

AMENDMENT NO. 1

CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT

AGREEMENT DATED June 13, 2008

BETWEEN CITY OF CHICO

AND

MARK THOMAS & COMPANY, INC.
Consultant

SR 99 & SOUTHGATE INTERCHANGE – ENGINEERING AND ENVIRONMENTAL SERVICES
Project Title

308-000-8801/50073-308-4110
Budget Account No.

THIS PROFESSIONAL SERVICES AGREEMENT AMENDMENT (Amendment) is entered into on May 3, 2019, between the City of Chico, a municipal corporation under the laws of the State of California (City), and Mark Thomas & Company, Inc., (Consultant). On June 13, 2008, City and Consultant entered into "City of Chico - Professional Services Agreement" (Agreement). The provisions of the Agreement are hereby amended as follows:

1. Exhibit B is hereby superseded and replaced by revised Pages B-1R1 – B-21R1 attached hereto.
2. Exhibit C is hereby superseded and replaced by revised Pages C-1R1 – C-3R1 attached hereto.
3. All other provisions of the Agreement shall remain in full force and effect.

CITY:

CONSULTANT:

Mark Orme

Mark Orme, City Manager*

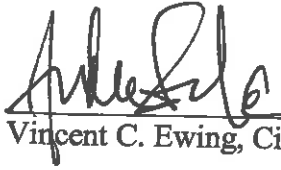
Zach Silviglia

By: Zach Silviglia
Title Vice President

*Authorized pursuant to Section 3.08.060 of the Chico Municipal Code

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:



Vincent C. Ewing, City Attorney*



Brendan Ottoboni, Public Works Director
Engineering

*Pursuant to The Charter of the
City of Chico, Section 906(D)

REVIEWED AS TO CONTENT:



Scott Dowell, Administrative Services Director*

*Reviewed by Finance and Information Systems

CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT

MARK THOMAS & COMPANY, INC.
Architect/Consultant/Engineer

SR 99 & SOUTHGATE INTERCHANGE -
ENGINEERING AND ENVIRONMENTAL SERVICES
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EXHIBIT "B"

SCOPE OF PROFESSIONAL SERVICES - BASIC; COMPLETION SCHEDULE

Scope of Professional Services - Basic

The Consultant shall provide professional services as follows:

1. PROJECT ADMINISTRATION AND MANAGEMENT

1.1 Coordination Meetings

The Consultant shall attend Project coordination meetings with the Project Development Team (PDT), comprised of the City, BCAG, Caltrans, property owners, and affected agencies such as Butte County (County). In addition, the Consultant shall sometimes include selected representatives from development interests, particularly when issues will include developing Interchange Project phasing triggers and/or funding mechanisms.

The first step following the Consultant's receipt of the City's Notice to Proceed shall be arranging a start-up meeting with the City; BCAG; the County; Caltrans branches for Special Funded Projects and Environmental, Traffic Operations, and Planning; and any other personnel and/or development interests deemed appropriate. The purpose of the meeting will be to identify the precise format, scope, and content needed for the technical studies, PSR, and supplemental Interchange Project information.

The Consultant shall take the lead in design coordination meetings. These services shall include preparation of meeting agenda in consultation with City staff, distribution of approved meeting agenda, arrangement of attendance of meeting participants, and preparation and distribution of meeting minutes, including recap of actions to be taken prior to the next meeting. This scope of services assumes a total of ten meetings.

1.2 Consultant Team Management/Coordination

This task shall include general Project management, including preparation of monthly progress reports, maintaining the Project submittal register, and Critical Path Method (CPM) scheduling and updates. As there will be a number of the Consultant Team members involved in the PSR, this Project management task shall also include coordination of Consultant Team members from the various disciplines.

1.3 Information Gathering

The Consultant shall identify and assemble existing data useful in analyzing impacts of the Interchange Project. These information sources shall include City, County, and Caltrans as-built information; adjacent proposed development project planning documents; other environmental studies conducted by the City, BCAG, or its consultants; as well as potential Interchange Project impacts identified by the City, the County, and other sources. As part of this task, the Consultant shall also prepare the encroachment permit application, which the City will submit, for Interchange Project site surveys and field investigation, as required from Caltrans and the City and the County.

Task 1 Deliverables

PDT Meeting agendas and meeting minutes	Ten meetings
Schedule updates	As needed
Encroachment permit application	

2. AERIAL PHOTOGRAPHY AND TRAFFIC MODELING

2.1 Aerial Photogrammetric Control Surveys and Flight

The Consultant and subconsultant Radman shall complete control surveys and required aerial mapping for the Interchange Project. Control shall be established by Global Positional Systems (GPS) and conventional methods on the California Coordinate System (NAD83) in English units. Elevations shall be established on a Caltrans-approved datum by digital differential levels from established benchmarks. The Caltrans Office of Photogrammetry A, B, C approval process and GPS Report shall be completed.

Flight crosses for aerial mapping shall be set by the Consultant in accordance with the layout provided by subconsultant Radman. Crosses shall be painted on asphalt surfaces where practical. In other instances, crosses made of paper, cloth, or plastic shall be set. The aerial control for the photogram-metric mapping shall consist of three horizontal and vertical points along and 19 centerline (shoulder) vertical control points. Access to private property for the purpose of setting and surveying aerial panels will be provided by the City. Control for the rectified photo shall consist of 12 vertical control points. The rectified photo control work will not require following the Caltrans specifications.

2.2 Preliminary Traffic Modeling and Analysis

Subconsultant FPA shall begin the advance tasks for the traffic operations analysis report for the Interchange Project.

2.2.1 Conduct Traffic Counts and Field Observations

Subconsultant FPA shall collect available data for use in the analysis of existing, construction-year, and design-year conditions. Data requirements for the Interchange Project study area are listed below.

- Existing roadway geometrics and traffic controls.
- Existing AM and PM peak-hour traffic counts at Interchange Project locations while schools are in session.
- Existing AM and PM peak-hour heavy vehicle (truck) percentage for SR 99.
- Existing and planned transit service and facility descriptions.
- Location of existing and planned bicycle and pedestrian facilities.
- Proposed land uses.
- Proposed transportation improvements.
- Existing signal timing plans from Caltrans.

Subconsultant FPA shall collect intersection turning-movement counts for the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods at the following intersections:

- Southgate Avenue/SR 99
- Southgate Avenue/Entler Avenue
- Southgate Avenue/Southgate Lane
- Midway/Entler Avenue
- Midway/Hegan Lane

2.2.2 Forecast Travel Demand Volume

As roadway connectivity eastward to Skyway was not assessed in the City's Nexus Study, subconsultant FPA shall review and use a combination of the City's TMODEL Travel Demand Forecasting (TDF) model and the Butte County Association of Governments' (BCAG) TDF model to develop travel demand forecasts. Subconsultant FPA shall review and modify, if necessary, the traffic analysis zone (TAZ) system and roadway network for "No Interchange Project" and "With Interchange Project" scenarios for cumulative conditions to accurately reflect existing and planned land use and roadway network conditions in the Interchange Project area within the BCAG model. Subconsultant FPA shall request TMODEL to conduct model runs and shall develop forecasts for the following scenarios:

- One intersection/interchange alternative
- One alignment alternative for the Midway
- One alignment alternative for Skyway

As the construction year for the Interchange Project has not yet been determined, the recommended procedure to forecast traffic volumes for construction year and design year is to use straight-line interpolation/extrapolation between the existing and cumulative TDF model forecasts.

The TDF models shall be used to generate AM and PM peak-hour traffic forecasts for the Interchange Project intersections. The base conditions run shall be used to develop a traffic volume forecasting adjustment procedure to correct for any model errors found in the base year model due to differences in model volumes and traffic counts.

Subconsultant FPA shall submit a TDF Technical Memorandum to Caltrans for review and approval prior to initiating any operational analyses.

3. PSR/TECHNICAL STUDIES

The general intent of this task shall be to develop geometrics and Interchange Project design in sufficient detail so that the environmental impacts can be identified. To the extent possible, required design activities shall be of sufficient detail for use in the future Interchange PA&ED and Plans, Specifications, and Estimates (PS&E) phases of the Interchange Project. Other activities not strictly needed for the PSR (such as right-of-way surveys and appraisal mapping) are not included in this scope of services. Following are key subtasks included in this scope of services:

3.1 Interchange Project Mapping/Surveys

Base mapping shall consist of two components: (1) new design-level aerial photogrammetric topographic mapping to be prepared for the Interchange Project 400 feet wide along SR 99 from the Skyway interchange mapping to 500 feet south of the Southgate intersection, supplemented with topographic surveys and as-built information, and (2) a rectified aerial photograph with five-foot contours for the roadway extensions which shall also be supplemented by field surveys. This scope of services assumes using full photogrammetric mapping for the SR 99 corridor and rectified aerial photography for the City/County roadway connections to the east and west. The Consultant shall obtain existing utility mapping and add it to the mapping.

a. Acquire Record Mapping and Associated Documentation

The Consultant shall research record mapping and as-built documents at Caltrans, the City, and the County. In particular, the Consultant shall review available records of survey, parcel maps, and final maps (subdivisions). The Consultant shall prepare base maps showing compiled record information for property lines including existing roadway control lines.

b. Aerial Photogrammetry

Subconsultant Radman shall prepare digital photogrammetric mapping for the Interchange Project limits. Mapping products shall include 1" = 50" scale photogrammetric mapping in English units and in AutoCAD and Microstation formats. All mapping shall be completed to meet Caltrans standards and shall be approved by Caltrans through the A, B, and C process.

c. Supplemental Field Topography

The Consultant shall perform supplemental field surveys as needed to identify and locate major features. Roadway cross sections shall be performed at locations to be determined by the City. The Consultant shall also survey surface-visible evidence of major underground utilities, intersections, and other critical features necessary for design. This scope of services assumes a total of five days for topographic surveys.

The location of the existing right-of-way shall be approximately established from available Caltrans, City, and County maps of record. Sufficient monuments to

approximately determine the right-of-way shall be located; however, detailed evaluation of the existing right-of-way is not included in this scope of services. Detailed right-of-way services will be completed at the Interchange PA&ED phase. The Consultant shall also approximately determine the location of lot lines.

d. Utility Mapping

This subtask shall consist of compiling existing utility mapping and doing verification with the utility companies. This subtask shall also allow identification of preliminary conflicts for budgeting and scheduling purposes, in support of the PSR right-of-way estimates. The Consultant shall use the following procedure:

- Compile mapping on base plans using utility company system mapping, as-built information, and visible and surveyed locations of surface utility facilities.
- Prepare utility coordination cover letters for the utility companies. After review and approval by City staff, send the plans and cover letters to the utility companies for confirmation and/or location of facilities.
- Revise utility mapping per utility company comments.
- Return corrected utility mapping to utility companies for information only.

3.2 Traffic Modeling and Analysis

This scope of services includes tasks to be performed by subconsultant FPA to prepare the traffic operations analysis report for the Interchange Project. Subconsultant FPA shall also review one interim phasing option to determine if initial connectivity improvements could be implemented as part of the analyses.

3.2.1 Analyze Traffic Operations for Existing Conditions

For the existing conditions analysis, subconsultant FPA shall analyze the Interchange Project intersections according to the analysis procedures contained in the Highway Capacity Manual (HCM), (Transportation Research Board, 2000).

For the intersection analysis, subconsultant FPA shall use the Synchro/SimTraffic traffic analysis software. Peak-hour factors shall be based on the traffic counts collected in Task 2.2.1. Saturation flow rates shall be determined from observations at the Interchange Project site. The analysis results shall contain AM and PM peak-hour levels of service.

To evaluate freeway operations north and south of the Interchange Project site, subconsultant FPA shall use the Highway Capacity Software (HCS+).

3.2.2 Analyze Traffic Operations for Future Conditions

The traffic analysis to be performed by subconsultant FPA shall include the following scenarios:

- Construction year no Interchange Project conditions
- Construction year with Interchange Project conditions
- Design year no Interchange Project conditions
- Design year with Interchange Project conditions

The construction year has not yet been determined. The PDT shall identify the construction year and design year for the Interchange Project for inclusion in the analyses.

The interchange shall be evaluated using Synchro/SimTraffic for all scenarios during the AM and PM peak hours by reporting intersection delay and levels of service. Additionally, subconsultant FPA shall assess operations on SR 99 using HCS+.

3.2.3 Phasing Analysis

Subconsultant FPA shall coordinate with the PDT to determine if an interim phased improvement is feasible. Subconsultant FPA shall evaluate a new construction year and new design year volumes for the interim phase for one proposed set of improvements, as determined by the PDT. The analysis shall be conducted using the Synchro/SimTraffic analysis software at intersections using the AM and PM peak hours. Freeway ramps shall be evaluated using the HCS+ software.

3.2.4 Prepare the Traffic Report for the PSR

Subconsultant FPA shall prepare a traffic report to be included in the PSR and shall submit a draft version of it for review by the City, BCAG, and Caltrans. This scope of services includes up to 12 hours of time for response to comments on the draft report. A final version of the traffic report shall be prepared in electronic and hard-copy format that incorporates the review comments.

3.2.5 Attend Meetings and Workshops

Subconsultant FPA shall attend up to 14 PDT meetings, workshops, and/or Technical Advisory Committee (TAC) meetings.

3.2.6 Alignment/Geometric Alternatives Analysis (Optional)

Subconsultant FPA's current scope of services includes developing forecasts and operations analysis of one project alternative (one interchange design, one alignment to the Midway, and one alignment to Skyway). Should the City desire the development of forecasts and operations analysis for additional alignment alternatives, the evaluation of additional alignment connectivity will be authorized through an amendment to this Agreement.

3.3 Geometric Approval Drawings/Construction Staging

3.3.1 Geometric Approval Drawings

Based on review of preliminary traffic volumes, the Consultant shall prepare geometric approval drawings for the Interchange Project alternatives. The geometrics shall be further developed with traffic operations data, and with basic controlling geometric features shown. A total of three Interchange Project alternatives shall be prepared.

The Geometric Approval Drawings shall also identify alignments for two alternatives each for the extension easterly to Skyway and westerly to the Midway.

The Geometric Approval Drawings shall be prepared at a scale of 1" = 100' and shall show mainline and intersection alignment, lane and shoulder widths, stationing and ties, cut/fill lines, right-of-way requirements, and intersection details. Profiles and traffic volumes shall also be shown.

Concurrent with geometric development, the Consultant shall also prepare an Advance Planning Study (APS) for each of the structures; this scope of services assumes a total of six structures. The six structures are described as follows: Southgate over-crossing of SR 99, west-side frontage road crossing Butte Creek and Comanche Creek, northbound SR 99 auxiliary lane crossing Comanche Creek, and Skyway extension over Butte Creek, and Little Chico Creek-Butte Creek Diversion Channel. The APS, which is a preliminary plan for Caltrans review, documenting structure type, layout, and preliminary cost, shall be prepared in draft and final versions for Caltrans Division of Structure review.

This geometric development task shall also include an evaluation of construction staging and traffic handling. A preliminary evaluation shall be made for higher-cost traffic control items, such as changeable message signs and K-rail, so that they can be included in the PSR cost estimates.

3.4 Geotechnical Review/Initial Site Assessment

Subconsultant BCI shall prepare the preliminary geotechnical/geologic memorandum and the Initial Site Assessment for the Interchange Project, as described below.

3.4.1 Preliminary Geotechnical/Geologic Memorandum

Subconsultant BCI shall attend a PDT meeting to discuss the Interchange Project, issues, and schedule, and shall review as-built logs of test borings, foundation reports, geotechnical design reports, and other documents for nearby State or local bridges, as provided by the City or Caltrans. To evaluate Interchange Project site geology seismic conditions, subconsultant BCI shall review in-house local and regional geologic and seismic hazards maps pertaining to the Interchange Project site. Subconsultant BCI shall also conduct a geologic reconnaissance of the Interchange Project site and immediate vicinity.

Subconsultant BCI shall prepare a Preliminary Geotechnical/Geologic Memorandum for the Interchange Project which shall include the following: Interchange Project description, summary of Interchange Project site geology and subsurface conditions; as-built logs of test borings for nearby State or local bridges; preliminary seismic data and evaluation; and a discussion of potential geotechnical/geologic issues for design. The memorandum shall address preliminary foundation alternatives, liquefaction potential, embankment settlement, cut/fill slope stability, and constructability issues.

Subconsultant BCI shall submit ten copies of the Preliminary Geotechnical/Geologic Memorandum to the Consultant for distribution to the PDT.

3.4.2 Initial Site Assessment

The overall purpose of the Initial Site Assessment shall be to attempt to identify significant soil/groundwater contamination issues that could affect the constructability, feasibility, and/or cost of the Interchange Project. Subconsultant BCI shall complete the following items for the Initial Site Assessment. If the potential for significant contamination is found and requires additional investigation, such services will only be performed if the Phase I assessment shows the need to do further analysis. In such a case, the following services shall be authorized through an amendment to this Agreement.

- Subconsultant BCI shall review and discuss the latest improvement plans with the Consultant and shall review Consultant-provided Assessor's Parcel Number (APN) parcel maps, including specific parcels subject to property acquisition around the Interchange Project site. Subconsultant BCI shall also review the Interchange Project site for suspected or known contamination/hazardous materials issues, such as mine tailings, railroad alignments, industrial parks, and orchards.
- Subconsultant BCI shall review existing documents and reports, such as work completed in the vicinity, readily available consultant reports for the Interchange Project site and/or adjacent locations, and Interchange Project site geology and the hazardous waste analysis required by Caltrans for right-of-way acquisition.
- Subconsultant BCI shall conduct a limited Interchange Project site reconnaissance to observe current land uses and to look for potential indications of contamination at the Interchange Project site, including documentation of areas showing general evidence of surface disturbance or grading, illegal dumping, or where handling and mixing of hazardous materials such as pesticides, insecticides, and fuel products have occurred. Subconsultant BCI shall observe the following:
 - General land uses at the Interchange Project site.
 - Physical setting of the Interchange Project site.
 - Observations, from public right-of-way and related street-side locations, of visible indications of contamination at the Interchange Project site. Individual properties shall not be accessed or reviewed.
- Sites noted in the database provided for the Interchange Project.

Subconsultant BCI shall conduct some of the Initial Site Assessment Interchange Project site reconnaissance concurrent with the preliminary geotechnical/geologic site visit and review.

Through historical research, subconsultant BCI shall attempt to identify past and present operations conducted at the Interchange Project site, to assess the potential for

hazardous materials impacts therein. To research potential sources for contamination, subconsultant BCI shall review historical aerial photographic coverage and topographic map coverage of the Interchange Project site and surrounding properties.

Subconsultant BCI shall also review a commercial database including Federal, State, and County records for indications of the use, misuse, or storage of hazardous and/or potentially hazardous materials on or near the Interchange Project site.

Based on the results of the database search, Interchange Project site review land use and existing assessments, subconsultant BCI shall determine specific areas that need further review to determine the presence or extent of known contamination, or the risk of potential hazardous materials occurring at the Interchange Project site. For those areas identified, subconsultant BCI may review additional historic air photos and historic Sanborn Fire Insurance Maps of the Interchange Project site and surrounding properties.

Where feasible, subconsultant BCI shall conduct interviews with available persons knowledgeable about the history of specific parcels identified as areas of concern, to assess other potential environmental liabilities.

Files maintained by regulatory agencies for individual sites shall not be reviewed at this time; their review may be required for further evaluation as an amended task.

Additionally, given the large size of the Interchange Project site and the limits of this scope of services, it cannot be assured that all potential hazardous materials sites will be identified. Additional evaluation and subsurface investigation will reduce (but not eliminate) this risk.

Subconsultant BCI shall prepare a draft report summarizing the findings of its review, Interchange Project site reconnaissance, historical photograph evaluation, and regulatory records review. The draft report shall address identified potential hazardous materials impacts and shall provide recommendations for further investigation and analysis if necessary. Once draft report comments are provided, subconsultant BCI shall finalize the Initial Site Assessment incorporating the review comments.

If the Initial Site Assessment identifies the potential for hazardous materials to impact soil and/or groundwater at the Interchange Project site, it may be necessary to investigate these locations and confirm or characterize potential contamination. If this is necessary, such additional services will be authorized through an amendment to this Agreement.

Subconsultant BCI shall submit ten copies of the Draft and Final Initial Site Assessment to the Consultant for distribution to the PDT.

3.5 Drainage Analysis

Subconsultant WRECO shall coordinate with the Consultant and the PDT to collect and review available data on hydrology and hydraulics for the existing flood control and drainage facilities. The major sources of data shall be from Caltrans, the Federal Emergency and Management Agency (FEMA), the City, and the County.

3.5.1 Preliminary Floodplain Risk Assessment

The major creeks and flood control facilities in the Interchange Project vicinity include Butte Creek and Comanche Creek. Subconsultant WRECO shall perform a preliminary floodplain risk assessment using FEMA data and information from the City and the County to assess the floodplain impacts from the Interchange Project to the floodplain development and habitat values.

3.5.2 Preliminary Drainage Review for Alternatives Analysis

The various Interchange Project alignment alternatives may have different degrees of impact to the existing facilities. Subconsultant WRECO shall perform preliminary drainage review and alternative analysis for the Interchange Project and shall assess both the on-site and off-site runoffs.

3.5.3 Storm Water Data Report

Subconsultant WRECO shall evaluate the potential for Best Management Practices (BMP) and shall make recommendations to minimize water quality impacts from the Interchange Project. Subconsultant WRECO shall also prepare a PSR-level Storm Water Data Report for review and approval by Caltrans.

3.5.4 Assistance for PSR and PDT Meetings

Subconsultant WRECO shall provide input to the PDT for the PSR preparation and shall work with the PDT to prepare the PSR-level cost estimate for the drainage improvements, BMP applications, and any possible improvement to the existing flood control facilities. Subconsultant WRECO shall also attend the Project kickoff meeting and one coordination meeting with the PDT.

3.6 Quantity/Cost Estimates

The Consultant shall prepare quantity and cost estimates, segregated by Interchange Project element. Costs shall be summarized in Caltrans PSR Cost Estimating format, with appropriate contingencies.

3.7 Right-of-Way Estimates/Exhibit

Concurrent with the cost estimate task, subconsultant BRI shall prepare the Caltrans Right-of-Way Data Sheets. Right-of-way costs shall be based on preliminary evaluations provided by subconsultant BRI, not detailed appraisals. Major utility relocation costs (relocations, lowering, and/or additional encasement) shall also be evaluated in the right-of-way estimate. The Consultant shall prepare a right-of-way exhibit using record information or Assessor Parcel Maps only and showing the required acquisitions per APN.

3.8 Value Engineering Analysis

Once cost estimates are prepared for the preliminary work effort, there may be a need to review potential cost-saving measures, such as phased implementation of improvements. The

Consultant shall evaluate these areas on a case-by-case basis, as well as reviewing opportunities for cost savings where possible.

3.9 PSR

The Consultant shall prepare an Administrative Draft PSR, Draft PSR, and Final PSR for distribution, review, and approval by the City, BCAG, County, Caltrans, and the Consultant Team. The PSR shall be prepared to conform with the Caltrans Project Development Procedures Manual, latest edition, and shall discuss the following key areas:

- Introduction
- Background
- Need and Purpose
- Deficiencies
- Corridor and System Coordination
- Alternatives
- Community Involvement
- Environmental Determination/Document
- Funding
- Schedule
- Federal Highway Administration (FHWA) Coordination
- District Contacts
- Project Reviews

As part of the PSR process, the Consultant shall review Design Information Bulletin No. 78 for all mandatory and advisory design standards and shall then prepare Fact Sheets to document any feature that does not meet the current standard. This scope of services assumes a total of two Fact Sheets will be required.

Task 3 Deliverables

Caltrans Encroachment Permit Application	
1" = 50' Aerial Topographic Mapping	
Base Mapping at 1" = 50'	
Traffic Analysis Report - Draft and Final	Five copies each
Roadway Extension Geometric Approval Drawings - Two alternatives	Ten copies each
Interchange Geometric Approval Drawings - Three alternatives	Ten copies each
Initial Site Assessment - Draft and Final	Five copies each
Geotechnical Memorandum - Draft and Final	Five copies each
Preliminary Floodplain Risk Assessment Memorandum - Draft and Final	Five copies each
Preliminary Drainage Review Memorandum - Draft and Final	Five copies each
Storm Water Data Report - Draft and Final	Five copies each
Preliminary Construction Cost Estimate	One copy
Preliminary Right-of-Way Data Sheets and Exhibit	Five copies
Project Study Report - Administrative Draft, Draft, and Final	20 copies each
Fact Sheets for Design Exception - Two total	Five copies each

4. ENVIRONMENTAL ANALYSIS

Subconsultant Gallaway Consulting, Inc. (Gallaway), along with the appropriate subconsultants, shall prepare a Preliminary Environmental Analysis Report (PEAR) to provide a qualitative description of potential environmental resources and issues that could affect the Interchange Project's schedule and cost. Each environmental issue shall be discussed in the PEAR in sufficient detail to determine the requirement for further study or analysis. Subconsultant Gallaway shall also include any information completed under Tasks 2 and 3 that relates to the environmental issues, such as traffic, drainage, geotechnical, and hazardous waste.

The PEAR shall present an overview of environmental issues and constraints that might be encountered if the Interchange Project is constructed as proposed, as well as those issues that could affect the budget and schedule; there is no environmental clearance associated with a PEAR. Additional documentation will be required to comply with the California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA) if the Interchange Project is pursued. There are no other documents or permitting tasks associated with this scope of services.

The PEAR shall identify the permits that may be required to complete the Interchange Project and shall provide a discussion of the type of environmental documents needed for CEQA and NEPA review. The anticipated costs associated with preparation of the likely environmental and permitting documents shall also be identified. The PEAR shall be prepared according to the Caltrans PEAR Handbook dated December 2001.

Subconsultant Gallaway's environmental analysis shall include the following tasks:

4.1 Initial Review and Meeting Attendance

Subconsultant Gallaway shall review existing and available information pertaining to the Interchange Project site, including the City and County General Plans and General Plan Environmental Impact Reports (EIR). Subconsultant Gallaway shall also attend up to a total of 12 PDT workshops or TAC meetings.

4.2 Develop Interchange Project Description

Based on information presented at the PDT meetings, subconsultant Gallaway, in association with the Consultant, shall develop an Interchange Project description, including:

- Purpose and need
- Description of work
- Phasing
- Interchange Project and roadway extension alternatives
- Anticipated source of funding

4.3 Biological Resources

Subconsultant Gallaway shall conduct a literature search and shall create a list of potentially occurring special-status wildlife and plant species occurring within the Environmental Study Limits prepared by the Consultant and PDT. Subconsultant Gallaway shall access all pertinent databases, including the California Department of Fish and Game's (CDFG) California Natural Diversity Database, National Oceanic Atmospheric Administration (NOAA) Fisheries, and the U.S. Fish and Wildlife Service (USFWS) species list. This task

shall also include initial consultation with the appropriate State and Federal agencies, as well as a review of topographic maps and aerial photos of the Interchange Project site.

Subconsultant Gallaway shall conduct windshield surveys and shall prepare a biological technical report per Caltrans' PEAR guidelines, which shall include a summary of the background literature review and findings of the survey along with a list of contacts made and sources consulted prior to the survey. Subconsultant Gallaway shall identify the type of survey(s) completed and types of surveys required and shall provide a brief description of the setting and sensitive biological resources present, or potentially occurring within the Environmental Study limits. Subconsultant Gallaway shall prepare a technical report which shall include a set of maps that clearly delineate the occurrence or potential thereof of sensitive species as well as the preliminary wetlands assessment map.

The biological technical report shall identify specific studies or focused surveys needed as well as those that must be performed at certain times of the year in accordance with a specified protocol. This scope of services, however, does not include any protocol-level surveys. The biological technical report shall include an explanation of required coordination, such as Section 7, with other agencies and a proposed timeline for completion of that coordination. Subconsultant Gallaway shall note any required permits, agreements, or approvals which will be necessary, such as Regional Water Quality Control Board (RWQCB) Section 401, Clean Water Act Section 404, or CDFG Section 1602.

The biological technical report shall discuss what potential effects the Interchange Project may have on biological resources, their level of significance, and mitigation measures that might be necessary. It shall also identify biological issues that may affect the Interchange Project cost or scheduling, including protocol-level surveys, biological mitigation, preliminary cost estimates and preliminary schedules for mitigation acquisition, design, construction, and monitoring.

4.4 Cultural Resources

Subconsultant Pacific Legacy shall conduct the cultural resources services for the Project. The first task shall be to conduct a records search by completing a literature review at the Northeast Information Center of the California Historical Resources System at California State University, Chico (CSUC) to determine if any previously known or documented prehistoric, historic, or ethnographic resources have been recorded at the Interchange Project site. Subconsultant Pacific Legacy shall also contact local historical societies and in-house library holdings.

As part of the background research and consultation with knowledgeable parties, subconsultant Pacific Legacy shall contact the Native American Heritage Commission (NAHC) and request a search of the Sacred Lands Inventory for the Interchange Project site. Subconsultant Pacific Legacy shall also request a list of Native American individuals and groups for Butte County, including the Mechoopda Indian Tribe of the Chico Rancheria. Each individual on the list shall be contacted via certified mail. If no reply is received within two weeks, subconsultant Pacific Legacy shall conduct follow-up phone calls.

Subconsultant Pacific Legacy shall coordinate with the Mechoopda Indian Tribe for accompaniment on a windshield survey of the Interchange Project site to note potential

cultural resources in order to create recommendations for further studies that will be necessary. No resources shall be formally recorded during the windshield survey.

Subconsultant Pacific Legacy shall prepare a technical report of findings that shall include:

- Setting and sensitivity to resources
- Cultural resources identified during the records search and surveys
- Potential effects and potential mitigation measures
- Contacts/Sources consulted
- Recommendations
- Summary
- Time estimate for delivery of studies

4.5 Air Quality and Noise Issues

The air quality and noise analyses shall be prepared by subconsultant I&R following Caltrans guidelines outlined in "Guidelines for the Preparation of a Preliminary Environmental Analysis Report" dated December 2001. Subconsultant I&R shall complete the following tasks:

1. Review aerial photos and mapping, and review preliminary Interchange Project plans and identify areas of concern.
2. Perform a windshield survey of the Interchange Project site to gain familiarity with existing land uses.
3. Prepare a report that shall include the following:
 - The results of the background research and fieldwork;
 - Describe the Interchange Project setting, and identify potential sensitive receptors;
 - Discuss possible impacts and mitigation that might be needed; and
 - Identify any circumstances that have the potential to affect the viability or schedule of the Interchange Project.

Following Caltrans guidelines as described above, subconsultant I&R shall complete the following tasks for the air quality analysis:

1. Conduct a background document review of the Interchange Project vicinity, and make any necessary contact with the Butte County Air Quality Management District (BCAQMD);
2. Perform a windshield survey of the Interchange Project site;
3. Prepare a written report consisting of:

- The Interchange Project setting including the Air Quality Attainment/Maintenance Plan Status and the Interchange Project Regional Transportation Improvement Program (RTIP) conformity;
- Discuss potential impacts and mitigation that may be needed;
- Indicate any involvement or permits that may be required by other agencies; and
- Make any appropriate recommendations and summarize the report, identifying any circumstances that have the potential to affect the viability of the Interchange Project.

4.6 Prepare PEAR

Subconsultant Gallaway shall prepare a PEAR that identifies the environmental issues associated with the Interchange Project. The PEAR shall discuss the following issues:

- Socio-economic and community effects
- Farmlands
- Section 4(f) issues (if any)
- Scenic/Visual effects
- Geology and soils (based primarily on information developed by subconsultant BCI)
- Water resources, water quality, and floodplains (based primarily on information developed by subconsultant WRECO)
- Traffic (based primarily on information developed by subconsultant FPA)
- Air quality and noise (based primarily on information developed by subconsultant I&R)
- Cultural resources and Native American coordination (based on information from subconsultant Pacific Legacy)
- Biological resources and wetlands
- Hazardous waste/materials (based primarily on information developed by subconsultant BCI)
- Energy

The Administrative Draft PEAR shall be submitted to the PDT for review and comment. Once comments have been received and changes have been incorporated, the Consultant shall prepare a Final PEAR.

Task 4 Deliverables

Draft PEAR	Ten copies
Final PEAR	Ten copies

5. PUBLIC OUTREACH

Due to the location of the Interchange Project on a Caltrans facility, the extensive roadway extensions required for connection to major facilities and the need for right-of-way acquisition, a successful public involvement program will be integral to the overall success of the Interchange

Project. Caltrans prefers to hold a minimum of one workshop during this phase to gain public support. The Consultant, however, shall provide a more comprehensive outreach plan to notify the public and involve them in the decision-making process, as shown below.

5.1 Public Workshops (three total)

The Consultant shall design the first workshop as a combined presentation/open house, and it shall take place very early in the process in order to flush out any potential concerns that can be addressed in the engineering and environmental processes. The meeting shall provide aerial photos of the Interchange Project site with optional alignments provided to spur discussions. The focus of the meeting shall be to identify possible alignments for further study and to discount alignments with fatal flaws. The meeting shall be publicized through the City's Web site, the newspaper, and with an Interchange Project information flyer mailed to affected properties.

The second workshop shall discuss the proposed alternative alignment designs, with input from the workshop to be used to refine the designs for the ultimate selection of a preferred alternative. The workshop shall be held after completion of the environmental analysis, and an environmental constraints map shall be available at the workshop as an overlay over the alternative alignments. Preliminary cost estimates shall also be available as a tool for analyzing alternatives. Tools for gauging public preference for the alternatives shall be used, such as a voting system, a ranking of alternatives, or other means. The second workshop shall also be publicized through the City's Web site, the newspaper, and with an Interchange Project information flyer mailed to affected properties.

The third workshop shall discuss the results of the second workshop and shall have further refined alternatives for final review and discussion. The goal of this meeting shall be to carry the preferred alternative forward for discussion in the PSR and PEAR.

5.2 Technical Advisory Committee

As part of the public outreach task, the Consultant shall form a Technical Advisory Committee (TAC), involving the City, BCAG, the County, Caltrans, and other interested parties, to review the proposed design alternatives prior to presentation at the workshops. The TAC shall meet and discuss the Interchange Project issues prior to the workshops so that there is agreement on the alternatives before taking the alternatives forward to the public. This scope of services assumes a total of four TAC meetings.

5.3 One-on-One Meetings

As the Interchange Project will require right-of-way acquisition, the Consultant shall include up to four individual meetings with affected property owners in the public outreach scope of services. These meetings shall allow for the Consultant, the City, and BCAG to meet and address individual comments and concerns with the property owners.

Task 5 Deliverables

Workshop/presentation agenda, meeting flyer, minutes, and presentation materials	Three
TAC meeting - presentation agenda, meeting minutes, and presentation materials	Four
One-on-one meeting minutes and handouts	Four

C. PROJECT SCHEDULE

The Consultant shall complete all services outlined herein in accordance with the following schedule:

Task 1: Project Administration and Management	Within 16 months of Notice to Proceed
Task 2: Aerial Photography and Traffic Modeling	Within two months of Notice to Proceed
Task 3: Project Study Report/Technical Studies	Within 14 months of Notice to Proceed
Task 4: Environmental Analysis	Within nine months of Notice to Proceed
Task 5: Public Outreach	Within 11 months of Notice to Proceed

The Consultant shall not be held liable for delays beyond the Consultant's control.

The Consultant shall not be held liable for losses or claims resulting from the unauthorized modification of documents or reuse of documents other than for the original purpose.

Amendment No. 1 Services

TASK 1. PROJECT MANAGEMENT

Task 1.1 Project Management

Consultant shall provide overall project management of the project and subconsultants in the performance of their work. Management tasks, such as normal communication with the internal Consultant team and subconsultants shall be included in this task.

Task 1.2 Meetings

Consultant shall attend up to two (2) meetings in support of this work. These meetings are assumed to be held in Chico or Marysville.

Task 1 Deliverables

- *Meeting attendance and Materials as needed*
- *Monthly Status Reports, Schedule Updates, and Invoices*

TASK 2. PRELIMINARY TRAFFIC ANALYSIS

The following scope of work covers the initial tasks for the Transportation Analysis Report (TAR) for the interchange PA-ED. Full Analysis of the interchange operations and the preparation of the TAR shall be deferred and covered under a separate contract. This scope included the following major tasks:

- **Data Collection**
- **Existing Conditions Analysis**
- **Travel Demand Forecast Development**
- **Meetings and Coordination**

Table 1 summarizes the study intersection and analysis scenarios that will be conducted for the TAR:

Table 1

	Software			Analysis Scenario			
	Synchro	Sim Traffic	HCS	Existing	Construction Year	Interim Year	Design Year
Midway / E Park Ave	X			X	X	X	X
Skyway / SR 99 Southbound Ramps	X			X	X	X	X
Skyway / SR 99 Northbound Ramps	X			X	X	X	X
Skyway / Notre Dame Blvd	X			X	X	X	X
Hegan Ln / Midway	X			X	X	X	X
Speedway Ave / Midway	X			X	X	X	X
Entler Ave / Midway	X			X	X	X	X
SR 99 / Southgate Ave		X		X	X	X	
SR 99 / Southgate Ave NB Ramps		X					
SR 99 / Southgate Ave SB Ramps		X					X
Southgate Ave / Entler Ave		X		X			X
Southgate Ave / Southgate Ln		X		X			
Southgate Ave / Notre Dame Blvd		X			X	X	X
Southgate Ave / Loren Ave		X			X	X	X
Southgate Ave / Midway	X				X	X	X
Southgate Ave / Skyway	X						X
SR 99/Southgate Ave Interchange Freeway Operations			X				X

Task 2.1 Data Collection and Field Review

Fehr & Peers shall collect weekday morning (7-9 AM) and evening (4-6 PM) peak period counts at the 10 intersections that are identified in Table 1 under the existing analysis scenario. Consultant shall conduct weekly field reviews to observe traffic operations during AM and PM peak period

conditions. Consultant shall request signal timing plans, collision records (most recent 3-year period available), and related information from the city and Caltrans.

The intersection counts shall include pedestrian, bicycle, and truck traffic at the intersections. Concurrently, observations of queues at the study intersections would be conducted. The counts and observations shall be conducted on a midweek day with good weather when schools and CSU Chico classes are in session.

Consultant shall also collect available traffic count data for conditions prior to the Camp Fire. Consultant shall use this information to inform changes in study area travel and potential adjustments to our traffic volume forecasts.

Task 2.2 Existing Conditions

As shown in Table 1, the intersections near SR 99 shall be modeled using the Sim Traffic traffic analysis software while the other study intersection further from the SR 99/Southgate Avenue intersection will be modeled using Synchro. SR 99 operations, under design year conditions shall be analyzed using deterministic Highway Capacity Manual methods.

The Synchro/Sim Traffic analysis shall include conflicting pedestrian volume at intersections to account for vehicle-pedestrian interactions. The AM and PM peak hours shall be modeled in 15-minute intervals using the peak hour factor (PHF) and anti-PHF adjustments to hourly flow rates. Consultant shall report intersection delay, intersection level of service, and vehicle queue lengths for critical turn movements at study intersections.

Consultant shall document the collision history at the SR 99/Southgate Avenue intersection and shall be presented and compared to statewide collision rates for similar facilities. The collision types shall be summarized to identify patterns that could be addressed by the proposed project design.

Consultant shall document the data collection, collision summary, existing conditions analysis, and analysis methods in a technical memorandum. A draft memorandum shall be submitted 4 weeks after traffic counts are collected. Consultant shall respond to comments on the draft and submit a final version two weeks after receiving comments.

Consultant has budgeted for attendance at one meeting for Task 2.2.

Task 2.3 Travel Demand Forecasts

Fehr & Peers shall use the BCAG travel demand forecasting model to prepare construction year, interim year (10 years after construction), and design year (20 years after construction) forecasts for the study locations identified in Table 1. Forecasts shall be developed based on the following project configurations:

- **No Build Conditions:**
 - Maintain current SR 99/Southgate Avenue at-grade signalized intersection configuration

- Maintain local access connections with Entler Avenue and Southgate Lane
- **Interim Configuration:**
 - Maintain SR 99/Southgate Avenue at-grade intersection
 - Construct Southgate Extension to Midway to realign local access connection west of SR 99
 - Construct Notre Dame Extension to realign local access connection east of SR 99
- **Ultimate Configuration:**
 - The Interim Configuration, plus:
 - Construct a grade-separated interchange at SR 99/Southgate Avenue
 - Construct extension of Southgate Avenue to Skyway
 - Construct extension of Speedway to Entler Avenue

The base year model shall be validated to the existing traffic counts. In the future year model, the land use growth near the study area shall be verified based on the latest proposed plans.

Construction Year No Build and Construction Year Plus Interim Configuration forecasts shall be prepared using linear interpolation between the base and future year model. This will require development of the future year model coded with the Interim Configuration.

Interim Year No Build and Interim Year Plus Interim Configuration forecasts shall also be prepared following the same methodology as under Construction Year.

Design Year No Build and Design Year Plus Ultimate Configuration forecasts shall be prepared using the future year model. Forecasts shall be developed using the difference method, in which the difference between the future year model and base year model volumes shall be added to the existing counts to develop the future year traffic volume forecasts.

Consultant shall estimate vehicle miles of travel (VMT) for each set of forecasts based on the state of practice methods.

Fehr & Peers shall document the traffic volume forecasts in a technical memorandum. Consultant shall submit a draft memorandum 8 weeks after traffic counts are collected. Consultant shall respond to comments on the draft and submit a final version two weeks after receiving comments.

Consultant has budgeted for attendance at one meeting for Task 2.3.

Task 2.4 Preliminary Operations Analysis for Interim At-Grade Signal

The analysis models for existing conditions shall be updated to the interim year by adding the proposed interim at-grade traffic signal configuration. Consultant shall analyze the AM and Pm peak hour traffic operations for the Interim Configuration to confirm that the configuration is adequate to accommodate at least 10 years of growth.

Task 2 Deliverables

- *Existing Conditions Technical Memorandum (PDF)*
- *Traffic Volume Forecast Technical Memorandum (PDF)*

TASK 3. REVIEW INTERIM AT-GRADE SIGNAL GEOMETRY

Task 3.1 Review At-Grade Signal Geometry

Consultant shall review the information provided in Task 2.4 to ensure the intersection will accommodate at least 10 years of growth. Minor modifications to the previously prepared GAD's shall be made to understand any resulting impacts (environmental, structural, or fiscal).

Task 3.2 Revised Cost Estimate

Consultant shall prepare revised cost estimates for the interim at-grade signal to support the City in budgeting for the phased improvement. The estimate shall be an update of the previously prepared Caltrans 6-page estimate.

Task 3 Deliverables

- ***Revised GAD for the Phase 1 Project (Interim At-Grade Signal) (PDF)***
- ***Revised cost estimates for the Phase 1 Project (MS Excel and PDF)***

CITY OF CHICO - PROFESSIONAL SERVICES AGREEMENT

MARK THOMAS & COMPANY, INC.
Architect/Consultant/Engineer

SR 99 & SOUTHGATE INTERCHANGE -
ENGINEERING AND ENVIRONMENTAL SERVICES
Project Title

308-000-8801/50073-308-4110
Budget Account No.

EXHIBIT "C"

COMPENSATION

Compensation for the proposed services shall be in accordance with the following schedule of hourly rates. Total maximum compensation for the services outlined herein shall not exceed \$570,253.00 \$643,109.00.

Compensation shall be based upon actual invoices received and shall be paid in accordance with the completion of each task as follows:

Task 1: Project Administration and Management	\$ 55,800.00
Task 2: Aerial Photography and Traffic Modeling	\$ 24,460.00
Task 3: Project Study Report/Technical Studies	\$334,064.00
Task 4: Environmental Analysis	\$ 57,395.00
Task 5: Public Outreach	\$ 57,441.00
Reimbursable Expenses	<u>\$ 41,093.00</u>
Subtotal:	\$570,253.00

Amendment No. 1

Task 1: Project Management & Meetings	\$ 9,888.00
Task 2: Preliminary Traffic Analysis	\$ 46,954.00
Task 3 Review Interim At-Grade Signal Geometry	\$ 9,224.00
Other Direct Costs	<u>\$ 6,790.00</u>
Subtotal:	\$72,856.00

Total: \$643,109.00

Mark Thomas & Company, Inc.
Hourly Rate Schedule

Principal/Project Manager	\$215.00/Hour
Survey Crew	\$200.00/Hour
Engineer Manager I	\$172.00/Hour
Engineer IX.....	\$153.00/Hour
Land Surveyor II.....	\$142.00/Hour
Public Outreach	\$124.00/Hour
Engineer III.....	\$ 98.00/Hour
Engineering Technician II	\$ 84.00/Hour
Clerical II.....	\$ 56.00/Hour

COST PROPOSAL FOR PROJECT SCOPE: Chico-Southgate Interchange PSR (AM #1)



Mark Thomas										Subs		TOTAL COST
	Engineering Manager	Sr. Project Manager	Project Engineer	Design Engineer I	Project Accountant	Sr. Project Coordinator	Sr. Project Assistant	Total Hours	Total MT Cost	Fehr & Peers	TOTAL COST	
1.0 PROJECT MANAGEMENT												
1.1 Project Management		8			4	10	2	24	\$3,744	-	\$3,744	
1.2 Meetings		16	16					32	\$6,144	-	\$6,144	
Subtotal Phase 1	0	24	16	0	4	10	2	56	\$9,888	\$0	\$9,888	
2.0 PRELIMINARY TRAFFIC ANALYSIS												
2.1 Data Collection & Field Review			2					2	\$292	7,260	\$7,552	
2.2 Existing Conditions			2					2	\$292	10,820	\$11,112	
2.3 Travel Demand Forecasts			2					2	\$292	25,800	\$26,092	
Preliminary Operations Analysis for Interim At-Grade Signal		2	2					4	\$768	1,430	\$2,198	
Subtotal Phase 2	0	2	8	0	0	0	0	10	\$1,644	\$45,310	\$46,954	
3.0 REVIEW INTERIM AT-GRADE SIGNAL GEOMETRY												
3.1 Review At-Grade Signal Geometry	4		8	40				52	\$6,424		\$6,424	
3.2 Revised Cost Estimate	2		4	16				22	\$2,800	-	\$2,800	
Subtotal Phase 3	6	0	12	56	0	0	0	74	\$9,224	\$0	\$9,224	
TOTAL HOURS	6	26	36	56	4	10	2	140				
OTHER DIRECT COSTS												
TOTAL COST	\$1,704	\$6,188	\$5,256	\$5,768	\$412	\$1,240	\$188		\$300	\$6,490	\$6,790	
										\$21,056	\$72,856	