

Geo-Advantec Inc.

G *Geotechnical Engineering*

A *Earthquake Engineering*

I *Inspection and Testing*

I *Engineering Geology*

PROPOSAL FOR:
PAVEMENT STUDY SERVICES FOR
GARFIELD AVENUE AND FERGUSON STREET

FOR:
THE CITY OF COMMERCE



2535 COMMERCE WAY
CITY OF COMMERCE, CA 90040

PREPARED BY:
GEO-ADVANTEC INC.
457 W. ALLEN AVENUE, SUITE 113
SAN DIMAS, CALIFORNIA 91773
PROPOSAL NO. 17-1041
MARCH 29, 2017

Geo-Advantec Inc.

Geotechnical Engineering. Earthquake Engineering. Engineering Geology

Ms. Maryam Babaki, PE
City of Commerce
Public Works & Development Services Department
2535 Commerce Way,
Commerce, CA 90040

March 29, 2017
Proposal No.: 17-1041

SUBJECT: Proposal for Geotechnical/Pavement Study Services for:
Garfield Avenue and Ferguson streets
within the City of Commerce

This proposal is in response to your request for geotechnical engineering investigation and pavement study services for various streets within the city limits. Geo-Advantec Inc., (GAI), along with its subcontractors, will perform the activities described in the forthcoming sections of this proposal for the fee outlined. The investigation will be performed in order to evaluate the thickness of existing pavement sections and subgrade soils condition and providing our recommendations for the subject projects. The ensuing section of this submittal is dedicated to provide detailed scope of our proposed services, cost breakdown and total fee for each of the projects, and project schedule.

PROPOSED SCOPE AND COST BREAKDOWN FOR EACH PROJECT

The purpose of this investigation is to conduct corings/potholes at various locations within the intended length of the introduced streets, i.e. projects, perform field measurements, collect samples, and perform laboratory testing and prepare a final geotechnical/pavement report which includes the results of our investigation, as well as our recommendations for rehanbilitation and/or reconstruction of the projects. The designated streets (projects) and their limits for this study are introduced in the following Table:

List of Projects/Streets

LOCATION NO.	LOCATION	LENGTH (FEET)
1	Garfield (NCL to Telegraph Road)	7,935
2	Ferguson (From Atlantic to East City Limit)	9,500

Our proposed scope of services, for all the listed streets includes the following general tasks;

1. Perform site reconnaissance, mark the proposed corings locations
2. Prepare traffic control plan, and submit for the City's review and approval
3. Provide a work schedule for the City for review and coordinate the field work days with the City project manager
4. Obtain a no fee permit from the City

5. Clarification of underground utilities by contacting Dig-Alert.
6. Patching coring locations using cold-patch asphalt.

Also, for each of the listed streets/projects and due to their number of lanes, expected volume of traffic, and types of streets, i.e. residential, main, artery, etc., the following specific scopes/tasks are proposed:

1. Garfield Ave from North City Limit to Telegraph Road, with about 7,935 feet total length

Garfield Avenue is a main street carrying considerable heavy traffic and comprises of 2 lanes in each direction. For this street we propose:

1. Provide traffic control as required by the City
2. Perform a total of 8 corings and 4 saw cuts/test pits
3. Measure thickness of AC pavement and the in-place base layer
4. Collect bulk samples of subgrade at sawcut locations
5. Perform laboratory tests on the collected samples
- 6. Perform Deflectometer Survey**
7. Perform office engineering analysis
8. Prepare final report which includes pavement analysis results and our recommendations for different viable alternatives

The following Table 1 provides cost estimate and breakdown of the cost for pavement study works for this avenue:

Table 1 – Proposed Cost Breakdown For Garfield Avenue from North City Limit to South City Limits

TASK	Estimated Amount	Cost/Unit	Total Cost	Remarks
Coring and sampling+Patching	16 hr	\$250 / hr	4,000	8 coring and 4 pothole (Crew+Equipment)
Traffic Control Plan Preparation	L.S.	L.S.	\$850	Plan preparation
Traffic Control/Field	1.5 days	\$1,500/day	\$2,250	Cost includes field traffic control
Field Engineer	27 hr	\$90/ hr	\$2,430	Boring Locations marking, Logging, sampling
Senior Geotechnical Engineer	8	\$150	\$1,200	Site reconnaissance and field visit
Laboratory Testing	Lump Sum	Per Master Fee	\$3,500	Tests include R-value, EI, Gradation, etc..
Office Engineer/Senior Geotechnical	40 hr	\$125/ hr	\$5,000	Analysis ,design and prepare draft report
Principal Geotechnical Engineer	14 hr	\$150/ hr	\$2,100	Final Review

TASK	Estimated Amount	Cost/Unit	Total Cost	Remarks
Drafter	8 hr	\$50/hr	\$400	Report Preparation tasks
Deflectometer Test for the entire project	L.S.	L.S.	\$9,600	
Traffic Control	1.5 days	\$1,500/day	\$2,250	1 to 1.5 days based on field condition
Engineering supervision and analysis of Deflectometer Test	L.S.	L.S.	\$3,000	
TOTAL PROPOSED FEE (Including Optional Task)			\$35,920	

2. Fergusen Drive East City Limit to Atlantic Boulevard, with about 9,500 feet total length

Fergusen Drive mostly passes through residential neighborhood, and comprises of one lane at each direction. For this street, we propose:

1. Provide traffic control as required by the City
2. Perform a total of 8 corings and 4 saw cuts/test pits
3. Measure thickness of AC pavement and the in-place base layer
4. Collect bulk samples of subgrade at sawcut locations
5. Perform laboratory tests on the collected samples
6. Perform office engineering analysis
7. Prepare final report which includes pavement analysis results and our recommendations

The following Table 2 provides cost estimate and breakdown of the cost for pavement study works for this avenue:

Table 2 – Proposed Cost Breakdown For Fergusen Drive from Atlantic Boulevard to East City Limit

TASK	Estimated Amount	Cost/Unit	Total Cost	Remarks
Coring and sampling+Patching	12 hrs	\$250 / hr	\$3,000	8 coring/ 4 potholes (Crew+Equipment)
Traffic Control Plan Preparation	L.S.	L.S.	\$500	Plan preparation
Traffic Control/Field	1.0 day	\$1,500	\$1,500	Cost includes field traffic control
Field Engineer	16 hrs	\$90/ hr	\$1,440	Boring Locations marking, Logging, sampling
Senior Geotechnical Engineer	4	\$150	\$600	Site reconnaissance and field visit
Laboratory Testing	Lump Sum	Per Master Fee	\$2,800	Tests include R-value, EI, Gradation, etc..
Office Staff Engineer	16 hrs	\$75/hr	\$1,200	Analysis ,design and prepare draft report
Office Engineer/Senior Geotechnical	16 hrs	\$125/ hr	\$2,000	Analysis ,design and prepare draft report

TASK	Estimated Amount	Cost/Unit	Total Cost	Remarks
Principal Geotechnical Engineer	4 hrs	\$150/ hr	\$600	Final Review
Drafter	6 hrs	\$50/hr	\$300	Report Preparation tasks
TOTAL PROPOSED FEE			\$13,440	

The total proposed fee for the above-outlined scope is \$50,000.

LABORATORY TESTING AND OFFICE ENGINEERING

The final determination of type of laboratory tests to be performed, will be based on the encountered soils. The laboratory tests may include some or all of the followings: Gradation, Moisture & Density, Atterberg Limits, , R-Value. Also if FDR is a considered option by the City, tests on the obtained AC/Base samples will be performed to determine the cement percentage for the mix.

FINAL REPORT

The final report, as a minimum, will include:


1. A site plan showing the location of borings
2. A discussion of the materials encountered in the borings and their engineering properties
3. Results of pavement sections measurements
4. Results of laboratory tests
5. Results of Deflectometer tests and engineering analysis (for streets the test was performed)
6. Pavement Design and construction recommendations including different appropriate alternatives.

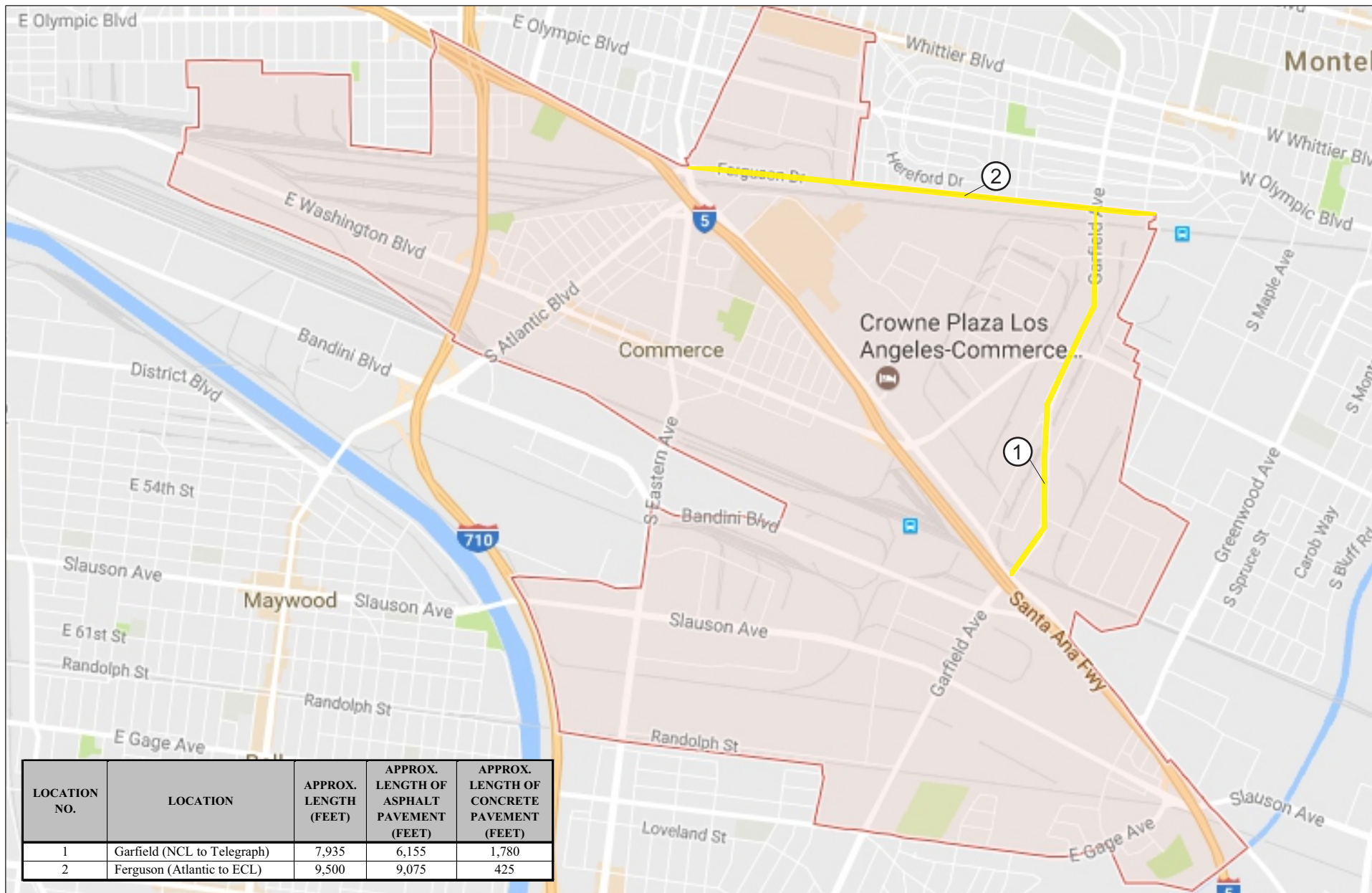
PROJECT SCHEDULE

The scope of work presented above will be discussed with the client and according to the priority set by the client, a schedule meeting the client's need will be prepared and followed.

GAI will prepare and submit 4 stamped copies and a pdf copy of the report. Thank you for the opportunity to be of service on this project. If there are any questions regarding this proposal, please call the undersigned.

Sincerely,
GEO-ADVANTEC, INC.


Shawn Ariannia, Ph.D., P.E., G.E.
President



LEGEND

PAVEMENT SURVEY LIMIT
LOCATION NUMBER



Geo-Advantec Inc.

PROJECT LIMITS

FIGURE

1

PROPOSAL NO.

17-1041

Pavement Rehabilitation - Commerce, CA

DATE

03-29-2017