TO: James L. App, City Manager

FROM: Doug Monn, Public Works Director

SUBJECT: Award Contract to Prepare a Project Report for Union Road/Highway 46 East

DATE: May 17, 2011

NEEDS: For City Council to consider appropriating funds and engaging the services of a consultant to prepare a project study report for the intersection of Highway 46 East and Union Road.

FACTS:

1. State 46 East is a major goods facility that connects the California Central Valley to the Central Coast and supports a variety of travel types including regional, inter-regional, commercial and recreational.

2. In 2007 the City, San Luis Obispo Council of Governments (SLOCOG), San Luis Obispo County, and Caltrans initiated and completed a Comprehensive Corridor Study (CCS) for a five mile section of Highway 46 East from about Buena Vista to Jardine Road.

3. The study was the culmination of an 18 month planning process that included significant negotiations and collaborative decisions among Caltrans, the City, SLOCOG, and SLO County, as well as an extensive public involvement process.

4. The study identified several improvement concepts for the portion of Highway 46 within the City limits that would enhance local connectivity, reduce congestion, and improve traffic movement and safety.

5. A major improvement identified in the study was to address the intersection of Union Road and Highway 46, requiring construction of substantial road and/or interchange facilities. The study further recommended that right-of-way be preserved for future infrastructure improvements.

6. In order to preserve right-of-way, the City, Caltrans, and SLOCOG are teaming up to assist in preparing the Project Study Report. The City, however, will be taking the lead.

7. Caltrans has notified the City that, because of the State's Budget, the City will need to reimburse them financially for their time spent in participating in the development of the Project Study Report. City and Caltrans will need to enter a reimbursement Agreement. Actual fees will be determined after July 1, 2011. City staff is estimating their fee to be $90,000.

ANALYSIS & CONCLUSION: In October 2009, the City drafted a Request for Proposals (RFP) for the Project Study Report. The City's draft was reviewed by Caltrans and SLOCOG, and in November 2010 the City issued the RFP to 15 firms.

On December 17, 2010, four firms responded. Caltrans, SLOCOG and City staff reviewed the four proposals and two firms were invited for an interview.

The selection committee, consisting of Caltrans, SLOCOG, and City staff, determined that Hatch-Mott-MacDonald provided the best qualified proposal to perform the work. The City and Caltrans staff negotiated the final scope of work and fee for the study in the amount of $293,682.

POLICY REFERENCE: Circulation Element

FISCAL IMPACT: The funding needs for this project is estimated to be as follows:

Consultant Fee	$293,682
Caltrans Fee	90,000
	$383,682
Contingency	16,318
	$400,000

As part of the Conditions of Approval for the Lowe's Shopping Center, the developer contributed $250,000 funding for the Project Study Report. In addition, the SLOCOG Board authorized an additional $150,000 Regional State Grant for the study. The total amount available for the study is therefore $400,000.

OPTIONS:

a. Adopt Resolution No. 11-xx appropriating $400,000 to Budget No. 120.910.5452.696 and a revenue of $150,000 to Budget No. 120.000.4617.000 for the Regional State Grant, and awarding a contract to Hatch-Mott-MacDonald in the amount of $293,682 to prepare a Project Study Report per the attached Scope of Work and Fee Proposal.

b. Amend, modify, or reject the above option.

Prepared by: Ditas Esperanza, P.E., Capital Projects Engineer

Attachments:
1) Resolution
2) Scope of Work & Fee Proposal

RESOLUTION NO. 11-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES APPROPRIATING FUNDS AND ENGAGING SERVICES FOR A PROJECT STUDY REPORT FOR IMPROVEMENTS AT HIGHWAY 46 EAST AND UNION ROAD

WHEREAS, State 46 East is a major goods facility that connects the California Central Valley to the Central Coast and supports a variety of travel types; and

WHEREAS, in 2007 the City of Paso Robles (City), San Luis Obispo Council of Governments (SLOCOG), San Luis Obispo County, and Caltrans completed a Comprehensive Corridor Study (CCS) for a five mile section of Highway 46 East from approximately Buena Vista to Jardine Road; and

WHEREAS, the study was the culmination of an 18 month planning process that included significant negotiations and collaborative decisions among Caltrans, the City, SLOCOG, and SLO County, as well as an extensive public involvement process; and

WHEREAS, the study identified several improvement concepts for the portion of Highway 46 within the City limits that would enhance local connectivity, reduce congestion, and improve traffic movement and safety; and

WHEREAS, a major improvement identified in the study was to address the intersection of Union Road and Highway 46, requiring construction of substantial road and/or interchange facilities; and

WHEREAS, the study further recommended that right-of-way be preserved for future infrastructure improvements; and

WHEREAS, in order to preserve right-of-way, the City, Caltrans, and SLOCOG are teaming up to prepare the Project Study Report, with the City taking the lead; and

WHEREAS, in October 2009, the City drafted a Request for Proposals (RFP) for the Project Study Report, the draft was reviewed by Caltrans and SLOCOG, and in November 2010 the City issued the RFP to 15 firms; and

WHEREAS, Caltrans, SLOCOG and City staff reviewed the four proposals received on December 17, 2010, and two firms were invited to interview; and

WHEREAS, the selection committee, consisting of Caltrans, SLOCOG, and City staff, determined that Hatch-Mott-MacDonald provided the best qualified proposal to perform the work; and

WHEREAS, the City and Caltrans staff negotiated the final scope of work and fee for the study in the amount of $293,682; and

WHEREAS, as part of the Conditions of Approval for the Lowe's Shopping Center, the developer contributed $250,000 funding for the Project Study Report; and

WHEREAS, the SLOCOG Board authorized an additional $150,000 Regional State Grant for the study; and

WHEREAS, the total amount available for the study is $400,000.

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

SECTION 1. The City Council of the City of El Paso de Robles does hereby appropriate $400,000 to Budget No. 120.910.5452.696.

SECTION 2. The City Council of the City of El Paso de Robles does hereby appropriate a revenue budget of $150,000 to 120.000.4617.000 for the Regional State Grant.

SECTION 3. The City Council does hereby award a contract to Hatch-Mott-MacDonald in the amount of $293,682 to prepare a Project Study Report per the attached Scope of Work and Fee Proposal.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 17th day of May 2011 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Duane Picanco, Mayor

ATTEST:

Caryn Jackson, Deputy City Clerk

8. Work Program

Project Management

This task encompasses general project management, administrative and reporting activities, and meetings with the city and other stakeholders that continue throughout the project. HMM's Project Manager will perform the management activities that include coordination with the City, Caltrans, in-house staff and sub-consultants, attending Project Development Team (PDT) meetings, and developing Work Breakdown Structure (WBS) and tracking the schedule and budget constantly. Following are specific tasks:

1.0 Perform Project Management

Our principal goal for this project will be to complete all phases of the project within the agreed upon budget and schedule. We have consistently proven our ability to adhere to contract agreements in past transportation projects. A majority of HMM's clients are repeat clients, and this is partly because of our success in meeting budget and schedule commitments. HMM utilizes an online intra-net to track project expenditures. This program is always current and available to all HMM employees via our internal network and provides detailed project information, from execution of a contract to completion of the project.

1.1 Project Initiation and Planning

Following are specific tasks:

Prepare Final Scope, Cost and Budget

Initiation of the PSR/PDS study involves developing a scope and schedule that is acceptable to the HMM Project Director, Caltrans and City of Paso Robles. Work includes discussions with City of Paso Robles, Caltrans and subconsultants to arrive at a cost, scope and schedule and assumptions to deliver the PSR/PDS.

Prepare Project Management Plan

As a first order of work, HMM will prepare a project specific Project Management Plan, that will include a refined schedule, resource allocations, key milestones, monthly meeting plans, agendas and a meeting minutes template and a deliverables review process.

Prepare Quality Assurance Plan

- Supervise staff and sub-consultants and perform Quality Control of all deliverables
- Prepare all necessary project correspondence memos and letters
- Maintain project files

Project Meetings

HMM Project Manager will participate in the following meetings

1. Project kick-off meeting: HMM Project Manager will schedule a kick-off meeting that will be attended by the HMM project team and representatives from the City of San Luis Obispo, Caltrans, San Luis Obispo COG, the County and other stakeholders. The HMM Project Manager will prepare a meeting agenda and minutes and distribute them to the team members. All minutes will be released after an initial review and approval by the City representative. The agenda at the kick-off meeting will include the discussion of key project issues, project coordination/contacts, project scope and

limits, data requests, stakeholder involvement, schedule, future PDT meetings and technical issues.

2. Project Development Team meetings: HMM Project Manager will schedule these meetings and invite the City representatives, Caltrans representatives from their functional units as necessary and other agency staff on an as needed basis. HMM project manager will diligently work to assure that these meetings are run according to the City's expectations and meets Caltrans guidelines. HMM Project Manager will prepare meeting agenda and minutes and distribute them to the team members. All minutes will be released after an initial review and approval by the City representative.
3. Technical Issues Resolution Meetings: HMM project Manager will schedule meetings with Caltrans functional units such as traffic forecasting/operations, Geometricians etc. to resolve technical issues as necessary.
4. Internal Coordination Meetings: HMM project Manager will conduct a weekly coordination meeting with the internal staff and sub-consultant staff to assure that the project remains on schedule and budget and to provide specific directions to the team members.
5. Meetings with the City Representatives: HMM Project Manager will attend meetings with City representatives on an as needed basis to report progress and to receive directions on any technical issues or procedures.

HMM will facilitate the preparation of any cooperative agreements required for the project.

Task 1.0 Deliverables

1. *Approved Scope, Budget and Schedule*
2. *Project Management Plan*
3. *Meeting Agenda and Minutes*
4. *Progress Reports*

Develop PSR/PDS

The HMM project team will develop a Project Study Report / Project Development Support (PSR/PDS) document in accordance with Caltrans' PDPM. In conformance with the work plan estimate provided in the RFP, preparation of the PSR/PDS will involve the following work tasks:

- Transportation Problem Definition and Site Assessment
- Initial Alternatives Development
- Alternatives Analysis
- Preliminary Environmental Analysis Report
- Approved PSR/PDS

The specifics of each of these tasks as well as the deliverables that will be produced for each task are summarized in the sections that follow.

2.0 Transportation Problem Definition and Site Assessment

The HMM team will perform an initial site assessment and analyses to establish and define existing deficiencies and key design constraints. This task involves the following:

1. Compile and review existing background information that describes existing deficiencies and may impact the alternatives;
2. Develop project constraints and information required to determine the extent of the existing problem and future needs.
3. Analyze the existing problem and future requirements to establish the project's need and purpose.

On the basis of a review of existing available data as well as preliminary field studies, the HMM team will identify opportunities and constraints. Key design constraints will be identified on aerial photographs. These constraints include:

1. Property lines
2. Land development – existing and planned residences, businesses, agriculture
3. Waterways/habitats/river beds
4. Local roads – existing and planned
5. Major utilities
6. Environmental constraints

In addition, existing traffic conditions will be documented and preliminary traffic forecasts and operations analyses will be performed. The results of this task will be support and refine the purpose and need for the project and to develop and refine the alternatives for further evaluation. Specific tasks included in this task are presented below.

2.1 Review of Existing Reports, Studies and Mapping

The HMM team will obtain and review available data and studies related to the project and the study area from the City of Paso Robles, Caltrans, County and others as appropriate. This information will include planning documents, plans, as-builts, base mapping, aerial photographs, topographic surveys and right-of-way maps. Initial field reviews will also be conducted during this task to verify existing documented conditions.

2.2 Utility Search

Utility companies will be contacted to obtain their utility atlases for the area. We do not anticipate that USA markings or a field survey of the markings will be required at this stage of the project.

2.3 Environmental Constraints Identification

The purpose of this task is to identify and delineate any environmental resources or issues that might affect initial alternatives selection. Existing studies will be reviewed and a field review of the project area will be conducted. Existing environmental related opportunities and constraints will be identified.

2.4 Traffic Forecasts / Modeling

Travel demand forecasts will be prepared using the City of Paso Robles traffic forecasting model. In addition, pavement Traffic Indexes will be developed based on the forecasts for pavement design. Traffic forecasts will be initially developed for the no-build condition to provide a framework for analyzing conditions with no-change to the road network. The analysis of no-build conditions will be used to support the Purpose and Need Statement. Subsequent to the identification of the alternatives to be studied, additional modeling will be conducted to establish traffic forecasts for each of the design alternatives. The traffic forecasting approach and tasks are described in detail in **Appendix F.**

W-Trans will analyze the feasibility of installing an at-grade roundabout at Route 46/Union Road under the volumes projected for the near-term, mid-term, and long-term time horizons. W-Trans will utilize traffic volume forecasts to determine broad roundabout geometric needs using the SIDRA roundabout analysis software, and coordinate with Hatch Mott MacDonald to determine if and how a roundabout could fit within the given constraints (including right of way) and also if the installation would meet Caltrans requirements for State highway facilities. W-Trans will also analyze the potential for a roundabout to be included on Union Road as part of a future interchange alternative under the long-term time horizon.

If it is determined that a roundabout could function acceptably at Route 46/Union Road for a sufficient length of time, either as an interim or permanent solution, W-Trans will prepare a conceptual roundabout layout that would depict the outer footprint including curb locations and pedestrian facilities. The concept would reflect state-of-the-practice techniques and design criteria for modern roundabouts as established in the recent publication Roundabouts: An Informational Guide, Second Edition, Transportation Research Board, 2010, as well as roundabout design guidance provided in Caltrans Design Bulletin 80-01. Note that the layout would include the basic elements needed by Caltrans to assess the viability of a roundabout; this level of detail may be less than that produced by W-Trans for roundabout concepts for other projects in the City of Paso Robles. W-Trans will coordinate with the Hatch Mott MacDonald design team to incorporate the roundabout into the surrounding roadway system.

If a grade-separated interchange is included as one of the report's alternatives, W-Trans will produce a conceptual roundabout layout for the future Route 46 East Ramps/Union Road intersection. The layout for this roundabout would be prepared in the same manner as described above for the Route 46/Union Road intersection.

If one or more roundabout alternatives are found to be viable, W-Trans will prepare a "letter of viability and recommendation for further study" to be approved by the Caltrans Headquarters Design Coordinator and included with the PSR/PDS. W-Trans will also prepare a Roundabout Fact Sheet including all details required by Caltrans.

2.5 Problem Definition

The Project Charter contains a Purpose and Need statement for the project. The Purpose and Need statement will be reviewed and enhanced based on upon the results of the work conducted in this task. Changes to the Purpose and Need statement will be closely coordinated with City of Paso Robles, Caltrans and other stakeholders. The Purpose and Need statement with revisions, if necessary, will be distributed to the City of Paso Robles for review and subsequently to Caltrans. The Purpose and Need may change or be refined over the course of the study and a final Purpose and Need statement will be included in the PSR / PDS.

2.6 As-Built Centerline and Existing Right-of-Way

Existing as-built centerline, road design, and right-of-way information will be obtained from Caltrans and the City. The information will be reviewed and evaluated. A base plan will be prepared that contains the preliminary centerline and right of way line locations based on record data.

2.7 Other Definition and Assessment Products

The review of existing available reports, studies and mapping as well as the initial field reviews will be used to document existing property lines, existing and planned land development, waterways, habitats, river beds, existing roads and highways, local roads, trails, utilities and environmental constraints. This

information will be identified on aerial photos. This information will be used in Task 3.0 to develop and refine the initial alternatives for analysis.

Task Deliverables

1. *Traffic Forecasting Model Report and Traffic Forecasts*
2. *Traffic Indexes*
3. *Purpose and Need Statement*
4. *Preliminary environmental assessment*
5. *CADD drawing file containing preliminary centerline and right of way line locations*
6. *Preliminary Constraints Analysis that includes aerial photos showing roadway centerlines and right of way property lines, existing and planned development, waterways/habitats/river beds, major utilities.*

3.0 Initial Alternatives Development

On the basis of the opportunities and constraints analysis performed in Task 2.0, initial project alternatives will be developed in this task. Based on PDT input, a final set of design alternatives will be selected for further evaluation. The tasks below will be performed to identify and develop the initial alternatives as well as final alternatives that will be analyzed in detail.

3.1 Public / Local Agency Input

Policy-Maker Updates and Hearing Presentations

Periodic updates to City representatives including members of the Paso Robles Planning Commission and the City Council are essential to maintain community support for the project. The Hatch Mott MacDonald team will prepare for and present up to two (2) project updates, as needed, at pre-determined project milestone dates.

Agency Meetings and Coordination

Prepare for and attend up to six (6) staff level meetings with the City and various agencies during alternative analysis and preparation of the Intersection Alignment Study. This task will include a the initial kick-off meeting to review and finalize project goals, discuss emerging issues and establish a strong foundation for inclusive and collaborative problem solving and informative inter-agency communication.

3.3 Concept Alternatives Development

This task is the initial phase of alternatives development and will establish the basic project road network and intersection improvement layouts and design features. This work will build upon the Paso Robles General Plan road network as well as the findings of the CCS and Parallel Routes studies and input from the PDT. The road network and intersection improvements will be developed on available mapping and aerial photos and will be utilized to establish the project study limits for environmental and engineering studies. Information gained from field investigations, project research, and input from the PDT and previously prepared studies will be used to develop the concept alternatives. When developing the alternatives, the HMM will work to minimize impacts to private property and minimize right of way takings. Preliminary costs, impacts and advantages/dis-advantage of each alternative will be prepared. The concept alternatives will be documented in a technical memorandum that will be forwarded to the City for review. Schematics and graphic illustrations of the plans showing their relationship to property boundaries and existing development will be prepared. A final technical memorandum that incorporates comments

from City staff will be forwarded to Caltrans and other stakeholders. The concept alternatives will be presented to the public in a community meeting (Task 3.1).

3.4 Other Initial Alternative Development Products

Task Deliverables

1. *Preliminary Concept Alternatives with preliminary costs, impacts and advantages/dis-advantages of each alternative.*
2. *Final Concept Alternatives for analysis in Task 4.0*

4.0 Alternatives Analysis

The Alternatives Analysis will develop the scope and cost of each alternative to be presented in the PSR / PDS. The analysis will be of sufficient detail to identify all potential costs. The adequacy of the alternatives to meet the project's need and purpose will be evaluated in this task. In conjunction with the Preliminary Environmental Analysis, this task will establish project scope, cost, and feasibility. The alternatives to be analyzed will be established in Task 3.0.

4.1 Right of Way Data Sheets

Cannon will assess right of way requirements. Hamner & Jewell will prepare right of way data sheets and right of way cost estimates. Right of way Cost Estimate Maps will be prepared. The project budget is based upon acquisition of right of way from a maximum of four parcels.

4.2 Utility Relocation Requirements Assessment

All utility relocation requirements for the six different alternatives will be evaluated. This will include utility needs, inspecting facilities and preparation of utility estimate for inclusion in the Right of Way Data Sheets.

4.3 District Preliminary Geotechnical Report (DPGR)

Earth Systems will prepare a District Preliminary Geotechnical Report (DPGR) for the study. The following tasks will be performed:

- Obtain available as-built drawings and reports from Caltrans with a Request for Public Records.
- Site reconnaissance by a Certified Engineering Geologist and Registered Civil Engineer to assess the proposed alternatives from a geotechnical and geologic standpoint.
- Review published reports, maps, and drawings, pertinent to the project area, as they relate to the proposed alternatives.

Potential geotechnical and geologic hazards and impacts such as landslides, slope instability, erosion, settlement, subsidence, expansive soils, naturally-occurring asbestos, and naturally-occurring radon will be evaluated and discussed. Potential seismic impacts, including nearby faults and the potential for seismic-related hazards such as fault rupture, ground shaking, liquefaction, lateral spreading, seismically-induced landslides, seismically-induced settlement, tsunami, and seiches will be discussed. Where potentially significant impacts are identified, potential mitigation measures will be presented and recommendations for further study will be provided.

A written report will be prepared that will be utilized by the HMM team in the preparation of the PSR/PDS.

4.4 Preliminary Materials Report

Earth Systems will provide guidance with respect to materials information based on existing reports and data. No new testing or borings are proposed for this task.

4.5 Structures Advance Planning Study

A structural Advanced Planning Study (APS) will not be required for the PID. Instead a structural PID cost estimate which would consist of a memo stating all assumptions and a rough cost range for each alternative. An APS will be required during the PA/ED phase.

4.6 Hydraulic Review

Existing drainage facilities will be reviewed and inspected to determine the need to upgrade or replace the existing drainage system. Anticipated drainage structures for the design alternatives will be determined.

4.7 Traffic Capacity Analysis

All traffic impact analyses will be performed utilizing the 2000 Highway Capacity Manual methodologies. The Synchro (version 7) traffic analysis software will be utilized to perform nearly all intersection analysis. The Traffix (version 8) traffic analysis software may also be utilized where necessary, specifically at unsignalized intersections.

Note: As of this writing, the 2010 Highway Capacity Manual (HCM) has not yet been released by the Transportation Research Board. Therefore, this analysis assumes use of the 2000 HCM methodologies for intersection and roadway segment analysis. It will not be possible to switch from the 2000 to the 2010 HCM methodologies during the life of the project without an expansion of the proposed schedule for the project.

Weaving analysis (utilizing the Leisch method) will also be performed for all the analyses involving the interchange alternative. This weaving analysis would be performed in each direction of SR 46 between the next adjacent intersections, i.e. between Golden Hill Drive and Union Road, and between Union Road and Airport Road. This analysis may become unnecessary if the interchange design includes or requires closure or grade separation of the adjacent intersections. Again, a detailed discussion of the modeling effort to be employed on this study is included in **Appendix F**.

Alternative Scenario Models

The same process as described in the preceding section will be used to develop future models of proposed alternatives. Networks will be modified to reflect geometric changes. Any land use changes will be reflected in the OD matrices and a new assignment performed. Signal timings will be optimized in Synchro. HCM analyses will be performed to screen alternatives prior to exporting the more promising scenarios to VISSIM for further multi-modal analyses.

W-Trans will prepare all calculations and background data needed to evaluate roundabouts as part of the traffic capacity analysis and traffic study. This information will be provided to the Hatch Mott MacDonald team.

4.8 Traffic Studies

The traffic capacity analysis will assess the operations of both the SR 46 E corridor, as well as affected city streets. The following intersections would be included within this analysis:

1) Golden Hill Road/SR 46;
2) Union Road-Paso Robles Boulevard/SR 46;

3) Airport Road/SR 46;
4) Golden Hill Road/Union Road;
5) Union Road/Union Road Connector;
6) Golden Hill Road/Dallons Drive-Tractor Street;
7) Golden Hill Road/Wisteria Lane; and
8) Airport Road/Dry Creek Road

In addition, as many as six additional future intersections will be incorporated into the analysis. These would include new intersections created by proposed interchanges and construction of the city roadway network.

The analysis of each design alternative will be performed under the following five scenarios:

1) Existing conditions;
2) Existing Plus Project at opening day;
3) Near-Term future conditions;
4) Short-Term future conditions; and
5) Long-Term future conditions.

The specific years associated with each of the above scenarios will be finalized during the Kick-Off Meeting for the project.

Peak hour analysis under each scenario will be performed for the following timeframes:

1) Weekday AM;
2) Weekday PM;
3) Friday PM; and
4) Weekend peak hour.

Existing weekday traffic volumes will be taken from recent traffic analyses within the study area, including analyses for the SR 46 East Comprehensive Corridor Study, SR 46 Parallel Routes Study, Paso Robles Property Master Reuse Plan EIR, and Regency Center (now Golden Hill Plaza) retail development. These counts will be supplemented by new traffic counts at the Union-Paso Robles/SR 46 and Union/Union intersections. Adjustments to these counts will be made as necessary, to reflect 2010-2011 conditions. Future year forecasts will be taken from these reports and supplemented with new forecasts derived via the aforementioned traffic demand model, growth rates derived manually and from said model, and manual and model-projected trip reassignments. All weekend volumes (existing and forecasts) will be developed utilizing an agreed-upon factor.

Proposed local roadway connections will be incorporated into the analysis in phases. Near-Term improvements will include those improvements included within the SR 46 Parallel Routes Study. The Short-Tem and Long-Term analyses will include all of the new network improvements and extensions within the draft 2010 General Plan Circulation Element update. Note that other roadway connections (possibly including some within the Draft 2010 Circulation Element update) may be incorporated into one or more design alternative.

Site visits will also be made to the study area, in order to verify existing intersection geometrics, perform measurements, observe existing traffic conditions, identification of adjacent land uses, photographs, etc.

4.9 Construction Estimates

Cost estimates for each project alternative will be prepared by major project component. All costs will be developed using current base year data. The unit costs will be determined by reviewing similar recent bid summaries, Caltrans Contract Cost Data book and the California Highway Construction Cost Index. The format for the estimates will be similar to the Caltrans 6-page estimate format for inclusion in the draft and final PSR.

4.10 Preliminary Traffic Management Plan (TMP)

A preliminary TMP will be prepared for the PSR/PDS. Concept staging/traffic handling plans, TMP elements and an itemized estimate of the proposed TMP strategies and their costs will be prepared for inclusion in the PSR/PDS. HMM will prepare TMP data sheets for the project alternatives as required in the PSR preparation guidelines.

4.11 Other Alternative Analysis Products

Task Deliverables

1. *Right of Way Data Sheets*
2. *Right of Way Cost Estimate Maps*

5. 0 Preliminary Environmental Analysis Report

A Preliminary Environmental Analysis Report (PEAR) that identifies the potential environmental impacts of each alternative, as well as potential mitigation costs will be prepared. PMC will conduct a Preliminary Environment Analysis Report (PEAR) to identify potential environmental impacts, technical studies, additional necessary technical analysis, and fatal flaws with the preliminary alternatives. The PEAR will be completed for summation in and attachment to the Project Study Report (PSR/PDS).

Preliminary Environmental Analysis Report (PEAR)

The PEAR will provide important information to help refine design alternatives and to identify environmental fatal flaws early in the process. The PEAR also estimates the scope, schedule, and costs associated with completing subsequent environmental compliance. Because the environmental process can have a substantial impact on the project alternatives, design, costs, schedule, and delivery, the PEAR will clearly present and discuss the results of preliminary environmental studies in order to identify environmental and land use constraints that may affect design. The information contained in the PEAR serves as the foundation for the environmental team to begin studies in the Project Report phase, facilitating early consultation with Federal and State resource agencies.

For scoping purposes, three (3) rounds of PEAR document review and comment between the Project Team and Client are assumed.

Technical Reviews:

Technical Reviews will be conducted in several environmental specialty areas in order to provide information in the PEAR on what additional Technical Studies would be required to support an environmental document. The reports will describe the project setting, type of survey conducted, summary of literature searches and findings, and offer discussion of the effects that the proposed project might have on resources within or adjacent to the project area. Additionally, the individual Technical Reviews will identify any further studies that are necessary; recommend possible mitigation and alternatives; determine what permits, approvals and/or coordination must be completed; provide an outline of a time schedule for that activity, such as Section 106 compliance or Section 7 consultation; and conclude with a summary of

the Technical Review that may be included in the PEAR. Technical Reviews will be conducted for the following environmental specialty areas:

- Noise
- Hazardous Waste / Materials (Phase I ISA results)
- Scenic / Visual Resources and Landscape Architecture Review
- NEPA/404 Coordination
- Preliminary Biology / Special Status Species (including wetlands and agency permit review)
- Cultural Resources (data base, records and literature search)
- Socioeconomics, Community Impact and Land Use (including land ownership and right of way patterns)
- Air Quality Assessment
- Water Quality
- Floodplain Study
- Preliminary Environmental Analysis Report Preparation
- Paleontological Resources
- Tribal Lands / Native American Coordination
- Energy
- 4(f) Issues

The preparation of each technical report will include:

- Conduct a Literature Search
- Perform a Windshield, Photo log, and/or on the ground Survey
- Prepare a Report including:
  - Project Description
  - Environmental Setting
  - Resources Identified and Sensitivity
  - Potential Effects, Probable Permits and Mitigation
  - Contacts/Sources Consulted
  - Recommendations
  - Mitigation Cost Estimate
  - Summary

Each report will make note of any possible situations that may affect the alternatives, cost, or viability of the project. All known resources or possible areas of resource sensitivity will be plotted on an aerial map that will be attached to the PEAR.

PMC will conduct all Technical Reviews, with the exception of the Hazardous Waste Review, which will be conducted under contract to the Prime consultant.

Deliverables:

1. *Complete Technical Reviews for incorporation in the PEAR.*
2. *Complete PEAR.*

6.0 Approved PSR / PDS

6.1 Draft PSR / PDS

HMM will prepare a draft PSR / PDS document. The report will be prepared according to the latest Caltrans requirements and in accordance with the Caltrans Project Development Procedures Manual. The PSR / PDS will include the following attachments:

1. Preliminary Cost Estimates for Alternatives
2. Location Map
3. Initial Site Assessment
4. Right of Way Data Sheet
5. Environmental Checklist
6. Storm Water Data Report
7. Traffic Management Plan
8. Typical Cross Sections & Project Layouts
9. Traffic Analysis Report
10. Purpose and Need
11. Fact Sheets with exceptions to design standards
12. Geometric approval drawings
13. Structure Advance Planning Study

HMM will prepare Fact Sheets based on the mandatory and advisory design exceptions determined for project alternatives. Several review cycles are anticipated with Caltrans for each Fact Sheet for each project alternative before securing approval of the fact sheets from Caltrans District and Headquarters offices.

HMM will prepare the various PSR scoping checklists for the project alternatives. Scoping checklists include the design scoping checklist, planning scoping checklist and DES scoping checklist.

Life Cycle Cost Analysis (LCCA) & Approval – HMM will prepare simulations for various roadways and ramps for the project alternatives as required in the PSR preparation guidelines. Concurrence with Caltrans on pavement design life must be worked out in the process of determining the appropriate pavement types to use. Results from the LCCA contribute to a more accurate cost estimate.

PSR Scoping Checklists – as required in the PSR preparation guidelines, HMM will prepare the various PSR scoping checklists for two project alternatives. Scoping checklists include the design scoping checklist, planning scoping checklist and DES scoping checklist.

Constructability and Safety Review Process – Constructability and safety reviews will be performed by HMM in conjunction with Caltrans for the project alternatives.

Develop Funding Strategies - Creating a fundable project will be a critical step to gaining approval of the PSR/PDS. HMM will provide assistance to the City of Paso Robles in developing a funding strategy for potential State, Federal, and Local resources and other potential opportunities for the preferred alternative.

6.2 Approved Exceptions to Design Standards

HMM will identify mandatory and advisory design exceptions to the standard design criteria identified in the Highway Design Manual (HDM) for the project alternatives. Identification of the design exceptions early in the geometric design process will help guide the project designs. HMM will prepare Fact Sheets based on the mandatory and advisory design exceptions determined for the project alternatives.

6.3 PSR /PDS Circulation, Review and Approval

The Administrative Draft PSR/PDS will be submitted to the City of Paso Robles for review. Comments will be incorporated into the Administrative Draft PSR/PDS and submitted to both the City of Paso Robles and Caltrans for review.

The Draft PSR/PDS will incorporate comments from both the City of Paso Robles and Caltrans made regarding the Administrative Draft Project Study Report. The Draft PSR/PDS will be presented to the City of Paso Robles Planning Commission. Comments received during the Planning Commission meeting will be addressed and incorporated into the Draft Final PSR/PDS and will be submitted to both the City of Paso Robles and Caltrans. The Draft Final PSR/PDS will be presented to the City Council. Comments from the City Council will be incorporated into the Final PSR/PDS document. It is assumed that up to three (3) rounds of comments and resubmittal will be required to obtain final approval from Caltrans for the PSR/PDS.

6.4 Storm Water Data Report

Cannon will research and prepare storm water data reports and checklists.

6.5 Base Maps and Plan Sheets for Project Initiation Documents

Base maps and plan sheets for the PSR/PDS will be prepared by Cannon.

Deliverables:

1. *Administrative Draft, Draft, Draft Final and Final PSR/PDS*
2. *Roundabout Fact Sheet*
3. *Fact sheets and Design Exceptions*

9. Work Budget

The anticipated budget for this project is $293,682, as indicated in the detailed fee estimate included as **Appendix G**. It is based upon our expectation of work effort for each component of the study effort for the

scope of work outlined in this proposal. Additional compensation will be required for any services in addition to specifically described above. We look forward to the opportunity to further refine the work effort and fee in consultation with the City of Paso Robles, Caltrans, and other stakeholders.

10. Project Schedule

The schedule provided as **Appendix H** includes tasks associated with this project as well as the amount of time we forecast it will take to accomplish each task. The start date will be the middle of January, 2011 and the Final Report will be delivered on or before December 31, 2011. However, HMM will revise the schedule with the City's concurrence based on the Notice to Proceed date, keeping the original duration (approximately 11 ½ months) intact. HMM staff has completed many similar projects that required Caltrans/City government involvement and we have successfully completed the approval of those projects. We typically meet the deadline for submittal of the draft document. However, project processing can be delayed due to public input and agency review that are beyond our control. Hatch Mott MacDonald will make every effort to keep the project on schedule and provide assistance to public agencies to expedite the review process.

Hatch Mott MacDonald intends to follow previous successful approaches to completing various tasks including key tasks such as alternatives analysis, Geometrical Drawing/Fact sheet approval, coordination of cooperative agreement preparation by providing all necessary input to Caltrans' cooperative agreement team in a timely manner, preparation and approval of the PEAR, intense participation during the review process and incorporating comments from the City and Caltrans in a timely manner. We believe a thorough quality control of deliverables would minimize the comments on the draft report, thereby assuring completion of the project on time. HMM will perform diligent quality control of all deliverables and also assure all comments are incorporated accurately to avoid schedule delays.

11. Exceptions to City of Paso Robles Contract

Generally, pursuant to industry standard and practice, an agreement for engineering services such as those envisioned here will feature, among other things certain principles and industry standards which would govern the services provided hereunder. These include standards which provide for a reasonable standard of care, a limitation of liability, a waiver of consequential damages, and no responsibility for overall project site safety amongst other things.

Although we are in agreement with virtually every term contained in the standard contract provisions suggested by the City of Paso Robles, we would note in those provisions none of these important standards of professional practice referenced above are included with specificity and detail. Accordingly, we would respectfully ask that language reflecting these important concepts be incorporated into the already existing clauses to be included in any final contract.

We look forward to discussing these concepts with you at your earliest convenience. Regardless, in light of our historical success in successfully finalizing mutually agreeable terms and conditions on similar type projects, we envision no obstacles to negotiating and rapidly finalizing a mutually agreeable set of terms and conditions for use on this project as well.

INTERSECTION ALIGNMENT STUDY
PSR/PDS
Fee Estimate
Submitted by
Hatch Mott MacDonald
April 26, 2011

Union Road Intersection Improvement Workplan Work Tasks	HMM		Cannon		PMC		Earth Systems		W-Trans		Hamner-Jewell		TOTAL	
	Total Hours HMM	Total Budget HMM	Total Hours Cannon	Total Budget Cannon	Total Hours PMC	Total Budget PMC	Total Hours Earth Systems	Total Budget Earth Systems	Total Hours W-Trans	Total Budget W-Trans	Total Hours Hamner-Jewell	Total Budget Hamner-Jewell	Total Hours	Total Budget
1.0 Project Management														
1.0 Project Management (Meetings included in Task 3.1)	176	$38,040	48	$7,440	0	$0	0	$0	0	$0	0	$0	224	$45,480
1.1 Project Initiation and Planning	16	$3,660	30	$4,200	20	$3,200	0	$0	0	$0	0	$0	66	$11,060
1.2 Executed Cooperative Agreement for PID Process	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
2.0 Transportation Problem Definition and Site Assessment														
2.1 Review of Existing Reports, Studies and Mapping	14	$2,224	20	$2,800	0	$0	12	$1,500	0	$0	0	$0	46	$6,524
2.2 Utility Search	0	$0	16	$2,240	0	$0	0	$0	0	$0	0	$0	16	$2,240
2.3 Environmental Constraints Identification	2	$441	0	$0	20	$2,575	0	$0	0	$0	0	$0	22	$3,016
2.4 Traffic Forecasts / Modeling	252	$33,179	0	$0	0	$0	0	$0	0	$0	0	$0	252	$33,179
2.5 Problem Definition	8	$1,568	0	$0	0	$0	0	$0	0	$0	0	$0	8	$1,568
2.6 As-Built Centerline and Existing Right-of-Way	0	$0	30	$4,650	0	$0	0	$0	0	$0	0	$0	30	$4,650
2.7 Other Definition and Assessment Products	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
3.0 Initial Alternatives Development														
3.1 Public / Local Agency Input	0	$0	0	$0	0	$0	0	$0	33	$5,520	0	$0	33	$5,520
3.2 Value Analysis		$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
3.3 Concept Alternatives Development	226	$32,614	68	$9,640	0	$0	0	$0	188	$22,810	0	$0	482	$65,064
3.4 Other Initial Alternative Development Products	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
4.0 Alternatives Analysis														
4.1 Right of Way Data Sheets	0	$0	24	$3,720	0	$0	0	$0	0	$0	47	$5,950	71	$9,670
4.2 Utility Relocation Requirements Assessment	0	$0	20	$2,800	0	$0	0	$0	0	$0	0	$0	20	$2,800
4.3 District Preliminary Geotechnical Report (DPGR)	0	$0	0	$0	0	$0	28	$3,540	0	$0	0	$0	28	$3,540
4.4 Preliminary Materials Report	0	$0	0	$0	0	$0	24	$2,772	0	$0	0	$0	24	$2,772
4.5 Structures Advance Planning Study	30	$4,392	0	$0	0	$0	0	$0	0	$0	0	$0	30	$4,392
4.6 Hydraulic Review	0	$0	20	$2,800	0	$0	0	$0	0	$0	0	$0	20	$2,800
4.7 Traffic Capacity Analysis	40	$5,804	0	$0	0	$0	0	$0	8	$1,015	0	$0	48	$6,819
4.8 Traffic Studies	64	$8,670	0	$0	0	$0	0	$0	8	$1,015	0	$0	72	$9,685
4.9 Construction Estimates	10	$2,240	0	$0	0	$0	0	$0	0	$0	0	$0	10	$2,240
4.10 Preliminary TMP	20	$4,120	0	$0	0	$0	0	$0	0	$0	0	$0	20	$4,120
4.11 Other Alternative Analysis Products	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
5.0 Preliminary Environmental Analysis Report														
5.1 Initial Noise Study	0	$0	0	$0	15	$1,875	0	$0	0	$0	0	$0	15	$1,875
5.2 Hazardous Waste Initial Site Assessment	0	$0	0	$0	7	$700	8	$1,000	0	$0	0	$0	15	$1,700
5.3 Scenic Resource and Landscape Architecture Review	0	$0	0	$0	20	$2,675	0	$0	0	$0	0	$0	20	$2,675
5.4 Initial NEPA/404 Coordination	0	$0	0	$0	10	$1,100	0	$0	0	$0	0	$0	10	$1,100
5.5 Initial Biology Study	0	$0	0	$0	15	$1,650	0	$0	0	$0	0	$0	15	$1,650
5.6 Initial Records and Literature Search for Cultural Resources	0	$0	0	$0	10	$1,100	0	$0	0	$0	0	$0	10	$1,100
5.7 Initial Community Impact Analysis, Land Use and Growth Studies	0	$0	0	$0	25	$3,125	0	$0	0	$0	0	$0	25	$3,125
5.8 Initial Air Quality Study	0	$0	0	$0	10	$1,075	0	$0	0	$0	0	$0	10	$1,075
5.9 Initial Water Quality Studies	0	$0	0	$0	7	$700	0	$0	0	$0	0	$0	7	$700
5.10 Initial Floodplain Study	0	$0	8	$1,120	7	$700	0	$0	0	$0	0	$0	15	$1,820
5.11 Preliminary Environmental Analysis Report Preparation	0	$0	0	$0	115	$12,375	0	$0	4	$565	0	$0	119	$12,940
5.12 Initial Paleontology Study	0	$0	0	$0	10	$1,100	0	$0	0	$0	0	$0	10	$1,100
5.13 Initial Native American Coordination	0	$0	0	$0	10	$1,100	0	$0	0	$0	0	$0	10	$1,100
5.14 Other PEAR Products	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0
6.0 Approved PSR/PDS														
6.1 Admin Draft PSR/PDS	32	$6,732	0	$0	15	$1,525	0	$0	8	$1,125	0	$0	55	$9,382
6.2 Approved Exceptions to Design Standards	11	$2,327	0	$0	0	$0	0	$0	0	$0	0	$0	11	$2,327
6.3 PID Circulation, Review and Approval	50	$8,570	0	$0	10	$900	0	$0	0	$0	0	$0	60	$9,470
6.4 Storm Water Data Report	0	$0	24	$3,360	0	$0	0	$0	0	$0	0	$0	24	$3,360
6.5 Base Maps and Plan Sheets for Project Initiation Documents	0	$0	24	$3,360	0	$0	0	$0	0	$0	0	$0	24	$3,360
Subtotal Labor Costs	951	$154,581	332	$48,130	326	$37,475	72	$8,812	249	$32,050	47	$5,950	1977	$286,998
Other Direct Costs														
Mileage		$3,820		$0		$750		$105		$405		$80		$5,160
Printing and Expenses		$754		$0		$750		$0		$0		$20		$1,524
Subtotal ODC		$4,574		$0		$1,500		$105		$405		$100		$6,684
TOTAL BUDGET		**$159,155**		**$48,130**		**$38,975**		**$8,917**		**$32,455**		**$6,050**		**$293,682**