

PROPOSED ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY (ACCMA) FREEWAY SOUNDWALL POLICY

Background

When Senate Bill 45 was signed into state law in 1997, the responsibility for funding soundwalls that are not part of new freeway construction devolved from the California Department of Transportation (Caltrans) to the local Congestion Management Agencies. This process is intended to clarify the responsibilities of Caltrans, the Alameda County Congestion Management Agency (ACCMA) and its member jurisdictions under SB 45 for the approval of freeway soundwall projects through the ACCMA.

Summary

The following are proposed policies coupled with a process for consideration and programming of freeway soundwall projects in Alameda County. A freeway is a multilane, divided highway with a minimum of two lanes for the exclusive use of traffic in each direction and full control of access without traffic interruption, as defined in the 2000 Highway Capacity Manual. The process for funding will be conducted in two phases: (1) the initial screening process; and (2) the Noise Barrier Scope Summary Report (NBSSR) process. Projects that do not qualify for federal funding may be allowed to appeal to the ACCMA for discretionary funds from other sources. Steps for both federal and discretionary funds are outlined on the following pages, accompanied by a flow chart illustrating the process and roles of the various partners in these phases.

As long as there are requests for soundwalls pending that have been initiated but not fully funded or denied, the ACCMA may adopt an amount to be allocated for freeway soundwalls as part of the State Transportation Improvement Program (STIP) fund programming process, usually performed every two years. The amount of funding that can be programmed to soundwalls in Alameda County will be governed by the Alameda Countywide Transportation Plan.

The ACCMA has developed maps of remaining freeway locations that may require a soundwall. These maps, in conjunction with the findings of the “Environmental Justice Report for the 2001 Regional Transportation Plan for the San Francisco Bay Area” prepared by the Metropolitan Transportation Commission, will be considered in setting priorities for funding of future soundwalls. The ACCMA will review its list of funded soundwall projects periodically to ensure that the noise mitigation needs of minority and low-income populations are being addressed, as required by the Federal Highway Administration’s (FHWA) order regarding “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.”

The federal funding process applies to **residences** affected by an existing or predicted future noise level approaching an exterior sound level of 67 decibels, where the noise can be mitigated by 5 decibels with a freeway soundwall and where the cost per dwelling unit does not exceed \$45,000. The federal funding process is further defined by the following caveats:

- Only residences developed prior to opening the freeway are eligible for federal funding.
- The term “approaching” is defined as 2 decibels below the federal criterion of 67 decibels. In the remainder of this document, a level of 65 decibels will be used to encompass the ACCMA’s definition of “approaching 67 decibels.”
- The maximum amount of \$45,000 per dwelling unit may be adjusted periodically to reflect current construction costs.

RESOLUTION 02-04 REVISED - Attachment I
Alameda County CMA Freeway Soundwall Policy

- Soundwalls will not be considered for commercial areas and parking lots.

As a second priority, after the needs of residents for soundwalls have been met, the ACCMA will consider noise attenuation out of its discretionary funds for library, hospital, school buildings and parks along freeways. Noise attenuation may consist of freeway soundwalls or alternative noise abatement devices, such as installation of air conditioning or soundproofing windows. Noise abatement solutions must reduce the interior noise to below 52 decibels within the sensitive uses of libraries, hospitals, and schools and will not be considered for playgrounds, parking lots or any other external uses. The standard of below 52 decibels for interior noise only applies to these sensitive uses, not residences.

Caltrans will attenuate noise in schools along freeways where the schools are not also significantly affected by surrounding arterials. The ACCMA's freeway soundwall policy applies only to those schools along freeways which have been denied noise attenuation by Caltrans. (Contact the Program Advisor for the School Noise Abatement Program in Caltrans' District 4 office for further information about soundwalls for schools.)

Alternative pavement surfaces / treatments:

Alternative pavement surfaces / treatments such as open graded asphalt concrete (OGAC), including Rubberized OGAC, are not listed in the Federal Highway Traffic Noise Regulations (23 CFR 772) as a noise abatement measure for which Federal funding may be used. The CMA may request alternative pavement surfaces / treatments to be used on projects within Alameda County. Alternative pavement surfaces / treatments are not proposed to replace soundwalls though. Candidate areas approved for soundwalls should be reevaluated if the pavement of the facility is rehabilitated with an alternative pavement with noise reducing properties to ensure the area remains a priority location.

Alternative Lightweight Materials:

The Policy assumes soundwalls built with standard masonry block. Caltrans approved alternative lightweight materials may be considered for locations where an overall project cost savings can be demonstrated. For example, a lightweight material may be proposed to be placed on an existing structure, rather than a standard masonry material which would also require a retrofit of the existing structure.

Reflective Noise and Sound Absorptive Alternatives:

The Policy assumes soundwalls built with standard masonry block. In certain scenarios, sound absorptive material may be considered to reduce reflective noise. In such scenarios the local jurisdiction supporting the soundwall request will be responsible to fund any additive costs towards the use of non standard sound absorptive materials.

Activities Related to Soundwall Development that can Address Climate Change:

The CMA may request that material used for OGAC pavement rehabilitation work be of "lighter" colors to promote the reflection of incident sunlight (i.e. a surface with a higher albedo coefficient) and reduce the effects of climate change. This Policy also encourages the inclusion of vegetation to cover soundwalls. The support of vegetation on the soundwalls is intended to provide absorption of certain of vehicle emissions. Vegetation will also provide aesthetic benefit as well as discourage graffiti.

PHASE 1: INITIAL SCREENING PROCESS

Approximately 6-12 months

Step 1: Request for Freeway Soundwall Is Initiated.

A request for a freeway soundwall has, historically, originated in a number of ways. A request may originate from residents to their jurisdiction, from residents to Caltrans, from residents to the ACCMA, or from an ACCMA Board Member to the rest of the Board. If the request is made to Caltrans, Caltrans will forward it to the ACCMA under this process.

Steps 2-4: Jurisdiction Sponsors Initial Screening.

A jurisdiction in this document is defined as the governmental entity of Alameda County or an incorporated city within Alameda County. ACCMA staff will refer all requests for soundwalls to the appropriate jurisdiction in order to ascertain whether it wishes to sponsor the soundwall request and take responsibility for coordinating the input from the public. Underlying this step is the policy that the ACCMA's responsibility is limited to funding and programming freeway soundwalls. (Step 2)

If the jurisdiction wishes to sponsor the request for a freeway soundwall—whether it is a referral from the ACCMA or a request from its residents directly to the jurisdiction—the jurisdiction should so indicate in writing. This can be in the form of a letter or by electronic mail, notifying the ACCMA that it is aware of its role in the process and specifying the staff person assigned to head the project within the jurisdiction. The request should also indicate whether the jurisdiction is aware of or has available any previous noise studies conducted in the vicinity of the proposed soundwall. (Step 3) If the jurisdiction decides not to sponsor the request, the ACCMA will refer all further inquiries about the soundwall project to the jurisdiction. (Step 4)

Step 5: ACCMA Staff Sends Request to Caltrans.

ACCMA staff will send the request for an initial screening to Caltrans, indicating the jurisdiction's support and its staff member assigned to the project. The ACCMA will also forward information on whether or not a previous noise study exists.

Caltrans will review any previous noise studies it has conducted in the area or any the jurisdiction has conducted. If the study indicates a freeway soundwall is warranted and Caltrans staff concurs with the study, the soundwall request will move to Step 6. If the study needs updating or if no study exists, Caltrans will perform an initial screening to determine whether the soundwall is warranted. The screening will determine whether the following four criteria are met:

RESOLUTION 02-04 REVISED - Attachment I
Alameda County CMA Freeway Soundwall Policy

- The existing or future predicted exterior noise level is 65 decibels.
- A reduction of at least 5 decibels resulting from the installation of a soundwall can be achieved.
- The projected cost will not exceed \$45,000 per dwelling unit affected by the soundwall.
- The residences were developed prior to opening the freeway to traffic.

Caltrans will write up the results of its initial screening and forward them to the ACCMA with the following components:

1. The existing noise levels expressed in decibels;
2. The estimated decibel reduction resulting from the installation of a freeway soundwall;
3. A description of the potential soundwall's length and height;
4. A diagram of the affected freeway section, its on-and-off ramps, and the soundwall locations;
5. The location and number of residences, schools, and commercial buildings affected by the proposed soundwall;
6. The estimated construction costs of the soundwall and the associated Caltrans' support costs; and
7. Special circumstances that could affect the costs, such as retaining walls, lane closures, right-of-way acquisitions, etc.

Step 6: ACCMA Evaluates Compliance with Project Screening Criteria.

Projects that meet the four screening criteria will proceed to step 18. The four screening criteria are:

- an existing or future exterior noise level of at least 65 decibels;
- a reduction of at least 5 decibels resulting from the installation of a freeway soundwall;
- a cost of not more than \$45,000 per dwelling unit affected by the soundwall, which may be adjusted periodically; and
- a residence that existed before the opening of the freeway to traffic.

Some proposed soundwalls may meet one or two of the criteria, but not all four. Freeway soundwall requests will first be presented to the Alameda County Technical Advisory Committee (ACTAC), which will make a recommendation to the ACCMA Board. The ACTAC and the ACCMA Board may deny further study and programming of soundwalls that do not meet the screening criteria. Jurisdictions recommended for denial may appeal the decision by requesting that additional analysis be performed by Caltrans to more precisely determine the project's ability to meet the federal standard in question. These projects should proceed to step 7.

Steps 7-8: ACTAC and the ACCMA Board (A) Authorize Additional Analysis or (B) Consider Discretionary Funding or (C) Deny Project.

Screening Criteria Not Met

(A) Additional Analysis: In order to allow flexibility in its freeway soundwall policy, the ACCMA Board, at its discretion, may permit jurisdictions that are recommended for denial to appeal the decision by requesting additional analysis. All soundwall projects must result in a 5 decibel reduction or face an outright denial. However, some projects may be borderline in meeting other criteria—several thousand dollars above the threshold or a few decibels below the 65 decibel criterion. The appeal will be considered only for jurisdictions that are borderline in meeting these criteria, as determined by ACTAC and the ACCMA Board. Projects authorized for additional analysis will proceed to Step 9.

(B) Discretionary Funding: Projects that are not borderline in meeting the other three criteria, but nonetheless demonstrate that a 5 decibel reduction could be achieved from a soundwall, may be considered for non-federal, discretionary funding from the ACCMA. The ACCMA Board may allow the jurisdiction to submit a justification in writing of the compelling reasons a freeway soundwall would benefit its community. The jurisdiction might offer financial participation in the project. Or the jurisdiction might petition for other noise abatement measures, such as soundproofing windows. Projects considered for discretionary funding will proceed to Step 14.

(C) Step 8 - Deny: Soundwall projects that cannot achieve a 5 decibel reduction in noise will be ineffective and, therefore, will be denied.

Step 9: Caltrans Performs Additional Analysis on the Criteria in Question for Projects that Failed the Initial Screening.

Caltrans will perform more detailed study on projects that did not meet federal decibel or cost criteria and forward its results to the ACCMA. Projects that meet all four of the federal requirements after the additional analysis will proceed to Step 18, other projects to Step 10.

Step 10: ACTAC and the ACCMA Board (A) Consider Addition of Local Funds to the Project Budget or (B) Consider Request for Non-Federal Funds or (C) Deny Project.

Screening Criteria Not Met

(A) Steps 11-13 - Jurisdiction Supplements Federal Funds:

Projects that meet the decibel requirements but exceed a cost of \$45,000 per dwelling unit will be given the option of paying for the additional costs through local resources. Some examples of payment options that could be offered by the jurisdiction include:

- Forming an assessment district with the affected property owners to pay the difference between the \$45,000 per dwelling unit and the higher cost estimated by Caltrans.
- Agreeing to fund the soundwall by forfeiting another of its Regional Transportation Improvement Program (RTIP) projects.
- Using the jurisdiction's local funds.

The jurisdiction may submit its offer to meet the higher costs in writing to ACTAC and the ACCMA Board (step 11). The ACCMA Board will consider the proposed financing plan (step 12). The freeway soundwall project will proceed to Step 18 if the plan is approved or will be denied (step 13).

(B) Steps 14-16 - Jurisdiction Requests Non-Federal Funds and Prepares Justification:

Projects that do not meet the four federal criteria or are not accompanied by an agreement to pay for costs above \$45,000 per dwelling unit will be recommended for denial. However, the ACCMA Board may permit jurisdictions that are recommended for denial to compete for non-federal, discretionary funds. It should be noted that the primary sources of funding available to the ACCMA for programming contain federal funds and that the availability and frequency of the funding cycles for non-federal discretionary funding are limited. ACCMA staff will inform jurisdictions of their project's failure to pass the additional analysis by Caltrans. Such jurisdictions may submit a justification in writing to ACTAC and the ACCMA Board describing the compelling reasons that a freeway soundwall would benefit their communities (step 14). The jurisdictions might offer financial participation in the project. Or the jurisdictions might petition for other noise abatement measures, such as soundproofing windows.

In these steps, all projects requesting discretionary funding for noise abatement will be considered—those borderline projects that did not pass the additional analysis and those projects

from Step 7 that are accompanied by a justification from the jurisdiction (step 15). In addition, second priority applications from libraries, hospitals and schools will be considered at this time. The ACCMA Board will consider the discretionary funds available in determining which projects are approved. Approved projects will proceed to Step 18. If the ACCMA Board determines that the justification for the project is not satisfactory, the project will be denied for non-federal funding and consideration of it will end. (step 16)

(C) Step 17 - Deny:

If no justification is proposed, the project will be denied for non-federal funding and consideration of it will end.

Step 18: Property Owners Petition

During the initial screening, Caltrans will define the specific location of the soundwall and identify the residences that will be adjacent to it and/or affected by it with a minimum 5 decibels noise reduction. The ACCMA will notify the jurisdiction of Caltrans' findings from the initial screening and request that a petition from the property owners be circulated for those proposed soundwalls which meet the requirements of the ACCMA Freeway Soundwall Policy. In order to evaluate support in the neighborhood, a petition favoring construction of a soundwall must be signed by a property owner from 100% of the households with a property line that immediately faces the proposed soundwall and 75% of the households with a property line not immediately facing the proposed soundwall, but experiencing a minimum 5 decibels in noise reduction, as defined by Caltrans (multi-unit structure petition requirements will be considered on a case by case basis). At this stage, the jurisdiction should encourage property owners with tenants to notify their tenants of the proposed soundwall. The notice can also alert tenants about their opportunity to participate in a future meeting (in step 26), describing Caltrans' findings from a scoping study of the proposed soundwall. The jurisdiction will collect the petition and forward it to the ACCMA with the required signatures. If the petition requirements as detailed above are not met, the jurisdiction may submit an appeal with the petition. The appeal should address issues such as why a soundwall should be pursued with less than the policy mandated support levels and why a soundwall should be pursued if there is not unanimous support from the property owners with a property line that immediately faces the proposed soundwall. The goal of Step 18 is to assure the ACCMA, the region, and the State that there is strong support for the soundwall before further efforts are made on the project to make it eligible for programming.

Step 19: ACCMA Evaluates Completed Petition.

Proposed freeway soundwalls that meet the requirements of the ACCMA Freeway Soundwall Policy and that are accompanied by a completed petition will be forwarded first to ACTAC and then to the ACCMA Board with a staff recommendation that they be allowed to proceed to Phase 2, pending a Letter of Intent from the jurisdiction. In Phase 2, a detailed noise study, known as a Noise Barrier Scope Summary Report (NBSSR), will be conducted by Caltrans.

Step 20: ACTAC and the ACCMA Board Consider Proceeding with a NBSSR, Pending a Letter of Intent from the Jurisdiction

Projects that meet the requirements of the ACCMA Freeway Soundwall Policy and that are accompanied by a completed petition will be presented to ACTAC with a recommendation to proceed with a NBSSR. ACTAC will then forward its recommendations to the ACCMA Board for approval. Projects that have an incomplete petition/appeal will be considered on a case-by-case basis. Projects, if approved, will proceed to Step 22, or will be denied (step 21).

Stage 22: Jurisdiction Submits Letter of Intent to ACCMA.

The jurisdiction should submit a Letter of Intent to the ACCMA, indicating its intention to support the freeway soundwall or alternative noise abatement project and take responsibility for a formal public process during Phase 2. If the jurisdiction agreed to pay costs exceeding the federal standard, it should outline in more detail how it intends to meet those obligations and under what time frame.

**PHASE 2: NOISE BARRIER SCOPE SUMMARY REPORT (NBSSR) PROCESS
Approximately 2 years**

Step 23: ACTAC and the ACCMA Board Prioritize NBSSR Requests.

Requests for all NBSSR studies are part of an annual process, which usually occurs in the Fall. In the event that there is neither the staff time nor the funds available to program all the requested studies, ACTAC will recommend which projects should receive the highest priority. Individual freeway soundwall studies may be judged against each other, with priorities based on:

- how much the existing or predicted future exterior noise exceeds 65 decibels;
- whether the project meets all four federal standards;
- cost-effectiveness;
- financial participation by the jurisdiction;
- considerations based on impact on minority and low income populations; and
- how long the request for a soundwall has been in the queue waiting for a study.

Noise abatement projects that do not involve a soundwall will also be considered in this process and prioritized.

ACTAC will then forward its priority list to the Board for approval. Those soundwall studies and alternative noise abatement projects that do not make the cutoff list to have the necessary studies performed, due to limited staff time and funding, will return to Step 23 for consideration in the next fiscal cycle.

Step 24: Caltrans Prepares the NBSSR or Jurisdiction Prepares Noise Study.

Caltrans will prepare the NBSSR and provide quarterly status reports on its progress. A NBSSR is a detailed noise study, which usually consists of an analysis of the following factors:

- Cost of the soundwall not to exceed \$45,000 per dwelling unit, which may be adjusted periodically to reflect current construction costs;
- Absolute noise levels approaching 67 decibels or more;
- Reduction of a minimum of 5 decibels in noise levels expected from soundwall construction;
- A detailed cost estimate;
- Life cycle of the soundwall to exceed 15 years;
- Consideration of the environmental impacts of a freeway soundwall, such as visually intruding on a scenic highway, blocking residents' views or scenic vistas, or causing adverse effects on historical sites or endangered species; and
- Engineering feasibility, including consideration of topography; access requirements for driveways, freeway ramps, and local streets; safety; and other noise sources in the area.

Jurisdictions approved for non-soundwall noise abatement projects will prepare a noise study with the detail necessary for final approval and construction or installation. The noise study will include, at a minimum:

- A detailed cost estimate;
- Cost of the noise abatement project per dwelling unit, classroom, hospital room, or library study area;
- Reduction in decibels expected from the project;
- Life cycle of the project; and
- Factors influencing feasibility.

Caltrans will not be involved in non-soundwall projects, unless the project requires use of its right-of-way, in which case Caltrans must approve the design. Jurisdictions that receive final ACCMA approval to fund non-soundwall noise abatement projects will be expected to plan and administer the construction of the projects themselves.

Step 25: ACTAC and the ACCMA Board Accept the Freeway Soundwall or Alternative Noise Abatement Project, Pending Receipt of a Resolution Adopted by Elected Officials of the Jurisdiction.

Projects with a completed NBSSR or noise study will be presented to ACTAC with a recommendation to accept the projects. ACTAC will then forward its recommendations to the ACCMA Board for approval. ACTAC and the ACCMA Board will take action at this stage, before the jurisdiction conducts a formal public process, to assure the jurisdiction of the ACCMA's intent to fund the soundwall or alternative noise abatement project.

Step 26: Jurisdiction Conducts a Formal Public Process.

The jurisdiction shall invite all those directly affected by a freeway soundwall to a meeting held within the vicinity of the proposed project. Notices of the meeting must be mailed to those property owners and tenants adjacent to the proposed soundwall and to those property owners and tenants who will be able to see the soundwall from their residences. Notices of the meeting must be mailed or posted to alert other residents, schools, businesses, etc. in the immediate neighborhood. Notices must be written and distributed in the predominate languages of the impacted area. The jurisdiction is encouraged to notify as broadly as possible other parties who may be interested. This could be done through communication vehicles, such as newsletters, posters, newspaper articles, etc. The meeting should be open to the general public. The jurisdiction should arrange for a Caltrans representative to be present to act as a resource for questions about the findings of the NBSSR. Issues of design and landscaping should also be covered during this meeting. The ACCMA will only fund soundwalls with Caltrans' standard designs and landscaping. Jurisdictions desiring enhancement of the design and landscaping (such as 'living walls' or special façade treatments) must be prepared to make up the difference in cost. Therefore, whether property owners wish to form an assessment district to support such upgrades may be a topic covered in this meeting. Caltrans will also explain the conditions under which reflected noise may occur from a soundwall and how potential noise reflection of soundwalls will be addressed during the detailed design of an approved soundwall. Depending on the level of public concern or interest, the jurisdiction may wish to hold additional meetings to be certain there is community consensus about supporting the soundwall.

For alternative noise abatement projects, the jurisdiction shall convene a meeting of all those who would directly receive a benefit, including property owners and tenants. The jurisdiction should explain the results of the noise study and address any issues raised by the property owners or residents. The jurisdiction must receive acquiescence in writing from each property owner who will receive an alternative noise abatement project. No further noise abatement in the form of soundwalls will be considered, if alternative noise abatement is accepted.

Step 27: Jurisdiction Submits Resolution Adopted by Elected Officials.

Elected officials of the jurisdiction must pass a resolution of support for the proposed freeway soundwall as an agenda item at one of their meetings. The resolution should state that significant support exists in the community for the proposed soundwall. If the jurisdiction has offered financial participation, the resolution should commit the resources or actions to ensure that these financial promises will be fulfilled. The ACCMA Board will not hear appeals of the jurisdiction's resolution of support. Any resident who objects to the ACCMA about the jurisdiction's resolution will be referred to the jurisdiction's staff. The resolution adopted by the elected officials will stand through Step 28. The goal of Step 27 is to assure the ACCMA, the region, and the State that there is strong support for the soundwall before further funds are programmed or expended. However, should the resolution be rescinded before construction, the soundwall will be deleted from the ACCMA's list of projects.

RESOLUTION 02-04 REVISED - Attachment I
Alameda County CMA Freeway Soundwall Policy

The jurisdiction must also pass a resolution of support as an agenda item at one of its meetings for alternative noise abatement projects. The resolution should be forwarded to the ACCMA with the written signatures of the affected property owners acquiescing to the project.

Step 28: ACTAC and ACCMA Board Prioritize Completed NBSSR Projects and Approve Funding for Construction.

In the event that there is neither the staff time nor the funds available for all the requested projects, ACTAC will recommend which projects should receive the highest priority. The same criteria outlined in Step 23 to prioritize studies will be used in this step to prioritize the projects for funding. Projects that do not meet the funding cutoff will return to Step 28 for consideration in the next fiscal cycle. Projects that are funded will have completed the ACCMA approval process for freeway soundwalls.

Attachment:

ACCMA Freeway Soundwall Policy Flowchart

PHASE 1
INITIAL SCREENING PROCESS

Steps 1-5 = approx. 4 months
Steps 6-7 = approx. 2 months
Steps 8-17 = approx. 4 months



