

information, as appropriate.

2. *A description of any major actions proposed by other governmental agencies in the same geographic area as the proposed FHWA action.*
3. *A summary of all reasonable alternatives considered (The draft EIS must identify the preferred alternative or alternatives officially identified by the HA).*
4. *A summary of major environmental impacts, both beneficial and adverse.*
5. *Any areas of controversy (including issues raised by agencies and the public).*
6. *Any major unresolved issues with other agencies.*
7. *A list of other Federal actions required for the proposed action (i.e., permit approvals, land transfer, Section 106 agreements, etc.).*

III. TABLE OF CONTENTS

A. Includes the following headings (p. 13 of TA):

1. *Cover Sheet*
2. *Summary*
3. *Table of Contents*
4. *Purpose of and Need for Action*
5. *Alternatives*
6. *Affected Environment*
7. *Environmental Consequences*
8. *List of Preparers*
9. *List of Agencies, Organizations, and persons to whom copies of the document are sent*
10. *Comments and Coordination*
11. *Index*
12. *Appendices (if any)*

B. Lists Section 4(f) Evaluation, if appropriate.

C. Includes listing of figures and tables.

IV. PURPOSE AND NEED OF PROJECT (Refer to Purpose and Need Policy Paper, the NEPA/404 Merger Agreement and Guidance Papers)

A. Identifies the transportation problem with supporting data and proposed solutions to the problem.

B. Establishes level of service (LOS) objective, if any.

R.C.:

-- This section should include a summary of how the project purpose and need was identified in the planning process and a summary of relevant studies.

-- The traffic and transportation conditions that the project is intended to address are discussed here and not in the Affected Environment Section.

-- The purpose and need discussed is the purpose and need for the project, not for the EIS.

TA Guidance:

This section should identify and describe the proposed action and the transportation problem(s) or other needs which it is intended to address (40 CFR 1502.13). This section should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the general public. This discussion should clearly describe the

problems which the proposed action is to correct. It will form the basis for the "no action" discussion in the "Alternatives" section, and assist with the identification of reasonable alternatives and the selection of the preferred alternative. Charts, tables, maps, and other illustrations (e.g., typical cross-section, photographs, etc.) are encouraged as useful presentation techniques.

The following list may assist in the explanation of the need for the proposed action. It is not all-inclusive or applicable in every situation and is intended only as a guide.

- 1. Project Status - Briefly describe the project history including actions taken to date, other agencies and governmental units involved, action spending, schedules, etc.*
- 2. System Linkage - Is the proposed project a "connecting link?" How does it fit in the transportation system?*
- 3. Capacity - Is the capacity of the present facility inadequate for the present traffic? Projected traffic? What capacity is needed? What is the level(s) of service for existing and proposed facilities?*
- 4. Transportation Demand - Including relationship to any statewide plan or adopted urban transportation plan together with an explanation of the project's traffic forecasts that are substantially different from those estimates from the 23 U.S.C. 134 (Section 134) planning process.*
- 5. Legislation - Is there a Federal, State, or local governmental mandate for the action?*
- 6. Social Demands or Economic Development - New employment, schools, land use plans, recreation, etc. What projected economic development/land use changes indicate the need to improve or add to the highway capacity?*
- 7. Modal Interrelationships - How will the proposed facility interface with and serve to complement airports, rail and port facilities, mass transit services, etc.?*
- 8. Safety - Is the proposed project necessary to correct an existing or potential safety hazard? Is the existing accident rate excessively high? Why? How will the proposed project improve it?*
- 9. Roadway Deficiencies - Is the proposed project necessary to correct existing roadway deficiencies (e.g., substandard geometrics, load limits on structures, inadequate cross-section, or high maintenance costs)? How will the proposed project improve it?*
- 10. Where new pedestrian or bicycle facilities are proposed as a part of the proposed highway project, the EIS should include sufficient information to explain the basis for providing the facilities (e.g., proposed bicycle facility is a link in the local plan or sidewalks will reduce project anticipated access impact to the community).*

V. ALTERNATIVES

(See also Alternatives Guidance Papers and the NEPA/404 Agreement)

- A. Includes discussion and description of all reasonable alternatives and the "no action" alternative including estimated costs information.
- B. Includes discussion on mass transit alternatives if in urbanized areas over 200,000 population.
- C. Demonstrates that Single Occupant Vehicle capacity increasing projects come from or are consistent with the State Congestion Management Plan and that all reasonably available travel demand reduction and operational management strategies have been adopted for the proposed project and project corridor.
- D. Considers Transportation System Management (TSM) alternatives.

E. Summarizes and references Major Investment Study (MIS), if developed separately (reference 23 CFR 450.318 and August 25, 1994 FHWA Questions and Answers on MIS Paper).

F. Explains in detail "other alternatives" previously considered in project development and why they were eliminated or rejected.

G. Evaluates all reasonable alternatives including the "no action" to a comparable level of detail.

H. Includes supporting information if a "preferred alternative" is identified.

R.C.:

-- Includes a summary of the screening process for eliminating the alternatives rejected during transportation planning.

-- Includes a statement that indicates the final selection of an alternative will not be made until after the consideration of impacts and the public hearing comments and following approval of the final EIS.

-- Includes 20-year traffic projection based upon anticipated Project Specifications and Estimates' (PS&Es) approval date.

-- Discusses analysis of all alternatives including full and non-standard approved design. Also discusses any non-standard features.

-- Includes pictorial of the six levels of service (LOS).

TA Guidance:

This section of the draft EIS must discuss a range of alternatives, including all "reasonable alternatives" under consideration and those "other alternatives" which were eliminated from detailed study (23 CFR 771.123(c)). The section should begin with a concise discussion of how and why the "reasonable alternatives" were selected for detailed study and explain why "other alternatives" were eliminated. The following range of alternatives should be considered when determining reasonable alternatives:

1. "No-action" alternative: The "no-action" alternative normally includes short-term minor restoration types of activities (safety and maintenance improvements, etc.) that maintain continuing operation of the existing roadway.

2. Transportation System Management (TSM) alternative: The TSM alternative includes those activities which maximize the efficiency of the present system. Possible subject areas to include in this alternative are options such as fringe parking, ridesharing, high-occupancy vehicle (HOV) lanes on existing roadways, and traffic signal timing optimization. This limited construction alternative is usually relevant only for major projects proposed in urbanized areas over 200,000 population.

For all major projects in these urbanized areas, HOV lanes should be considered. Consideration of this alternative may be accomplished by reference to the regional transportation plan, when that plan considers this option. Where a regional transportation plan does not reflect consideration of this option, it may be necessary to evaluate the feasibility of HOV lanes during early project development. Where a TSM alternative is identified as a reasonable alternative for a "connecting link" project, it should be evaluated to determine the effect that not building a highway link in the

transportation plan will have on the remainder of the system. A similar analysis should be made where a TSM element(s) (e.g., HOV lanes) is part of a build alternative and reduces the scale of the highway link.

While the above discussion relates primarily to major projects in urbanized areas, the concept of achieving maximum utilization of existing facilities is equally important in rural areas. Before selecting an alternative on new location for major projects in rural areas, it is important to demonstrate that reconstruction and rehabilitation of the existing system will not adequately correct the identified deficiencies and meet the project need.

3. Mass Transit: This alternative includes those reasonable and feasible transit options (bus systems, rail, etc.) even though they may not be within the existing FHWA funding authority. It should be considered on all proposed major highway projects in urbanized areas over 200,000 population. Consideration of this alternative may be accomplished by reference to the regional or area transportation plan where that plan considers mass transit or by an independent analysis during early project development.

Where urban projects are multi-modal and are proposed for Federal funding, close coordination is necessary with the Federal Transportation Administration (FTA). In these situations, FTA should be consulted early in the project-development process. Where FTA funds are likely to be requested for portions of the proposal, FTA must be requested to be either a joint lead agency or a cooperating agency at the earliest stages of project development (23 CFR 771.111(d)). Where applicable, cost-effectiveness studies that have been performed should be summarized in the EIS.

4. Build alternatives: Both improvement of existing highway(s) and alternatives on new location should be evaluated. A representative number of reasonable alternatives must be presented and evaluated in detail in the draft EIS (40 CFR 1502.14(a)). For most major projects, there is a potential for a large number of reasonable alternatives. Where there is a large number of alternatives, only a representative number of the most reasonable examples, covering the full range of alternatives, must be presented. The determination of the number of reasonable alternatives in the draft EIS, therefore, depends on the particular project and the facts and circumstances in each case.

Each alternative should be briefly described using maps or other visual aids such as photographs, drawings, or sketches to help explain the various alternatives. The material should provide a clear understanding of each alternative's termini, location, costs, and the project concept (number of lanes, right-of-way requirements, median width, access control, etc.). Where land has been or will be reserved or dedicated by local government(s), donated by individuals, or acquired through advanced or hardship acquisition for use as highway right-of-way for any alternative under consideration, the draft EIS should identify the status and extent of such property and the alternatives involved. Where such lands are reserved, the EIS should state that the reserved lands will not influence the alternative to be selected.

Development of more detailed design for some aspects (e.g., Section 4(f), COE or USCG permits, noise, wetlands, etc.) of one or more alternatives may be necessary during

preparation of the draft and final EIS in order to evaluate impacts or mitigation measures or to address issues raised by other agencies or the public. However, care should be taken to avoid unnecessarily specifying features which preclude cost-effective final design options.

All reasonable alternatives under consideration (including the no-build) need to be developed to a comparable level of detail in the draft EIS so that their comparative merits may be evaluated (40 CFR 1502.14(b) and (d)). In those situations where the HA has officially identified a "preferred" alternative based on its early coordination and environmental studies, the HA should so indicate in the draft EIS. In these instances, the draft EIS should include a statement indicating that the final selection of an alternative will not be made until the alternatives' impacts and comments on the draft EIS and from the public hearing (if held) have been fully evaluated. Where a preferred alternative has not been identified, the draft EIS should state that all reasonable alternatives are under consideration and that a decision will be made after the alternatives' impacts and comments on the draft EIS and from the public hearing (if held) have been fully evaluated.

VI AFFECTED ENVIRONMENT

The following is a reminder of the issues that should be addressed to describe the **existing conditions** in the study area affected by all reasonable alternatives. The outline format is used only for ease of referencing and follows the TA format. Discussion of the information is not restricted to the listed headings but may be contained under broader or narrower subheadings. The discussion should be limited to information, issues, and values that have a bearing on possible impacts, mitigation and selection of an alternative. Data and analysis should be commensurate with the importance of the impact. Photographs, illustrations and other graphics should be used with the text. A statement that an issue listed below is not pertinent within the project study area should be included when appropriate.

A. LAND USE (p. 19 of TA)

1. Includes a Regional summary.
2. Identifies the study area.
3. Includes a brief description of the scope and status of planning processes for the local jurisdictions, including conformance with local comprehensive plans.
4. Includes map showing existing and planned land use (farmland, parks, community and recreational facilities, etc., by type) and transportation plans.

TA Guidance:

This discussion should identify the current development trends and the State and/or local government plans and policies on land use and growth in the area which will be impacted by the proposed project. These plans and policies are normally reflected in the area's comprehensive development plan, and include land use, transportation, public facilities, housing, community services, and other areas.

B. FARMLAND (pp. 19-20 of TA)

Required for this project? Y or N

1. Describes existing farmlands and consultation done to identify them.
 Farmland protected under the Farmland Protection Act includes prime and

- unique farmland and other farmland of statewide or local importance.
- 2. Summarizes appropriate parts of Natural Resources Conservation Service (NRCS) form AD 1006 farmland determination (includes form in appendix).
- 3. Where farmland would be impacted, a map showing the location of all farmlands in the project impact area.

C. SOCIAL AND ECONOMIC (pp 20-22 of TA)

- 1. Includes demographic data (i.e., age, ethnicity, and income) from most recent census.
- 2. Discusses locations and sense of neighborhood and community cohesion relative to alternatives.
- 3. Identifies community resources (parks, churches, shopping, schools, emergency services, libraries, etc.).
- 4. Discusses existing travel patterns.
- 5. Discusses existing types of housing and businesses.
- 6. Discusses employment and tax base.

TA Guidance:

Where there are foreseeable impacts, the draft EIS should discuss the following items commensurate with the level of potential impacts and to the extent they are distinguishable:

- (a) Existing neighborhoods or community cohesion for the various social groups, development trends, property values trend, etc.*
- (b) Existing travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian).*
- (c) Existing school districts, recreation areas, churches, businesses, police and fire protection, etc.*
- (d) Identifiable general social groups that could be benefitted or harmed by the proposed project. The elderly, handicapped, nondrivers, transit-dependent, and minority and ethnic groups are of particular concern. Secondary sources of information such as census and personal contact with community leaders supplemented by visual inspections normally should be used to obtain these data. However, for projects with potentially major community impacts, a survey of the affected area may be needed to adequately evaluate the extent and severity of impacts of the various alternatives on these social groups.*

D. PEDESTRIAN AND BICYCLE FACILITIES *Required for this project? Y or N*

- 1. Identifies any existing facilities and their use (recreation-4(f) or transportation).
- 2. Discuss local and regional plans for existing and future facilities.

E. AIR QUALITY

Required for this project? Y or N

- 1. Identifies relevant pollutants and their National Ambient Air Quality Standards (NAAQS) in existing air quality.
- 2. Discusses regional compliance with NAAQS (TIP & RTP conformity to SIP).
- 3. Indicates attainment/non-attainment status of the area for CO, Ozone, PM10, and NOx.

F. WATERWAYS & HYDROLOGIC SYSTEMS *Required for this project? Y or N*

1. Identifies public water sources, aquifers (with emphasis on sole-source aquifers), wellhead protection areas, and watersheds (drainage patterns, intermittent runoff channels).
2. Identifies lakes, bays, streams.
3. Coastal resources.
4. National Wild and Scenic Rivers.
5. Areas within Coastal Zone Management Program.
6. Areas subject to Coastal Barrier Resources Act.
7. Wetlands (discussion should not be unnecessarily repeated under a separate heading).
8. Factors that influence percolation and infiltration (now discussed under Water Quality).

R.C.:

- Identifies beneficial uses of surface waters.
- Discusses only resources that could be affected by implementation of the project.
- Discusses resource parameters or characteristics of concern that could be affected by project alternatives.

WATER QUALITY

Water quality can be discussed in Waterways and Hydrologic Systems (preferable) or under a separate section. If it is discussed under a separate section, it should not unnecessarily repeat the information. The discussion should include the following;

1. Water bodies that may receive runoff from the project.
2. Ground water conditions along alternatives alignment.
3. Discussion of water quality parameters that may be affected by the project.
4. Identification of major aquifers, if not done under Waterways and Hydrologic Systems.

TA Guidance:

The draft EIS should include summaries of analyses and consultations with the State and/or local agency responsible for water quality. Coordination with the EPA under the Federal Clean Water Act may also provide assistance in this area. The discussion should include sufficient information to describe the ambient conditions of streams and water bodies which are likely to be impacted and identify the potential impacts of each alternative and proposed mitigation measures. Under normal circumstances, existing data may be used to describe ambient conditions. The inclusion of water quality data spanning several years is encouraged to reflect trends.

The draft EIS should also identify any locations where roadway runoff or other nonpoint source pollution may have an adverse impact on sensitive water resources such as water supply reservoirs, ground water recharge areas, and high quality streams.

G. WETLANDS/WATERS OF THE U.S. *Required for this project? Y or N*
(Including agricultural wetlands) (p. 17 of TA)

The text needs to indicate whether waters of the U.S. are in the project area.

1. If there are no waters of the U.S. in the project area, the discussion should

provide the basis for and conclude that there are no waters of the U.S. in the project area.

2. If there are waters of the U.S. in the project area, the discussion should
 - a. Include and reference the location(s) of copies of Corps and other appropriate agencies (NEPA/404 Agreement agencies) letters concurring in the Purpose and Need and the Alternatives evaluated in the EIS (Not required for wetland covered by Nationwide permits).
 - b. Includes an exhibit or exhibits depicting the waters of the U.S. in the project area relative to the alternatives under consideration, including identification of the location(s) of any associated sensitive species habitat or special aquatic sites.
 - c. Provides a concise description of the waters of the U.S. in the project area;
 - d. Briefly describes all sensitive resources associated with the waters of the U.S. in the project area; and
 - e. Refers to the location(s) for the exhibits depicting the waters of the U.S., special aquatic sites, and associated sensitive species habitat.

H. WILDLIFE, FISHERIES AND VEGETATION

Required for this project? Y or N

1. Discusses ecosystems (wildlife and vegetation), fisheries and any sensitive species.
2. Discusses wildlife and fish migration patterns and existing obstacles to migration.
3. Discuss threatened and endangered species under a separate heading.

I. FLOODPLAIN

Required for this project? Y or N

1. Identifies base flood plains (100 year) using National Flood Insurance Program (NFIP) maps or other maps developed by the highway agency. If the NFIP maps do not exist, the agency must develop the needed maps so that the floodplain can be identified.
2. Identifies natural and beneficial floodplain values.

J. WILD AND SCENIC RIVERS

Required for this project? Y or N

1. Summarizes the coordination with Federal Land agency to determine presence of river on or under study for inclusion on the National Wild and Scenic Rivers System (possible Section 4(f)).

TA Guidance:

If the proposed action could have foreseeable adverse effects on a river on the National Wild and Scenic Rivers System or a river under study for designation to the National Wild and Scenic Rivers System, the draft EIS should identify early coordination undertaken with the agency responsible for managing the listed or study river (i.e., National Park Service (NPS), Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), or Forest Service (FS)). The EIS should identify the natural, cultural, and recreational values of the listed or study river.

Publicly owned waters of designated wild and scenic rivers are protected by Section 4(f). Additionally, public lands adjacent to a Wild and Scenic River may be subject to Section 4(f) protection. An examination of any adopted or proposed management plan for a listed river should be helpful in making the determination on applicability of Section 4(f).

K. COASTAL BARRIERS

Note: There are no designated coastal barriers in California as of February 1995.

L. COASTAL ZONE (page 31 of TA) Required for this project? Y or N

1. Identifies Coastal Zone Management Program (CZMP) area.

TA Guidance:

*Where the proposed action is within, or is likely to affect land or water uses within the area covered by a State Coastal Zone Management Program (CZMP) approved by the Department of Commerce, the draft EIS should briefly describe the portion of the affected CZMP plan, identify the potential impacts, and include evidence of coordination with the State Coastal Zone Management agency or appropriate local agency. (Additional guidance under **Environmental Consequences**)*

M. THREATENED AND ENDANGERED SPECIES Required for this project? Y or N

1. Includes a summary of the biological studies specific to threatened and endangered species.
2. Refers to and includes in the appendix, recent Fish and Wildlife Service (FWS) and/or National Marine Fisheries Service (NMFS) letters identifying species and critical habitat.

TA Guidance:

The SHA must obtain information from the FWS of the DOI and/or the National Marine Fisheries Service (NMFS) of the Department of Commerce to determine the presence or absence of listed and proposed threatened or endangered species and designated and proposed critical habitat in the proposed project area (50 CFR 402.12(c)). The information may be (1) a published geographical list of such species or critical habitat; (2) a project-specific notification of a list of such species or critical habitat; or (3) substantiated information from other credible sources. Where the information is obtained from a published geographical list the reasons why this would satisfy the coordination with DOI should be explained. If there are no species or critical habitat in the proposed project area, the Endangered Species Act requirements have been met. The results of this coordination should be included in the draft EIS.

N. HISTORIC AND ARCHAEOLOGICAL PRESERVATION Required for this project? Y or N

1. Includes identification and description of National Register of Historic Places (NRHP) listed and eligible historic and archeological resources for **each** reasonable alternative.
2. Refers to and includes in the appendix a concurrence in eligibility letter from State Historic Preservation Officer (SHPO) for property affected by each

reasonable alternative.

TA Guidance:

The draft EIS should contain a discussion demonstrating that historic and archeological resources have been identified and evaluated in accordance with the requirements of 36 CFR 800.4 for each alternative under consideration. The information and level of effort needed to identify and evaluate historic and archeological resources will vary from project to project as determined by the FHWA after considering existing information, the views of the SHPO and the Secretary of Interior's "Standards and Guidelines for Archeology and Historic Preservation." The information for newly identified historic resources should be sufficient to determine their significance and eligibility for the National Register of Historic Places. The information for archeological resources should be sufficient to identify whether each warrants preservation in place or whether it is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. Where archeological resources are not a major factor in the selection of a preferred alternative, the determination of eligibility for the National Register of newly identified archeological resources may be deferred until after circulation of the draft EIS.

The draft EIS discussion should briefly summarize the methodologies used in identifying historic and archeological resources. Because Section 4(f) of the DOT Act applies to the use of historic resources on or eligible for the National Register and to archeological resources on or eligible for the National Register and which warrant preservation in place, the draft EIS should describe the historical resources listed in or eligible for the National Register and identify any archeological resources that warrant preservation in place. The [Affected Environment Section] document should evidence coordination with the SHPO on the significance of newly identified historic and archeological resources and the eligibility of historic resources for the National Register. Where the draft EIS discusses eligibility for the National Register of archeological resources, the coordination with the SHPO on eligibility and effect should address both historic and archeological resources.

The proposed use of land from an historic resource on or eligible for the National Register will normally require an evaluation and approval under Section 4(f) of the DOT Act. Section 4(f) also applies to all archeological sites on or eligible for the National Register and which warrant preservation in place (see discussion on Section 4(f) evaluation).

O. HAZARDOUS WASTE SITES

Required for this project? Y or N

(page 34 of TA)

1. Identifies known and potential sites.
2. Coordinates with the EPA and the state agency to help identify sites, as appropriate.

TA Guidance:

Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability

*Act (CERCLA). During early planning, the location of permitted and nonregulated hazardous waste sites should be identified. Early coordination with the appropriate Regional Office of the EPA and the appropriate State agency will aid in identifying known or potential hazardous waste sites. If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, the effects should be discussed in the **Environmental Consequences** Section.*

P. VISUAL (page 34-35 of TA)

Required for this project? Y or N

1. Identifies sensitive visual resources.
2. Indicates if project is in a visually sensitive urban or rural setting.

TA Guidance:

The draft EIS should state whether the project alternatives have a potential for visual quality impacts. When this potential exists, the draft EIS [Affected Environment Section] should identify the existing visual resource and the potential viewers of and from the project. When there is potential for visual quality impacts, the draft EIS should explain the consideration given to design quality, art, and architecture in the project planning. These values may be particularly important for facilities located in visually sensitive urban or rural settings. When a proposed project will include features associated with design quality, art or architecture, the draft EIS should be circulated to officially designated State and local arts councils and, as appropriate, other organizations with an interest in design, art, and architecture.

VII. ENVIRONMENT CONSEQUENCES (Avoid, Minimize, and Mitigate)

The document must fully describe the probable impacts in the study area affected by all reasonable alternatives. All measures proposed to mitigate any adverse impacts identified must be included or an explanation as to why the mitigation would not be a reasonable, feasible or prudent expenditure of public funds. *A statement that a given subject area listed below is not applicable for the particular project study area is recommended when appropriate.*

A. LAND USE IMPACTS

1. Discusses consistency of the alternatives with land use plans.
2. Discusses growth inducement:
 - a. Future development trends and land use planning efforts.
 - b. Indirect effects of the project on land use patterns, population density and growth rate.
 - c. Identify any development prohibited from proceeding unless the project is approved.

R.C.:

-- Includes a statement, if applicable, that "(T)he proposed transportation project is intended to meet the existing and/or projected traffic demand based upon the local land use plans."

TA Guidance:

This discussion should address how the alternatives will affect current development trends and their consistency with the State and/or local government plans and policies on land use and growth in the area.

The land use discussion should assess the consistency of the alternatives with the comprehensive development plans adopted for the area and (if applicable) other plans used in the development of the transportation plan required by Section 134. The secondary social, economic, and environmental impacts of any substantial, foreseeable, induced development should be presented for each alternative, including adverse effects on existing communities. Where possible, the distinction between planned and unplanned growth should be identified.

B. FARMLAND IMPACTS

Required for this project? Y or N

1. Discusses impacts to farmland in the project area.
2. Summarizes results of coordination with NRCS.

R.C.:

-- Provides alternatives to avoid farmland impacts if feasible on scores of 160 points or greater on NRCS form AD 1006.

TA Guidance:

The draft EIS should summarize the results of early consultation with the Natural Resources Conservation Service (NRCS) and, as appropriate, State and local agriculture agencies where any of the four specified types of farmland could be directly or indirectly impacted by any alternative under consideration. Where farmland would be impacted, the draft EIS should contain a map showing the location of all farmlands in the project impact area, discuss the impacts of the various alternatives and identify measures to avoid or reduce the impacts. Form AD 1006 (Farmland Conversion Impact Rating) should be processed, as appropriate, and a copy included in the draft EIS. Where the Land Evaluation and Site Assessment score (from Form AD 1006) is 160 points or greater, the draft EIS should discuss alternatives to avoid farmland impacts. If avoidance is not possible, measures to minimize or reduce the impacts should be evaluated and, where appropriate, included in the proposed action.

C. SOCIAL AND ECONOMIC IMPACTS

Required for this project? Y or N

(Also use other available guidance, such as guidance on Environmental Justice)

1. Discusses neighborhood and community cohesion.
2. Addresses impacts on travel patterns, accessibility, community facilities, overall public safety.
3. Discusses impacts on economic vitality in project area and on established business districts, including employment effects, if any.
4. Identifies any contacts with community, city or county leaders.
5. Complies with Executive Order 12898, DOT Environmental Justice guidance.

TA Guidance:

SOCIAL ELEMENTS:

Where there are foreseeable impacts, the draft EIS should discuss the following items for

each alternative commensurate with the level of impacts and to the extent they are distinguishable:

- 1. Changes in the neighborhoods or community cohesion for the various social groups as a result of the proposed action. These changes may be beneficial or adverse, and may include splitting neighborhoods, isolating a portion of a neighborhood or an ethnic group, generating new development, changing property values, or separating residents from community facilities, etc.*
- 2. Changes in travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian).*
- 3. Impacts on school districts, recreation areas, churches, businesses, police and fire protection, etc. This should include both the direct impacts to these entities and the indirect impacts resulting from the displacement of households and businesses.*
- 4. Impacts of alternatives on highway and traffic safety as well as on overall public safety.*
- 5. General social groups specially benefitted or harmed by the proposed project alternatives. The effects of a alternatives on the elderly, handicapped, nondrivers, transit-dependent, and minority and ethnic groups are of particular concern and should be described to the extent these effects can be reasonably predicted. Where impacts on a minority or ethnic population are likely to be an important issue, the EIS should contain the following information broken down by race, color, and national origin: the population of the study area, the number of displaced residents, the type and number of displaced businesses, and an estimate of the number of displaced employees in each business sector. Changes in ethnic or minority employment opportunities should be discussed and the relationship of the project to other Federal actions which may serve or adversely affect the ethnic or minority population should be identified.*

The discussion should address whether any social group is disproportionately impacted and identify possible mitigation measures to avoid or minimize any adverse impacts. Secondary sources of information such as census and personal contact with community leaders supplemented by visual inspections normally should be used to obtain the data for this analysis. However, for projects with major community impacts, a survey of the affected area may be needed to identify the extent and severity of impacts on these social groups.

ECONOMIC ELEMENTS:

There are foreseeable economic impacts, the draft EIS should discuss the following for each alternative commensurate with the level of impacts:

- 1. The economic impacts on the regional and/or local economy such as the effects of the project on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales. Where substantial impacts on the economic viability of affected municipalities are likely to occur, they should also be discussed together with a summary of any efforts undertaken and agreements reached for using the transportation investment to support both public and private economic development plans. To the extent possible, this discussion should rely upon results of coordination with and views of affected State, county, and city officials and upon studies performed under Section 134.*
- 2. The impacts on the economic vitality of existing highway-related businesses (e.g., gasoline stations, motels, etc.) and the resultant impact, if any, on the local economy. For example, the loss of business or employment resulting from building an alternative*

on new location bypassing a local community.

3. Impacts of the proposed action on established business districts, and any opportunities to minimize or reduce such impacts by the public and/or private sectors. This concern is likely to occur on a project that might lead to or support new large commercial development outside of a central business district.

D. RELOCATION IMPACTS

Required for this project? Y or N

1. Identifies and describes residential (number and type of dwelling and price range, tenants and owners) and non-residential (types of businesses) displacees for all reasonable alternatives.
2. Refers to or summarizes the preliminary relocation study including right-of-way cost estimates.
3. Discusses available replacement dwellings and business sites based on current market data.
4. Discusses and refers to the Relocation Assistance Program including the types of benefits available to residential and business displacees (including Last Resort Housing, if applicable) and Title VI of the Civil Rights Act of 1964. A detailed summary of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, should be included in the appendix, if appropriate.

R.C.:

-- Includes a statement, if applicable, that "(T)he acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended."

TA Guidance:

The relocation information should be summarized in sufficient detail to adequately explain the relocation situation including anticipated problems and proposed solutions. Project relocation documents from which information is summarized should be referenced in the draft EIS. Secondary sources of information such as census, economic reports, and contact with community leaders, supplemented by visual inspections (and, as appropriate, contact with local officials) may be used to obtain the data for this analysis.

Where a proposed project will result in displacements, the following information regarding households and businesses should be discussed for each alternative under consideration commensurate with the level of impacts and to the extent they are likely to occur:

- 1. An estimate of the number of households to be displaced, including the family characteristics (e.g., minority, ethnic, handicapped, elderly, large family, income level, and owner/tenant status). However, where there are very few displacees, information on race, ethnicity and income levels should not be included in the EIS to protect the privacy of those affected.*
- 2. A discussion comparing available (decent, safe, and sanitary) housing in the area with the housing needs of the displacees. The comparison should include (1) price ranges, (2) sizes (number of bedrooms), and (3) occupancy status (owner/tenant).*
- 3. A discussion of any affected neighborhoods, public facilities, non-profit organizations,*

and families having special composition (e.g., ethnic, minority, elderly, handicapped, or other factors) which may require special relocation considerations and the measures proposed to resolve these relocation concerns.

4. A discussion of the measures to be taken where the existing housing inventory is insufficient, does not meet relocation standards, or is not within the financial capability of the displacees. A commitment to last resort housing should be included when sufficient comparable replacement housing may not be available.

5. An estimate of the numbers, descriptions, types of occupancy (owner/tenant), and sizes (number of employees) of businesses and farms to be displaced. Additionally, the discussion should identify (1) sites available in the area to which the affected businesses may relocate, (2) likelihood of such relocation, and (3) potential impacts on individual businesses and farms caused by displacement or proximity of the proposed highway if not displaced.

6. A discussion of the results of contacts, if any, with local governments, organizations, groups, and individuals regarding residential and business relocation impacts, including any measures or coordination needed to reduce general and/or specific impacts. These contacts are encouraged for projects with large numbers of relocatees or complex relocation requirements. Specific financial and incentive programs or opportunities (beyond those provided by the Uniform Relocation Act) to residential and business relocatees to minimize impacts may be identified, if available through other agencies or organizations.

7. A statement that (1) the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and (2) relocation resources are available to all residential and business relocatees without discrimination.

E. JOINT DEVELOPMENT

Required for this project? Y or N

TA Guidance:

Where appropriate, the draft EIS should identify and discuss those joint development measures which will preserve or enhance an affected community's social, economic, environmental, and visual values. This discussion may be presented separately or combined with the land use and/or social impacts presentations. The benefits to be derived, those who will benefit (communities, social groups, etc.), and the entities responsible for maintaining the measures should be identified.

F. PEDESTRIAN AND BICYCLE FACILITIES ***Required for this project? Y or N***

1. Describes any measures to avoid or reduce adverse impacts to the facilities.
2. Discusses where new facilities are part of the project, basis for providing such facilities.

TA Guidance:

Where current pedestrian or bicycle facilities or indications of use are identified, the draft EIS should discuss the current and anticipated use of the facilities, the potential impacts of the affected alternatives, and proposed measures, if any, to avoid or reduce adverse impacts to the facility(ies) and its users. Where new facilities are proposed as a part of the proposed highway project, the EIS should include sufficient information to

explain the basis for providing the facilities (e.g., proposed bicycle facility is a link in the local plan or sidewalks will reduce project access impact to the community).

G. AIR QUALITY IMPACTS

Required for this project? Y or N

1. Air quality conformity (for projects in areas that are in non-attainment for one or more of the transportation related pollutants)
 - a. States that the project is included in a conforming regional transportation plan (RTP) and TIP and that there have been no substantial changes in the design concept and scope as used in the TIP.
 - b. Contains a statement that includes a specific reference to the particular RTP and TIP conformity finding, and dates of the MPO and FHWA conformity determinations.
 - c. States that the conformity determination is based on the latest planning assumptions.
 - d. Summarizes results of hot spot analysis.
 - e. Demonstrates that the project does not cause or contribute to any new localized CO or PM-10 violations or increase the frequency or severity of any existing CO or PM-10 nonattainment and maintenance areas.
 - f. States that the project complies with PM-10 control measures, as applicable, in the PM-10 air quality plan.
 - g. States that the "hot-spot" analysis assumptions are consistent with those in the regional emissions analysis for those inputs which are required for both analyses.
2. Discusses possible mitigation to avoid exceeding the federal standard.

H. NOISE IMPACTS

Required for this project? Y or N

1. Identifies land use categories and sensitive noise receptors.
2. Uses A-weighted decibels (dB(A)), expressed as an equivalent steady-state sound level, Leq(h), to compare existing with predicted noise levels.
3. Describes noise abatement measures such as range of wall heights, decibel reductions.
4. Describes what are considered reasonable and feasible abatement measures that would likely be incorporated into the project including wall lengths, and associated costs.

R.C.:

- Traffic noise impacts occur and consideration of noise abatement measures is required when the predicted traffic noise levels approach or exceed and/or substantial increase. Uses FHWA Noise Abatement Criteria (NAC) and includes the 23 CFR 772 reference.
- States that a final decision on the installation of abatement measure(s) will be made upon completion of the project design and the public involvement process. Explains factors that will be used later in determining whether to abate noise in a given location.

TA Guidance (also use Highway Traffic Noise Analysis and Abatement Policy and Guidance, issued in June 1995, and FHWA approved Caltrans Noise Protocol): The draft EIS should contain a summary of the noise analysis including the following for each alternative under detailed study:

1. A brief description of noise sensitive areas (residences, businesses, schools, parks, etc.), including information on the number and types of activities which may be affected. This should include developed lands and undeveloped lands for which development is planned, designed, and programmed.
2. The extent of the impact (in decibels) at each sensitive area. This includes a comparison of the predicted noise levels with both the FHWA noise abatement criteria and the existing noise levels. (Traffic noise impacts occur when the predicted traffic noise levels approach or exceed the noise abatement criteria or when they substantially exceed the existing noise levels). Where there is a substantial increase in noise levels, the HA should identify the criterion used for defining "substantial increase." Use of a table for this comparison is recommended for clarity.
3. Noise abatement measures which have been considered for each impacted area and those measures that are reasonable and feasible and that would "likely" be incorporated into the proposed project. Estimated costs, decibel reductions and height and length of barriers should be shown for all abatement measures.
4. Where it is desirable to qualify the term "likely," the following statement or similar wording would be appropriate. "Based on the studies completed to date, the State intends to install noise abatement measures in the form of a barrier at (location(s)). These preliminary indications of likely abatement measures are based upon preliminary design for a barrier of _____ high and _____ long and a cost of \$_____ that will reduce the noise level by _____ dBA for _____ residences (businesses, schools, parks, etc.). (Where there is more than one barrier, provide information for each one.) If during final design these conditions substantially change, the abatement measures might not be provided. A final decision on the installation of abatement measure(s) will be made upon completion of the project design and the public involvement process."
5. Noise impacts for which no prudent solution is reasonably available and the reasons why.

I. WATERWAYS and HYDROLOGIC SYSTEMS

Required for this project? Y or N

Discusses impacts on the resources identified in the Affected Environment Section. Include impacts caused by indirect effects of the project, such as induced growth. Consider:

1. Water body modification.
 - a. Stream location and meander patterns (includes stream relocations).
 - b. Quantities and flow rate, including possible effects of accretion and erosion (including channel deepening).
 - c. Effects on stream uses (including navigation).
 - d. Effects on stream and surface drainage (including impoundments).
 - e. Effects on resources subject to Section 10 and Section 404 permits for actions that would result in discharges to navigable waters and waters of the United States and Section 9 (U.S. Coast Guard Bridge) permits. See discussion under Wetlands.

TA Guidance (Also see guidance under the Water Quality and Wetland sections):

PERMITS

If a facility such as a safety rest area is proposed and it will have a point source

discharge, a Section 402 permit will be required for point source discharge (40 CFR 122). The draft EIS should discuss potential adverse impacts resulting from such proposed facilities and identify proposed mitigation measures. The need for a Section 402 permit and Section 401 water quality certification should be identified in the draft EIS.

For proposed actions requiring a Section 404 or Section 10 (Corps of Engineers) permit, the draft EIS should identify by alternative the general location of each dredge or fill activity, discuss the potential adverse impacts, identify proposed mitigation measures (if not addressed elsewhere in the draft EIS), and include evidence of coordination with the Corps of Engineers and appropriate Federal, State and local resource agencies, and State and local water quality agencies.

For proposed actions requiring Section 9 (U.S. Coast Guard bridge) permits, the draft EIS should identify by alternative the location of the permit activity, potential impacts to navigation and the environment (if not addressed elsewhere in the document), proposed mitigation measures and evidence coordination with the U.S. Coast Guard.

WATER QUALITY IMPACTS

Required for this project? Y or N

1. Discusses roadway runoff and/or nonpoint source pollution impacting water resources.
 - a. National Pollution Discharge Elimination System permit required?
2. Coordinates with EPA, as appropriate.
3. Discusses water quality analysis and impacts.
4. Contains evidence of consultation with the State and/or local agency responsible for water quality. See NEPA/404 Questions and Answers.
5. If project has impacts on any sole source aquifer(s), document must contain evidence of coordination with the EPA
6. Discusses any impacts on wellhead protection area(s).
7. Identifies Section 402 or Section 404 permit requirements.

TA Guidance:

The draft EIS should identify the potential impacts of each alternative and proposed mitigation measures. Where an area designated as principal or sole-source aquifer under Section 1424(e) of the Safe Drinking Water Act may be impacted by a proposed project, early coordination with EPA will assist in identifying potential impacts. The EPA will furnish information on whether any of the alternatives affect the aquifer. This coordination should also identify any potential impacts to the critical aquifer protection area (CAPA), if designated, within affected sole-source aquifers. If none of the alternatives affect the aquifer, the requirements of the Safe Drinking Water Act are satisfied. If an alternative is selected which affects the aquifer, a design must be developed to assure, to the satisfaction of EPA, that it will not contaminate the aquifer (40 CFR 149). The draft EIS should document coordination with EPA and identify its position on the impacts of the various alternatives.

Wellhead protection areas were authorized by the 1986 Amendments to the Safe Drinking Water Act. Each State will develop State wellhead protection plans with final approval

by EPA. When a proposed project encroaches on a wellhead protection area, the draft EIS should identify the area, the potential impact of each alternative and proposed mitigation measures. Coordination with the State agency responsible for the protection plan will aid in identifying the areas, impacts and mitigation.

J. WETLANDS/WATERS OF THE U.S. *Required for this project? Y or N*
IMPACTS (23 CFR Part 777, page 26 of TA, NEPA-404 MOU Guidance Papers)

The text needs to indicate whether waters of the U.S. are in the project area, and if so, whether any of the alternatives affect waters of the U.S.

1. If there are no waters of the U.S. in the project area
 - a. States that there are no waters of the U.S. in the project area;
 - b. Refers to the location of any Corps letters in the draft EIS.

2. If there are waters of the U.S. in the project area but are not affected by any of the project alternatives
 - a. Includes a copy of a Corps letter concurring that, based on the information provided, none of the project alternatives under consideration affect waters of the U.S. and/or that a section 404 will not be required for the project.
 - b. Provides the basis for and concludes none of the project alternatives under consideration affect waters of the U.S.;
 - c. States a section 404 permit will not be required for the project; and
 - d. Refers to the draft EIS locations of the Corps letter and the exhibit(s) depicting the waters of the U.S., special aquatic sites, and associated sensitive species habitat in the project area.

3. If all project alternative involvements with waters of the U.S. are nationwide 404 permit situations
 - a. Resource description.
 - (1) Describes the location, extent, and quality of waters of the U.S. and special aquatic sites in the project area;
 - (2) Provides the basis for and concludes that all project alternative involvements with waters of the U.S. are nationwide 404 permit situations.
 - (3) Includes a copy of a Corps letter or letters concurring, based on the information provided, that all project alternative involvements with waters of the U.S. are likely to meet the conditions for nationwide 404 permits and also appear to require a nationwide permit.

4. If any of the alternatives affect or could affect special aquatic sites, includes drawings clearly showing each involved special aquatic site relative to the alternative(s).
 - a. Resource Description
 - (1) Refers to exhibit(s) depicting the waters of the U.S., special aquatic sites, and associated sensitive species habitat; and

(2) Includes a description of the functions and values of the affected waters of the U.S. and special aquatic sites, identifying which functions are performed and the value of those functions (included in the Affected Environment Section).

(3) In conjunction with the associated EIS evaluations of upland wildlife habitat and vegetative communities, the exhibits of waters of the U.S., special aquatic sites, and associated sensitive species habitat, and the text, use mapping units of a recognized classification system or systems, and cite the source(s);

b. Impact evaluation.

(1) Identifies the location(s) and extent of modifications to waters of the U.S. and special aquatic sites for each alternative under consideration;

(2) Includes an assessment of the project impacts, including the type of impact (e.g., habitat removal, fragmentation, introduction of exotic species), its magnitude, and how the project will affect the continued performance of the identified functions;

(3) If a wetland assessment methodology was utilized as part of the wetland impact evaluation, it is identified;

c. Compensatory mitigation.

Summarizes the general mitigation plan concepts developed to date:

(a) habitat types and approximate hectares of impact

(b) plant communities and habitat to be replaced

(c) functions and values to be enhanced or created by the mitigation

(d) plant species to be used

(e) cost estimate

(f) mitigation success criteria

(g) monitoring criteria for evaluation of the mitigation

5. If any of the project alternative involvements with waters of the U.S. are individual 404 permit situations

a. Resource description.

(1) Describes the location, extent, and quality of waters of the U.S. and special aquatic sites in the project area;

(2) Refers to a copy of a Corps letter included in the EIS which verifies the delineations of the waters of the U.S. and the special aquatic sites.

(3) If any of the alternatives affect or could affect special aquatic sites, includes a delineation of each involved special aquatic site at a 1:1200 scale relative to the alternative(s).

(4) Refers to exhibit(s) depicting the waters of the U.S., special aquatic sites, and associated sensitive species habitat; and

(5) Includes a description of the functions and values of the affected waters of the U.S. and special aquatic sites, identifying which functions are performed and the value of those functions.

(6) In conjunction with the associated EIS evaluations of upland

wildlife habitat and vegetative communities, the text and the exhibits of waters of the U.S., special aquatic sites, and associated sensitive species habitat utilize mapping units of a recognized classification system or systems, and cite the source(s);

(7) The draft EIS includes descriptive information for each exhibit mapping unit that provides:

- (a) the distribution of the unit within the study area,
- (b) an estimate of the total number of hectares present,
- (c) the dominant plant species, and
- (d) the relative sensitivity of the vegetation.

(8) All plant and animal taxa encountered during site visits are listed by vegetation type in an appendix to the draft EIS, and this listing is referred to in the draft EIS text.

b. Impact evaluation.

(1) Identifies the location(s) and extent of modifications to waters of the U.S. and special aquatic sites for each alternative under consideration;

(2) Includes an assessment of the project impacts, including the type of impact (e.g., habitat removal, fragmentation, introduction of exotic species), its magnitude, and how the project will affect the continued performance of the identified functions;

(3) Impacts are evaluated in a regional and, if appropriate, a local context; and

(4) If a wetland assessment methodology was utilized as part of the wetland impact evaluation, it is identified.

c. Compensatory mitigation.

(1) Summarizes the pertinent factors from the feasibility study of candidate mitigation sites which demonstrate that conditions at mitigation sites under consideration would make a successful mitigation effort likely--particularly groundwater, hazardous wastes, historic/archaeological resources, and easements/land ownership (see NEPA-404 MOU Guidance Papers page 27 for the feasibility study factors); and

(2) Summarizes the description of the general mitigation plan concepts developed to date, including:

- (a) habitat types and approximate hectares of impact;
- (b) plant communities and habitat to be replaced;
- (c) functions and values to be enhanced or created by the mitigation;
- (d) plant species to be used;
- (e) cost estimate;
- (f) mitigation success criteria;
- (g) monitoring criteria for evaluation of the mitigation.

d. A draft 404 Alternatives Analysis is contained in a separate section of the draft EIS (e.g., an EIS Appendix) and is referred to in the draft EIS 404 discussion. (The content of a draft 404 Alternatives Analysis is outlined in the NEPA-404 MOU Guidance Papers, pp 21- 23)

e. Agency Concurrence.

(1) Includes written documentation from the Corps, EPA, FWS, and (when marine or anadromous fish resources are involved)

NMFS stating their agreement on:

- the project purpose and need,
- the project alternatives to be evaluated in draft EIS,
- the preliminary preferred alternative (if known), and
- any involvement as a cooperating agency.

(2) Refers to this documentation in the discussion of waters of the U.S./Section 404

TA Guidance:

When an alternative will impact wetlands [the Environmental Consequences section of the] draft EIS should (1) describe the impacts to the wetlands [area, quality, and functions], (2) evaluate alternatives which would avoid these wetlands, and (3) identify practicable measures to minimize harm to the wetlands. Exhibits showing wetlands in the project impact area in relation to the alternatives, should be provided. [If the exhibits appear in the Affected Environment section, they should be referenced here.]

In evaluating the impact of the proposed project on wetlands, the following two items should be addressed: (1) the importance of the impacted wetland(s) and (2) the severity of this impact. Merely listing the number of acres taken by the various alternatives of a highway proposal does not provide sufficient information upon which to determine the degree of impact on the wetland ecosystem. The wetlands analysis should be sufficiently detailed to provide an understanding of these two elements.

In determining the wetland impact, the analysis should show the project's effects on the stability and quality of the wetland(s). This analysis should consider the short- and long-term effects on the wetlands and the importance of any loss such as: (1) flood control capacity, (2) shore line anchorage potential, (3) water pollution abatement capacity, and (4) fish and wildlife habitat value. Knowing the importance of the wetlands involved and the degree of the impact, the SHA and FHWA will be in a better position to determine the mitigation efforts necessary to minimize harm to these wetlands.

Mitigation measures which should be considered include preservation and improvement of existing wetlands and creation of new wetlands (consistent with 23 CFR 777).

K. WILDLIFE IMPACTS

Required for this project? Y or N

1. Discusses impacts to fish and wildlife including any sensitive species resulting from the loss of degradation or modification of aquatic or terrestrial habitat.
2. Documents coordination with state, local agencies and FWS under the Fish and Wildlife Coordination Act of 1958.

TA Guidance:

Impacts to fish and wildlife resulting from the loss degradation, or modification of aquatic or terrestrial habitat should also be discussed. The results of coordination with appropriate Federal, State and local agencies should be documented in the draft EIS (e.g., coordination with FWS under the Fish and Wildlife Coordination Act of 1958).

L. FLOODPLAIN IMPACTS
(23 CFR 650 Subpart A)

Required for this project? Y or N

1. Identifies and evaluates longitudinal/transverse encroachments of project alternatives on flood plains.
2. Includes summary of the "Location Hydraulic Study".
3. Reflects coordination with the Federal Emergency Management Agency (FEMA) and appropriate State and local government agencies for each floodway encroachment.
4. Includes a discussion of the consistency of the project with the Regulatory floodway.
5. Evaluates and discusses practicable alternatives if it has been determined that there is a significant encroachment.

TA Guidance:

National Flood Insurance Program (NFIP) maps or, if NFIP maps are not available, information developed by the highway agency should be used to determine whether an alternative will encroach on the base (100-year) floodplain. The location hydraulic studies required by 23 CFR 650, Subpart A, must include a discussion of the following items commensurate with the level of risk or environmental impact, for each alternative which encroaches on base floodplains or would support base floodplain development:

- (a) The flooding risks;*
- (b) The impacts on natural and beneficial floodplain values;*
- (c) The support of probable incompatible floodplain development (i.e., any development that is not consistent with a community's floodplain development plan);*
- (d) The measures to minimize floodplain impacts; and*
- (e) The measures to restore and preserve the natural and beneficial floodplain values.*

The draft EIS should briefly summarize the results of the location hydraulic studies. The summary should identify the number of encroachments and any support of incompatible floodplain developments and their potential impacts. Where an encroachment or support of incompatible floodplain development results in substantial impacts, the draft EIS should provide more detailed information on the location, impacts and appropriate mitigation measures. In addition, if any alternative (1) results in a floodplain encroachment or supports incompatible floodplain development having significant impacts, or (2) requires a commitment to a particular structure size or type, the draft EIS needs to include an evaluation and discussion of practicable alternatives to the structure or to the significant encroachment. The draft EIS should include exhibits which display the alternatives, the base floodplains and, where applicable, the regulatory floodways.

For each alternative encroaching on a designated or proposed regulatory floodway, the draft EIS should provide a preliminary indication of whether the encroachment would be consistent with or require a revision to the regulatory floodway. Engineering and environmental analyses should be undertaken, commensurate with the level of encroachment, to permit the consistency evaluation and identify impacts. Coordination with the Federal Emergency Management Agency (FEMA) and appropriate State and

local government agencies should be undertaken for each floodway encroachment.

M. WILD AND SCENIC RIVERS

Required for this project? Y or N

1. Indicates that the "National Inventory of Wild and Scenic Rivers" has been reviewed.
2. Summarizes the coordination between the highway agency and the National Park Service, if appropriate.

TA Guidance:

If the proposed action could have foreseeable adverse effects on a river on the National Wild and Scenic Rivers System or a river under study for designation to the National Wild and Scenic Rivers System, the draft EIS should identify early coordination undertaken with the agency responsible for managing the listed or study river (i.e., National Park Service (NPS), Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), or Forest Service (FS)). For each alternative under consideration, the EIS should identify the potential adverse effects on the natural, cultural, and recreational values of the listed or study river. Adverse effects include alteration of the free-flowing nature of the river, alteration of the setting or deterioration of water quality. If it is determined that any of the alternatives could foreclose options to designate a study river under the Act, or adversely affect those qualities of a listed river for which it was designated, to the fullest extent possible, the draft EIS needs to reflect consultation with the managing agency on avoiding or mitigating the impacts (23 CFR 771.123(c)). Publicly owned waters of designated wild and scenic rivers are protected by Section 4(f). Additionally, public lands adjacent to a Wild and Scenic River may be subject to Section 4(f) protection. An examination of any adopted or proposed management plan for a listed river should be helpful in making the determination on applicability of Section 4(f). For each alternative that takes such land, coordination with the agency responsible for managing the river (either NPS, FWS, BLM, or FS) will provide information on the management plan, specific affected land uses, and any necessary Section 4(f) coordination.

N. COASTAL BARRIERS

Required for this project? Y or N

Note: There are no designated coastal barriers in Region 9 as of February 1995.

O. COASTAL ZONE IMPACTS

Required for this project? Y or N

1. Indicates whether the proposed project is within, or is likely to affect land or water uses within the area covered by a State Coastal Zone Management Program (CZMP).
2. Documents coordination between the highway agency and the State CZM agency.

TA Guidance:

Where the proposed action is within, or is likely to affect land or water uses within the area covered by a State Coastal Zone Management Program (CZMP) approved by the Department of Commerce, the draft EIS should briefly describe the portion of the affected CZMP plan, identify the potential impacts, and include evidence of coordination with the State Coastal Zone Management agency or appropriate local agency.

P. THREATENED OR ENDANGERED SPECIES IMPACTS

Required for this project? Y or N

1. Documents coordination with FWS and/or NMFS.
2. Identifies whether any threatened or endangered species and/or designated or proposed critical habitat may be impacted in the project area; includes exhibits depicting habitat and avoidance alternatives.
3. Discusses biological assessment and documented FWS coordination of Section 7 consultation.

R.C.:

-- Ensures that only the FHWA or the State DOT made the written request to the FWS for listed or proposed species and/or critical habitat in the project area. Include the FWS written response in the appendix and refer to it in both the "affected" and "consequences" sections of the endangered species discussion.

TA Guidance:

When a proposed species or a proposed critical habitat may be present in the proposed project area, an evaluation or, if appropriate, a biological assessment is made on the potential impacts to identify whether any such species or critical habitat are likely to be adversely affected by the project. Informal consultation with FWS and/or NMFS should be undertaken during the evaluation. The draft EIS should include exhibits showing the location of the species or habitat, summarize the evaluation and potential impacts, identify proposed mitigation measures, and evidence coordination with FWS and/or NMFS. If the project is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, the HA in consultation with the FHWA must confer with FWS and/or NMFS to attempt to resolve potential conflicts by avoiding, minimizing, or reducing the project impacts (50 CFR 402.10(a)).

When a listed species or a designated critical habitat may be present in the proposed project area, a biological assessment must be prepared to identify any such species or habitat which are likely to be adversely affected by the proposed project (50 CFR 402.12). Informal consultation should be undertaken or, if desirable, a conference held with FWS and/or NMFS during preparation of the biological assessment. The draft EIS should summarize the following data from the biological assessment:

- (a) The species distribution, habitat needs, and other biological requirements;*
- (b) The affected areas of the proposed project;*
- (c) Possible impacts to the species including opinions of recognized experts on the species at issue;*
- (d) Measures to avoid or minimize adverse impacts; and*
- (e) Results of consultation with FWS and/or NMFS.*

Q. HISTORIC AND ARCHEOLOGICAL PRESERVATION

Required for this project? Y or N

1. Refers to the Historic Property Survey Report (HPSR) as necessary.

2. Describes in qualitative and quantitative detail the potential effects of **each** alternative on each NRHP property.
3. Discusses and documents all Section 106 coordination efforts with the SHPO regarding eligibility and effects under each alternative. Refers to a copy of the SHPO letter which is included in the appendix.

R.C.:

-- Indicates whether archaeological sites warrant preservation in place or are only significant for their data. If preservation is warranted, then Section 4(f) applies.

TA Guidance:

The draft EIS discussion should briefly summarize the methodologies used in identifying historic and archeological resources [discussed in Affected Environment]. The draft EIS should summarize the impacts of each alternative on and proposed mitigation measures for each resource. The document should evidence coordination with the SHPO on the significance of newly identified historic and archeological resources, the eligibility of historic resources for the National Register, and the effects of each alternative on both listed and eligible historic resources. Where the draft EIS discusses eligibility for the National Register of archeological resources, the coordination with the SHPO on eligibility and effect should address both historic and archeological resources. The draft EIS can serve as a vehicle for affording the Advisory Council on Historic Preservation (ACHP) an opportunity to comment pursuant to Section 106 requirements if the document contains the necessary information required by 36 CFR 800.8. The draft EIS transmittal letter to the ACHP should specifically request its comments pursuant to 36 CFR 800.6.

R. HAZARDOUS WASTE SITES

Required for this project? Y or N

1. Includes a map identifying the location of the site(s) in relation to the alternatives.
2. Discusses results of coordination with resource agency, state and local agencies including description of clean-up plans.
3. Includes information on the number and types of sites/structures, extent of contamination, and alternative treatment/disposal measures with relative costs.
4. Includes justification for not avoiding waste sites, if warranted.
5. Includes statement on how hazardous wastes will be handled if encountered during construction activities.

TA Guidance:

If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts and public health concerns of the affected alternative(s), and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the draft EIS.

S. VISUAL IMPACTS

Required for this project? Y or N

1. Discusses impacts to potential viewers of and from the project.

2. Uses a federally accepted visual assessment methodology.

TA Guidance:

The draft EIS should state whether the project alternatives have a potential for visual quality impacts. When this potential exists, the draft EIS should identify the impacts to the existing visual resource, the relationship of the impacts to potential viewers of and from the project, as well as measures to avoid, minimize, or reduce the adverse impacts. When there is potential for visual quality impacts, the draft EIS should explain the consideration given to design quality, art, and architecture in the project planning. These values may be particularly important for facilities located in visually sensitive urban or rural settings. When a proposed project will include features associated with design quality, art or architecture, the draft EIS should be circulated to officially designated State and local arts councils and, as appropriate, other organizations with an interest in design, art, and architecture.

T. ENERGY

Required for this project? Y or N

1. Discusses cost/benefit analysis of reasonable alternatives for major projects

TA Guidance:

Except for large scale projects, a detailed energy analysis including computations of BTU requirements, etc., is not needed. For most projects, the draft EIS should discuss in general terms the construction and operational energy requirements and conservation potential of various alternatives under consideration. The discussion should be reasonable and supportable. It might recognize that the energy requirements of various construction alternatives are similar and are generally greater than the energy requirements of the no-build alternative. Additionally, the discussion could point out that the post-construction, operational energy requirements of the facility should be less with the build alternative as opposed to the no-build alternative. In such a situation, one might conclude that the savings in operational energy requirements would more than offset construction energy requirements and thus, in the long term, result in a net savings in energy usage.

For large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. Direct energy impacts refer to the energy consumed by vehicles using the facility. Indirect impacts include construction energy and such items as the effects of any changes in automobile usage. The alternative's relationship and consistency with a State and/or regional energy plan, if one exists, should also be indicated.

U. CONSTRUCTION IMPACTS (pages 35-36 of TA)

1. Discusses related adverse impacts on safety, air, noise, water, traffic congestion, access to businesses, schools, community facilities and potential detours for each alternative.
2. Discusses appropriate mitigation measures.
3. Includes impacts of borrow or disposal of waste material and appropriate mitigation.

TA Guidance:

The draft EIS should discuss the potential adverse impacts (particularly air, noise, water, traffic congestion, detours, safety, visual, etc.) associated with construction of each alternative and identify appropriate mitigation measures. Also, where the impacts of obtaining borrow or disposal of waste material are important issues, they should be discussed in the draft EIS along with any proposed measures to minimize these impacts.

VIII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY (page 36 of TA)

TA Guidance:

The EIS should discuss in general terms the proposed action's relationship of local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity. This general discussion might recognize that the build alternatives would have similar impacts. The discussion should point out that transportation improvements are based on State and/or local comprehensive planning which consider(s) the need for present and future traffic requirements within the context of present and future land use development. In such a situation, one might then conclude that the local short-term impacts and use of resources by the proposed action is consistent with the maintenance and enhancement of long-term productivity for the local area, State, etc.

IX. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION (pp. 36-37 of TA)

TA Guidance:

The EIS should discuss in general terms the proposed action's irreversible and irretrievable commitment of resources. This general discussion might recognize that the build alternatives would require a similar commitment of natural, physical, human, and fiscal resources. An example of such discussion would be as follows:

"Implementation of the proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use will not have an adverse effect upon continued availability of these resources. Any construction will also require a substantial one-time expenditure of both State and Federal funds which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, State, and region will benefit by the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources."

X. LIST OF PREPARERS

- A. Summarizes the credentials of all preparers.

TA Guidance:

This section should include lists of:

- 1. State (and local agency) personnel, including consultants, who were primarily responsible for preparing the EIS or performing environmental studies, and a brief summary of their qualifications, including educational background and experience.*
- 2. The FHWA personnel primarily responsible for preparation or review of the EIS and their qualifications.*
- 3. The areas of EIS responsibility for each preparer.*

XI. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES ARE SENT

R.C.:

- Check for correct mailing addresses and phone numbers for Federal/State agencies.
Ensure FHWA and the state DOT are not on the mailing list.

TA Guidance:

List all entities from which comments are being requested (40 CFR 1502.10).

XII. COMMENTS AND COORDINATION

- A. Discusses scoping meetings and other meetings.
B. Includes copies of pertinent correspondence with other agencies and the public.

R.C.:

- Summarizes key issues from the public and government.
- References and includes copy of Notice of Intent and letters inviting cooperating agency status.
- Removes FHWA from the mailing list and any letters from FHWA and the State DOT.

TA Guidance:

1. The draft EIS should contain copies of pertinent correspondence with each cooperating agency, other agencies and the public and summarize: 1) the early coordination process, including scoping; 2) the meetings with community groups (including minority and non-minority interests) and individuals; and 3) the key issues and pertinent information received from the public and government agencies through these efforts.

XII. INDEX

R.C.:

- Includes accurate page numbers.

TA Guidance:

The index should include important subjects and areas of major impacts so that a reviewer need not read the entire EIS to obtain information on a specific subject or impact.

XIV. APPENDICES

A. Consists of various material prepared specifically for this EIS to substantiate information in the EIS. Lengthy technical discussions are part of a technical report and are made available for review at specified locations.

R.C.:

-- Includes plan and profile drawings or aerial photographs.

TA Guidance:

The EIS should briefly explain or summarize methodologies and results of technical analyses and research. Lengthy technical discussions should be contained in a technical report. Material prepared as appendices to the EIS should:

- 1. consist of material prepared specifically for the EIS;*
- 2. consist of material which substantiates an analysis fundamental to the EIS;*
- 3. be analytic and relevant to the decision to be made; and*
- 4. be circulated with the EIS within FHWA, to EPA (Region), and to cooperating agencies and be readily available on request by other parties. Other reports and studies referred to in the EIS should be readily available for review or for copying at a convenient location.*

XV. DRAFT SECTION 4(F) EVALUATION
(See also FHWA Section 4(f) Policy Paper)

Required for this project? Y or N

- A. Cites the Section 4(f) Regulation and explains the requirements of 4(f).
- B. Identifies and depicts on map, all 4(f) or 6(f) resources in project corridor to show relationship of resource to project.
- C. Discusses actual use on each 4(f) resource for each alternative. Includes discussion on the types of activities affected.
- D. Discusses avoidance alternative(s) which avoid each and all 4(f) properties.
- E. Discusses any proximity impacts on each 4(f) resource not actually used under each alternative.
 1. Includes detailed discussion with maps and photographs of any proximity impacts such as noise, visual and access.
 2. Ensures that proper noise abatement criteria are applied depending on types of activities impacted.
- F. If there are no feasible and prudent avoidance alternatives, the discussion is clear.
- G. Discusses all possible mitigation measures to minimize harm.
- H. Discusses results of coordination efforts with jurisdictional parties over the 4(f) properties and with National Park Service (NPS) for 6(f) properties.

R.C.:

- Includes citation: "submitted pursuant to 42 U.S.C. 4332(2)(c) and 49 U.S.C. 303" on the title page or in the introductory paragraph.
- Need to clearly indicate whether a property is a 4(f) resource or it is not. "Potential"

4(f) resources has no meaning.

-- Any planned parks and recreation trails are subject to Section 4(f) evaluation and must be identified.

-- For potential constructive use issues, ensure that regulations at 23 CFR 771.135(p) are complied with and any compliance with Section 4(f) based on joint planning must be carefully documented.

TA Guidance:

A Section 4(f) evaluation must be prepared for each location within a proposed project before the use of Section 4(f) land is approved (23 CFR 771.135(a)). For projects processed with an EIS or an EA/FONSI, the individual Section 4(f) evaluation should be included as a separate section of the document, and for projects processed as categorical exclusions, as a separate Section 4(f) evaluation document. Pertinent information from various sections of the EIS or EA/FONSI may be summarized in the Section 4(f) evaluation to reduce repetition. Where an issue on constructive use Section 4(f) arises and FHWA decides that Section 4(f) does not apply, the environmental document should contain sufficient analysis and information to demonstrate that the resource(s) is not substantially impaired.

The use of Section 4(f) land may involve concurrent requirements of other Federal agencies. Examples include consistency determinations for the use of public lands managed by the Bureau of Land Management, compatibility determinations for the use of land in the National Wildlife Refuge System and the National Park System, determinations of direct and adverse effects for Wild and Scenic Rivers, and approval of land conversions under Section 6(f) of the Land and Water Conservation Fund Act. The mitigation plan developed for the project should include measures which would satisfy the various requirements. For example, Section 6(f) directs the Department of the Interior (National Park Service) to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions. Therefore, where a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. Regardless of the mitigation proposed, the draft and final Section 4(f) evaluations should discuss the results of coordination with the public official having jurisdiction over the Section 4(f) land and document the National Park Service's position on the Section 6(f) land transfer, respectively.

A. Draft Section 4(f) Evaluation

The following format and content are suggested. The listed information should be included in the Section 4(f) evaluation, as applicable.

1. Proposed Action.

Where a separate Section 4(f) evaluation is prepared, describe the proposed project and explain the purpose and need for the project.

2. Section 4(f) Property.

Describe each Section 4(f) resource which would be used by any alternative under consideration. The following information should be provided:

- (a) *A detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property.*

- (b) *Size (acres or square feet) and location (maps or other exhibits such as photographs, sketches, etc.) of the affected Section 4(f) property.*
- (c) *Ownership (city, county, State, etc.) and type of Section 4(f) property (park, recreation, historic, etc.).*
- (d) *Function of or available activities on the property (ball playing, swimming, golfing, etc.).*
- (e) *Description and location of all existing and planned facilities (ball diamonds, tennis courts, etc.).*
- (f) *Access (pedestrian, vehicular) and usage (approximate number of users/visitors, etc.).*
- (g) *Relationship to other similarly used lands in the vicinity.*
- (h) *Applicable clauses affecting the ownership, such as lease, easement, covenants, restrictions, or conditions, including forfeiture.*
- (i) *Unusual characteristics of the Section 4(f) property (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property.*

3. Impacts on the Section 4(f) Property(ies).

Discuss the impacts on the Section 4(f) property for each alternative (e.g., amount of land to be used, facilities and functions affected, noise, air pollution, visual, etc.). Where an alternative (or alternatives) uses land from more than one Section 4(f) property, a summary table would be useful in comparing the various impacts of the alternative(s). Impacts (such as facilities and functions affected, noise, etc.) which can be quantified should be quantified. Other impacts (such as visual intrusion) which cannot be quantified should be described.

4. Avoidance Alternatives.

Identify and evaluate location and design alternatives which would avoid the Section 4(f) property. Generally, this would include alternatives to either side of the property. Where an alternative would use land from more than one Section 4(f) property, the analysis needs to evaluate alternatives which avoid each and all properties (23 CFR 771.135(i)). The design alternatives should be in the immediate area of the property and consider minor alignment shifts, a reduced facility, retaining structures, etc. individually or in combination, as appropriate. Detailed discussions of alternatives in an EIS or EA need not be repeated in the Section 4(f) portion of the document, but should be referenced and summarized. However, when alternatives (avoiding Section 4(f) resources) have been eliminated from detailed study the discussion should also explain whether these alternatives are feasible and prudent and, if not, the reasons why.

5. Measures to Minimize Harm.

Discuss all possible measures which are available to minimize the impacts of the proposed action on the Section 4(f) property(ies). Detailed discussions of mitigation measures in the EIS or EA may be referenced and appropriately summarized, rather than repeated.

6. Coordination.

Discuss the results of preliminary coordination with the public official having

jurisdiction over the Section 4(f) property and with regional (or local) offices of DOI and, as appropriate, the Regional Office of HUD and the Forest Supervisor of the affected National Forest. Generally, the coordination should include discussion of avoidance alternatives, impacts to the property, and measures to minimize harm. In addition, the coordination with the public official having jurisdiction should include, where necessary, a discussion of significance and primary use of the property.

Note: The conclusion that there are no feasible and prudent alternatives is not normally addressed at the draft Section 4(f) evaluation stage. Such conclusion is made only after the draft Section 4(f) evaluation has been circulated and coordinated and any identified issues adequately evaluated.

XVI. GENERAL COMMENTS

R.C.:

- Avoids using the term "Significant" except to describe 4(f) resources, 106 properties, or floodplain impacts.
- Satisfies State only requirements with a separate section or appendix in the document.
- Provides information and data to thoroughly describe each impact to support conclusions made.
- Refers to specific technical reports and summarizes contents as appropriate.
- Uses photographs, illustrations, and other graphics as appropriate.
- Includes a key for figures and tables that is easily understandable.
- Includes a statement that the project will conform with the American Disabilities Act (ADA) of 1990, as appropriate.
- Discusses cumulative impacts: substantial, foreseeable, induced secondary impacts for each alternative - in particular to air, water quality, and wetlands.
- Uses a table summarizing total project mitigation.
- Ensures that the consultants' names do not appear on the binding, cover, and title page of the EIS except under the List of Preparers.
- Checks that names of the preparers of technical reports are not in the narrative of the subject discussions but listed under List of Preparers.
- Refers to verbal communications with date, complete name and title of individuals involved in conversation with documentation in the project file.

COMMENTS:

The **State DOT** ensures that this environmental document has been reviewed for completeness.

REVIEWED BY:

State DOT Project Manager

DATE: _____

FHWA California Division Checklist for Draft Environmental Documents (SS #S20319)

The FHWA Division office Project Manager (i.e., Transportation Engineer) and the EIS Review Team (ERT) have completed their review of this environmental document.

REVIEWED BY:

FHWA Division Project Manager (TE)

DATE: _____