & Planning, LLC)

PRIME PROVIDER NAME: Brown & Gay Engineers, Inc.  
 CONTRACT NUMBER:  
 PROJECT NAME: Corridor E1  
 WORK AUTHORIZATION NO. 1

TASK DESCRIPTION	Principal	Project	Senior Media Specialist	Senior Public Involvement Specialist	Public Involvement Specialist	Senior Graphic Design & Web Developer	Graphic Design & Web Developer	Junior Public Involvement Specialist	Admin Clerical	TOTAL LABOR HRS & COSTS	NO OF DWGS	LABOR HRS PER SHEET
<b>1. PROJECT MANAGEMENT</b>												
Project coordination meetings and updates	7	7			7			7				
Monthly status reports and invoices	3											
<b>HOURS SUB-TOTALS</b>	10	7	0	0	7	0	0	14	0	38		
<b>CONTRACT RATE PER HOUR (use the loaded rate in the contract which includes base hourly rate overhead and profit)</b>	165	130	115	115	100	90	65	65	50			
<b>TOTAL LABOR COSTS</b>	\$1,650.00	\$910.00	\$0.00	\$0.00	\$700.00	\$0.00	\$0.00	\$910.00	\$0.00	\$4,170.00		
<b>% DISTRIBUTION OF STAFFING</b>	28.3%	18.4%	0.0%	0.0%	18.4%	0.0%	0.0%	36.8%	0.0%			
<b>SUBTOTAL 1. PROJECT MANAGEMENT</b>										\$4,170.00		

TASK DESCRIPTION	Principal	Project	Senior Media Specialist	Senior Public Involvement Specialist	Public Involvement Specialist	Senior Graphic Design & Web Developer	Graphic Design & Web Developer	Junior Public Involvement Specialist	Admin Clerical	TOTAL LABOR HRS & COSTS	NO OF DWGS	LABOR HRS PER SHEET
<b>2. PUBLIC INVOLVEMENT (PG 128)</b>												
Public Involvement Plan												
Research and Draft Plan Development	4	4						4				
Revisions and Final Plan		2						2				
Outreach Tools												
Develop and maintain stakeholder database		2			8			18	8			
Develop and distribute up to 4 email updates (outside of meeting notices)		2			4	3		4				
Communications and responses to stakeholders	10	20			20							
Stakeholder Outreach and Meetings												
Identify and reach out to stakeholders	2	4			4			12				
Coordinate and facilitate meetings (up to 3 rounds of outreach)	24	24			16			18				
Document meetings	4	8			8			4				
Public Meetings (2 meetings)												
Meeting planning (logistics, location, facility prep)	2	4			16			18	4			
Meeting announcements		4			4	8		18	4			
Meeting facilitation	8	8			12			12				
Meeting materials (invite, PPT, exhibits, signage)	4	8			6	16		4				
Summary Report and Analysis	6	10	4		10			4	4			
Project Materials and Tools												
Illustrations to share project information	2	2	4			8						
Handouts, flyers, FAQs, or fact sheets	4	4				8						
Website												
Develop draft content	2		4		4							
Monthly updates to content as needed		2			2	6						
Media Outreach												
Up to two media releases	2		4									
Content for social media posts	1		4			4						
Development of three display advertisements	1		3			4						
<b>HOURS SUB-TOTALS</b>	78	100	23	0	114	57	0	170	20	510		
<b>CONTRACT RATE PER HOUR (use the loaded rate in the contract which includes base hourly rate overhead and profit)</b>	165	130	115	115	100	90	65	65	50			
<b>TOTAL LABOR COSTS</b>	\$12,870.00	\$14,040.00	\$2,645.00	\$0.00	\$11,400.00	\$5,130.00	\$0.00	\$7,150.00	\$1,000.00	\$34,735.00		
<b>% DISTRIBUTION OF STAFFING</b>	15.2%	21.1%	4.51%	0.00%	22.35%	11.18%	0.00%	21.57%	3.92%			
<b>SUBTOTAL 2. PUBLIC INVOLVEMENT</b>										\$34,735.00		

ATTACHMENT D-FEE SCHEDULE (Concept Development & Planning, LLC)

PRIME PROVIDER NAME: Brown & Gay Engineers, Inc.

DESCRIPTION	# OF UNITS	COST/UNIT	TOTAL COSTS BY FC
PROJECT MANAGEMENT (FC 164)			\$4,170.00
ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT (FC 120)			\$54,235.00
SUBTOTAL LABOR EXPENSES			\$58,405.00
OTHER DIRECT EXPENSES (COMPLETE IN ACCORDANCE WITH YOUR CONTRACT)			
Air Travel			\$0.00
Mileage (# of miles) (current state rate)	1,000	\$0.535	\$535.00
Computer Meeting Signs	20	\$25.00	\$500.00
Foam Boards	10	\$70.00	\$700.00
Postage	600	\$0.48	\$288.00
Photocopies BW (8.5x11)	100	\$0.10	\$10.00
Photocopies BW (11 X 17)	100	\$0.20	\$20.00
Photocopies Color (8.5 X 11)	600	\$0.40	\$240.00
Photocopies Color (11 X 17)	225	\$0.80	\$180.00
Venue Rental	2	\$125.00	\$250.00
AV Rental (Estimate)	2	\$150.00	\$300.00
Misc. (meeting supplies, signage, etc.)	2	\$100.00	\$200.00
Advertisements (Estimate)	4	\$250.00	\$1,000.00
SUBTOTAL DIRECT EXPENSES			\$4,327.00
SUMMARY			
TOTAL COSTS FOR CDP ONLY	\$		\$58,405.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR CDP ONLY			\$4,327.00
GRAND TOTAL			\$62,732.00

ATTACHMENT D-FEE SCHEDULE (HVJ)

PRIME PROVIDER NAME: Brown & Gay Engineers, Inc.

SUMMARY	
TOTAL COSTS FOR HVJ ONLY	\$0.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR HVJ ONLY	\$0.00
GRAND TOTAL	\$0.00