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Chapter 27 - Visual & Aesthetics Review

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What Does This Topic Include?

This chapter provides an overview of the approach Caltrans uses to identify visual and aesthetic issues that may result from transportation projects. Information is provided to give the reader a basic understanding of the Visual Impact Assessment (VIA) and Scenic Resource Evaluation (SRE). These studies are used to predict the degree and type of impact proposed transportation projects will have on the “visual” environment.

Visual Resource Study Decision Tree

[View the Visual Resource Study Decision Tree \(PDF\)](#) |

[Visual Resource Study Decision Tree \(ADA version\)](#)

Laws, Regulations, and Guidance

Visual impacts are mentioned in the National Environmental Policy Act (NEPA) of 1969 and Council on Environmental Quality (CEQ) regulations to implement NEPA under the heading of aesthetics. These regulations identify aesthetics as one of the elements or factors in the human environment that must be considered in determining the effects of a project. Further, Title 23, USC 109(h) cites “aesthetic values” as a matter that must be fully considered in developing a project. The California Environmental Quality Act (CEQA) also mentions aesthetics as an environmental factor to be analyzed for potential effects resulting from a proposed project. Aesthetics, as used in this context relate to the visual impacts of a project.

Federal Law

- [Department of Transportation Act of 1966, Section 4\(f\)](#)
- [Historic Preservation Act of 1966](#)
- [National Environmental Policy Act of 1969](#)

State Law

- [SER Vol. 1, Chapter 2 - State Requirements](#)
- CEQA Guidelines
 - a. Appendix G
 - b. Article 19. Categorical Exemptions
 - Section 15304 *Minor Alterations to Land*
 - Section 15300.2 *Exceptions*
 - (d) *Scenic Highways*
- CEQA Statute
 - Section 21084 – Lists of Exempt Classes of Projects; Projects Damaging Scenic Resources (c)
- Streets and Highways Code, Sections 260 – 263 (State Scenic Highways)

Guidance

- [Guidelines for the Visual Impact Assessment of Highway Projects](#), FHWA 2015
- [Noise Barrier Design Handbook - Noise Barrier Aesthetics](#)
- [A Guide to Visual Quality in Noise Barrier Design, Aesthetics in the Design Process](#), Publication Number: FHWA–RD–IMP–77–12 (December 1976)

- [Flexibility in Highway Design](#) , Publication Number: FHWA-PD-97-062
- [Landscape Architecture's VIA website](#)
- [Highway Design Manual, Chapter 100](#) , Topic 109 – Scenic Values in Planning and Design
- [Project Development Procedures Manual, Chapter 8](#) , Section 7, Article 6
-- Consideration of Visual Impacts and Protection of Visual Quality
- [California State Scenic Highways](#)
- Director's Policy 22 (DP 22), Context Sensitive Solutions
- Director's Policy 37 (DP 37), Complete Streets
- Deputy Directive 31 (DD-31), Protection of Scenic Corridors
- Deputy Directive 94 (DD-94), Scenic Highway Program
- [Context Sensitive Solutions Implementation Plan](#) , Rick Knapp (October 3, 2002)

Early Coordination

Conducting SREs and VIAs on projects requires early coordination with the Project Development Team (PDT) and representatives from the affected community. Community participation through public outreach and surveys are useful tools in predicting viewer response to proposed changes in the visual environment. Since budget and time constraints often limit the use of these methods, it is important to determine community values and goals by other means such as examining city general plans and meeting with local planning staff. Close coordination with the PDT member who is working on community impacts and the environmental planner/generalist is critical and efficient. This coordination should be underway at the project initiation phase in the event that potential project impacts would require the PDT to consider design alternatives or environmental commitments (avoidance, minimization, and/or mitigation) that would affect project funding levels. It is also important to discuss these issues with other agencies, such as the California Coastal Commission, that will have an interest and stake in the outcome. Early coordination between Caltrans, the community, and other agency stakeholders facilitates timely and efficient project development.

State Scenic Highway Program

The intent of the State Scenic Highway Program is to protect and enhance California's natural scenic beauty. Caltrans provides city and county governments the opportunity to nominate eligible scenic highways and adopt corridor protection programs to obtain official scenic highway status. Corridor protection programs contain land use elements that support scenic preservation along the route. If the proposed project is within an officially designated State Scenic Highway the environmental document must discuss whether the project has the potential to affect the scenic highway and if so, whether the project is consistent with the protection program. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway System and care must be taken to preserve its eligible status. For additional information regarding scenic highways, please see the [Caltrans Scenic Highway website](#) .

Reporting

Whether sponsored by Caltrans or a local agency, all proposed projects on the State Highway System (SHS) must meet the requirements of CEQA. In addition, most of these projects, as well as federal-aid projects off the SHS, will also need to meet the requirements of NEPA if the action requires federal funding, approval, or encroachment upon federal lands.

Both CEQA and NEPA require that scenic quality and aesthetic issues be considered when determining environmental impacts. The SRE and VIA are conducted to satisfy these environmental requirements. Typically, these studies are combined into one technical report.

VIA's may also be used to support Coastal Consistency Determinations, Waivers, or Coastal Zone Permits from the California Coastal Commission (CCC), Coastal Development Permits (CDP) from the Local Coastal Agency (LCA), or Bay Conservation and Development Commission (BCDC) permits.

Scenic Resource Evaluation

All projects must be evaluated for scenic resources and the evaluation will be documented in either the project file or in a VIA (Questionnaire, Memorandum, Standard or Advanced) as appropriate. An SRE is particularly important for project sites located within the limits of an officially designated State Scenic Highway or eligible scenic highway to prevent project impacts negatively impacting the eligibility status of a scenic highway. The goal is to examine the project limits, determine if scenic resources exist within those limits including the project viewshed, and whether they will be impacted by the proposal. Impact assessment should also determine if views of scenic resources will be obstructed. To adequately determine the presence of scenic resources, SREs should be based on an evaluation of the public's anticipated perception of the existing resource and its visual setting. The District's Planning and Environmental units should be consulted to ensure that all appropriate input is considered.

The SRE considers the site-specific visual and historic context, anticipated sensitivity of identified viewers, and the extent of visibility.

As part of the SRE, three primary actions are performed:

- Research - An understanding is developed of the proposed project, community values expressed in applicable planning documents, and of relevant project history.
- Field Review - Investigation of the project setting and an inventory of existing visual features as well as proposed project element locations, viewer groups, and probable affects is conducted.
- Synthesis - The research and field data is analyzed to determine whether a scenic resource exists. The analysis identifies the setting, whether or not a scenic resource is present, why it qualifies as a scenic resource, and how the proposed project will potentially affect the scenic resource. The SRE is provided in the project file or in a VIA (Questionnaire, Memorandum, Standard or Advanced) including photographs and graphic information necessary to substantiate the findings.

The SRE is also used for determining whether or not a proposed project qualifies for a categorical exemption. CEQA Statute Section 21084(c) and CEQA Guidelines Section 15300.2(d)] state that no project damaging "scenic resources, including but not limited to trees, historic buildings, rock outcropping, or similar resources, within a highway designated as an official state scenic highway" is categorically exempt. Section 15304 of the CEQA

Guidelines permits, as a categorical exemption, the minor alteration of land or vegetation that does not involve removal of mature, scenic trees. Following completion of the SRE, environmental staff in coordination with the PDT will determine whether a categorical exemption is still appropriate for the project. Because of the implications to the categorical exemption determination, it is necessary that the SRE findings be used in documenting the proposed project 's potential effect on identified scenic resources.

Scenic Resource Examples

According to the VIA Handbook, scenic resources are generally understood as public places recognized for their scenic quality or deserving protection from adverse visual change or visual impacts to users enjoying their visual quality. They are designated or otherwise recognized by a public authority (federal, state, local) or visual quality experts for their scenic qualities. While there is no comprehensive list of specific features that automatically qualify as scenic resources, certain characteristics can be identified which contribute to the determination of a scenic resource. Following is a partial list of visual qualities and conditions which, if present, may indicate the presence of a scenic resource:

- A tree that displays outstanding features of form or age;
- A landmark tree or a group of distinctive trees accented in a setting as a focus of attention;
- An unusual planting that has historical value;
- A unique, or massive rock formation;
- A historic building that is a rare example of its period, style, or design, or which has special architectural features and details of importance (A historic building, however, should be evaluated by an Architectural Historian as part of the historic resources studies);
- A feature specifically identified in applicable planning documents as having special scenic value;
- A unique focus or a feature integrated with its surroundings or overlapping other scenic elements to form a panorama;
- A vegetative or structural feature that has local, regional, or statewide importance.

Conversely, examples of features that lack the typical characteristics of a scenic resource include:

- Trees that are commonplace and repetitious, occurring frequently along a roadway;
- The fringe trees of a forest;
- Rock outcroppings that are generally characterized by little or no variety and possessing no uniqueness of form or aesthetic merit.

Visual Impact Assessment

A VIA should be produced for every project. At a minimum a VIA Questionnaire should be completed and could lead to a more advanced level VIA (Memorandum, Standard, or Advanced). If the project is within the limits of an officially designated State Scenic Highway, ensure that an SRE accompanies the Questionnaire or is included in a more advanced VIA.

The level of VIA is determined using the VIA Questionnaire. The Questionnaire and the VIA Annotated Outlines can be found on

[Landscape Architecture's VIA website](#) . The Questionnaire considers many factors such as:

- Numbers and sensitivities of affected viewer groups;

- Existence of scenic resources;
- Extent and degree of the proposed changes in the visual environment;
- Local concerns or project controversy;
- Cumulative impacts along the transportation corridor.

Prior to completing the VIA Questionnaire, it is recommended that a site visit be conducted to inventory the visual resources within the project viewshed, estimate potential changes to these resources, and identify potential viewer groups and public concerns regarding the proposal. In addition, the Questionnaire (see Project Initiation Document below) is used as a scoping tool to inform the PDT of any potential impacts or controversy that may occur. This helps identify potential environmental commitment costs for design options that the PDT may consider to reduce costs or impacts.

The total point score of the completed VIA Questionnaire corresponds to the recommended level of visual analysis. In general, projects to replace or rehabilitate existing facilities (e.g., pavement overlay, striping, sign replacement) do not constitute a change in character to those facilities, and as such, will not require further analysis. Projects that constitute negligible or very minor visual change will require a Memorandum that describes the site characteristics and provides confirmation of minimal changes. Projects resulting in a noticeable level of visual change will require a Standard or Advanced VIA to be completed. The VIA Annotated Outlines have been developed to ensure that visual analyses are thorough, concise, objective, and consistent with statewide practices. Go to the VIA Questionnaire to begin this process.

Methodology

Caltrans conducts visual studies using FHWA methodology that is described in the 2015

[Guidelines for the Visual Impact Assessment of Highway Projects](#) . Caltrans

has developed a Handbook and VIA Annotated Outlines that follow this FHWA methodology, which can be found on Landscape Architecture's VIA website. As a component of this methodology, Caltrans considers regulatory environment and cumulative impacts as important issues when evaluating a project's visual impacts. Projects involving other agencies may need to include additional methodologies for assessing impacts.

Preparer Qualifications

Scenic Resource Evaluations and VIAs are performed under the direction of licensed Landscape Architects. Landscape Architects receive formal training in the area of visual resource management with a curriculum that emphasizes environmental design, human factors, and context sensitive solutions. When recommending specific visual environmental commitments, Landscape Architects can appropriately weigh the benefits of these different measures and consider construction feasibility and maintainability.

Processing and Approval

For Caltrans or locally-sponsored projects on the SHS, the SRE and/or VIA are submitted to the environmental generalist/planner. The environmental generalist/planner summarizes the findings and recommended environmental commitments identified in the SRE and/or VIA in the environmental document and then provides a copy of the environmental document to the Landscape Architect for review and concurrence. Environmental commitments can involve avoiding, minimizing, and/or mitigating for proposed project impacts. The completed SRE and/or VIA

serves as a supporting technical study and is referenced in the environmental document. Upon receipt of this information and other technical studies the environmental staff, in coordination with the PDT, will determine the appropriate level of environmental documentation for the project.

For Local Assistance projects (federal-aid projects off the SHS), the Preliminary Environmental Studies (PES) form in combination with the VIA Questionnaire is used to determine what level of VIA is appropriate. The local agency submits the VIA (along with a list of environmental commitments) to Caltrans in accordance with the processing procedures set forth in the [Local Assistance Procedures Manual \(LAPM\)](#) , Chapter 6. As part of this process, the Caltrans District Landscape Architect will review and concur with the VIA for compliance with NEPA visual assessment requirements.

Supplemental VIAs and VIA Addendums

Changes to a project during the Project Approval and Environmental Document (PA&ED) phase or subsequent phases such as Design and Construction may require a completed VIA to be updated or amended to reflect this information, especially when the changes have potential to alter the findings of the document or adversely affect the corridor's visual quality and viewers. If project changes occur, the District Environmental Planning Branch shall inform the Caltrans District Landscape Architect of the changes, who will determine whether a supplemental VIA or an addendum to the VIA should be developed. The PDT should be informed of the need for a supplemental VIA or addendum and any additional environmental commitments that may be required.

In general, a supplemental VIA or addendum shall include an introductory statement on the need for the additional documentation or addendum, reference the date of the original VIA, summarize any project changes that have occurred, and address related visual effects. A new approval and date for the supplemental VIA or addendum shall be provided.

A supplemental VIA should adhere to the format of the VIA Annotated Outline as applicable, and generally should *not* repeat information from the original VIA that has not changed. The VIA addendum is briefer than a supplemental VIA and is used to correct or clarify information presented in the original VIA.

Cumulative Impacts

A cumulative impact is defined in the NEPA Regulations as "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Cumulative effects can result from individually minor yet collectively significant actions taking place over a period of time. CEQA has similar language and requirements.

While removing trees or excavating slopes may not be considered major impacts on an individual project, similar impacts on past or future projects within a highway corridor can result in a cumulative impact when considering the combined result.

Because different agencies have differing approaches to cumulative impacts, it is recommended that interagency coordination begin early in project development. Also refer to the Caltrans

[Guidance for Preparers of Cumulative Impact Analysis](#) .

Construction Impacts

In addition to impacts that will affect the visual environment as a result of the proposed project, the impacts of the contractors' operations must also be considered. Scenic resources identified should be protected at all stages of the project's construction. Disposal sites, construction signs, material storage, and other items of work necessary for construction that will create a visual impact should be identified. Environmental commitments for construction impacts should be considered, as with other project impacts, and appropriately incorporated into the project. This can be particularly important when reviewing projects along scenic highways.

Timing the Studies With the Environmental Process

Early involvement by the Landscape Architect ensures that the benefits of visual studies are maximized. By initiating visual studies during the Preliminary Environmental Analysis Report (PEAR) phase of the project, potential impacts can be identified, project alternatives examined, and environmental commitments proposed. These factors need consideration to accurately develop initial project costs prior to programming. Also, early involvement promotes discussions between the PDT and Landscape Architect in order to identify and incorporate design features that address potential visual impacts, avoidance alternatives, and environmental commitments.

Depending on the complexity of the impact assessment, it may take from a few days to several months to complete the appropriate studies. Continuous involvement by the Landscape Architect ensures that any design changes will reflect appropriate visual consideration.

Information Needed for Project Delivery

Regional Transportation Plan

The existing visual environment should be documented in the Environmental Impact Report (EIR) prepared for the Regional Transportation Plan (RTP) and serve as a building block in subsequent decision making.

Approval of the RTP requires preparation of a CEQA environmental document, normally a program or master EIR. Caltrans encourages the MPO/RTPAs to identify scenic routes, visual landmarks, or vistas of regional importance, as seen from the project corridor in the environmental document for the plan.

Project Initiation Document

The use of a VIA Questionnaire provides preliminary identification of potential visual resource issues of a project for the PEAR prepared as part of the Project Initiation Document (PID).

The "Preparation Guidelines for Project Study Report" (PSR), Appendix L in the Project Development Procedures Manual, stipulate that PSRs and project study report equivalents contain a discussion of environmental resources, identification of potential environmental issues and anticipated environmental processing type. Potential environmental commitments and associated costs should also be identified. In situations where avoidance, minimization, and/or mitigation requires purchasing of right-of-way, costs can be dramatically affected.

For projects on the SHS, the following level of information is recommended to fulfill the requirements of the guidelines:

- Verification of information from the RTP stage;
- Identification of possible scenic resources and the project’s potential visual impact(s);
- Identification of possible environmental commitments and preliminary costs to be included in the PSR estimate (e.g., special grading requirements, architectural features on bridges and walls, urban street amenities, landscape treatment, right-of way requirements);
- Identification of officially designated State Scenic Highways in the project area.

The Landscape Architect may identify the need for early public engagement to solicit local concerns and along with the PDT, determine appropriate public engagement activities. The process of determining final environmental commitments involves ongoing discussions between the PDT and public through the design phase.

For projects off the SHS, complete the PES form. The information required for the PES satisfies the environmental requirement for the PSR equivalent. For federally funded projects, a VIA must be performed in accordance with this chapter.

Draft Project Report

The SRE and/or VIA is prepared during this stage of the project. Environmental commitments are developed in coordination with the PDT. Costs for visual impacts are also refined in the estimate. See “Activities That May Occur During the Project Design Phase” below for links to information regarding split funding policy for highway planting.

The SRE and/or VIA is used to prepare the visual section of the Draft Environmental Document or used as a supporting technical study for a CEQA Exemption/NEPA Categorical Exclusion, as appropriate.

Project Report

The SRE and/or VIA may be revised during this stage in response to public comment on the Draft Environmental Document, and final environmental commitments are established. This information must be presented in the Final Environmental Document and is used to develop the

[Environmental Commitment Record](#) , as required.

Environmental commitment costs for visual impacts should be refined in the Project Report to fulfill the requirements of the Environmental Commitment Record.

Activities That May Occur During the Project Design Phase

During project design the Landscape Architect coordinates with the PDT to ensure aesthetic treatments and environmental commitments are incorporated into the plans, specifications, and estimate. This can include making final decisions on:

- Type, treatment, and color for barriers and walls;
- Architectural styles for bridge structures and miscellaneous hardware;
- Contour grading plans that incorporate slope rounding;
- Landscape treatment (e.g., planting for screening, revegetation)

If highway planting has been identified see [Chapter 29](#) , Section 2, “Highway Planting” in the Project Development Procedures Manual and [Chapter 900](#) , Topic 902, “Highway Planting Standards and Guidelines” in the Highway Design Manual for additional guidance.

The project will be reevaluated for visual impacts and subsequent environmental commitments if any design changes occur during this phase.

Activities That May Occur During Construction Phase

This phase of the project requires that the Landscape Architect be available to assist the Resident Engineer in ensuring that environmental commitments are constructed as originally intended. Coordination during the pre-construction meeting with the Resident Engineer and Contractor provides the Landscape Architect an opportunity to establish a schedule for field reviews at critical milestones. This is especially important with design features that include color and texture. In addition, coordination with the PDT is important to ensure that measures in the Environmental Commitments Records are implemented. Construction contract change orders may alter visual environmental commitments or cause new visual impacts. The project may need to be reevaluated if these types of events occur.

Activities That May Occur During Maintenance

The Landscape Architect should meet with the Resident Engineer and Maintenance representative, near the completion of construction, to ensure a smooth transition of responsibilities. Important information such as design intent, environmental commitment goals, permit commitments, monitoring, etc. is discussed during this meeting.

Emergency Projects

Emergency work on an officially designated State Scenic Highway undertaken to maintain, repair, or restore an existing highway that has been damaged as a result of fire, flood, storm, earthquake, land subsistence, gradual movement, or landslide, is not statutorily exempt from the requirements of the CEQA. However, it may qualify for a categorical exemption. Please see Question 3 of the [Emergency Projects: Environmental Process and Requirements Guidance](#) for additional details.

(Last content update: 03/12/24, JC)

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