May 4, 2017

Josie Lantaca
Assistant Engineer
City of Salinas
Public Works Department
200 Lincoln Ave
Salinas, CA 93901

Subject: East Boronda Road Contract Amendment #3: Field Surveys, Mapping, and Right-of-Way

Dear Ms. Lantaca:

We at Wallace Group appreciate the opportunity to continue our work with the City on the East Boronda Road widening project. As we've discussed the City wishes to expedite the project schedule as much as possible. To that end, we have prepared this contract amendment request addressing surveying and right of way delineation to assist the final design effort for your consideration and authorization. This effort can precede the final scoping of the roundabout or signalized intersection decision by the City Council as it will be used to support either corridor concept.

Wallace Group will provide topographic mapping, right-of-way, property line and easement survey base mapping which will be used as the basis of the roadway design project. Figure 1 shows the area to be surveyed. The survey base map will be prepared at a scale of 1 inch = 20 feet with a vertical contour interval of 1 foot. The horizontal datum shall be based on the California Coordinate System of 1983, Zone 4 (CCS83) and the vertical datum shall be based on North America Vertical Datum of 1988 (NGVD 88). The control will be consistent and constrained to the control used for the existing project mapping so that existing project mapping can be leveraged as appropriate for reference and information.

THIS PROPOSAL IS VALID FOR 60 DAYS FROM THE DATE OF THIS DOCUMENT.

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Wallace Group will establish semi-permanent primary and secondary control points for the survey mapping. These control points will be listed on the topographic base map and also serve as construction staking control as the project moves from design to construction.

Aerial and Aerial Control

In lieu of using the existing aerial mapping we advise capturing updated aerial photography along with producing a georectified aerial mapping product. The City provided aerial mapping doesn't appear to include a mapping accuracy scale or a photography date in the drawing file. Additionally, the preliminary concept files provided by the City do not include an aerial digital terrain model or an ortho-photograph aerial image produced from the aerial photography used for the aerial mapping. Refreshing the aerial mapping will ensure it is consistent with the field densification surveys and produce a complete and comprehensive aerial mapping deliverable which will include an ortho-photograph aerial image and aerial digital terrain model. Central Coast Aerial Mapping will provide aerial mapping services to include aerial planimetric and digital terrain mapping and a color ortho-photograph with a 0.2' pixel size of the entire survey area. The aerial photography will be captured at a flight elevation suitable for preparing a topographic map at a scale of 1-inch = 20-feet, with a contour interval of 1 foot. The limits of aerial mapping are shown in Figure 1.

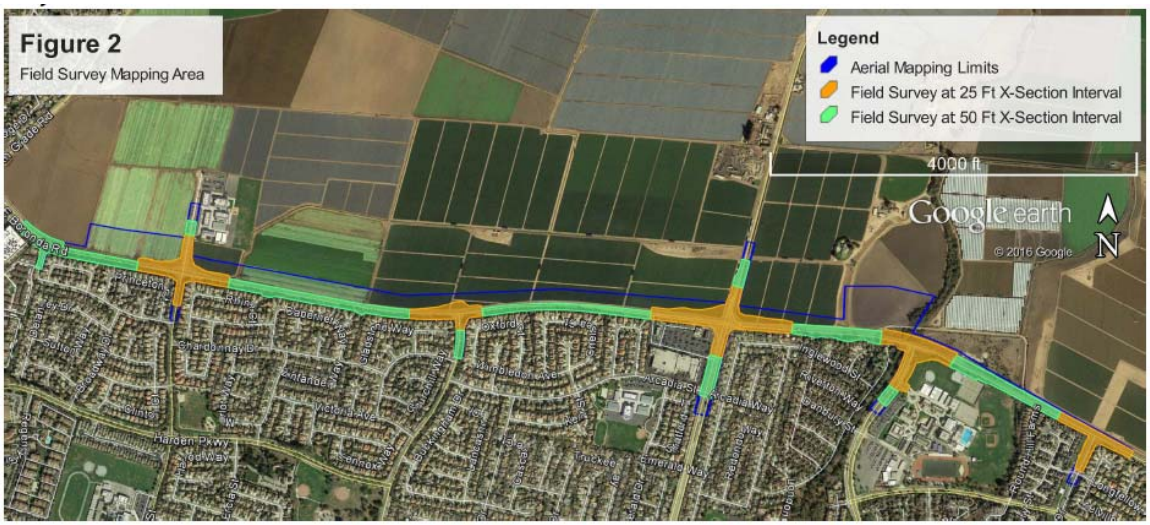
Wallace Group will set aerial photography control stations and the control stations will be shown on the survey base map.

Topographic Augmentation

Supplemental ground survey within the area shown in Figure 2 will include the location of above ground utility structures and additional information or accuracy for a variety of features. This includes visible surface improvements such as structures, creeks, culverts, fences, driveways, roadway signs, and utilities such as street lights, utility poles and vaults, fire hydrants, utility maintenance holes, valves, storm and sewer structures and spot elevations supplementing the aerial topographic mapping. Known underground utilities will be plotted based on a combination of field measurements and record mapping and atlases for utilities within the project limits. The rim and invert elevations of storm and sewer manhole and inlet structures will be measured and shown on the base map along with the size, material and direction of flow of the pipes entering and exiting these structures. For storm and sewer systems that cross the survey limits we will also locate the up or downstream structure that is outside the survey limits. Trees greater than 4 inches in diameter measured at four feet above ground and within the mapping limits shall be located with their trunk size and drip lines depicted.

We will also collect cross section measurements of the roadways within the limits shown in Figure 2 at an approximate interval of every fifty feet. Within one hundred feet of the proposed conform locations and at intersections the cross section interval will be approximately twenty-five feet. Spot elevations will be shown at the cross

section locations with hard surface measurements shown to the nearest 0.01 feet. The road cross section mapping will be provided between right-of-way and right-of-way.



Right-of-Way, Boundary and Easements

Wallace Group staff will also establish the existing road right-of-way (ROW) for the portions of the road within the project area as shown in Figure 3. The lines will be established based a review of available County of Monterey record maps, title research for the parcels of land along the north side of Boronda Road within the project area, title research for the parcels of land within the shopping complex on the southerly side of Boronda Road, title research for Everett Alvarez High School parcel and constrained to field located and measured surveyed monuments. Adjoining property line locations may be based on a "best fit" of record information to surveyed monuments. Adjacent property information such as assessor's parcel number (APN) and owner name shall be shown.

Wallace Group will procure Preliminary Title Reports (PTR) for the parcels listed below. These PTR's will be used for right-of-way research and easement encumbrance plotting.

- North side of Boronda Road
  - 153-091-003
  - 153-091-005
  - 153-091-015
  - 211-231-016
  - 211-231-059
  - 211-231-060
- South side of Boronda Road
  - 153-071-001
  - 211-383-004
  - 211-383-011
  - 211-383-012

The location of these APN parcels is shown on Figure 3. We will review the legal descriptions and the exceptions listed in the PTR's and plot, if possible, easements near the right-of-way lines adjacent to the project area.

The survey information will be compiled and produced in Civil 3D 2017 to form the survey base map at a scale of 1" = 20' and with a one foot contour interval and conform to National Map Accuracy Standards

As needed and appropriate for safety, traffic control may be required. It is assumed that no more than two days of traffic control will be required. The anticipated cost for two days of traffic control are included in the proposed budget (up to $5,000). We expect that if traffic control is needed it will be so that storm and sewer structures can be accessed in order to measure down to the invert of the structures and also during the field mapping of the intersections, so that both these tasks can be completed safely. We will be utilizing remote sensing and reflectorless measurement techniques when appropriate and in the area of high traffic, such as the intersection, in order to minimize the need for traffic control and also to keep field personnel safe and out of the traveled way in these areas.

Deliverables:

- Survey Base Map, Signed and Sealed PDF (22"x34", 1" = 20')
- Survey Base Map, Electronic Copy (AutoCAD Civil 3D 2017)
- Digital color ortho-photograph (electronic copy)

We appreciate the opportunity to provide the City with this additional analysis and resultant contract amendment request. We've estimated the additional budget need for this work at one hundred thirty-nine thousand eight hundred dollars ($139,800) and have shown the budget breakout by major work activities for your ease of review.

TERMS AND CONDITIONS

In order to convey a clear understanding of the matters related to our mutual responsibilities regarding this proposal, the City of Salinas Contract Agreement dated September 23, 2014 is considered a part of our proposal agreement.

We want to thank you for the opportunity to continue to support the City of Salinas with our professional services. Please do not hesitate to contact me at 805-544-4011 or jorgea@wallacegroup.us if you have any questions or would like to discuss this proposal in greater detail.

Sincerely,

WALLACE GROUP, a California Corporation

Jorge Aguilar, PE C48704
Principal
612 Clarion Court
San Luis Obispo California 93401
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Federal Tax ID No. 04-3753801

Attachment

Wallace Group Team Resource Estimate for the
East Boronda Road Widening - CA #3, Survey

PHASE/TASK	TASK DESCRIPTION	PRINCIPAL	SENIOR ENGINEER	ASSOCIATE ENGINEER	TWO MAN SURVEY CREW	SENIOR LAND SURVEYOR	SURVEY TECHNICIAN	CONSTRUCTION INSPECTOR	CLERICAL	Misc. Direct Costs	TOTAL LABOR HOURS	LABOR	TOTAL
		HRS	HRS	HRS	HRS	HRS	HRS	HRS	HRS	Cost	HRS	$	$
	RATE	$195	$160	$105	$280	$165	$133	$120	$73				
1	Aerial and Aerial Control	2	6		20	10	2		4	$10,386	44	$9,158	$19,544
2	Right-of-Way, Boundary and Easements	8	16		30	55	15			$10,418	124	$23,590	$34,008
3	Topographic Augementation	8	20	24	130	24	160			$10,276	366	$68,920	$79,196
	Field Mobilization				22					$893	22	$6,160	$7,053
	SUB-TOTALS	18	42	24	202	89	177		4	**$31,972**	**556**	**$107,828**	**$139,800**
	WALLACE GROUP LABOR COSTS	$3,510	$6,720	$2,520	$56,560	$14,685	$23,541		$292				**$107,828**
	WALLACE GROUP DIRECT COSTS												**$31,972**
	SUBCONSULTANTS TOTAL COSTS												
	SUBCONSULTANT OVERHEAD @											15%	
	TOTAL												**$139,800**

Task Budgets may fluctuate within Overall Budget