

I.

Article 2, Engineering Services and Exhibit B, Engineering Services shall be amended as set forth in the attached Addendum to Exhibit B. Exhibit C, Work Schedule shall be amended as set forth in the attached Addendum to Exhibit C.

II.

Article 4, Compensation and Exhibit D, Fee Schedule shall be amended by increasing by \$216,816.50 the lump sum amount payable under the Contract for a total of \$1,406,635.65, as shown by the attached Addendum to Exhibit D.

IN WITNESS WHEREOF, the City and the Engineer have executed this Supplemental Contract in duplicate.

[signature pages follow]

BROWN & GAY ENGINEERS, INC.

By: *Erin N. Gonzalez*
Erin N. Gonzalez, Director of Transportation

November 11, 2020

Date

CITY OF ROUND ROCK

APPROVED AS TO FORM:

By: _____
Craig Morgan, Mayor

Stephan L. Sheets, City Attorney

Date

ADDENDUM TO EXHIBIT B

Engineering Services

The work to be performed by the ENGINEER under this contract consists of providing engineering services required for the development of construction plans for the widening and reconstruction of Gattis School Road from Red Bud Lane to Via Sonoma Trail and along Red Bud Lane approximately 500' south of Gattis School Road. The project consists of reconstructing approximately 0.65 miles of the existing 4-lane roadway section to a 6-lane divided facility and adding a right turn lane on Red Bud Lane. This project involves surveying, engineering analyses, and associated details necessary to produce PS&E to a 100% design, including bidding & award services, and construction phase support.

The ENGINEER shall perform all work and prepare all deliverables in accordance with the latest version of the City of Round Rock criteria.

The ENGINEER shall perform quality control and quality assurance (QA/QC) on all deliverables associated with this project.

The ENGINEER shall provide traffic control in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD) when performing onsite activities associated with this contract.

PROJECT MANAGEMENT (Function Code 145)

1. Meetings

- A. Attend and document Progress Meetings with the City of Round Rock (2) and with TxDOT (10). Assume twelve (12) meetings shall be required.

2. General Contract Administration

- A. Develop monthly invoices and progress reports.
- B. Subconsultant coordination.
- C. Design coordination with the City of Round Rock.
- D. Stakeholder/Utility Company coordination.

3. Local Government Project Procedures Checklist

- A. Prepare the checklist
- B. Coordinate with City of Round Rock on information as needed

FIELD SURVEYING (Function Code 150) (Inland Geodetics)

1. General

- A. Surveys provided will be in accordance with the "Texas State Board of Land Surveying" and the applicable City of Round Rock regulations.
- B. Survey field notes will be submitted if requested by the City of Round Rock.
- C. The City of Round Rock will obtain right-of-entry agreements with property owners for the required field surveys (short of litigation).
- D. Survey control (vertical and horizontal) captured and established during the initial phase will be utilized
- E. Verify and compare previously located utility data with current ground conditions. The Surveyor will contact the One-Call System in advance of performing field surveys to attempt data collection includes ties to location of marked utilities (if needed). This task does not always allow for timing of markings with the survey activities. Reasonable attempts to coordinate with utility owners will be made to achieve efficiency in data collection. Historically, results in this task have been marginal and there may cause to seek additional compensation for repeated trips to the project site to complete this effort.

2. Topographic Surveys for Engineering Design and Hydraulic Analysis

- A. Survey files with previously obtained project data will be compared to and merged with survey files generated through this proposal. In areas of uncertainty and/or limited topographic information, additional data will be collected as directed by the project engineer.
- B. Data collection will consist of spot elevations for improvements, edge of roadway, driveways, visible or marked utilities, drainage features, centerline of roadway, and grade breaks.
- C. Profiles of intersecting driveways within the project limits will extend a sufficient distance beyond the existing right of way to ensure adequate data is available to determine tie-ins with proposed vertical alignment changes. Seven (7) driveway locations have been identified requiring additional field data for adequate grading and tie-in.
- D. Field data for three (3) intersection locations have been identified requiring additional field data for adequate grading and tie-in.
- E. Survey shots will be assigned a unique point number which provides a positive identification of the point. Each point will be assigned a feature number or feature name using the TxDOT's standard feature table. An ASCII points file and a hard

copy print out will be provided. Each line of the output data shall contain in this order: the point number, northing, easting, elevation, and the descriptive feature code.

- F. Surveyed data will be provided in a Microstation .dgn (V8) compatible two dimensional base map format. The survey shot point attributes will appear on separate levels.
- G. A Digital Terrain Model (DTM) will be provided in a Microstation .dgn (V8) GEOPAK compatible three-dimensional format.
- H. Prepare individual parcel plats and descriptions to be used by the City of Round Rock for required right of way acquisition and easement process.

ROADWAY DESIGN CONTROLS (Function Code 160)

1. 100% Design Development

Perform the following items for the project

- A. **Geometric Design** – Revise the horizontal alignment; vertical profile; pavement cross slopes; front slope, back slope, and ditch configuration that meet acceptable design criteria and remain within the limits of the proposed ROW.
- B. **Limits of Proposed ROW** – Analyze the cross sections associated with the desirable design criteria to determine the limits of ROW necessary to accommodate the resultant configuration. Develop an exhibit providing the ROW footprint with the desirable configuration. Incorporate final ROW footprint into design base files and reflect on all plan submittals.
- C. **Design Cross Sections** – Develop roadway cross sections associated with the proposed horizontal alignment and vertical profile in accordance with acceptable design criteria
- D. **Typical Sections** – Prepare existing and proposed typical sections.
- E. **Plan & Profile Drawings (1"=100')** – Drawings to include critical basemap information, control and benchmark data, proposed roadway improvements including horizontal and vertical roadway geometry, pavement edge geometry, drainage, grading and miscellaneous improvements.
- F. **Alignment Data Sheets** – Prepare horizontal and vertical alignment data sheets with the Geopak baseline descriptions.
- G. **Earthwork Quantities** – Prepare final cut/fill and general earthwork calculations to support design elements and roadway construction efforts.

DRAINAGE (Function Code 161)

100% PS&E:

- A. Incorporate all design surveys into computer aided drafting and develop topographies and surfaces. This data shall be utilized to develop drainage areas, hydrology and

- hydraulics. This shall include topographic working drawings to prepare the final drainage design.
- B. Develop storm water hydrology for the existing and ultimate roadway section throughout the limits of the project. The model shall incorporate the 10%, 4% and 1% annual chance storm (10-year, 25-year, and 100-year) events. Modeling shall develop storm water flows to all cross culverts and roadway conveyances. Based on the data developed, drainage infrastructure shall be designed for the project area to include a level of detail sufficient to establish cost estimates and required easements and possession and use agreements for the construction of the proposed drainage structures and channel improvements.
 - C. Develop designs for all cross-drainage structures throughout the project limits. The cross drainage shall be modeled with HEC-RAS.
 - D. Develop designs for proposed storm water collection systems for the proposed curb-and-gutter portion of the project area. Storm sewer designs shall be developed using Geopak Drainage.
 - E. Identify potential utility conflicts based on design for the project area.
 - F. Develop drainage easement requirements for the project area.
 - G. Develop locations for detention facilities if applicable.
 - H. Coordinate the design with the City of Round Rock.

Signing, Pavement Markings and Signalization (Function Code 162)

100% PS&E:

- A. **Signing & Pavement Markings** – Prepare signage and pavement marking plan sheets, layouts, and associated details.
- B. **Traffic Signal Layouts** – Prepare traffic signal plan sheets, layouts, and associated details.
- C. **Quantity Summaries** – Prepare summary sheets of all signing, pavement markings, and traffic signal quantities.

MISCELLANEOUS (ROADWAY) (Function Code 163)

100% PS&E

- A. **Traffic Control Plans (TCP)** – Prepare Sequence of Phased Construction. Prepare TCP cross sections to identify temporary pavement needs. Identify impacts to existing drainage. TCP will be presented in construction plans.
- B. **Temporary Traffic Signals** – Prepare temporary traffic signals plans and details to accommodate construction and traffic control plan sequencing.
- C. Prepare Title Sheet and Project Layout
- D. **Cost Estimates** – Prepare updated construction cost estimates at each milestone submittal.

- E. **Illumination Photometric Study** – Continuous street illumination will be designed in accordance to requirements of Texas Department of Transportation Highway Illumination Manual and modeled utilizing AGI 32 lighting software.
- F. **Illumination Layout Roll Plot** – Prepare illumination roll plot showing illumination pole locations and light intensity measurements on 10’ grid.
- G. **Illumination Circuit Design, Layouts, and Details**– Design conduit runs, circuits, size conductors and electrical services in accordance to Texas Department of Transportation Highway Illumination Manual and National Electric Code (NEC). Prepare illumination plan sheets showing illumination pole location, conduit runs, conductor size and lengths, and proposed electrical services locations.

BID PHASE SERVICES (Function Code 170)

- A. **Project Manual Development** – Prepare project manual utilizing front-end documents and specifications provided by City (TxDOT or COA can be used as needed) including bid items, contract, and special conditions.
- B. Provide bidding support services, including assistance with responding to bidder questions, attend pre-bid meeting, and prepare minutes. Agenda will be prepared by the City.
- C. Prepare Responses to Bidders’ questions.
- D. Tabulate, evaluate bids, and make apparent low bidder award recommendation

CONSTRUCTION PHASE SUPPORT SERVICES (Function Code 309)

- A. Engineer shall provide construction support services, including assistance with responding to contractor questions, attend pre-construction meeting, and prepare minutes. Agenda will be prepared by the City.
- B. Assist City with Shop Drawing and material review and approval (**assume 16 submittals**)
- C. Assist City with preparation of Change Orders, Alternate Design or Additional Design Details
- D. Respond to Questions related to the Plans - The Engineer shall be available to respond to questions related to the plans and specifications as needed throughout the duration of the construction. The Engineer will document each question in sufficient detail, formulate a response and submit a written version of the response to the City for distribution to all involved parties. Estimate assumes no more than **ten (10)** Requests for Information.
- E. The Engineer representative to attend site visits as needed at the request of the City, estimated at **eight (8)** site visits, not included are visits to resolve E&O issues.
- F. At the completion of pond construction, the City will provide survey information for the pond locations or modifications. With the City survey information, the Engineer will provide certification that the ponds were constructed per plan.

- G. The Engineer shall not at any time supervise, direct, control, or have authority over any contractor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, or the safety precautions and programs incident thereto, for security or safety at the construction site, nor for any failure of a contractor to comply with Laws and Regulations applicable to such contractor's furnishing and performing of his work. The Engineer will not bear any responsibility or liability for defects or deficiencies of the contractor.

ADDENDUM TO EXHIBIT C
Work Schedule

DATE*	MILESTONE
November 12, 2020	Notice to Proceed SWA #5 (Final 100% PS & E)
March 4, 2021	Submit 100% PS & E to City & TxDOT
March 22, 2021	Receive 100% Comments from City & TxDOT
July 2021	Letting (TxDOT)
September 2021	Award Construction Contract - NTP Construction
September 2021-March 2023	Construction Phase Services

ADDENDUM TO EXHIBIT D
Fee Schedule

Attached Behind This Page

**PROJECT NAME: GATTIS SCHOOL RD
FROM RED BUD LN TO VIA SONOMA TRL**

EXHIBIT D-1 - FEE SCHEDULE

FC	DESCRIPTION	BGE	Inland	TOTAL
FC 110	ROUTE AND DESIGN STUDIES	\$0.00		\$0.00
FC 120	ENVIRONMENTAL	\$0.00		\$0.00
FC 130	ROW	\$0.00		\$0.00
FC 145	GENERAL MANAGEMENT / COORDINATION	\$16,460.00		\$16,460.00
FC 150	FIELD SURVEYING AND PHOTOGRAMMETRY	\$0.00	\$10,272.00	\$10,272.00
FC 160	ROADWAY DESIGN CONTROLS	\$36,176.00		\$36,176.00
FC 161	DRAINAGE	\$54,580.00		\$54,580.00
FC 162	SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION	\$6,306.00		
FC 163	MISCELLANEOUS ROADWAY	\$50,344.00		\$50,344.00
FC 170	BID PHASE SERVICES	\$11,314.00		\$11,314.00
FC 309	CONSTRUCTION PHASE SUPPORT SERVICES	\$30,746.00		\$30,746.00
	EXPENSES	\$618.50		\$618.50
	TOTAL	\$206,544.50	\$10,272.00	\$216,816.50

TASK DESCRIPTION	Senior Project Mgr	Project Manager	Project Engineer	EIT	Senior Engineer Tech	Senior CADD Op	Senior ENV	ENV Scientist	Admin/ Clerical	Total	TOTAL LABOR HRS. & COSTS	Sheets	Hrs/Sheet
FC 110 ROUTE AND DESIGN STUDIES										0	\$0.00		#DIV/0!
Data collection											\$0.00		
Review of data											\$0.00		
Complete design summary form											\$0.00		
Route studies											\$0.00		
CAMPO Application Assistance	0	0		0	0		0		0	0	\$0.00		#DIV/0!
FC 120 ENVIRONMENTAL COMPLIANCE AND PUBLIC INVOLVEMENT										0	\$0.00		#DIV/0!
1. Data Collection and Environmental Constraints Mapping										0	\$0.00		#DIV/0!
2. TxDOT Environmental Scoping Documentation										0	\$0.00		#DIV/0!
3. Archeological Background Study Technical Report										0	\$0.00		#DIV/0!
4. Historic Structures Project Coordination Request Form										0	\$0.00		#DIV/0!
5. Water Resources Technical Report										0	\$0.00		#DIV/0!
6. Biological Evaluation and Tier 1 Form										0	\$0.00		#DIV/0!
7. Hazardous Materials Initial Site Assessment										0	\$0.00		#DIV/0!
8. Traffic Noise Analysis										0	\$0.00		#DIV/0!
Coordination with TxDOT on ENV Public involvement										0	\$0.00		#DIV/0!
General public outreach										0	\$0.00		#DIV/0!
Public meetings										0	\$0.00		#DIV/0!
1 on 1 meetings with key stakeholders										0	\$0.00		#DIV/0!
Community meetings with HOAs										0	\$0.00		#DIV/0!
FC 130 RIGHT OF WAY DATA										0	\$0.00		#DIV/0!
Utility coordination										0	\$0.00		#DIV/0!
FC 145 PROJECT MANAGEMENT											\$16,460.00		#DIV/0!
Meetings		12	20	20						52	\$7,048.00		#DIV/0!
General contract administration		8	8	8					8	32	\$3,928.00		#DIV/0!
LGPP Checklist	8	6		24						38	\$5,484.00		#DIV/0!
FC 160 ROADWAY DESIGN CONTROLS											\$36,176.00		#DIV/0!
Final Design Development													#DIV/0!
Geometric design	4	6	8	12	10					40	\$5,468.00		#DIV/0!
Revisions to Alignment (at project limits)	4	8		12	20					44	\$5,812.00		#DIV/0!
Design cross sections (util conflict)	4	8	16	20	20					68	\$8,900.00		#DIV/0!
100% PS&E													#DIV/0!
Typical Sections	2	4	4	12	10					32	\$4,118.00	3	10.66666667
Plan & Profile Drawings	2	12	16		20					50	\$6,946.00	6	8.333333333
Alignment Data Sheets	2	4		4	8					18	\$2,466.00	2	9
Earthwork Quantities	2	4		4	8					18	\$2,466.00	2	9
FC 161 DRAINAGE											\$54,580.00		#DIV/0!
External storm water hydrology (ex/prop)	2	4	4	6	4					20	\$2,798.00		#DIV/0!
Internal storm water hydrology (ex/prop)	2	6	6	8	4					26	\$3,642.00		#DIV/0!
HEC-RAS designs for all cross drainage (ex/prop)	2	6	8	8	12					36	\$4,798.00	4	9
Hydraulic Data Sheets	2		8	8	6					24	\$3,094.00	2	12
Culvert Layout P&P Sheets	2		8	10	8					28	\$3,534.00	2	14
Geopak Drainage design for proposed storm sewer (ex/prop)	2	8	8	12	8					38	\$5,146.00	12	3.166666667
Storm Sewer P&P Sheets	2	6	8	16	20					52	\$6,558.00	12	4.333333333
Hydraulic Data Sheets-SS	2		4	8	6					20	\$2,542.00	1	20
Identify potential utility conflicts/adjustments		6	8		6					20	\$2,808.00		#DIV/0!
Detention Design	2	8	16	6	12					44	\$6,030.00	4	11
Coordinate design with the CoRR staff	2	2		2						6	\$1,018.00		#DIV/0!
TASK DESCRIPTION	Senior Project Mgr	Project Manager	Project Engineer	EIT	Senior Engineer Tech	Senior CADD Op	Senior ENV	ENV Scientist	Admin/ Clerical		TOTAL LABOR HRS. & COSTS		
FC 162 SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION											\$6,306.00		#DIV/0!
Signing & Pavement Markings plan sheets and details	2	2	4		8					16	\$2,230.00		#DIV/0!
Proposed Traffic Signal layouts and details	2	2	8		8					20	\$2,782.00		#DIV/0!

INLAND GEODETICS

EXHIBIT D-1 - FEE SCHEDULE

AGonzales Est.

**PROJECT NAME: GATTIS SCHOOL RD
FROM RED BUD LN TO VIA SONOMA TRL**

SERVICE	2 CREW	3 CREW	4 CREW	ADD	PM	RPLS	1GPS	TECH	GPS TECH	ADMIN	TOTAL
RATE / HOUR	\$138	\$160	\$183	\$42	\$136	\$132	\$118	\$98	\$98	\$54	
ROE					4 HRS	4 HRS					\$ 1,072.00
SITE VISITS (TASK 2)						8 HRS		4 HRS		2 HRS	\$ 1,556.00
50.1 - ADMIM MOBILIZE	0 HRS	0 HRS	0 HRS	0 HRS	4 HRS	12 HRS	0 HRS	4 HRS	0 HRS	2 HRS	\$ 2,628.00
ADDNL FIELD SURVEY	26 HRS				1 HRS	2 HRS	8 HRS	4 HRS		2 HRS	\$ 5,432.00
DELIVERABLES					2 HRS	2 HRS		16 HRS		2 HRS	\$ 2,212.00
50.2 - FIELD SURVEYING	26 HRS	0 HRS	0 HRS	0 HRS	3 HRS	4 HRS	8 HRS	20 HRS	0 HRS	4 HRS	\$ 7,644.00
BOUNDARY ANALYSIS											\$ -
SECONDARY FIELD SURVEY											\$ -
ROW ACQ PARCEL PROD (11)											\$ -
ROW MONUMENTATION (11)											\$ -
50.3 - ROW ACQ TASKS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	\$ -
SUB-TOTAL	26 HRS	0 HRS	0 HRS	0 HRS	7 HRS	16 HRS	8 HRS	24 HRS	0 HRS	6 HRS	\$ 10,272.00
REIMBURSEABLE ITEMS											\$ -
REIMBURSEABLE SERVICES											\$ -
ESTIMATED FEE	\$3,588	\$0	\$0	\$0	\$952	\$2,112	\$944	\$2,352	\$0	\$324	\$10,272.00

Cost Variables:

GPS Receivers
Vehicle
ATV

\$15
\$60
\$55

Reimbursable Services Include:

Total:

\$0.00
\$0.00
\$0.00
\$0.00

Reimbursable Fees Include:

SUPPLIES
TITLES

Total:

\$0.00
\$0.00
\$0.00