



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR QUALIFICATIONS NOTICE

NUMBER 12A1778

Read carefully as the following revisions have been made to this document:

- **On 10/2/18, Section I, General Information, Paragraph E, regarding financial documents was revised.**
- **On 4/7/17, Section I, General Information, Paragraph E, regarding financial documents was revised.**
- **On 4/7/17, the Note on this page regarding questions was revised.**

Note: Questions concerning this Request for Qualifications (RFQ) must be submitted in writing to the attention of Alma Rodriguez at Alma.Rodriguez@dot.ca.gov. Questions must be received no later than ten (10) calendar days after RFQ advertisement. Consultants contacting the District or Division directly seeking information about this RFQ will be disqualified from consideration in the selection process.

Proposers are advised that Caltrans has established a federally mandated overall annual DBE goal comprising both race neutral and race conscious elements to ensure equal participation of DBE groups specified in 49 CFR 26.5. In compliance with 49 CFR 26, Caltrans set a contract goal for DBEs participating in this solicitation expressed as a percentage of the total dollar value of the resultant Agreement. The DBE participation goal for this solicitation is six percent (6%). See section I.H. in this RFQ for requirements.

I. GENERAL INFORMATION

- A. Caltrans is soliciting Statements of Qualifications (SOQs) from qualified firms that may lead to the award of a contract for On-Call Traffic Operations and Management Planning Services. In submitting your Statement of Qualifications (SOQ), you shall comply with the instructions found herein. In addition to those programs that are

specified in this solicitation, prospective consultants are encouraged to consider programs that are available, such as those for the use of small businesses, disadvantaged businesses, disabled veteran businesses, new emerging firms, and other businesses covered by State and Federal programs.

- B. The estimated contract amount is \$1,440,000 - \$2,340,000.
- C. The estimated contract term is three (3) years.
- D. Interviews will be held in Santa Ana, CA on **March 5, 2019**. Confirmation letters will be sent to those firms short-listed.
- E. The most highly qualified consulting firm will be required to submit an electronic copy of the financial documents listed on the appropriate Financial Documents Submittal Checklist available at: <http://www.dot.ca.gov/dpac/viewaeinfo.html>. The most highly qualified consulting firm will be notified of their selection and receive instructions for the electronic submission financial documents.

The most highly qualified consulting firm must submit a complete financial documents package no later than four (4) days after notification of selection. The prime consultant must submit the complete financial documents package in order for Caltrans to have the information necessary to engage in negotiations. The prime consultant is solely responsible for timely and complete submission of financial documents on behalf of the entire proposed team; financial documents will not be accepted from proposed subconsultant firms. Failure to submit a complete financial documents package by the specified due date may result in termination of negotiations with the most highly qualified consulting firm.

- F. Negotiations will be held with the top-ranked firm in Santa Ana, CA during the week of **March 11, 2019**. The fee for profit shall be 10.2% percent, and the escalation shall be as follows:

Year	% Escalation
1	0
2	1.5
3+	3

- G. The scheduled date to complete cost negotiations and submit final cost proposal is **March 19, 2019**.
- H. Disadvantaged Business Enterprise Program
1. This solicitation and resultant Agreement is financed in whole or in part with federal funds and therefore subject to Title 49, Code of Federal Regulations, Part 26 (49 CFR 26) entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." To ensure equal participation for Disadvantaged Business Enterprise (DBE) groups specified in 49 CFR 26.5, Caltrans specifies a contract goal for DBE participation. The required goal for DBE participation in this solicitation is not less than six percent (6%).
 2. Only participation by certified DBEs will count toward the contract goal for this solicitation. In order to count toward a contract goal, a firm must be certified as a DBE by the California Unified Certification Program (CUCP) and possess the work codes applicable to the type of work the firm will perform on the Agreement by the SOQ submittal due date. For a list of work codes, go to http://www.dot.ca.gov/hq/bep/find_certified.htm
 3. It is the proposer's responsibility to verify that the DBE firm is certified as a DBE by the specified SOQ submittal due date and time. For a list of DBEs certified by the CUCP, go to: http://www.dot.ca.gov/hq/bep/find_certified.htm
 4. A DBE must perform a commercially useful function (CUF) for the type of work it will perform on the Agreement as provided in 49 CFR 26.55(c)(1)-(4). A DBE performs a CUF when it is responsible for the execution of a distinct element of the work of the Agreement and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.
 5. See "Statement of Qualifications Submittal Instructions and General Contract Process Information" for detailed information and references to the required forms. Required forms will be made a part of the Agreement. Failure to meet the DBE goal or Good Faith Effort requirements and provide required DBE participation at due date and time of SOQ submittal may result in the SOQ submittal being rejected as non-responsive.

- I. Federal and/or State prevailing wage rates may apply. This requirement, if applicable, will be specified in the draft Agreement. See SOQ Submittal Instructions, Section I., H. regarding the California Department of Industrial Relations (DIR) Consultant/Contractor Registration Program <http://www.dot.ca.gov/dpac/viewaeinfo.html>
- J. Caltrans does not guarantee, either expressly or by implication, that any work or services will be required under any contract issued as a result of this RFQ.
- K. A Pre-award or Post-award Audit will be performed on any contract issued as a result of this RFQ.
- L. Contract boilerplate can be obtained at <http://www.dot.ca.gov/dpac/viewaeinfo.html>

II. SCOPE OF WORK/DELIVERABLES

The work to be performed for this RFQ is described in the Scope of Work/Deliverables, and is hereby incorporated as Attachment 1.

III. CONFLICT OF INTEREST

- A. Conflicts of interest may occur due to direct or indirect financial or business interests in the work to be performed or in any real property acquired for such project. Conflicts of interest can include, but are not limited to, past, existing or planned activities or because of relationships with other persons or firms. If there is a conflict of interest, the proposed team, including both the prime consultants and subconsultants, and individual employees of team members would actually or potentially be unable to render impartial assistance or advice to Caltrans. The proposer's objectivity or availability in performing the contract work may be impaired due to actual or potential conflicts of interest.
- B. If the proposed team determines that any actual or potential conflicts of interest exists, it must identify and describe in detail each conflict of interest to Caltrans, using the Disclosure of Potential Conflict of Interest Form, which can be found on the Caltrans website at <http://www.dot.ca.gov/dpac/viewaeinfo.html>. Along with the description of the actual or potential conflicts of interest, the proposed team shall also offer measures to avoid, neutralize, or mitigate all listed

conflicts. The list of conflicts, including conflicts that apply to individuals as well as firms, and the mitigation measures on the Disclosure of Potential Conflict of Interest Form must be submitted as a separate section in the Statement of Qualifications. Disclosure of information will not disqualify a proposed team from competing for a contract. The existence of actual or potential conflicts of interest will be used as a criterion to evaluate team availability during the evaluation and selection process. Caltrans reserves the right to terminate negotiations with the first selected firm and begin negotiations with the next selected firm or to cancel the procurement prior to execution if Caltrans learns that the selected team failed to disclose any actual or potential conflicts, which it knew or should have known about, or if the proposed team provided or omitted information on the disclosure form that results in the information being false or misleading.

- C. After award, conflict of interest guidelines and policies shall continue to be monitored and enforced by the Caltrans Contract Manager. Additional information about Conflict of Interest issues can be found in the SOQ Submittal Instructions and General Contract Process Information document (Section V. Post Government Employment Restrictions and Section VI. Conflict of Interest Concerning Consultant(s)) found at <http://www.dot.ca.gov/dpac/viewaeinfo.html>. The State and Federal contract boilerplates on DPAC's website also contain information on conflict of interest issues (Exhibit D) and can be found at <http://www.dot.ca.gov/dpac/viewaeinfo.html>
- D. The prime consultant and subconsultants may be proposed on SOQs for other Caltrans A&E on-call contracts; however, the Caltrans Contract Manager may prohibit work on specific project(s) where Caltrans determines that a conflict of interest exists.

IV. SUBMISSION OF STATEMENTS OF QUALIFICATIONS (SOQs)

- A. **IMPORTANT:** Download "Statement of Qualifications Submittal Instructions and General Contract Process Information" from <http://www.dot.ca.gov/dpac/procuringaecontracts.html> (dated Rev. 10/19/18). Failure to follow these instructions may result in rejection of your SOQs.
- B. SOQ Package Submittal Instructions

Read instructions below carefully. You will be required to submit SOQ packages to Sacramento and District 12 (see items 1 and 3 below for required number of copies), as well as an electronic file to Sacramento. See paragraph B.5.

1. One (1) copy of the SOQ containing all the indicated information shall be submitted. Fax copies will not be allowed. SOQs will be accepted until **3:00 p.m. on February 21, 2019**, and must be directed to:

State of California
Department of Transportation
Administration
Division of Procurement and Contracts, MS 65
1727 30th Street
Sacramento, CA 95816-7006
Attention: Alma Rodriguez
Telephone: (916) 227 – 6836

2. If your SOQ package is hand-delivered, you must date and time stamp it immediately upon arrival. The date/time stamp machine is located in the lobby of the first floor to the right of the security guard station at the address noted above. Date/stamp one label for each SOQ package/box submitted. Ask the security guard to call the Division of Procurement and Contracts' reception desk at (916) 227-6000 to have your SOQ package picked up by Contracts' staff.
3. In addition, five (5) copies of the SOQ containing all indicated information shall be submitted to District 12. FAX copies will not be allowed. SOQs will be accepted until **3:00 p.m. on February 21, 2019**, and must be directed to:

State of California
Department of Transportation
District 12, Project Management
1750 East 4th Street, Suite 100
Santa Ana, CA 92705
Attention: Lieu Pham
Telephone: (657) 328-6310

4. The SOQs must be submitted in a sealed package labeled as follows:

- RFQ Number 12A1778
 - Submittal deadline: **3:00 p.m. on February 21, 2019**
 - “DO NOT OPEN”
5. In addition to the six (6) copies of the SOQ requested in this section IV “Submission of Statements of Qualifications,” electronic submission of a single unprotected (i.e. not password protected) PDF file of the SOQ is required. The electronic submittal will be accepted until **3:00 p.m. on February 21, 2019**.

You will be required to create a Novell Filr account with Caltrans. Send an email message to the Contract Analyst, Alma Rodriguez, at Alma.Rodriguez@dot.ca.gov containing the information listed below for a link and instructions to complete the self-registration page and submit the SOQ electronically.

- Your firm’s name
- Your email address
- The solicitation number for which you would like to submit an SOQ

The file name shall include the contract number, consultant name (max. 25 characters) separated by an underscore (_), ending with the “.pdf” extension.

Example A: 50A0694_JohnDoeConsulting.pdf

Example B: 50A0694_aaa1234engineer.pdf

6. SOQ submittals will be considered non-responsive if all copies, including electronic submittal, are not received in the specified locations by the date and time specified in this RFQ.
- C. Request for RFQ Copies

Copies of this RFQ may be obtained at
<https://caleprocure.ca.gov/pages/index.aspx>

SCOPE OF WORK/DELIVERABLES
Traffic Operations and Traffic Management Planning Services
for Caltrans, Office of Traffic Operations, District 12
On-Call Contract

A. Purpose of Work.

The Consultant shall perform consultation, research, professional and technical services required for Traffic Operations and Traffic Management Planning Services by licensed professionals on an “as-needed” basis to support the Department of Transportation (Caltrans), Office of Traffic Operations, District 12, in the maintenance, development and construction of proposed Caltrans transportation facilities. The Caltrans Contract Manager shall assign specific work to the Consultant to assist the Caltrans work force through the issuance of Task Orders describing in detail the services to be performed. The Consultant shall only perform work that is assigned in an authorized Task Order. The Contract does not guarantee that a Task Order shall be issued. The Consultant may have licensed professionals provide services to Caltrans including, but not limited to, Engineering Studies producing Project Development and Design products and deliverables to support the preparation of the Project Report (or Project Report equivalents), Project Approval report, developing Design Plans, Specifications and Estimates (PS&E); support to the Office Engineers during project Advertisement and Award; project history files; design support during the construction phase, traffic operations analysis and transportation management planning; gathering of data for technical studies, traffic operations studies, operations investigations, support in Public Workshops and the preparation of traffic related documents in support of the Environmental Impact Report (EIR).

1. Exclusion of Work.

Any services that are related to the Project Initiation Document (PID) phase of the Caltrans project delivery process.

B. Location of Work.

The work shall be performed on projects to improve the State transportation system throughout the County of Orange in California within the limits of District 12. The specific location within the above-described geographical limits of the work to be performed within this geographic area shall be identified in each Task Order. It may become necessary for Caltrans, Office of Traffic Operations, District 12, projects to extend into another adjoining District 7, 8, or 11 County line. In such instances, the project work shall not extend more than a thirty (30)-mile radius from the District 12 geographic boundary.

C. Required Services.

1. Pursuant to an authorized Task Order, the Consultant shall provide Traffic Operations and Traffic Management Planning Services within the geographical jurisdiction of the Contract set forth in “Location of Work” Section, and all necessary personnel, material, transportation, lodging, instrumentation, and the specialized facilities and equipment necessary to satisfy all appropriate agencies and required to ensure compliance with all applicable Federal, State, and Local statutes, laws, codes, regulations, policies, procedures, ordinances, standards, specifications, performance standards, and guidelines, applicable to the Consultant's services and work product. The Consultant shall assist Caltrans, Office of Traffic Operations, District 12, to produce a plan by developing a complete and biddable Plans, Specifications and Estimate (PS&E) package.
2. Provided in Section 4 below of this Scope of Work is a list of proposed Caltrans projects; however, this list is not exclusive and it does not constitute a commitment that the projects will be initiated or completed or work assigned to the Consultant. Caltrans reserves the right to add or delete from this list of projects that are within the geographical jurisdiction of the Contract set forth in “Location of Work” Section within the Office of Traffic Operations, District 12’s jurisdiction.

Caltrans intends to utilize the Contract to complete a specific piece of work as long as it is located within the geographical jurisdiction of the Contract set forth in the “Location of Work” for each of the projects listed in the Contract utilizing the services described in this Scope of Work and as described in a Task Order. In the future, Caltrans may find it necessary to create a separate contract (or contracts) that involves a specific project listed in the Contract and includes part of the work contained in the Contract. Caltrans reserves the right to procure Architectural and Engineering (A&E) services involving the listed projects or unlisted projects (within the geographical jurisdiction of the Contract set forth in “Location of Work” Section) involving in whole or in part the same work using a project-specific agreement if the schedule to complete performance of the specific project extends beyond the term of the Contract or the cost to complete the specific project exceeds the dollar balance remaining in the Contract after accounting for amounts due to the Consultant for work previously performed and for work that is scheduled to be performed in executed task orders.

Should a project-specific agreement be procured under these provisions, the parties mutually agree that, in accordance with Exhibit D, Section III, Termination of the Contract, Caltrans shall terminate for convenience the portion of the Contract that includes the common scope of work identified in the project-specific agreement per Exhibit D, Section III, Termination of the Contract. Such partial termination for convenience shall be processed by amendment to the

Contract. Unless otherwise required by law, regulation, or Caltrans policy or procedure, the Consultant may compete for these project-specific Contracts.

3. Consultant agrees that:
 - a. The Consultant Contract Manager or designee shall manage, instruct and supervise all Consultant employees and subcontractors, and shall not allow any other party to manage, instruct and supervise such parties.
 - b. Consultant shall employ and discharge its own employees and subcontractors.
 - c. Unless approved in writing by the Caltrans Contract Manager, Consultant shall not hire employees or subcontractors to exclusively and only work on Caltrans matters. Consultant may hire employees and subcontractors for a specific Caltrans matter provided such party has the skills and knowledge to work on other matters and they are assigned to other matters from time to time.
 - d. The work performed by Consultant, its employees and its subcontractors shall be a regular part of Consultant's regular and established business.
 - e. Consultant shall make all of its own business (including personnel) decisions and bear the risk for its decisions.
 - f. Consultant shall provide its own tools, equipment and supplies, and Consultant shall not rely on Caltrans to provide such tools, equipment and supplies. Notwithstanding the foregoing, Caltrans may, during the term of the Agreement, allow Consultant to access selected items of equipment; provide non-employee userids and related access to Caltrans computer systems to Consultant employees and subcontractors; and provide non-employee access cards and other such forms of identification to Consultant employees and subcontractors.
 - g. Consultant shall provide its own training to its employees and subcontractors, and Consultant shall not rely upon Caltrans to provide such training.

4. The projects that Caltrans, Office of Traffic Operations, District 12, plans to work on under the Contract are as follows:

EA/Project Number	Route	Begin PM	End PM	Project Description
0F970/1212000031	039	15.15	15.91	Remove/Replace Curbs & Gutters, and install Storm Drains
0H047/1212000053	241	24.5	39	NB/SB Resurfacing of all lanes and all on and off-ramps within the project limits.
0N840/1214000115	073	16.859	17.059	Cold plane & resurface roadway with Open Graded Asphalt Concrete (OGAC) and Restripe all traffic lanes and right/left edge lines.

EA/Project Number	Route	Begin PM	End PM	Project Description
0N890/1214000130	133	8.5	9.3	Extend the No. 4 lane on SBSR-133 from SB I-5 Connector & add a second lane to NB 405 Connector.
0P400/1215000093	405	5.831	5.831	Modify existing signals, install high visibility LED for improved visibility, refresh pavement delineation, and ADA if needed.
0P520/1215000137	022	12.03	12.636	Enhance safety by installing lighting and modify traffic control device.
0P580/1215000148	090	2.6	5.1	Replace roadway signs when reflectivity is compromised, replace/restore existing and missing traffic delineation and overlay WB and EB general purpose and left turning Ins.
0P590/1215000149	001	29.9	33.7	Resurface & rehabilitate 14.9 lane miles.
0P670/1215000160	VAR	0	0	Install and modify Intelligent Transportation System (ITS) elements to provide mobility for motorists.
0P680/1216000002	001	13	33.6	Upgrade of the Traffic Signals equipment.
0P700/1216000004	005	3.29	3.29	Drainage restoration at the Segunda Deshecha Channel.
0P730/1216000008	074	13.29	13.29	Upgrade existing non-standard concrete bridge railing.
0Q270/1216000117	057	20.8	22.6	Regrade slopes, add Design pollution Prevention; add landscape vegetation; treatment site BMP's if criteria is met.
0Q310/1216000124	091	1.9	3.4	Overhead Sign Structure.
0Q320/1216000129	022	10.7	12.7	Improve drainage in both dir. grading PCC; resurface AC pavement with OGAC; pavement delineation. Install safety lighting. repic med barrier; new OH sign structure.
0Q370/1216000136	005	6.62	6.62	Bridge Rails Upgrade.
0Q390/1217000003	VAR	0	0	Upgrade to current Seismic Standard by strengthening both bridge substructure and superstructure components.

EA/Project Number	Route	Begin PM	End PM	Project Description
0P030/1215000024	074	11.5	16.6	Super elevation corrections, shoulder widening, Open Graded Asphalt Concrete (OGAC) overlay and apply High Friction Surface Treatment (HFST).
0G950/1215000045	055	8.0	9.2	Construct northbound auxiliary lane.
0H150/1216000055	001	4.9	5.5	Remove and replace existing pavement with Rubberized Hot Mix Asphalt (RHMA).
0N720/1214000093	073	10.0	28.0	Upgrade highway safety features.
0Q360/1216000133	133	3.1	4.3	Construct detention basin, reconstruct channel, extend reinforced concrete box and regrade to prevent adverse flow.
0N060/1213000097	133	3.1	3.6	Extend lanes in both directions.
0N730/1214000095	142	3.5	4.7	Storm water mitigation.
0N320/1213000196	091	9.8	18.9	Pavement rehabilitation.
0Q850/1217000116	005	34.5	37.4	Improve wet pavement safety by repairing and placing a grooved polyester concrete overlay on three undercrossing bridge decks, and upgrading guardrail.

The above list is not an exclusive list of projects.

5. At the sole discretion of Caltrans, Consultant may be required to provide the required services on safety projects, emergency projects, Emergency Storm Damage Projects, excess parcel assessments, or other current/future transportation projects, including minor projects not listed above, except for those specially excluded above, within the geographical jurisdiction of the Contract set forth in “Location of Work” Section. However, the dollar value of the services not listed in the Contract shall not exceed 10% of the total value of services that are listed and performed in the Contract.

6. The potential projects may vary in scope and size, and may encompass any type of improvement for the State transportation system including, but not limited to, roadway rehabilitation, widening and/or realignment of existing facilities, relocation of existing facilities, and construction of new facilities. The project location, project limits, purpose, expected results, project deliverables, period of performance, project schedule, and scope of work to be performed shall be described in each Task Order.

7. The Consultant shall be available, on two (2) days' written notice and/or phone call:
 - a. To meet with Caltrans; to participate in internal Project Development Team (PDT) meetings or other Caltrans meetings.
 - b. To attend public meetings (day and evening) where an expert is required.
 - c. To participate in any public hearings necessary for a Project.
 - d. To provide technical expertise on an "as-needed" basis.
8. Maintaining a stable work force is essential to the successful completion of Caltrans, Office of Traffic Operations, District 12, work. Consultant shall implement a personnel retention plan strategy and shall submit a written plan with the Statement of Qualifications submittal.
9. The Traffic Operations and Traffic Management Planning Services shall include, but not be limited to, tasks pertaining to Project Reports (PR), PS&E bidding documents, and other project delivery activities. Specific work in the following areas may be needed:
 - a. Independent cost estimating for PS&E or Project Report phase for all cost items in construction project(s), which may include the preparation of a critical path construction schedule that is used to determine the construction contract duration.
 - b. Americans with Disabilities Act (ADA) compliance for transportation facilities and right-of-ways, which includes work in site assessments, PR and PS&E.
 - c. Technical/Specification writing for PR, and PS&E phases.
 - d. Drafting services for PS&E or other project drawings for this project(s).
10. The Consultant shall assist Caltrans Office Engineer by providing answers to the bidders' questions during advertisement and award phase.
11. If set forth in an authorized Task Order, the Consultant shall assist Caltrans, Office of Traffic Operations, District 12, in reviewing the construction contractor's Request for Information by performing independent modeling, analysis, and engineering studies during construction.
12. Where directed in a Task Order, the Consultant performs the following tasks:
 - a. Review all available existing documents (As-Built Plans, reports, and others).
 - b. Determine member properties and weight.
 - c. Prepare complete PS&E construction contract packages in both English and Metric units for a construction contract (or contracts) as directed by the executed Task Orders. The plan sheets shall be electronically prepared

using the Caltrans Division of Design's format. As-Built record drawings shall be utilized to the maximum extent possible.

13. Perform Constructability Review: This task involves reviews of plans, special provisions, and construction sequencing.
14. The Consultant shall establish internal accounting methods and procedures acceptable to Caltrans for documenting and monitoring the Contract and individual Task Order costs.
15. Consultant shall perform Architectural & Engineering (A&E) services relating to traffic operations analysis (collectively called "Traffic Operations Analysis Work") as required in the Contract.
16. Consultant shall perform A&E services for the preparation of transportation management plan(s) and construction traffic handling services (collectively called "Transportation Management Planning Work") as required in the Contract.
17. Consultant shall provide lead direction in traffic analysis methodologies with consultation of the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, particularly related to oversight comments. Caltrans intends to develop consistent study approaches throughout the project(s) within transportation corridors.
18. Consultant shall use the appropriate traffic operations analysis methodologies as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager.
19. Consultant shall prepare reports, studies, and coordinate activities with local agencies as specified in a Task Order. The Consultant shall prepare the required data collection, model executions, output interpretation, calculations, traffic operations analysis, and reports needed according to Caltrans' standards, requirements, and accepted practices.
20. The scope of the work may include, but not be limited to, the following:
 - a. Traffic Operations Analysis Work.
 - i. Gather and review all available information relevant to each traffic analysis including, but not limited to, traffic volume data, travel time and speed profile data, existing and proposed roadway geometrics, and recent studies in the project vicinity.
 - ii. Perform operational analysis, using either macroscopic or microscopic analysis as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, on existing demand for individual facility including, but not limited to,

- iii. Perform operational analysis, using either macrosimulation or microsimulation analysis as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, on forecasted demand for individual facility including, but not limited to, freeway segment, weaving section, ramp junction, signalized intersection, and un-signalized intersection, for project alternatives.
 - iv. Conduct corridor system-wide analysis as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager on existing and future demand volumes for project alternatives.
 - v. Collect, aggregate, and summarize existing traffic volume data as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager. Potential locations for traffic data collection may include, but not be limited to, freeway segments, highway segments, ramps, and intersections. Potential durations for traffic data collection may range from one hour to multiple weeks.
 - vi. Determine operationally preferred alternatives and make design recommendations for project alternatives based on traffic analysis results.
 - vii. Produce technical reports or memoranda to document the results and conclusions of work.
 - viii. Provide responses to comments of agencies, organizations, or general public related to traffic analysis work.
 - ix. Collect, aggregate, and summarize existing travel time and speed profile data by floating car method (Tach Run) as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager.
 - x. Preparation of Standard Special Provisions (SSPs), which may include non-standard SSPs, for inclusion in construction contract specifications as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager.
- b. Transportation Management Planning Work.
- i. Perform operational analysis in support of development of stage construction, provide recommendations and costs on mitigation strategies.
 - ii. Collect, aggregate, and summarize existing traffic volume data as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager. Potential locations for traffic data collection may include, but not be limited to, freeway segments, highway segments, ramps, and intersections. Potential durations

- for traffic data collection may range from one hour to multiple weeks.
- iii. Calculate permitted lane closure hours and prepare lane requirements charts for inclusion in construction contract specifications and in support of construction activities.
 - iv. Evaluate and prepare detour layouts and graphics for construction traffic handling.
 - v. For proposed closures with significant delay, prepare presentation, supporting traffic analysis, and documentation for the District Lane Closure Review Committee.
 - vi. Prepare Significant Issue Report (SIR) related to capital outlay projects as directed by the Transportation Management Plan (TMP) Manager.
 - vii. Prepare TMP documents which may include, but not be limited to, the following:
 - A communication plan with contact information and detailed implementation schedule with tasks.
 - Analysis and impacts of planned closures, including demand management and incident management.
 - Analysis and impacts of partial, full and extended weekdays and weekend closure.
 - Contingency/action plan for unplanned events/incidents during planned closures.
 - Develop alternate route graphic plans.
 - Calculation of Road User Cost (RUC) and Liquidated Damages for Late Closure Pick Up.
 - Evaluation of other viable alternatives of closure strategies.
 - viii. Prepare agendas and record minutes for meetings.
 - ix. Facilitate stakeholder review and approval of draft TMP Reports.
21. When authorized by the Caltrans Contract Manager and required by a Task Order, the Consultant may establish direct contact for the purpose of obtaining information, expertise, and assistance in developing baseline data and resource inventories relative to the project OR assist with coordination to achieve compatibility with the concerns and requirements of Caltrans and other resource or regulatory agencies with, but not limited to: other consultants; other contractors; Federal, State, and Local resource and regulatory agencies; U.S. Army Corps of Engineers; U.S. Fish and Wildlife Service; National Marine Fisheries Service; U.S. Forest Service; U.S. National Park Service; U.S. Department Of The Interior Bureau of Land Management; Federal Highway Administration; California Department of Fish and Wildlife; California Fish and Game Commission; California Department of Parks and Recreation; California State Water Quality Control Boards; California State Water Resources Control Boards; California Regional Water Resources Control Boards; California Coastal

Commission; Native American Heritage Commission; Regional Clearinghouse of the California Historical Resources Information System; Regional Water Quality Control Boards; other involved agencies; other agencies; institutions; researchers or groups; and others.

- a. Caltrans shall provide prior written approval for, and may participate in, any and all contacts, intra-agency scoping meetings, or other meetings with resource or regulatory agencies to discuss the project, project impacts, project mitigation proposals, project mitigation, project compensation, project proposals. The Consultant shall maintain a record of all such contacts and shall transmit copies of these records to Caltrans, at a minimum, with the regular monthly progress reports.
- b. The Consultant shall not commit Caltrans to any mitigation measures or mitigation compensation.
- c. The Consultant shall not negotiate or make decisions in Caltrans' name. Caltrans shall retain responsibility for initiating and managing all final consultation, both informal and formal, with other consultants; other contractors; Federal, State, and Local resource and regulatory agencies; and other involved agencies, regarding regulatory, project, project impacts, project mitigation proposals, project mitigation, project compensation, project proposals, and any issues. The Consultant shall be available (within two (2) working day(s) written notice and/or phone call) to provide advice and to participate in such consultations as required in each Task Order, as directed by the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, and at the request of Caltrans. Should specific permits or agreements be required, Caltrans may require the Consultant to prepare appropriate information.

D. Workplan Standards Guide Codes.

Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at <http://www.dot.ca.gov/hq/projmgmt/guidance.htm>. The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to the Contract. The WSG references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the Work Breakdown Structure (WBS) shall apply during the life of the Contract.

The WBS activities below applicable to the Contract are limited to those set forth below:

- | | |
|--------|--|
| 100 | Perform Project Management (Contract Management) |
| 100.10 | Project Management PA&ED Component |

100.15	Project Management PS&E Component
100.20	Project Management Construction Component
160	Perform Preliminary Engineering Studies and Draft Project Report
160.05	Updated Project Information
160.05.05	Approved PID Review (Project Initiation Document)
160.05.20	Traffic Data and Forecasts Review
160.05.25	Geometrics Review
160.05.30	Project Scope Review
160.10	Engineering Studies
160.10.10	Traffic Forecasts/Modeling
160.10.15	Geometric Plans for Project Alternatives
160.10.20	Value Analysis
160.10.35	Traffic Operational Analysis
160.10.55	Multi-modal Study
160.10.60	Park and Ride Study
160.10.70	Traffic Studies
160.10.90	High Occupancy Vehicle Report
160.10.95	Updated Preliminary Transportation Management Plan
160.15	Draft Project Report
160.15.10	Fact Sheet for Exceptions to Design Standards
160.15.20	Draft Project Report
160.15.25	Draft Project Report Circulation Review and Approval
165	Perform Environmental Studies and Prepare Draft Environmental Document (DED)
165.05	Environmental Scoping of Alternatives Identified for Study in PID (Project Initiation Document)
175	Circulate Draft Environmental Document and Select Preferred Project Alternative
175.10.35	Public hearing
180	Prepare and Approve Project Report and Final Environmental Document
180.10.05.05	Draft Final Environmental Document Review
180.10.05.10	Revised Draft Final Environmental Document
185	Base Maps and Plan Sheets for PS&E Development
185.15.20	Value Analysis
185.20.05	Updated Traffic Data Analysis and Forecasts
185.20.35	Updated Transportation Management Plan for Design Phase
230	Prepare Draft PS&E (Plans, Specifications, and Estimates)

230.05.60	Stage Construction and Detour Plans or Traffic Handling Plans
230.15	Draft Traffic Plans
230.20	Transportation Management Plan
230.35.15	Traffic Specifications
255	Circulate, Review, and Prepare Final District PS&E Package
255.10.15	Updated Traffic PS&E
270	Construction Engineering and Contract Administration
270.66	Technical Support
285	Change Order Administration
285.10.15	Other Functional Support
290	Resolve Contract Claims
290.40	Potential Claim Record
290.50	Alternative Dispute Resolution
290.60	Claim Resolution
290.70	Arbitration

The Consultant shall not work on any projects that are in the planning phase (K-Phase) and the Consultant shall not be reimbursed for any work performed during this phase of a project.

E. Period of Performance

This is a three (3) year contract. Task Orders will be issued and executed during the term of this contract. Task Orders shall be completed within the timeframe as stated in the Task Order and prior to the expiration of this contract.

F. General Personnel Requirements.

1. The Consultant's personnel shall be capable, competent, and experienced in performing the types of work in the Contract with minimal instruction. Personnel skill level should match the specific job classifications, as set forth herein or in the Consultant's Cost Proposal, Attachment 2 and task complexity. The Consultant's personnel shall be knowledgeable about, and comply with, all applicable Federal, State, and Local laws and regulations.
2. The Consultant is required to submit a written request and obtain the Caltrans Contract Manager's prior written approval for any substitutions, additions, alterations, or modifications to the Consultant's originally proposed personnel and project organization, as depicted on the proposed Consultant's Organization Chart or the Consultant's cost proposals. The Consultant personnel shall have the same

job classification, as set forth herein or in the Consultant's Cost Proposal, Attachment 2, not exceed the billing rate, and meet or exceed the qualifications and experience level of the previously assigned personnel, at no additional cost to Caltrans. The Consultant personnel shall have significant experience in the work involving a similar transportation facility for at a minimum two (2) previous projects, unless otherwise approved by the Caltrans Contract Manager.

3. In responding to Caltrans' Task Order and in consultation with the Caltrans Contract Manager, the Consultant Contract Manager shall identify the specific individuals proposed for the task and their job assignments. The Consultant shall provide documentation that proposed personnel meet the appropriate minimum qualifications as required by the Contract.
4. The Consultant's personnel shall typically be assigned to and remain on specific Caltrans projects/deliverables until completion and acceptance of the project/deliverables by Caltrans. Personnel assigned by the Consultant shall be available at the start of a Task Order and after acceptance of the project/deliverable by Caltrans.
5. After the Caltrans Contract Manager's approval of the Consultant's personnel proposal and finalization of a Task Order, the Consultant may not add, delete or substitute personnel without the Caltrans Contract Manager's prior written approval.
6. Resumes containing the qualifications and experience of the Consultant's and Subconsultant's personnel, which include existing and additional personnel, and copies of their minimum required certifications, shall be submitted to the Caltrans Contract Manager for review before assignment on a project or Task Order. The resume and copies of current certification for each candidate shall be submitted to the Caltrans Contract Manager within one (1) week of receiving the request.
7. The Caltrans Contract Manager may interview the Consultant's personnel for the qualifications and experience. The Caltrans Contract Manager's decision to select the Consultant's personnel shall be binding to the Consultant and its Subconsultants. The Consultant shall provide adequate qualified personnel to be interviewed by the Caltrans Contract Manager within one (1) week of receiving the request.
8. The Caltrans Contract Manager shall evaluate the adequacy (quality and quantity) of the work performed by the Consultant's personnel, and determining whether the deliverables satisfy the acceptance tests and criteria. The Caltrans Contract Manager may reject any Consultant personnel who are determined by the Caltrans Contract Manager to lack the minimum qualifications. If at any time the level of performance is below expectations, the Caltrans Contract Manager may direct the

Consultant to immediately remove Consultant personnel from the project specified in a Task Order and request that the Consultant provide another qualified person be assigned as needed. The Consultant personnel shall meet the qualifications required by the Contract for performance of the work as demonstrated by a resume and copies of current certifications submitted by the Consultant. Consultant personnel shall receive prior written approval from the Caltrans Contract Manager. Invoices with charges for personnel not pre-approved by the Caltrans Contract Manager for work on the Contract and for each Task Order shall not be reimbursed.

9. The Consultant shall not remove or replace any existing personnel assigned to Task Orders without the prior written consent of the Caltrans Contract Manager. The removal or replacement of personnel without the written approval from the Caltrans Contract Manager shall be violation of the Contract and may result in termination of the Contract per Exhibit D, Section III, Termination of the Contract.
10. When assigned consultant personnel is on approved leave and required by the Caltrans Contract Manager, the Consultant Contract Manager shall provide a temporary substitute employee until the assigned employee returns to work from the approved leave. The Consultant personnel shall have the same job classification, as set forth herein or in the Consultant's Cost Proposal, Attachment 2, not exceed the billing rate and meet or exceed the qualifications and experience level of the previously assigned personnel, at no additional cost to Caltrans. Consultant personnel shall receive prior written approval from the Caltrans Contract Manager to work on the Contract.
11. Other project personnel who are not identified on the Consultant's cost proposal, including, but not limited to, field and laboratory technicians, shall also satisfy appropriate minimum qualifications for assigned Task Orders. Caltrans' prior written approval is required for all personnel not identified on the Consultant's organization chart or the Consultant's cost proposals before providing services under the Contract.
12. The Consultant is responsible to provide fully trained personnel to efficiently perform the work. The Consultant's personnel may be asked to attend certain special training if recommended by the Caltrans Contract Manager. On such occasions, with the approval of the Caltrans Contract Manager, Caltrans shall compensate the Consultant for the Consultant's actual cost for time spent in training only. All other costs, fees, and expenses associated with the training, including any transportation costs and training fees, shall be the Consultant's responsibility. In addition, services to train the Caltrans personnel shall not be provided by the Consultant under the Contract.

13. In location(s) where the Consultant personnel is expected to work for extended period(s) of time, the Consultant shall either relocate the personnel or make every effort to hire local persons.

G. Traffic Operations and Traffic Management Planning Personnel Requirements.

1. The Consultant and all Sub-Consultants, shall throughout the life of the Contract, retain within its firm, a staff of people who shall be properly licensed and certified in accordance with the laws of the State of California and qualified to perform all aspects of the required work described in the Contract and all work specified in a Task Order along with any emergencies that may arise during the life of the Contract.

The Consultant shall be prepared to provide additional personnel, as necessary, during the period performance of the Contract to accommodate the work.

It is expected that the Consultant's personnel shall be assigned to long term assignments in the District Office.

2. Consultant Contract Manager.

The Consultant Contract Manager shall coordinate work-related matters and Consultant's operations under the Contract with the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, Functional Manager, District/Region Area Construction (Claims) Engineer, Laboratory Supervisor, Headquarters' Structural Construction Engineer, Resident Engineer, District Landscape Architect, District Surveys Engineer, District Right-of-Way Engineer, District Water Quality Program Manager, District Deputy Director for Program/Project Management, District's Traffic Operations Units, Project Coordinator, Deputy District Director for Environmental Analysis, District Surveys Office Chief, and/or District's Public Information Officer.

The Consultant Contract Manager shall have a minimum of five (5) years of responsible experience performing the duties as a contract manager for similar Traffic Operations and Traffic Management Planning Services contracts. The Consultant Contract Manager shall be knowledgeable about all Caltrans policies and procedures. The Consultant Contract Manager shall be an employee of the Consultant.

The Consultant Contract Manager shall be a Registered Professional Engineer, and preferably a Registered Traffic Engineer, licensed in the State of California in good standing with the California State Board for Professional Engineers, Land Surveyors, and Geologists at all times during the Contract period, to perform the tasks described in the Contract and in the Task Orders and shall have a

documented minimum ten (10) years of demonstrated experience acceptable to Caltrans in Traffic Operations and Traffic Management Planning Services work.

The Consultant Contract Manager should have extensive experience performing microscopic and macroscopic traffic simulation modeling, traffic analysis for freeway mainline, merge/diverge areas, weaving areas, highway segments, signalized and unsignalized intersections, preparing traffic analysis reports, signal coordination plans, time space diagrams, lane closure charts, and transportation management plans.

In addition to other specified responsibilities, the Consultant Contract Manager shall be responsible for all matters related to the Consultant's personnel, Subconsultants, Traffic Operations and Traffic Management Planning Services work, and Consultant's and Sub-Consultants' operations including, but not limited to, the following:

- a. Ensuring that deliverables are clearly defined, acceptance tested and that criteria are specific, measurable, attainable, realistic and time-bound; and that the deliverables satisfy the acceptance tests and criteria.
- b. Supervising, reviewing, monitoring, training, and directing the Consultant's and Sub-Consultants' personnel.
- c. Assigning qualified personnel to complete the required Task Order work as specified on an "as-needed" basis in coordination with the Caltrans Contract Manager.
- d. Administering personnel actions for Consultant personnel and ensuring appropriate actions taken for Subconsultant personnel.
- e. Maintaining and submitting organized project files for record tracking and auditing.
- f. Developing, organizing, facilitating, and attending scheduled coordination meetings, and preparation and distribution of meeting minutes.
- g. Implementing and maintaining quality control procedures to manage conflicts, insure product accuracy, and identify critical reviews and milestones.
- h. Assuring that all applicable safety measures are in place.
- i. Providing invoices in a timely manner and providing monthly Contract expenditures.
- j. Reviewing invoices for accuracy and completion before billing to Caltrans.
- k. Managing Subconsultants.
- l. Managing overall budget for Contract and provide report to the Caltrans Contract Manager.
- m. Monitoring and maintaining required DBE or DVBE involvement.
- n. Ensuring compliance with the provisions in the Contract and all specific Task Order requirements.

3. Consultant Task Order Manager.

For each Task Order, the Consultant shall provide a Consultant Task Order Manager to coordinate the Consultant Task Order operations with the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager.

The Consultant Task Order Manager shall be accessible to the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, Functional Manager, District/Region Area Construction (Claims) Engineer, Laboratory Supervisor, Headquarters' Structural Construction Engineer, Resident Engineer, District Landscape Architect, District Surveys Engineer, District Right-of-Way Engineer, District Water Quality Program Manager, District Deputy Director for Program/Project Management, District's Traffic Operations Units, Project Coordinator, Deputy District Director for Environmental Analysis, District Surveys Office Chief, and/or District's Public Information Officer at all times during normal Caltrans working hours that Task Order work is underway.

The Consultant Task Order Manager (who may be other than the Consultant Contract Manager) shall be assigned to conduct, or direct the conduct of, all work assigned under a single Task Order. The Consultant Task Order Manager shall be the primary contact for the assigned Task Order and be available as needed for communication with Caltrans.

The Consultant Task Order Manager shall be a Registered Civil Engineer who is licensed in the State of California to perform the tasks described in this Scope of Work and subsequent Task Order and shall have at least five (5) years of relevant experience in Project Development work in the State of California or described in the scope of work of this agreement.

The Consultant Task Order Manager shall be familiar with Caltrans project development procedures and process, Work Breakdown Structure (WBS), Project Development Procedures Manual, Caltrans Highway Design Manual, Manual of Uniform Traffic Control Devices (MUTCD), and Caltrans plan and preparation and drafting standards.

4. Consultant Task Order Lead Person.

The Consultant Task Order Lead person (who may be other than the Consultant Contract Manager) shall be assigned to conduct, or direct the conduct of, all work assigned under a single Task Order. The Consultant Task Order Lead person shall be the primary contact for the assigned Task Order and be available as needed for communication with Caltrans.

5. Consultant Personnel and Team Member Qualifications.

- a. **Consultant Responsible Project Engineer**
The Consultant Responsible Project Engineer person (may also be the Task Order Lead Person) shall be a registered Professional Engineer in good standing with the California State Board for Professional Engineers, Land Surveyors, and Geologists at all times during the Contract period, and shall have a documented minimum five (5) years of demonstrated experience acceptable to Caltrans in Traffic Operations and Traffic Management Planning or related fields. The Consultant Responsible Project Engineer shall be familiar with Caltrans project development procedures and process, Work Breakdown Structure (WBS), latest Caltrans geometric standards, Project Development Procedures Manual, Caltrans Highway Design Manual, Manual of Uniform Traffic Control Devices (MUTCD), and Caltrans plan and preparation and drafting standards.

- b. **Lead Technical Support Staff or Task Order Manager Assistant:** The Consultant Lead Support Staff professional or Task Order Manager Assistant shall have at a minimum one of the following:
 - i. A Degree (Bachelors, Masters, or higher) in Engineering or Sciences from an ABET accredited institution and a minimum five (5) years of demonstrated experience in the scope of services covered in this agreement and subsequent Task Orders and acceptable to Caltrans.
 - ii. Registered Civil Engineer, licensed in the State of California

- c. **Consultant Support Personnel and Team Member qualifications:** The Consultant Support Personnel and Team Member shall have a minimum qualification of one or more on the following:
 - i. Minimum One (1) year of demonstrated experience in the scope of services covered in this agreement and subsequent Task Order and acceptable to Caltrans.
 - ii. Knowledge and exposure to project development.
 - iii. Knowledge of computer, computer applications and computer software such as Microsoft Office Suite.
 - iv. Good verbal and written communication skills.

Other project design professionals, such as Assistant Project Engineers, shall have, at a minimum, a Degree (Bachelors, Masters, or higher) in Engineering from an ABET accredited institution (College or University) or possession of a valid Engineer-in-Training (EIT) certificate issued or accepted by the California State Board for Professional Engineers, Land Surveyors, and Geologists, and shall have a documented minimum three (3) years of demonstrated experience acceptable to Caltrans in Traffic Operations and Traffic Management Planning

and related fields. Other transportation professionals and specialists should have appropriate degrees, education, certificates, licenses, applicable work experience, and other professional affiliations in their related fields.

The Consultant team member shall be capable of assisting the Consultant Contract Manager in all aspects of the required work. The Consultant team member's required professional qualifications shall be identified in each Task Order.

6. Sub-Consultant Personnel

Sub-Consultant Lead Technical Support staff shall have the same qualification as Consultant Lead Technical Support staff. Sub-Consultant Support Personnel and Team Members shall have the same qualification as Consultant Support Personnel and Team Members.

7. In the Contract, a person who is authorized to review and approve Consultant Traffic Operations and Traffic Management Planning analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and deliverables in place of the Consultant Contract Manager shall be hereafter referred to as the Consultant Traffic Operations and Traffic Management Planning Responsible Person. The Consultant Traffic Operations and Traffic Management Planning Responsible Person, shall be a Registered Professional Engineer licensed in the State of California in good standing with the California State Board for Professional Engineers, Land Surveyors, and Geologists at all times during the Contract period (or engineer, certified technician, the Consultant Contract Manager registered in the State of California) signing analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and deliverables under the Contract requiring the signature of a Consultant Traffic Operations and Traffic Management Planning Responsible Person (or engineer, certified technician, the Consultant Contract Manager registered in the State of California) shall be currently employed by the Consultant or its Subconsultants at the time the deliverables are submitted to Caltrans for consideration under the review and acceptance process.

8. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and deliverables under the Contract not fully approved by Caltrans bearing the signature of the Consultant Traffic Operations and Traffic Management Planning Responsible Person (or engineer, certified technician, the Consultant Contract Manager registered in the

State of California) who is no longer employed by the Consultant or its Sub-Consultants, shall be replaced by analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and deliverables under the Contract bearing the signature of a qualified replacement Consultant Traffic Operations and Traffic Management Planning Responsible Person (or engineer, certified technician, the Consultant Contract Manager registered in the State of California) who is currently employed by the Consultant or its Sub-Consultants. In such an event, no additional time shall be allowed or cost reimbursed to the Consultant without the prior written approval of the Caltrans Contract Manager.

9. All of the Consultant's work shall be conducted under the direction of the Consultant Contract Manager who shall have the appropriate experience as described in the Contract. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and deliverables under the Contract requiring the Consultant Traffic Operations and Traffic Management Planning Responsible Person (or engineer, certified technician, the Consultant Contract Manager registered in the State of California)'s signature, shall be produced by the responsible Consultant personnel having appropriate experience, and shall be signed by a Consultant Traffic Operations and Traffic Management Planning Responsible Person (or engineer, certified technician, the Consultant Contract Manager registered in the State of California).
10. The page which identifies the preparer of engineering reports, technical studies, the title sheet for specifications, and each sheet of plans, shall each bear the professional seal, certificate number, registration classification, expiration date of the certificate, and the signature of the Registered Professional Engineer(s) licensed in the State of California in good standing with the California State Board for Professional Engineers, Land Surveyors, and Geologists at all times during the Contract period, responsible for their preparation.

H. Consultant Availability and Work Hours.

1. The typical workday on the project as identified in the Task Order and also as directed by the Caltrans Contract Manager. Unless otherwise specified in the Task Order or directed by the Caltrans Contract Manager, the normal workday shall be Monday through Friday, from 8 a.m. to 5 p.m. or any combination of five (5) consecutive days which may include Saturday and/or Sunday, and the normal workweek shall consist of forty (40) hours. If Saturday and/or Sunday is part of a regular work week as determined by Caltrans, then the Saturday and/or Sunday

work shall be treated as work performed on a regular workday and no overtime shall be paid for the first eight (8) hours on Saturday or Sunday.

If Caltrans determines that the Consultant's services and work product need to be received outside of normal business hours (including instances where receipt is required to avoid danger to life or property), the Consultant may be directed to provide its services and work product during specific hours during the week (including hours that are outside of normal business hours). Night work may be required on projects involving high traffic areas. Changes in hours or schedules shall be documented by amendment of Task Orders. Any shift differential rate pay shall be reimbursed in accordance with the applicable Department of Industrial Relations (DIR) determination.

The Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, Functional Manager, District/Region Area Construction (Claims) Engineer, Laboratory Supervisor, Headquarters' Structural Construction Engineer, Resident Engineer, District Landscape Architect, District Surveys Engineer, District Right-of-Way Engineer, District Water Quality Program Manager, District Deputy Director for Program/Project Management, District's Traffic Operations Units, Project Coordinator, Deputy District Director for Environmental Analysis, District Surveys Office Chief, and/or District's Public Information Officer shall provide advance notice of one (1) working day(s)/twenty-four(24) hour/eight (8) hours if the Consultant's services are not required as a result of a cessation of construction activities or if reassignment of personnel is required. If Caltrans fails to provide the required advance notice and the Consultant personnel are not required as a result of cessation of construction activities, Caltrans shall provide a maximum of four (4) hours compensation.

2. The Consultant shall obtain approval from the Resident Engineer prior to entering any Caltrans' project construction site.
3. The Consultant shall obtain approval from the Caltrans Facility Manager prior to conducting activities within a maintenance station or other Caltrans facility.

I. General Requirements.

1. The Consultant shall prepare the required analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract according to requirements of the Contract and applicable Caltrans Manuals for the work.
2. As directed and as a first order of work, the Consultant shall prepare and update a comprehensive Critical Path Method (CPM) network diagram, Bar Chart

Schedule, Logic Network Schedule, and the Caltrans Work Breakdown Structure (WBS) for each Task Order issued by the Caltrans Contract Manager showing a deliverables schedule as well as other relevant data to monitor project progress, Consultant's work control, and Caltrans review of work status, if required in the Task Order. The relevant data shall include a list of activities with budgeted cost, milestones, and target date for completion of each activity. The minimum number of task details shall be identified in the Task Order. This workplan shall be updated once a month to show the approved baseline schedule and the actual progress schedule.

Caltrans shall review these documents and return them to the Consultant with notes and comments as soon as possible in order to validate the planning and cost control procedures within the first calendar month of performance period.

3. The Consultant's timesheet/invoices/expenses shall be subject to the review of the Consultant Contract Manager and the subsequent review and the approval of the Caltrans Contract Manager before submitting timesheets, invoices, or expense reimbursement requests for payment.
4. The Consultant shall begin the required work within two (2) working days after receiving a fully executed Task Order and the issuance of the Notice to Proceed (NTP) from the Caltrans Contract Manager to the Consultant Contract Manager or on the date specified in the Task Order. Some work, however, may require Consultant personnel to mobilize within 24-hour of notifications. Once the work begins, the work shall be prosecuted/performed diligently until all required work has been completed to the satisfaction of the Caltrans Contract Manager or Caltrans designee.
5. The work shall not be performed when conditions prevent a safe and efficient operation, and shall only be performed with written authorization by Caltrans.
6. The Consultant Contract Manager, Consultant Task Order Manager, and Key Personnel shall be accessible to the Caltrans Contract Manager at all times during normal Caltrans working hours or after hours as required by the Caltrans Contract Manager.
7. The Caltrans Contract Manager or designee may advise the Consultant's Contract Manager of the perceived need to have the Consultant's employees to work overtime to meet Task Order schedules, and the Consultant's Contract Manager shall take effective measures to address the Caltrans Contract Manager's need. All overtime shall be pre-approved by the Caltrans Contract Manager or designee. Overtime pay shall be paid only to persons covered by the Fair Labor Standards Act.

8. All Consultant personnel are required to sign a confidentiality and nondisclosure agreement.
 9. The Consultant may not disclose any information to third parties without prior written approval of the Caltrans Contract Manager.
 10. The Consultant shall only provide incidental non-Architectural and Engineering (A&E) services, such as Computer Aid Drafting & Design (CADD) support, GIS support, utilities location support, traffic control, office support, field office support, and meeting support, provided (a) such services are necessary for the completion of the A&E tasks and/or deliverables performed by the Consultant described in executed Task Orders and covered by the work in the Contract and (b) the rendering of the services is approved in advance by the Caltrans Contract Manager. These incidental services shall only be provided to support the Consultant's personnel who are performing A&E services, tasks, and deliverables on the Contract. The Contract amount spent on such incidental services shall be relatively minor when compared to the professional A&E services performed. The Consultant shall not be paid or reimbursed for any incidental non-A&E services provided to Caltrans unless provided in the fashion described in the Contract and included in the executed Task Order. The Consultant is responsible for ensuring that Task Orders only include any incidental non-A&E services.
 11. Incidental training services may be provided only if the training involves the specific work product of the Agreement. Such incidental training services are permitted, but only if:
 - a. The training involves the specific work product created under the Agreement (and does not involve general A&E training and is not the work product of a previous agreement); and
 - b. The total aggregate cost of all training under the Agreement does not exceed 10% of the total authority of the Agreement; and
 - c. The training is an incidental task within the Agreement and not the purpose for entering into the Agreement.
 12. The Consultant shall include the Caltrans Contract Manager in written communications to other Caltrans personnel for any clarification on the scope of work.
- J. Coordination.
1. For each Task Order, the Consultant shall carry out instructions received from the Caltrans Contract Manager, and as directed by the Caltrans Contract Manager,

shall coordinate activities and work closely with multiple stakeholders including, but not limited to, Caltrans' various functional units, Caltrans' project managers, local agencies, various environmental groups, other state agencies, Native American tribal governments, utility companies, railroads, other agencies, other entities with an interest in the project (including, but not limited to, FHWA), other consultants, other contractors, and planning, engineering, and construction firms (and its suppliers and subcontractors) contracted by Caltrans working on the same projects or adjacent projects. In the event an instruction or direction is unclear to the Consultant, the Consultant shall ask the Caltrans Contract Manager to clarify the instruction or direction. The work is a critical element of compatible designs, project planning and construction schedules and shall be accomplished in a timely fashion. Projects having complex and overlapping schedules and therefore Project work may have overlapping and parallel (not serial order) schedules or make work discontinues. Projects have complex and overlapping schedules and field work may be intermittent. Task Orders may be written for treatment of unanticipated finds encountered during project work. When unanticipated finds are encountered, a rapid response shall be necessary to avoid costly construction delays.

2. The foregoing paragraph does not relieve the Consultant of professional responsibility during the performance of the Contract. In instances where the Consultant believes a better standard solution to a task being performed or an issue being addressed is possible, the Consultant shall promptly notify the Caltrans Contract Manager of these concerns, together with the reasons therefore. However, Caltrans shall make all final decisions on the interpretation of the instructions, directions, work product and outputs that are described in the Task Order.
3. The Consultant shall be required to work with other Caltrans Functional Units and others (including, but not limited to, Regional Water Quality Control Board - RWQCB, Permitting Agencies,) as directed by the Caltrans Contract Manager.
4. The Consultant shall work closely with the Caltrans Contract Manager and the Caltrans designee identified in the Task Order.
5. The Consultant shall have the capability to send to and receive from Caltrans' digital electronic mail system and file transfer protocol system including, but not limited to, attachments for word processing, photographs, spreadsheets, and databases.
6. Caltrans shall not reimburse the Consultant for costs to relocate its personnel to the service area of the Contract. Caltrans shall not reimburse the Consultant for per diem costs, unless preapproved by the Caltrans Contract Manager. Caltrans

shall not reimburse the Consultant for out-of-state travel without prior written approval from the Caltrans Contract Manager.

7. The Consultant shall obtain the Caltrans Contract Manager's approval prior to making presentations at non-Caltrans sponsored conferences or workshops for any services provided under the Contract.
8. The Consultant shall notify the Caltrans Contract Manager or Caltrans designee in writing a minimum one (1) week before it begins any field work, unless the Task Order specifies some other notification date.
9. Caltrans shall not incur costs beyond the funding commitments in the Contract and each Task Order. If the Consultant anticipates that funding for work will be insufficient to complete work, the Consultant shall promptly notify the Caltrans Contract Manager.

K. General Equipment Requirements.

1. The Consultant or its Sub-Consultants shall not incorporate any materials or equipment of a single or sole source origin without the advance written approval of Caltrans.
2. The Consultant may claim reimbursement for providing equipment or supplies. However, such claimed costs shall be in compliance with 48 Code of Federal Regulation (CFR), Chapter 1, Part 31 (Federal Acquisition Regulation - FAR cost principles) and 2 CFR, Part 200, and be consistent with the Consultant's company-wide allocation policies and charging practices with all clients including federal government, state governments, local agencies, and private clients.

L. Traffic Operations and Traffic Management Planning Equipment Requirements.

1. Office Equipment and Supplies (Consultant's Office):

The Consultant shall have and provide adequate office equipment and supplies to complete the work required by the Contract. Such equipment and supplies shall include, but not be limited to, the following:

- a. Office Supplies.
- b. Computers with appropriate software, printers, plotters, fax machines, calculators, data collectors and their necessary attachments and accessories.
- c. Data processing systems, software packages, reference materials, design aids, or other tools, including hardware and software, used in providing transportation engineering deliverables. This includes, but not be limited to, the following:

- i. Microsoft Office Software (including, but not limited to, Word, Excel, PowerPoint).
- ii. Adobe Acrobat Professional version 5 or later.
- iii. Critical Path Method (CPM) software, with Primavera Project Planner (P3, P6), or any updated version, as a minimum; Scheduler Analyzer Pro; and Microsoft Projects.
- iv. Data collection devices such as digital electronic counters/classifiers, Loop Detectors and hand-held traffic counters.
- v. Traffic Analysis Software such as, but not limited to, TAS, PETRA or others to analyze data that has been collected.
- vi. Operational Software such as, but not limited to:
 - Highway Capacity Software (HCS2000) by McTrans Center/Transportation Research Board.
 - SYNCHRO by TrafficWare.
 - Passer II.
 - CORSIM by FHWA.
 - PARAMICS by QuadStone.
 - VISSIM by PTV.
 - VISSUM.
 - TRAFFIX by PTV.
 - FREQ by UC Berkeley.
 - Dynameq by INRO.
- vii. Other transportation models in Caltrans' approved format as specified per Task Order.

2. Field Equipment and Supplies:

Consultant shall have and provide adequate field tools, instruments, equipment, materials, supplies, and safety equipment to complete the required field work and that meet or exceed Caltrans Specifications per the Caltrans Manuals. The tools, instruments, equipment, materials, supplies, and safety equipment required for each Consultant field personnel shall include, but not be limited to, the following, if required by the Task Order:

- a. Sufficient vehicles suitable for the work to be performed and terrain conditions of the project sites. Vehicles shall be fully equipped with all necessary tools, instruments, equipment, materials, supplies, and safety equipment required for the efficient operation of the Consultants' field personnel, including cellphones. Each vehicle shall have a load carrying capacity of 1500 pounds of materials and equipment. Each Vehicle shall have sufficient ground clearance to safely maneuver through highway construction sites while fully loaded with equipment and materials. Each vehicle shall have overhead flashing amber light(s), visible from all sides (360 degrees), with a driver control switch; locking toolbox; fire

extinguisher; and first aid kit. Vehicles without side windows shall not be used. All vehicles shall be clearly marked as to ownership. Each vehicle shall be equipped to meet Caltrans safety requirements.

- b. A laptop computer or tablet with appropriate software. An aircard may be required by Caltrans by written notice.
 - c. Communication device: Mobile telephone, cell phone shall be compatible with the current Caltrans cellular phone system.
 - d. Hand tools including but not limited to; shovels, gloves, pick, measuring tape, buckets, wheel barrow, heat gun, sledge hammer, concrete and asphalt thermometers, clip board, calculator, peg book, as appropriate for the requested field personnel work.
 - e. All necessary safety equipment including fire extinguisher, hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved safety vests as appropriate for the requested field work to be performed safely and efficiently within operating highway and construction zone environments.
 - f. Necessary miscellaneous tools, non-consumables, and supplies including, but not limited to, hammers, and shovels.
 - g. Traffic cones, at a minimum 25, for traffic control as necessary. Such cones shall be 28 inches, minimum, in height.
 - h. Traffic control devices (including signs, sign bases, flags, and hand held signs) as required to perform the requested field personnel work.
3. The Consultant shall provide all necessary tools, instruments, equipment, materials, supplies, and safety equipment required to perform the work identified in each Task Order and the Contract accurately, efficiently, and safely. The Consultant's personnel shall be fully trained in the use of such necessary tools, instruments, equipment, materials, supplies, and safety equipment. The Consultant shall not be reimbursed separately for tools of the trade, which may include, but not be limited to, the above-mentioned equipment.

M. Standards.

1. All work/services under the Contract shall be performed in accordance with all applicable Federal, State, and Local statutes, laws, codes, regulations, policies, procedures, ordinances, standards, specifications, performance standards, and guidelines, including the latest Caltrans regulations, policies, procedures, manuals, standards, specifications, performance standards, directives, guidelines, handbooks, guidance documents, forms, templates, policy memo, methodologies, and other informational or directive publications, including compliance with Federal Highway Administration (FHWA) and State guidelines for implementing those requirements; and any permits, licenses, agreements or certifications that apply to specific Task Orders; the terms and conditions of the Contract; and current Caltrans Manuals and any future revisions. Work not covered by the

“Manuals” shall be performed as specified in the Task Order. If no standards exist, Task Orders may call for the development of new standards, so long as these standards do not conflict with the requirements, or amend the Scope of Work under of the Contract.

- a. The Consultant is responsible for obtaining, at its expense, all necessary manuals, reference documents, and other materials.
- b. Caltrans Manuals generally may be purchased from the Publication Distribution Unit. The Publications staff may be reached at (916) 263-0822, and the center is located at the following address:
State of California
California Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, CA 95815-3800
- c. Manuals and documents that are not available from the Caltrans Publication Distribution Center or are not available from Caltrans’ Internet web site may be requested from the Caltrans Contract Manager. Caltrans does not guarantee the availability of publications nor its Internet web pages. Required Manuals include:
 - i. <http://www.dot.ca.gov/dpac/publications.html>
 - ii. <http://www.dot.ca.gov/manuals.html>
- d. Caltrans’ regulations, policies, procedures, manuals, standards, specifications, performance standards, directives, guidelines, handbooks, guidance documents, forms, templates, policy memo, methodologies, and other informational or directive publications, are dynamic documents and subject to change. The Consultant is responsible to verify that the latest version or update is used.

2. Manuals, Documents, and Websites.

The following manuals, documents and links to internet sites are referenced in association with the work in the Contract. The list is not all-inclusive, but is intended to illustrate the types of reference material and sources of information.

- a. Caltrans’ Internet Home Webpage:
<http://www.dot.ca.gov/>
- b. Caltrans’ Code of Safe Practices:
<http://www.dot.ca.gov/hq/construc/safety/>
- c. California Business and Professions Code:
http://www.dot.ca.gov/trafficops/oda/docs/Final_Web_Regs.pdf
- d. California Code of Regulations:

<http://www.dir.ca.gov/dlse/ccr.htm>

- e. California Health and Safety Code:
<https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=HSC>
- f. California Public Contract Code:
<http://leginfo.legislature.ca.gov/faces/codesTextSearch.xhtml>
- g. California Public Resources Code:
<https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=PRC>
- h. Caltrans Highway Design Manual:
<http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>
- i. Manual of Uniform Traffic Control Devices (MUTCD):
California Manual on Uniform Traffic Control Devices:
<http://mutcd.fhwa.dot.gov/>
<http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp>
http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd.htm
<http://www.dot.ca.gov/hq/traffops/engineering/mutcd/index.htm>
- j. Caltrans Traffic Impact Studies (TIS) Guidelines:
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf
- k. Caltrans Surveys Manual:
http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html
- l. Caltrans Construction Manual:
<http://www.dot.ca.gov/hq/construc/constmanual/>
<http://www.dot.ca.gov/hq/construc/manual2001/>
- m. Construction Manual:
Chapter 5 Section 1 Project Records and Reports
<http://www.dot.ca.gov/hq/construc/constmanual/chapter5/sec5-1.pdf>
- n. Caltrans Project Development Procedures Manual (PDPM):
<http://www.dot.ca.gov/hq/oppd/pdpm/pdpmn.htm>
<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm>
- o. Project Development Procedures Manual: Chapter 7 - Uniform File System:

- http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt07.pdf
- p. Project Development Procedures Manual: Chapter 15 - Final Project Development Procedures:
http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt15.pdf
- q. Caltrans CADD Users Manual:
<http://www.dot.ca.gov/hq/oppd/cadd/usta/caddman/english/toc.htm>
<http://www.dot.ca.gov/hq/oppd/cadd/usta/caddman/default.htm>
- r. CADD Users Manual Chapter 4.3 As-Built Plans (March 30, 2011)
<http://www.dot.ca.gov/hq/oppd/cadd/usta/caddman/english/4-3.pdf>
- s. Caltrans Construction Manual: Traffic Safety Guidelines:
http://www.dot.ca.gov/hq/construct/manual2001/chapter2/chp2_2.pdf
- t. Caltrans Surveys Manual - Chapter 12: Construction Staking Handbook
Construction Staking Handbook:
Construction Staking: Chapter 12 of Caltrans Surveys Manual:
http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/12_Surveys.pdf
- u. Caltrans Standard Special Provisions:
<http://www.dot.ca.gov/hq/esc/oe/conststand.html>
http://www.dot.ca.gov/hq/esc/oe/construction_standards.html
- v. Caltrans Guide for the Submittal of Plans, Specifications, and Estimates:
Caltrans Plans Preparation Manual:
<http://www.dot.ca.gov/hq/oppd/cadd/usta/caddman/english/4-1.pdf>
<http://www.dot.ca.gov/hq/oppd/cadd/usta/caddman/default.htm>
<http://www.dot.ca.gov/hq/oppd/cadd/usta/ppman/default.htm>
<http://www.dot.ca.gov/hq/oppd/cadd/usta/ppman/toc.htm>
<http://www.dot.ca.gov/hq/esc/oe/standards.php>
http://www.dot.ca.gov/hq/esc/oe/construction_standards.html
- w. Caltrans Policy and Guidelines: Cost Estimate:
<http://www.dot.ca.gov/hq/oppd/costest/costest.htm>
- x. Caltrans Right of Way Manual:
<http://www.dot.ca.gov/hq/row/rowman/manual/index.htm>
<http://www.dot.ca.gov/hq/row>
- y. Caltrans Project Management Handbook:
<http://www.dot.ca.gov/hq/projmgmt/guidance.htm>

http://www.dot.ca.gov/hq/projmgmt/documents/pmhb_5thed.pdf

- z. Caltrans Storm Water Quality Handbooks, Manuals, Project Planning, and Design Guide:
Caltrans Storm Water Quality Handbooks:
Caltrans Storm Water Quality Handbooks and Manuals:
Caltrans Storm Water Project Planning and Design Guide:
<http://www.dot.ca.gov/hq/oppd/stormwtr/>
<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>
- aa. Caltrans Project Management Directives:
http://pd.dot.ca.gov/pm/ProjectOffice/ProcessGuidance_Directives/Guidance_DirectivesHome.asp
- bb. Caltrans Project Risk Management Handbook:
http://www.dot.ca.gov/hq/projmgmt/guidance_prmhb.htm
- cc. Quantitative Risk Analysis section (page 14) of Caltrans Project Risk Management Handbook:
http://www.dot.ca.gov/hq/projmgmt/documents/prmhb/archive/caltrans_project_risk_management_handbook_20070502.pdf
- dd. Caltrans Standard Environmental Reference Webpage:
Caltrans Standard Environmental Reference (SER), Caltrans Environmental Handbook, Volume I, Volume II, Volume III, and Volume IV:
<http://www.dot.ca.gov/ser/>
<http://www.dot.ca.gov/ser/envhand.htm>
- ee. Caltrans Standard Environmental Reference, Biological Resources:
<http://www.dot.ca.gov/ser/vol3/vol3.htm>
- ff. Caltrans PEAR Handbook:
<http://www.dot.ca.gov/ser/pear.htm>
- gg. Caltrans Quality Control and Assurance for Biological Technical Documents:
http://www.dot.ca.gov/ser/vol1/sec3/natural/Ch14Bio/files/QC_guidance.pdf
- hh. Secretary of the Interior's Professional Qualification Standards:
http://www.nps.gov/history/local-law/arch_stnds_9.htm
- ii. Caltrans Technical Publications and Manuals:

- <http://www.dot.ca.gov/hq/esc/techpubs/>
- jj. Caltrans Design Information Bulletins:
<http://www.dot.ca.gov/hq/oppd/dib/dibprg.htm>
- kk. Construction Policy Bulletins (CPBs):
<http://www.dot.ca.gov/hq/construc/manual2001/CPBindex.HTM>
- ll. Caltrans Design Memorandum:
<http://www.dot.ca.gov/hq/oppd/design/index.htm>
- mm. Caltrans Cooperative Agreements Manual:
http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt16.pdf
- nn. Caltrans Environmental Handbook:
<http://www.dot.ca.gov/ser/envhand.htm>
- oo. Caltrans Preliminary Environmental Analysis Report (PEAR) Handbook:
Caltrans PEAR Handbook:
<http://www.dot.ca.gov/ser/pear.htm>
- pp. Caltrans Environmental Policy Memos:
Environmental Policy Memos:
<http://www.dot.ca.gov/ser/memos.htm>
- qq. California Test Methods:
<http://www.dot.ca.gov/hq/esc/ctms/index.html>
- rr. Bridge Construction Records and Procedures Manual, Volume I (8/31/07)
:
<http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCompleteManuals/BCRPVol1.pdf>
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCompleteManuals/BCRPVol1_Terms.pdf
- ss. Bridge Construction Records and Procedures Manual, Volume II (8/31/07)
:
<http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCompleteManuals/BCRPVol2.pdf>
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCompleteManuals/BCRPVol2_Terms.pdf
- tt. Caltrans Value Analysis Program:
<http://www.dot.ca.gov/hq/oppd/value>

- uu. METS Website:
<http://www.dot.ca.gov/hq/esc/Translab/>
- vv. AASHTO Pavement Design Guidance:
<https://bookstore.transportation.org>
- ww. Superpave Mix Design Standards:
<http://www.asphaltinstitute.org>
- xx. Federal Highway Administration Title 23, Code of Federal Regulations, 637B:
<http://www.fhwa.dot.gov/legregs/directives/fapg/cfr0637b.htm>
- yy. Caltrans Falsework Manual:
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCCompleteManuals/FW_Terms.pdf
- zz. Caltrans Trenching and Shoring Manual:
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCCompleteManuals/TS_Terms.pdf
- aaa. Caltrans Foundation Manual:
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCCompleteManuals/Foundation_Terms.pdf
- bbb. Caltrans Prestress Manual:
http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCCompleteManuals/PS_Terms.pdf
- ccc. Other applicable Offices of Structure Construction manuals:
<http://www.dot.ca.gov/hq/esc/construction/manuals/>
- ddd. Division of Construction Oversight Engineer Field Guidelines.
Chapter 4 Project Completion.
<http://www.dot.ca.gov/hq/construc/oversightengineerfieldguidelines2005.pdf>
- eee. Caltrans Encroachment Permits Manual.
Chapter 206.2A As-Built Plans and Other Completion Records.
http://www.dot.ca.gov/hq/traffops/developserv/permits/encroachment_permits_manual/index.html

- fff. Federal Highway Administration (FHWA) Guidance for Consultants: Procedures for the Protection of Historic Properties - Section 106 Process, and Guide for Consultants: Procedures for Completing the Natural Environment Study and Related Biological Reports:
<http://www.fhwa.dot.gov/>
<http://www.environment.fhwa.dot.gov/guidebook/index.asp>
<http://www.fhwa.dot.gov/>
<http://www.environment.fhwa.dot.gov/guidebook/chapters/v2ch10.asp>
- ggg. Guide to the Caltrans Capital Project Work Breakdown Structure (WBS).
- hhh. Caltrans Survey Engineer's File (SEF) Oversight Guideline.
- iii. Caltrans Project Planning and Design Activities Guide.
- jjj. Caltrans Right of Way Procedural Handbook- Volume 13"Utilities".
- kkk. Caltrans Manual on High and Low Risk Underground Facilities.
- lll. Caltrans Drafting Design User's Manual.
- mmm. Caltrans Bridge Design Specifications Manual.
- nnn. Caltrans Bridge Design Details Manual.
- ooo. Caltrans Bridge Design-Aids Manual.
- ppp. Caltrans Bridge Memo to Designers.
- qqq. Caltrans Bridge Standard Details Sheets.
- rrr. Caltrans Bridge Detail Decals.
- sss. Caltrans Formatted Highway Plan Sheets.
- ttt. Caltrans Formatted Bridge Plan Sheets.
- uuu. Caltrans Construction Site Best Management Practices Guide.

N. Field Safety.

In addition to the requirements specified elsewhere in the Contract, the following also shall apply:

1. The Consultant shall maintain a working environment that is safe for project personnel and the public. The Consultant shall provide a Code of Safe Practices that includes at a minimum, fall protection safety, lead training, respirator training, and promotes an awareness of health and safety requirements and enforce applicable regulations and contract provisions for the protection of the project personnel and the public. The Consultant's personnel shall comply with all safety provisions of the Caltrans Safety Manual (http://www.dot.ca.gov/hq/opo/safety/safetymanual_toc.htm), Caltrans Surveys Manual (http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html), Caltrans Laboratory Safety Manual (http://www.dot.ca.gov/hq/esc/ctms/pdf/lab_safety_manual.pdf), Caltrans Traffic Manual (<http://www.dot.ca.gov/hq/traffops/signtech/signdel/trafficmanual.htm>) and Caltrans Code of Safe Practices (<http://www.dot.ca.gov/hq/construc/safety/>). The Consultant shall comply with all Federal, State, and Local Occupational Safety and Health Administration (OSHA) statutes, laws, codes, regulations, policies, procedures, ordinances, standards, rules, specifications, performance standards, and guidelines, and the safety instructions that Caltrans issues for performance of Task Order work, applicable to the work under the Contract, regarding safety equipment and procedures (including, but not limited to, use and operation). Under no circumstance shall the Consultant's safety policies be less stringent than Caltrans'.
2. The field work shall not be performed when conditions prevent a safe and efficient operation, and shall only be performed with written authorization by Caltrans.
3. The Consultant shall provide, at no cost to Caltrans, all safety equipment to perform the required services in a safe manner including, but not limited to: gloves, coveralls, sunscreen, insect repellents, fire extinguisher, hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved safety vests. The Consultant's personnel shall wear hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved safety vests at all times while working in the field.
4. The Consultant shall provide, at no cost to Caltrans, appropriate safety training for all the Consultant's and the Sub-Consultant's office, laboratory, and field personnel, including training required for performing the work in an office setting or in the field to work on and near highways in a safe manner.
5. The Consultant shall be solely responsible for the protection of health and safety of its personnel, Sub-Consultants, and Subconsultant's personnel in performance of the Contract.

O. Orientation Provided by Caltrans.

1. Caltrans may provide orientation regarding the requirements for the Contract and each Task Order as deemed necessary by Caltrans. The orientation may consist of instructions on Caltrans procedures, practices, and requirements for the specific work to be performed and sharing of project related files and notes. However, if the orientation instructions conflict with the contract or task order requirements, the Contract and the executed Task Order shall prevail over any instructions provided.

P. Monitoring and Review Procedure.

1. The Caltrans Contract Manager shall have the unilateral right to monitor and review the progress and processes of the Consultant related to work performed under the Contract.
2. The performance of the Consultant Contract Manager, key personnel, and team shall be evaluated by the Caltrans Contract Manager, as needed, but no less frequently than annually, and at the expiration of the Contract. Unsatisfactory reviews of specific consultant personnel may result in Caltrans requesting that they be replaced with new personnel; the Consultant shall immediately replace personnel with individuals whose qualifications at a minimum equal those of the personnel replaced at no additional cost to Caltrans. Evaluation includes, but not be limited to, the following:
 - a. Job performance.
 - b. Quality of Work.
 - c. Timely submittal of reports, invoices, daily diaries, and other required documents.
 - d. Early detection of problems and timely resolutions.
 - e. Requesting timely approval for personnel changes and travel expenditure.
 - f. Responsiveness and ability to control costs.
 - g. DBE or DVBE Participation.
 - h. Conflicts of interest.

Poor performance and any negative evaluations may result in the request for replacement of the Consultant Contract Manager, key personnel, or any personnel; the need to replace key personnel shall reflect adversely on the Consultant's performance evaluation, and if warranted, may result in the termination of the Contract per Exhibit D, Section III, Termination of the Contract.

3. As a minimum, the monthly report should address the following specific areas:
 - a. Time related project status via a bar chart schedule.
 - b. Project performance progress report.

- c. Amendment summary history.
- d. Narrative status report by task to include work accomplished, work planned for the next month, identification of project issues, and an action plan to resolve issue.
- e. Monthly forecast of work report showing total dollars current expenditures, next month planned expenditures, and expenditures for the remainder of the fiscal year.
- f. The Consultant shall give written notice to the Caltrans Contract Manager in coordination with Caltrans Task Order Manager within seven (7) working days after the Consultant knows or should know of any cause or condition which may, under reasonable foreseeable circumstances, result in delay or cost overruns for which Consultant may request an extension of time and monies to complete the services.
- g. The Consultant shall report in a timely manner, through correspondence and monthly progress reports, whenever it appears that approved schedules outlined in the Task Order will not be met, whether or not the reasons are within the Consultant's control. In the event the Task Order Scope and Schedule of Services are modified, and the modified Schedule is approved by Caltrans, the Consultant shall submit a revised Schedule. The Consultant shall perform the Services in accordance with the latest revised and approved Task Order Schedule.

Q. General Materials to be Provided or made available by Caltrans.

Materials (if deemed applicable, necessary, and when available from Caltrans) that may be furnished or made available by Caltrans and where listed in the individual Task Orders and the Contract, are for the Consultant's use only, shall be returned at the end of the Contract. The Consultant shall use the materials in the execution of the specific work described in the Task Order. These materials may include, but not be limited to, the following:

1. Appropriate background or reference information for each Task Order.
2. Project special provisions, full-size and reduced-size sets of project plans, materials information handout, and construction contract and proposal, as necessary.
3. Caltrans standardized forms.
4. Caltrans shall provide Permits to Enter for private property access. The Consultant shall notify Caltrans, in writing, sufficiently in advance of its need to enter upon private property or facility to perform work. The Consultant's notice shall specify the date, purpose, duration, location, and the time of day of the Consultant's activities. The Consultant shall not perform work on property

outside of the Caltrans right-of-way until Caltrans has obtained an entry permit from the property owner. The Consultant is responsible for notifying the property owner 48 hours in advance of entering the property, unless otherwise specified in the Permit. The Consultant shall notify the Caltrans Contract Manager within 48 hours if permission has been denied. The Consultant personnel shall carry the Permits to Enter on their person while performing work outside the Caltrans Right-of-Way. No work shall be performed by the Consultant outside the Caltrans Right-of-Way without Permits to Enter. The Consultant shall comply with all conditions imposed by the Caltrans Contract Manager and requirements set forth in the Permit to Enter. The Consultant shall be responsible for any damages that consultant did to owner property at Consultant's own expense.

5. Appropriate background information, site topographic maps, as-built drawings, blank Caltrans plan sheet overlays, digital electronic seed files, cell libraries, lane closure request forms, right-of-way alignments and survey limits, preliminary utility location maps, areas where focused studies are needed, Construction Contract Documents, and Shop Drawings, as available, for each Task Order.
 6. Digital Electronic templates of Task Order formats.
 7. For Contract work on Caltrans' Right-of-Way, an executed contract constitutes the consultant's "Encroachment Permit." The consultant (prime as well as any subconsultants) shall carry a copy of the fully executed contract along with the pertinent Task Order(s) at all times while conducting work for Caltrans within Caltrans' Right-of-Way.
 8. All pertinent correspondence and investigations.
 9. The Caltrans Contract Manager may designate a Caltrans Task Order Manager to manage the technical aspects of the Task Order or each specific Task Order.
 10. The Caltrans Contract Manager or Caltrans designee shall review all deliverables for compliance, substance, and quality.
- R. Traffic Operations and Traffic Management Planning Materials to be Provided or made available by Caltrans.
1. Relevant and existing documents, right-of-way record data, survey maps, control, data, topographic maps, and planimetric maps, if any are available, that are applicable to the current project within the project limits.
 2. Project Study Report and other planning study data.
 3. Hourly and average daily traffic volume counts on Caltrans facilities.

4. Average daily truck volume counts by axle on Caltrans facilities.
5. Travel time and speed profile data collected by floating cars on Caltrans facilities.
6. Pertinent correspondence and investigations.

Note: The Consultant is responsible for the return to Caltrans, in original condition, of all items provided for use under the Contract. The Consultant shall replace, at the Consultant's sole expense, all lost or damaged Caltrans data or materials.

S. Materials to be Provided by the Consultant.

Unless otherwise specified in the Contract, the Consultant shall provide all materials to complete the required work in accordance with the delivery schedule and cost estimate outlined in each Task Order.

1. The Consultant shall be responsible for obtaining all necessary approvals and permits for Task Order work performed on any property that Caltrans does not own or control, with the exception of private property. The Consultant shall identify all necessary approvals and permits, prepare signature-ready permit applications, and track the status of permit applications, as specified in each Task Order. Also, the Caltrans District NPDES Coordinator shall be notified prior to performance of any work.
2. The Consultant shall provide to its Traffic Operations and Traffic Management Planning Services personnel sets of the following that are applicable to the current project:
 - a. Standard Specifications.
 - b. Standard Plans.
 - c. Materials listed under section "Equipment Requirements".
3. When performing work within Railroad Company property, the Consultant is required to obtain sufficient and/or adequate insurance coverage that shall comply with the Railroad Company's requirements when performing work within their jurisdiction. The amount of insurance and types of coverage required by the Railroad Company may be above and beyond that required by Caltrans. The Consultant may be required to provide additional Railroad liability insurance including, but not limited to:
 - a. Commercial General Liability Insurance.
 - b. Business Automobile Coverage Insurance.
 - c. Worker Compensation and Employers Liability Insurance.
 - d. Railroad Protective Liability Insurance.
 - e. Umbrella or Excess Insurance.

f. Pollution Liability Insurance.

T. Product Approval and Payment

1. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items produced by the Consultant in the performance of the Contract, shall be subject to the approval and acceptance by the Caltrans Contract Manager prior to invoicing and payment for these items.
2. All of the deliverables and tasks provided for acceptance under each Task Order shall comply with the terms, covenants and conditions of the Contract.
3. Upon completion of each deliverable or task, the Caltrans Contract Manager shall either accept or reject the completed work. In the event of non-acceptance due to errors, omissions, or non-compliance with the Caltrans Manuals, as revised as of the time of the Task Order, or the provisions of the Contract, the Consultant shall remedy the errors, omissions, or non-compliance to the satisfaction of the Caltrans Contract Manager at no cost to Caltrans prior to payment. Caltrans shall withhold payment until the work is satisfactorily completed and approved by the Caltrans Contract Manager. Additional cost incurred to correct errors will not be compensated.
4. Caltrans shall not pay the Consultant for the Consultant's work under the Contract and the charges incurred by the Consultant that does not conform to the requirements specified in the Contract and to the applicable Task Order, and such work shall be corrected at the Consultant's sole expense at no additional cost to Caltrans.
5. All reviews, inspections and approvals made prior to the final acceptance of deliverables or Task Orders are intended only to provide interim authorizations to proceed and do not constitute final approval of the deliverable or Task Order.
6. Notwithstanding any other provision of the Agreement, until final acceptance of a Task Order under the Agreement, any acceptance or approval means approval to proceed, but it does not mean acceptance or approval of a deliverable or task, and, it does not reduce or eliminate any of Consultant's duties or responsibilities under the Agreement.

U. General Deliverables.

All deliverables, intermediate work products, and original documents including, but not limited to, original field notes, photographs, reports, documents, plans, data, data files,

edits to field data, adjustment calculations, final results, drawings, specifications, estimates, studies, record search, records, books, maps, manuscripts, manuals, digital electronic software developed, databases, background information, spreadsheets, procedural scripts, macros developed, and intellectual properties, developed pursuant to the Contract, shall be subject to the provisions of Exhibit D, sections XIX and XX and shall be sent to Caltrans upon completion of each Task Order deliverable and acceptance/approval of the work by the Caltrans Contract Manager or immediately upon request by the Caltrans Contract Manager. The Consultant shall retain a copy of all documents furnished to Caltrans until expiration of the Contract.

Unless otherwise specified in the Task Order, the deliverables shall conform to the following:

1. Data Format for Unprotected and Modifiable Digital Electronic File Transfers.

The Consultant shall deliver unprotected and modifiable digital electronic files meeting the following requirements and as specified in each Task Order:

- a. Alphanumeric information (80 character, ASCII data type).
- b. Reports (Acrobat Writer 5 and above).
- c. Graphs, charts (Acrobat Writer 5 and above).
- d. Compliance with standard naming convention (including, but not limited to, Project ID, County, Route/PM, Date).

2. The Consultant shall work in close liaison with the Caltrans Contract Manager. Time is of the essence. Caltrans shall exercise review and approval functions through the Caltrans Contract Manager at key points, as specified in each Task Order. Milestone reviews shall be performed with the Caltrans Contract Manager for the specific performance, products, and deliverables listed in each Task Order.

3. The Consultant shall prepare a cost estimate showing WBS tasks, and their subtasks, personnel, personnel hours estimated for each WBS task or subtask, and a schedule of deliverables.

4. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract shall be prepared on Caltrans standardized forms. Necessary forms shall be provided by Caltrans for the Consultant's use.

5. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract shall be submitted in both hardcopy and unprotected and modifiable digital electronic files in the Caltrans-approved forms

and in the Caltrans-approved and designated digital electronic formats (Microsoft Word, Microstation, CAiCE, AutoCAD Civil 3D, PhotoShop, 8 1/2 x 11 in green, plastic, three ring binder), in accordance with the guidelines in the Contract and each Task Order, and shall conform to Caltrans standards and the requirements of the Caltrans Office Engineer at the end of Contract or when requested by the Caltrans Contract Manager or Caltrans designee. The unprotected and modifiable digital electronic files shall include the responsible person's digital electronic signature and seal. The Consultant shall verify the latest version of software used prior to submittal. The Consultant shall also provide plot parameter (.par) or IPARM (.i) files in accordance with I-Plot standards.

6. At the end of each Task Order or when requested by the Caltrans Contract Manager, the Consultant shall also submit one (1) unprotected and modifiable digital electronic copy of all analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract in a specified digital device format (CD, DVD, and/or flash drive). The file formats shall be specified in each Task Order. Appropriate documentation shall accompany each digital device indicating the contents of each file.
7. When the Consultant is required to prepare and submit analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract and any approved Task Order to Caltrans or review analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items submitted to Caltrans by others, these documents shall be reviewed. They shall be submitted in draft as scheduled and the opportunity provided for Caltrans to provide comments and feedback, prior to final submittal. The specific schedule for Caltrans' review of the Consultant's submittals shall be specified in the Task Order.

The Consultant personnel involved in preparation or review of analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items shall be identified in the prepared or review report.

8. If the Consultant fails to submit the required analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract and any

approved Task Order, Caltrans shall have the right to withhold payment and/or terminate the Contract in accordance with the termination provisions of the Contract per Exhibit D, Section III, Termination. If the Contract is terminated, the Consultant shall, at Caltrans' request, return all materials recovered or developed by the Consultant under the Contract including, but not limited to, photos, field notes, computer data files, maps, artifact collections, catalogs, analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract.

9. For each Task Order, a WBS Task milestone submittal schedule shall be prepared by the Consultant and approved by the Caltrans Contract Manager. Milestones may be changed by written agreement between the Caltrans Contract Manager and the Consultant Contract Manager through an amendment to the Task Order.
10. The Consultant shall prepare and update the Caltrans Work Breakdown Structure (WBS) as set forth in the Contract for each Task Order issued by the Caltrans Contract Manager showing a deliverables schedule. It is expected that the Consultant shall complete and meet the agreed upon schedule for each Task Order. Failure to complete the work based on the agreed upon schedule in the Task Order may result in termination of the Task Order or the Contract. Caltrans may have work completed in any way allowed by law, for which the Consultant shall be liable for any additional costs incurred by Caltrans to complete the work. Such costs may be deducted from amounts due to the Consultant in pending or future invoices, or if the Contract is terminated, may be recouped by any means allowed by law.
11. The Consultant shall maintain a separate complete set of project files for each Task Order issued by the Caltrans Contract Manager performed under the Contract. The Consultant shall maintain two (2) sets of these files. One (1) set shall be maintained on site with the Consultant and the other set shall be updated by the Consultant monthly and delivered to the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager. These files shall be indexed in accordance with Caltrans' Project Development Uniform File System (http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt07.pdf). These files shall be made available to the Caltrans Contract Manager during normal working hours and shall be transferred to Caltrans upon completion of work under the Task Order. If requested by the Caltrans Contract Manager, the Consultant shall provide these project files.
12. Deliverables specified in each Task Order shall be delivered to the attention and address indicated in each Task Order.

13. The Consultant shall be capable of working in either English or Metric units.
14. All deliverables shall be prepared in Imperial English Units unless an exception is approved. The units to be used for deliverables shall be addressed within individual Task Orders.
15. A Task Order may require the Consultant to use software and digital electronic formats other than those indicated in the Contract as needed to accomplish the objectives of the Task Order.
16. Quality Control Plan:

Prior to the work, the Consultant shall prepare the quality control plan and the minimum standard of work quality and obtain approval from the Caltrans Contract Manager, in effect for each and every Task Order during the entire time the work is being performed under the Contract. The Consultant shall complete the quality control plan and certify at the completion of work that all measures contained therein were satisfied. Caltrans shall perform quality assurance on the quality control plan to assure that quality control was satisfied.

The Consultant's quality control plan shall establish a process whereby:

- a. All deliverables are reviewed for accuracy, completeness, and readability before submittal to Caltrans.
- b. Calculations and plans are independently checked, corrected and re-checked.
- c. All job-related correspondence and memoranda are routed and received by affected persons and then filed in the appropriate Task Order file.
- d. Field activities are routinely verified for accuracy and completeness, such that any discovered deficiencies do not become systemic or affect the result of a Task Order deliverable.

The Consultant shall provide an outline of the quality control program before a specific task begins and shall identify critical quality control reviews within each Task Order. The Consultant shall identify the preparer and the designated reviewer for each document that the Consultant furnishes to Caltrans under each Task Order. The Consultant shall comply with all applicable state and federal standards and requirements. The Caltrans Contract Manager shall periodically request evidence that the quality control/quality assurance plan is functioning. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract submitted to the Caltrans Contract Manager for review shall be marked clearly as being fully checked or unchecked, and that the preparation of the material followed the quality control plan established for the

work. The Quality Control/Quality Assurance (QC/QA) plan shall contain provisions for the development of appropriate “checklists” to maintain product quality and control. These “checklists” shall be delivered to the Caltrans Contract Manager with the QC/QA plan. The Consultant shall update these documents when directed by the Caltrans Contract Manager. Within thirty (30) calendar days of the Notice to Proceed (NTP), the Consultant shall submit to the Caltrans Contract Manager or Caltrans designee a job specific QC/QA plan and staffing plan.

17. Subject to Caltrans review, approval, and acceptance, the Consultant has total responsibility for and shall verify the accuracy and completeness of the analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract prepared by the Consultant or its Subconsultants for the projects as specified in the Contract and in each Task Order. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract shall be reviewed by Caltrans for conformity with project standards and the requirements in the Task Order and the Contract. The analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract are subject to Caltrans’ review, approval, and acceptance. Reviews by Caltrans do NOT include detailed review or checking of major components, quantitative calculations, related details or accuracy of information. The responsibility for accuracy and completeness of such items remains solely that of the Consultant.
18. The Caltrans Contract Manager shall address all questions which may arise as to the quality or acceptability of deliverables furnished and work performed for the Contract.
19. Prepare the analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract in accordance with prevailing industry standards and in a form acceptable to the Caltrans Contract Manager. These items shall identify the preparer, the designated reviewers, and the criteria for acceptance. The deliverables shall satisfy the Caltrans acceptance criteria and tests. The work product shall be complete, of neat appearance, well-organized, technically and grammatically correct, independently checked for error, checked by designated reviewers (Caltrans and Consultant Personnel), dated, and shall

conform to industry standards and all applicable Caltrans, State, and Federal Standards, Requirements, and Procedures. All deliverables shall be approved by the Caltrans Contract Manager or Caltrans designee.

The minimum standard of appearance, organization, and content of analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract, shall be that of similar types produced by Caltrans and set forth in related Caltrans manuals.

Caltrans and the Consultant shall develop and agree to a schedule for the services and deliverables to be completed and delivered, and where appropriate, for acceptance criteria and acceptance tests that the services and deliverables must satisfy as a prerequisite for approval by Caltrans. All deliverables shall satisfy the Standards set forth in “Standards” Section in order to be accepted for payment.

V. Traffic Operations and Traffic Management Planning Deliverables.

1. The Consultant shall obtain written approval from Caltrans for all analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract. If there are no Caltrans standardized forms, the format and content requirements for all analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract shall be specified in each Task Order. All analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract to be used for the project includes, but not be limited to, the following:

- a. Traffic Operations Analysis Task Orders.

Unless otherwise specified per Task Order, the Consultant shall submit:

- i. Five (5) copies of each report for review, one set of original reproducible (unbound), and digital electronic file on CD or flash drive.
- ii. Five (5) copies of the approved reports, one set of original reproducible (unbound), and digital electronic file on CD or flash drive.

- iii. Five (5) copies of other studies and/or reports plus digital electronic file on CD or flash drive.
- iv. One (1) set of network plots (22" x 34" or larger) illustrating link characteristics and assignment results by mode.
- v. CD(s) or flash drive(s) containing digital electronic files of all executable program, source code, procedural script and macro, data bank, data file, plot, text document, and spreadsheet that collectively constitute a model, excluding the proprietary modeling software possessed by the Consultant listed in "Equipment Requirements."
- vi. CD(s) or flash drive(s) containing digital electronic files of all data and spreadsheets that are used to support model and/or its components.

b. Transportation Management Plan Task Orders.

Unless otherwise specified per Task Order, the Consultant shall submit:

- i. Five (5) copies of each draft Transportation Management Plan and one (1) digital electronic copy, for review by Caltrans.
- ii. Five (5) copies of all final Transportation Management Plans and one (1) digital electronic copy.
- iii. Five (5) copies of each draft report or studies other than the Transportation Management Plan and one (1) digital electronic copy.
- iv. Five (5) copies of all final reports and studies other than the Transportation Management Plan and one (1) digital electronic copy.
- v. Five (5) copies of draft lane requirements charts and supporting calculations, along with one (1) digital electronic copy of the charts and calculations, for review by Caltrans. The draft lane requirements charts shall be prepared by the Consultant using software that is 100% compatible with Caltrans's Office of Office Engineer's format requirements.
- vi. Five (5) sets of draft detour layouts on street maps or half size (11" x 17") plan sheets and one (1) digital electronic copy of the draft detour layouts for review by Caltrans.
- vii. Five (5) copies of final lane requirements charts and supporting calculations, along with one (1) digital electronic copy of the final charts and calculations, on a CD. The final lane requirements charts shall be prepared by the Consultant using software that is 100% compatible with Caltrans' Office of Office Engineer's format requirements.

- viii. Five (5) sets of final detour layouts on street maps or half size (11" x 17") plan sheets, one set of original reproducible (unbound), and one (1) digital electronic copy of the final detour layouts.
2. All Traffic Operations and Traffic Management Planning Services analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, deliverables, backup documents, other documents, and other items required by the Contract performed on computer shall be delivered to Caltrans including, but not limited to, the formats specified below:
- a. Text-based documents shall be submitted as an Adobe Portable Document Format ("pdf") file using Adobe Acrobat Professional version 5 or later software. The pdf file shall be inclusive of all graphics (e.g. page orientation, photographs or other images, charts, and tables) and be suitable for printing in final form. The pdf file shall:
 - i. Contain functioning bookmarks, indexes, tables of contents or other hyperlinks as required by the Task Order.
 - ii. Be configured (e.g. bookmarks, indexes, table of contents, thumbnails, annotations, signatures, and security settings) as required, or as directed by the Task Order.
 - iii. Be optimized for use by Adobe Acrobat Reader 10 or newer.
 - b. Text-based documents shall also be submitted in Microsoft Word format, version 2007. The document shall include all graphics (e.g. photographs, image graphics, charts, and tables). Photographs shall be in "jpeg" file format. Other image graphics shall be in "gif" format unless otherwise specified.
 - c. All graphics (e.g. photographs or other drawings) shall be submitted separately from the pdf and Microsoft Word documents in archive-type file formats (e.g. photographs and bitmapped drawings as "tif", Microstation drawings as "dgn", and vector drawings as "ai") unless otherwise specified. The intent of this section is for the Consultant to provide Caltrans with a copy of each graphic in an uncompressed file format for archive purposes. The Consultant may suggest alternative formats that are compatible with this goal.
 - d. Spreadsheet files shall be submitted in Microsoft Excel format, version 2007, or format currently in use by Caltrans.
 - e. Word processing files shall be submitted in Microsoft Word format, version 2007, or format currently in use by Caltrans.
 - f. Database files shall be submitted in Microsoft Access format, version 2007, or format currently in use by Caltrans.
 - g. The Consultant shall not format digital electronic files as "view only" or "read only" unless so specified in the Task Order.
 - h. Other - As specified in the Task Order.

3. Scope of Traffic Study using the Caltrans Traffic Impact Studies (TIS) Guidelines. The TIS Guidelines is available through the following link: http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf
4. The complexity of a project shall determine the level of work required for a traffic analysis review. A Traffic Study may include an analysis of main line traffic volumes as well as the intersections of adjacent local facilities with a State highway.

Traffic Study Report

The following is a list of the minimum contents for a typical traffic study report under review.

- I. EXECUTIVE SUMMARY
- II. TABLE OF CONTENTS
 - A. List of Figures/Maps
 - B. List of tables
- III. INTRODUCTION
 - A. Description of the potential project (alternatives)
 - B. Location of project
 - C. Site plan including all access to State highway
 - D. Contact persons
- IV. TRAFFIC ANALYSIS
 - A. Clearly stated assumptions
 - B. Existing and project traffic volumes (including turning movements), facility geometry (including storage lengths, and traffic control (including signal phasing and multi-signal progression where appropriate).
 - C. Analyze existing conditions, open to traffic year (build and no-build conditions) and horizon years (build and no-build conditions).
 - D. Provide recommendations and mitigations
- V. APPENDICES
 - A. Description of how traffic data was collected
 - B. Description of methodologies and assumptions used

C. Worksheets used in analysis (traffic count information)

W. Conflict of Interest.

1. All Traffic Operations and Traffic Management Planning Services provided by the Consultant and deliverables produced by the Consultant shall be free of any conflict of interest and shall be subject to the approval and acceptance of the Caltrans Contract Manager. The consultant shall inform the Caltrans Contract Manager of any 'perceived' conflict of interest as soon as discovered.
2. The Consultant shall not receive compensation for any services or products in which the Consultant is found to have a conflict of interest. In the event of non-acceptance due to discovery of conflict of interest, the Consultant shall provide replacement deliverables free of any conflict of interest prior to payment. In the event replacement deliverables are not possible, the Consultant shall not receive compensation for the deliverables containing conflict of interest. Examples of conflict of interest include, but not be limited to, the following:
 - a. Both preparing and reviewing the same technical Traffic Operations and Traffic Management Planning Services work on the same project for Caltrans or others.

The above conflict of interest scenario is only an example of possible conflicts of interest for the services provided under the Contract, but is not intended to describe all circumstances for potential or actual conflicts.