

THE STATE OF TEXAS §
 §
COUNTY OF HIDALGO §

SUPPLEMENTAL AGREEMENT NO. 2
TO WORK AUTHORIZATION NO. 1
TO AGREEMENT FOR PROFESSIONAL SERVICES
C-15-300-09-01

This **SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 8 of the Agreement made by and between **HIDALGO COUNTY**, acting herein by and through the **Commissioner’s Court**, hereinafter called the “**Owner**”, and **L&G Consulting Engineers Inc. d/b/a L&G Engineering**, Professional Engineers of Mercedes, Texas, hereinafter called “**Engineer**”.

WITNESSETH:

WHEREAS, the **Owner** and the **Engineer** executed the **Agreement** on the 1st day of September, 2015 concerning engineering for **Cesar Chavez Rd (from Business 83 to E. Nolana Loop)** project for Hidalgo County Precinct No. 2 (hereinafter referred to as the “**Project**”); and, *Nolana Ridge*

WHEREAS, Article 8 of the **Agreement**, (Supplemental Agreements), establishes “The terms of this Agreement may be amended by supplemental agreement if the **Owner** determines that (1) there is a need to extend the Termination Date identified in Article 3.1 hereof, (2) there has been a significant change in the scope, complexity or character of the services to be performed by the **Engineer**, and/or (3) for any other reason agreeable to the **Owner** and the **Engineer**”; and,

WHEREAS, it has become necessary to amend “Exhibit B – Services to be provided by the **Engineer**” of Work Authorization No. 1 to include required Traffic Analysis services for the project; and,

WHEREAS, it has become necessary to amend the existing “Exhibit D – Fee Proposal” of Work Authorization No. 1 to include the attached “Exhibit D2 – Supplemental #2 to WA#1 Fee Proposal” to increase the Work Authorization amount of \$1,401,211.40 to \$1,455,608.70; therefore, the amount of Supplemental No. 2 is \$54,397.32.
2

A. AGREEMENT

NOW THEREFORE, premises considered, the **Owner** and the **Engineer** agree that said **Agreement** is amended as follows:

- I.** Sections of the Agreement, “Exhibit B – Services to be provided by the **Engineer**” and “Exhibit D – Fee Proposal”, are revised to include the above listed modifications of this Supplemental.

All other provisions are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the Engineer and the Owner have caused this Supplemental Agreement to the Agreement for Professional Services to be executed as of the _____ day of _____, 2018.

THE ENGINEER:
L&G CONSULTING ENGINEERS INC.
d/b/a **L&G ENGINEERING**

BY: 

Jacinto Garza, P.E., President

THE OWNER:
HIDALGO COUNTY

BY: _____
Ramon Garcia, County Judge

LIST OF ATTACHMENTS

Exhibit B

Exhibit D



C&M Associates, Inc.

15770 North Dallas Parkway, Suite 870
Dallas, TX 75248
Tel: 214-245-5300
Fax: 214-889-5049
www.candm-associates.com

Memorandum

Sam Bohluli, Ph.D., P.E.

Vice President
sbohluli@candm-associates.com

Date: January 26, 2018
To: Robert Macheska, P.E., CFM
Project Manager
L&G Engineering
900 S. Steward Rd., Ste. 10
Mission, TX 78572
Subject: Cesar Chavez Traffic Projections: Scope of Services

Dear Robert,

This memorandum details C&M Associates, Inc.'s (C&M) scope of services regarding the development of traffic projections for Cesar Chavez Road (the Project) in Hidalgo County, TX on behalf of L&G Engineering.

Task 1: Review of Existing Information

C&M will first review all relevant available documentation regarding the Project. To determine historical traffic growth patterns, C&M will collect historical traffic counts on the major roadways within the study area from the Texas Department of Transportation's (TxDOT) Traffic Count Database System (TCDS), in the form of annual average daily traffic (AADT) counts. The base year (2016) traffic volumes of the Project and historical traffic within the study area will be extracted from this data source.

C&M will also review proposed future network improvements, as several transportation mobility and improvement projects are proposed in Hidalgo County's *2010–2035 Metropolitan Transportation Plan*.

Task 2: Travel Demand Model (TDM) Runs

For this study, in the absence of an updated TDM from a Metropolitan Planning Organization (MPO), C&M will adopt the 2009 Lower Rio Grande Valley (LRGV) TDM developed by the Texas Transportation Institute (TTI) for TxDOT. The LRGV TDM is a trip-based model developed in the TransCAD environment, utilizing TripCal5 software for trip generation. This TDM will be used by C&M to estimate traffic growth over a 20-year period based on future developments considered by the MPOs of the region.

The 2009 LRGV TDM is the first model developed for TxDOT that uses an extended precision trip table format. The model consists of 1,414 traffic analysis zones (TAZ), including internal and external zones. The TAZs cover two counties—Hidalgo and Cameron—with a total area of approximately 2,600 square miles. The Bureau of Public Roads (BPR) function is used as the model's volume-delay function (VDF).

C&M will obtain the following LRGV TDM files for this study:

- Roadway network for the model's base year 2009 and future years 2014 and 2035
- Daily trip tables for years 2009 and 2035 (not by mode) and assignment results
- TAZ structure

In this study, traffic growth rate will be calculated using TxDOT's 2016 traffic counts. Therefore, C&M will develop its 2016 base year model network by modifying the LRGV 2014 network to match existing roadways in 2016. The daily trip table for 2016 will be interpolated from the TDM's existing trip tables for 2009 and 2035. C&M will then complete the model assignments in TransCAD, review the results, and summarize the estimated traffic volumes in the study area.

Task 3: Development of Traffic Projections

The standard Texas Transportation Plan (TPP) methodology for developing traffic projections utilizes the facility's historical traffic growth rate. In addition to considering historical traffic growth, C&M's methodology incorporates TPP recommendations while estimating traffic growth via a TDM and applying the higher of these measures (historical vs. modeled) to the Project.

The LRGV TDM will be used to capture the effects of network improvements, land development, and projected socioeconomic growth on the Project's future traffic growth. The Project's traffic growth rate between 2016 and 2035 will be extracted from the model, and the linear annual growth rate will be calculated and compared to the growth rate estimated by the standard TPP method. The model's estimated traffic growth rates will be calculated for the same locations for which historical counts are obtained.

Task 4: Documentation

C&M will prepare a Draft Report documenting the methodology and results of its traffic projection analysis. The Draft Report will include a summary of existing information used in this study, a description of C&M's modeling and traffic projection methodologies, and the resultant traffic projections for the Project. After review by L&G Engineering, C&M will address any comments/questions, revise the Draft Report as needed, and submit a Final Report.

Proposed Schedule and Budget

C&M can begin work immediately upon receipt of the Notice to Proceed (NTP). C&M estimates a timeframe of five (5) weeks to complete the traffic projections study. As shown in Table 1, C&M proposes a lump sum fee of \$34,362.64.

EXHIBIT D2
WA#1 Supplemental #2 ~ FEE PROPOSAL

Cesar Chavez Road Project
HIDALGO COUNTY PRECINCT #2

	TASK	MANHOURS					L&G TOTAL HOURS	Sub-Contract Amounts	Total Line Item Cost
		Senior Project Manager	Senior Engineer	Project Engineer	Senior Engineering Technician	Admin / Clerical			
	Supplemental #1 to WA #2 - Cesar Chavez Traffic Analysis								
1	Management of and Coordination with Subconsultant for Traffic Analysis	6	10	12		6	34		\$ 4,940.72
2	SUB: C&M ~ Traffic Analysis & Projections	(See Subconsultant Fee Breakdown on Page 2)						\$ 34,362.64	\$ 34,362.64
3	Traffic Counts & Projections	10	14	18	28	7	77		\$ 10,032.44
4	Meetings & Coordination with Hidalgo County Precinct 2	6	10	12		8	36		\$ 5,061.52
	Subtotal Hours	22	34	42	28	21	147		
	Hourly Base Rate	\$ 70.00	\$ 58.00	\$ 43.00	\$ 30.00	\$ 20.00			
	FY 15 Contract Hourly Rate w/ OH Mult. (178.12%) & Fixed Fee (12.00%)	\$ 211.40	\$ 175.16	\$ 129.86	\$ 96.64	\$ 60.40			
	Total Labor Costs	\$ 4,650.80	\$ 5,955.44	\$ 5,454.12	\$ 2,705.92	\$ 1,268.40	\$ 20,034.68	\$ 34,362.64	\$ 54,397.32

Project Team Cost Proposals - Sub Consultants
C&M Associates, Inc.

Cost Proposal
\$34,362.64 (See detailed break-down of fee on page 2 of 2)

Total Project Fee (Supplemental #2) \$54,397.32

Exhibit D



For: L&G Engineering
Cesar Chavez Traffic Projections

Sub-consultant: C&M ASSOCIATES, INC.

Schedule Duration: 5 Weeks after NTP

DESCRIPTION	Project Manager	Senior Project Engineer	Project Engineer III	Associate II	Total Labor Hrs.	Remarks	Task Cost
Task 1. Review of existing information	8	16	16	0	40		\$ 5,918.64
Task 2. TDM model runs	8	16	16	0	40		\$ 5,918.64
Task 3. Prepare forecasts	8	32	32	0	72		\$ 10,137.52
Task 4. Documentation	16	24	24	40	104		\$ 12,387.84
Subtotal	40	88	88	40	256		\$ 34,362.64
HOURS TOTAL	40	88	88	40	256		
LABOR RATE PER HOUR	\$212.47	\$166.53	\$97.15	\$66.50			
TOTAL DIRECT LABOR COSTS	\$ 8,498.80	\$ 14,654.64	\$ 8,549.20	\$ 2,660.00	\$ 34,362.64		
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON FEE)	24.73%	42.65%	24.88%	7.74%	100.00%	CHECK	
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON MANHOURS)	15.63%	34.38%	34.38%	15.63%	100.00%	\$ 34,362.64	
TOTAL DIRECT LABOR COST							\$ 34,362.64