

INITIAL STUDY

STATE CLEARINGHOUSE NUMBER: **TBD**

AMENDMENT TO COUNTY GENERAL ORDINANCE CODE SECTIONS 6.20.30 AND 17.52.580 RE: CREMATORIA

PREPARED FOR:

COUNTY OF ALAMEDA

AUGUST 2010

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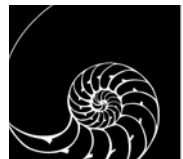


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INTRODUCTION AND PROJECT DESCRIPTION

INTRODUCTION TO THIS DOCUMENT

This document serves as the Initial Study and Negative Declaration (IS/ND) for the proposed amendment to the Alameda County General Ordinance Code (Health & Safety) Section 6.20.30 and Section 17.52.580 (Zoning Ordinance) regarding the criteria under which a crematorium could be permitted to operate within the Western, and potentially the Eastern, unincorporated areas of Alameda County. Per CEQA Guidelines (Section 15070), a Negative Declaration can be prepared to meet the requirements of CEQA review when the Initial Study determines that no potentially significant environmental effects would occur.

This document is organized in three sections as follows:

- **Introduction and Project Description.** This section introduces the document and describes the “Project” including how the proposed code amendment could potentially result in physical effects on the environment. This section also identifies the lead agency and contacts.
- **Negative Declaration.** This section proposes findings that would allow adoption of this document as the CEQA review document for the proposed project.
- **Initial Study.** This section discusses the CEQA environmental topics and checklist questions and documents that the proposed ordinance amendment would not result in significant environmental impacts.

PUBLIC REVIEW

The Initial Study and Proposed Negative Declaration will be circulated for a 30-day public review period. Written comments may be submitted to the following address:

Rodrigo Orduña, AICP, Senior Planner
Alameda County Planning Department – Permit Center
Community Development Agency
399 Elmhurst Street, Suite 141
Hayward, CA 94544

Telephone: 510-670-6503
Facsimile: 510-785-8793
Email: rodrigo.orduna@acgov.org

Adoption of the Negative Declaration does not constitute approval of the project itself, which is a separate action to be taken by the Alameda County Board of Supervisors. Approval of the project can take place only after the Negative Declaration has been adopted.



GENERAL PROJECT INFORMATION

PROJECT APPROVAL

Procedurally, the Ordinance Amendment would become legally operative 30-days following the approval by a majority vote of the Alameda County Board of Supervisors on the Amendment. Ordinance amendments require two (2) readings (i.e., that the matter must pass with a majority vote at two separate hearings of the Board).

LEAD AGENCY

Alameda County Planning Department
Community Development Agency
224 West Winton Avenue, Suite 111
Hayward, CA 94544

CONTACT PERSON

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PROJECT SPONSOR

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PROJECT LOCATION

The Ordinance Amendment would apply in the unincorporated communities of western Alameda County including Castro Valley, Fairview, Ashland, Cherryland, Hayward Acres, and San Lorenzo, and could also apply in the unincorporated communities of eastern Alameda County (lands located within the East County Area Plan).

At this time there are three mortuaries (or funeral homes) operating within western Alameda County communities that would be eligible for a Conditional Use Permit under the terms of the proposed Ordinance Amendment. These are identified below and on Figure 1:

- Deer Creek Funeral Services, 16190 Foothill Blvd, Ashland
- Grissom's Chapel and Mortuary, 267 E. Lewelling, San Lorenzo



- Jess C. Spencer, 21228 Redwood Rd, Castro Valley

In addition, there is a cemetery located in the Fairview area that could potentially avail itself of the proposed Ordinance Amendment, but it would need to obtain a General Plan Amendment and a zoning reclassification (i.e., re-zone) in order to be eligible. Since obtaining a General Plan Amendment and a rezone would be theoretically possible, that facility is identified below and shown on Figure 1:

- Lone Tree Cemetery, 24591 Fairview Road, Fairview

Additionally, for purposes of providing full context on the issue, the Groveway Veterinary Pet Hospital in Castro Valley (approximately 1 mile from the Jess C. Spencer Mortuary) performs cremations for pets. This facility is not eligible for a Conditional Use Permit under the terms of the proposed Ordinance Amendment, but is mentioned here for context relating to the cremation of deceased bodies (human and pet).

At this time there is one cemetery operating in the eastern unincorporated Livermore area that could be eligible for a Conditional Use Permit under the terms of the proposed Ordinance Amendment.

- Five Pillars Farm Cemetery, 1761 Laughlin Road, unincorporated east Livermore

Because of the large size of the two existing cemetery parcels, it is possible that, should the cemeteries add cremation units, the cremation units would be located further than 300 feet from an established residence, and would therefore not need to make use of this ordinance amendment, and would not need to apply for a Conditional Use Permit.

GENERAL PLAN DESIGNATION

The proposed Ordinance Amendment would apply only to existing mortuaries (including funeral homes), or cemeteries (including columbaria). Mortuaries (including funeral homes) are conditionally permitted only in commercially designated areas; cemeteries are conditionally permitted only in areas designated for agriculture.

ZONING

The proposed Ordinance Amendment would apply only to legally existing mortuaries (including funeral homes), or cemeteries (including columbaria). Mortuaries (including funeral homes) are allowed only as conditional uses in C-1 and C-2 commercial zoning districts. Cemeteries (including columbaria) are allowed only as conditional uses in agricultural (A) zoning districts.

PROJECT DESCRIPTION

Health and Safety Code Amendment

As currently written, Section 6.20.30 of the County's Health and Safety Code requires crematoria to be at least 300 feet away from the nearest residence:

6.20.030 - Crematoriums, unlawful to erect etc., within three hundred feet of residences.

It is unlawful for any person, firm, association or corporation to erect, maintain, or operate any buildings, furnace or other appliances for cremating, incinerating, burning or other destroying of human bodies or any parts thereof, within three hundred (300) feet from any established residence in the county.



This section shall not prevent the erection, operating or maintaining of any buildings, furnaces, or other appliances for cremating, incinerating, burning or other destroying of human bodies or other parts thereof as to any residence or residences, erected or established within the prescribed limits subsequently to the time of posting on the premises to be used and occupied for the buildings, furnaces or other appliances, a notice of intention to erect, operate and maintain the buildings, furnaces or other appliances on the posted premises.

The Project is a proposed amendment to County General Ordinance Code Section 6.20.30 that would create a conditional use permit process to allow legally existing mortuaries (including funeral homes) or cemeteries (including columbaria) to add a crematory facility to their existing operation, even if located closer than 300 feet to the nearest residence, subject to conditions and appropriate findings. No specific actions will occur following adoption of the proposed Ordinance Amendment. The Ordinance Amendment creates a procedure whereby private parties may apply for a Conditional Use Permit to establish a crematorium but only as an adjunct service to an existing mortuary (or funeral home) or cemetery (or columbarium) and only if certain findings can be made on the basis of the facts of a given case. Each such case that may come forward following adoption of the Ordinance Amendment would be subject to its own environmental review.

The proposed text of the amendment is set forth below; new wording proposed to be added to the existing code language is shown in **bold underscore**.

6.20.030 - Crematoriums, unlawful to erect etc., within three hundred feet of residences.

It is unlawful for any person, firm, association or corporation to erect, maintain, or operate any buildings, furnace or other appliances for cremating, incinerating, burning or other destroying of human bodies or any parts thereof, within three hundred (300) feet from any established residence in the county **unless, in areas outside the boundary of the East County Area Plan** [this phrase may be eliminated if the ordinance would apply to lands within the East County Area Plan], **findings can be made, through the Conditional Use Permit process, which demonstrate that:**

- A. **cremation shall not be the primary use in a residential or commercial area, i.e. it must be accessory or ancillary to a related and legally existing mortuary, funeral home, columbarium, or cemetery use; and**
- B. **such operation is not a nuisance or threat to public health, safety, or the quiet enjoyment of neighboring occupants; and**
- C. **the cremation operation shall be permitted by the regional air quality control agency (currently Bay Area Air Quality Management District), prior to issuance of any County ministerial permits.**

Zoning Ordinance Amendment

The Project also includes a proposed amendment to County General Ordinance Code Section 17.52.580 to add crematory units as a type of use which would only be permitted through a conditional use permit process. The proposed text of the Zoning Ordinance amendment is set forth below; new wording proposed to be added to the existing code language is shown in ***bold italic underscore***.

17.52.580 – Conditional uses – Board of Zoning Adjustments.



Except where they are listed in the district regulations as permitted uses, the following are conditional uses in any district and shall be permitted only if approved by the board of zoning adjustments, as provided in Section 17.54.130:

- A. Shelter;
- B. Temporary use as regulated in Section 17.52.480; and
- C. Church of wood frame or more lasting construction;
- D. Subdivision entrance structures;
- E. Group living quarters housing persons placed by an authorized agency for rehabilitation purposes and which is funded by or licensed by or is operated under the auspices of an appropriate federal, state or county governmental agency. These group living quarters are characterized by short-term non-medical care occupancies as distinguished from those residential care facilities for the ambulatory aged licensed by the State Department of Social Services Agencies and as distinguished from those medical care facilities as licensed by the State Department of Health.
- F. Crematory units as limited in Section 6.20.030.**

CUP Procedures and Standards

The County’s Zoning Ordinance¹ includes procedures and standards for the granting of a Conditional Use Permit.² The scope of what is considered in granting a CUP is broad:

17.54.130 Conditional Uses. Certain uses, referred to in this title as conditional uses, are hereby declared to possess characteristics which require *special review and appraisal* in each instance, in order to determine whether or not the use

- A. is required by the public need,
- B. whether the use will be properly related to other land uses and transportation and service facilities in the vicinity,
- C. whether or not the use if permitted will under all the circumstances and conditions of the particular case, materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, and
- D. whether or not the use will be contrary to the specific intent clauses or performance standards established for the district, in which it is to be located.

In exercising its discretionary powers regarding a CUP application, the decision-making body would necessarily need to consider all aspects of the proposal in terms of its compliance with adopted County policies, rules, regulations and standards. All CUP approvals carry with them conditions of approval (COA) that provide certainty in support of the necessary findings cited above (e.g., “...properly related to other land uses and transportation and other services in the vicinity...not adversely affect the health or safety of persons in the vicinity...not be materially detrimental to the public welfare...”), as well as providing a basis for accountability and enforceability in the event of bad performance later. Through the

¹ Alameda County General Ordinance Code Title 17 (Zoning Ordinance)

² Id. at 17.54.130



normal process of evaluating and ultimately granting a CUP, the County's Ordinance Code and the Planning Department's administration of it ensures compliance with a host of environmental requirements, many of which involve technical studies by qualified experts. Examples include hydrologic studies to support the design of drainage systems for compliance with the National Pollution Discharge and Elimination System (NPDES); geotechnical studies in support of grading and the design of structural systems; transportation impact studies to identify whether improvements are needed to assure acceptable performance of local roadways; and so on.

Environmental Review

Issuance of a CUP is inherently a discretionary action as it requires the decision-making body (typically, the County's Board of Zoning Adjustments) to make findings. Given that a CUP is a discretionary action, issuance of a CUP is subject to environmental review under CEQA (Guidelines §15357; see also §15268(d)).

The proposed Ordinance Amendment is not exempt from environmental review because the act of amending the County's Ordinance Code is a discretionary action and because the amendment, if adopted, would have the potential to result in a greater number of crematoria than would be possible in the absence of the Amendment. A greater number of crematoria operating in the unincorporated portions of Alameda County could potentially result in adverse physical effects on the environment. Because the Ordinance Amendment has the potential to cause adverse physical impacts to the environment, an environmental assessment must be prepared in accordance with the California Environmental Quality Act (CEQA). The environmental document must be certified or adopted before the Board of Supervisors can take action on the Amendment.

Taken on its face, amending the County's General Ordinance Code involves an action of the County's legislative body that would have no immediate environmental effect. Environmental effects could occur only after the ordinance is adopted and only to the extent that existing mortuaries (including funeral homes), cemeteries (including columbaria) or other applicants whose businesses fall within the criteria set forth in the Amendment apply for and are granted a Conditional Use Permit (CUP) to add a cremation unit as an accessory or ancillary feature to their existing facility. Each case that might apply for the CUP would be subject to its own project specific CUP approval process, which would include environmental review for compliance with CEQA. Accordingly, the focus of this Initial Study is on the broader, programmatic effects that might result from the possibility that additional crematoria could result from the Amendment compared with what would be possible under the current ordinance language.



NEGATIVE DECLARATION

PROJECT DESCRIPTION, LOCATION, AND SETTING

This Negative Declaration has been prepared for the proposed amendments to Section 6.20.30 – “Crematoriums, unlawful to erect etc., within three hundred feet of residences” and Section 17.52.580 – “Conditional uses – Board of Zoning Adjustments” of the Alameda County General Ordinance Code relative to establishing a Condition Use Permit procedure for crematoria closer than 300 feet from the nearest residence. See the Introduction and Project Description section of this document for details of the project.

POTENTIALLY SIGNIFICANT IMPACTS REQUIRING MITIGATION

None

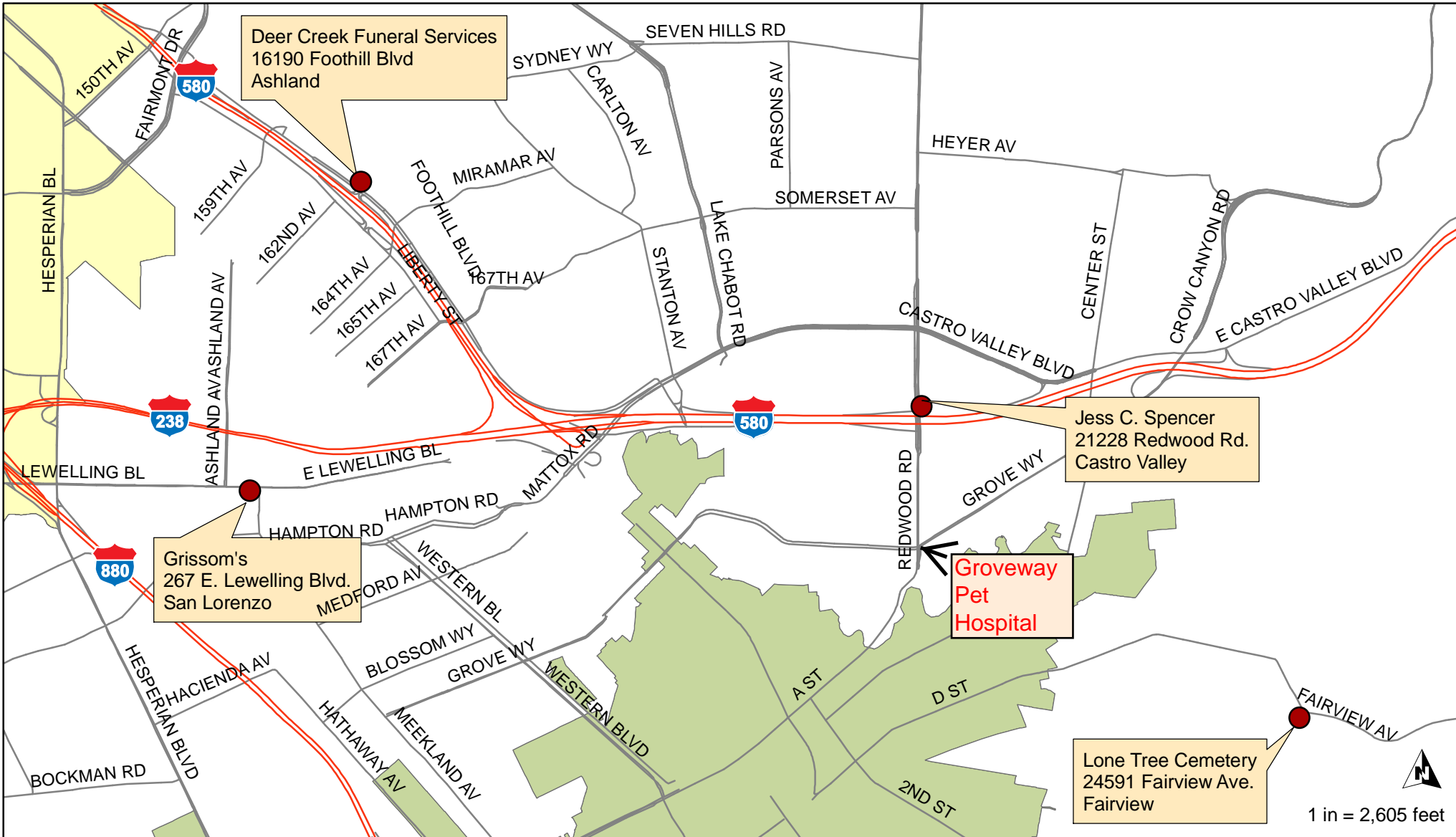
PROPOSED FINDINGS

The report preparers, in consultation with County of Alameda Planning Department staff, have determined that the proposed Project will not have a significant effect on the environment. If this Negative Declaration is adopted by the Alameda County Board of Supervisors, the requirements of the California Environmental Quality Act (CEQA) will be considered to have been met by the preparation of this Negative Declaration and the Project will not require the preparation of an Environmental Impact Report. This decision is supported by the following findings:

- a. The Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community. It does not reduce the number or restrict the range of a rare or endangered plant or animal. It does not eliminate important examples of the major periods of California history or pre-history, since there is no identified area at the Project site which is habitat for rare or endangered species, or which represents unique examples of California history or prehistory. In addition, the Project does not have any significant, unavoidable adverse impacts.
- b. The Project does not involve impacts that are individually limited but cumulatively considerable because the Conditional Use Permit process that would be created by the Ordinance Amendment will be self-mitigating. Individual applications for crematoria will be subject to project specific environmental review and cases that are shown as potentially resulting in cumulatively considerable impacts would be denied because the required findings cannot be made.
- c. The Project does not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly, because all adverse effects of the Project will be avoided.



Funeral Homes in Unincorporated Alameda County



1 in = 2,605 feet

- Alameda County
- Hayward
- San Leandro
- Highways
- Major Street and Roads



INITIAL STUDY

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Environmental factors which may be affected by the Project are listed alphabetically below. The list of factors and the ensuing Environmental Checklist have been updated to conform to the CEQA Guideline Amendments that were adopted in December 2009 and that became legally operative in March 2010.

Factors marked with a filled in block (■) have been determined to be potentially affected by the Project, involving at least one impact that has been identified as a “Potentially Significant Impact”, as indicated in the attached CEQA Evaluation and related discussion that follows.

Unmarked factors (□) were determined to be either not significantly affected by the Project, adequately examined under the Previous CEQA Documents, or fully mitigated through implementation of conditions of approval or revised mitigation measures adopted by the County of Alameda as both lead agency and project sponsor.

- Aesthetics
- Agricultural and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities & Service Systems
- Mandatory Findings of Significance

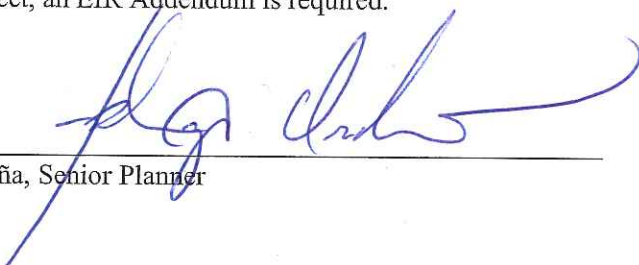


LEAD AGENCY DETERMINATION

The Lead Agency for this Mitigated Negative Declaration is the City of South San Francisco.

On the basis of this initial evaluation:

- I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, an EIR Addendum is required.


Rodrigo Orduña, Senior Planner

8/24/10
Date



INITIAL STUDY CHECKLIST

The Checklist portion of the Initial Study begins below, with explanations of each answer. A “*no impact*” response indicates that the impact simply does not apply to the project or any action that would occur due to the Project. A “*less than significant*” response indicates that while there may be potential for an environmental impact, there are standard procedures or regulations in place, or other features of the Project as proposed, which would limit the extent of this impact to below significance thresholds. Responses that indicate that the impact of the Project would be “*less than significant with mitigation*” indicate that mitigation measures, identified in the subsequent discussion, will be required as a condition of Project approval in order to effectively reduce potential Project-related environmental effects to a level below significance thresholds. Finally, while this is not the case for any topics in this IS/MND, topics with a “*potentially significant impact*” response would indicate the inability to identify mitigation measures to reduce the impact below significance thresholds and would need to be analyzed in an Environmental Impact Report.

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The Ordinance Amendment would apply in unincorporated communities of Castro Valley, Fairview, Cherryland, Ashland, and San Lorenzo in western Alameda County. The Ordinance Amendments could also apply to unincorporated East County communities in agricultural areas outside of Livermore, outside of Pleasanton, outside of Dublin, and in Sunol and its environs.

IMPACTS

(a) – (d) Scenic Vistas, Scenic Highways, Visual Character and Light and Glare

The Project is an amendment to the County General Ordinance Code. Amending the Code would not affect a scenic vista, scenic highway, the visual character of an area, or generate light and glare. Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process. This process includes review of the proposed physical development, with the intent to “...promote orderly, attractive, and harmonious development; recognize environmental limitations on development; stabilize



land values and investments; and promote the general welfare by preventing establishment of uses or erection of structures having qualities which would not meet the specific intent clauses or performance standards of this title or which are not properly related to their sites, surroundings, traffic circulation, or their environmental setting. Where the use proposed, the adjacent land uses, environmental significance or limitations, topography, or traffic circulation is found to so require, the planning director may establish more stringent regulations than those otherwise specified for the district.”³

Any impacts that future projects might have on aesthetic resources would be addressed at that time and appropriate mitigation measures or conditions of approval would be identified to avoid or reduce potential impacts to less than significant levels. *(No Impact)*

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant	No Impact
<u>II. AGRICULTURAL AND FOREST RESOURCES –</u>				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The Ordinance Amendment would apply only in unincorporated County areas, and only to legally existing mortuaries (including funeral homes) or cemeteries (including columbaria) that are allowed under general plan and zoning land use rules. Cemeteries (including columbaria) are allowed in agricultural areas as conditional uses; mortuaries (including funeral homes) are allowed in C-1 and C-2 zoning districts (commercial areas) and only as conditional uses. There is one existing cemetery (Five Pillars Farm Cemetery on Laughlin Road east of Livermore), that is located in an Agricultural zoning district and the Large Parcel Agriculture land use designation of the East County Area Plan. None of the other existing cemetery or mortuary uses that would be eligible under the Ordinance Amendment are in agricultural areas and none are zoned for agricultural use.

³ Id. at 17.54.210



IMPACTS

(a) – (e): Prime Farmland, Williamson Act Contracts, Timberland Zoning, Conversion of Forest Land and Conversion of Farmland.

The Project is an amendment to the County General Ordinance Code. In and of itself, amending the Code would not affect farmland or timberland of any nature or land held under a Williamson Act contract. **(No Impact)**

Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the Ordinance Amendment would be subject to the County’s Conditional Use Permit process, including development review and environmental review. Any impacts that future projects might have on agricultural resources would be addressed at that time and appropriate mitigation measures or conditions of approval would be identified to avoid or reduce potential impacts to less than significant levels.

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Would the project have any cumulative air quality impact (any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The amount of a given pollutant in the atmosphere is determined by the rate of release and the atmosphere’s ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and, for photochemical pollutants, sunshine.

The Ordinance Amendment would apply to unincorporated parts of Alameda County, primarily in areas governed by the *Castro Valley General Plan* or the *Eden Area General Plan*. The climate in these parts of unincorporated Alameda County (e.g., Castro Valley, Fairview, Ashland, Cherryland, and San Lorenzo) is mild during summer when temperatures tend to be in the 60's and cool during winter when temperatures tend to be in the 50's. In Castro Valley, the warmest month of the year is



September with an average maximum temperature of 76 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 41 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 21 degrees Fahrenheit, and fairly limited during winter with an average difference of 17 degrees Fahrenheit.

The existing Five Pillars Cemetery is governed by the *East County Area Plan*. The climate in this part of unincorporated Alameda County is warm during the summer when temperatures tend to be in the 90's and cold during winter when temperatures tend to be in the 40's.

REGULATORY SETTING

State of California and Federal Air Quality Standards

Both the California Air Resource Board and the U.S. Environmental Protection Agency have established ambient air quality standards for common pollutants, including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM₁₀ and PM_{2.5}) and lead. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards include what are called “criteria” pollutants, because the health and other effects of each pollutant are described in criteria documents. For some of these pollutants, notably ozone and PM₁₀, the State standards are more stringent than the national standards.

In addition to the criteria pollutants, Toxic Air Contaminants (TACs) are another group of pollutants of concern in the Bay Area. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants.

Bay Area Air Quality Management District

The local air quality agency is the Bay Area Air Quality Management District (BAAQMD). The BAAQMD enforces rules and regulations regarding air pollution sources and is the primary agency preparing the regional air quality plans mandated under state and federal law. The BAAQMD has prepared air quality impact guidelines for use in preparing environmental documents under the California Environmental Quality Act.

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The monitoring station closest to the communities of San Lorenzo, Cherryland, Ashland, Fairview and Castro Valley is in San Leandro. There is also a monitoring station in the City of Livermore. According to the standards of the federal Clean Air Act, the Bay Area is in attainment with all federal ambient air quality standards except for ozone and particulate matter.

SIGNIFICANCE THRESHOLDS

The CEQA environmental checklist provides five questions regarding the air quality impact significance of proposed projects. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations of



significance. By Resolution adopted on June 2, 2010, BAAQMD adopted new significance thresholds for determining a significant air quality impact⁴:

- A project contributing to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour would be considered to have a significant impact.
- A project that generates criteria air pollutant emissions in excess of the BAAQMD annual or daily thresholds would be considered to have a significant air quality impact. The recently adopted thresholds are 10 tons/year or 54 pounds/day for Reactive Organic Gases (ROG) and Nitrogen Oxides (NOx). For PM₁₀, the new threshold is 15 tons per year or 82 pounds per day. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.
- Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.
- Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants would be deemed to have a significant impact. The term “substantial levels” is further defined as an exposure associated with an excess cancer risk of 10 cases in one million.

The BAAQMD significance thresholds for construction dust impacts are based on the appropriateness of construction dust controls. The BAAQMD guidelines provide feasible control measures for construction emission of PM₁₀. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less than significant.

IMPACTS

a) Conflict with Air Quality Plan

Significance Criteria: The Ordinance Amendment would be considered to have a significant impact if it were to be in conflict with the current air quality plan.

The project is subject to the *Bay Area Clean Air Plan (CAP)*, first adopted by the Bay Area Air Quality Management District (BAAQMD) in 1991 to meet state requirements and those of the Federal Clean Air Act. As required by state law, the CAP has been updated every three years, with the last update being the 2005 *San Francisco Bay Area Ozone Strategy*, adopted in 2006. A 2010 update of the CAP is currently in process.

A project would be in conflict with or obstruct implementation of the regional air quality plan if it would be inconsistent with the growth assumptions, in terms of population, employment or regional growth in vehicle miles traveled. The growth assumptions used for the regional air quality plans are based upon the growth assumptions provided in local general plans.

The EIR for the recently adopted *Eden Area General Plan* found that the *Eden Area General Plan* would not be consistent with the latest Clean Air Plan assumptions since population and VMT growth at build

⁴ A Resolution of the Board of Directors of the Bay Area Air Quality Management District Adopting Thresholds For Use In Determining the Significance of Projects’ Environmental Effects Under the California Environmental Quality Act, Resolution 2010-06, June 2, 2010.



out of the *Eden Area General Plan* would exceed ABAG and MTC projections.⁵ Nevertheless, the potential contribution towards population and VMT growth within the area of the *Eden Area General Plan* attributable to the possibility that there could be one addition crematory unit within the area covered by the Eden Area General Plan is considered a less than significant impact but would be evaluated at the time an application is processed for a CUP pursuant to the proposed Ordinance Amendment. Adoption of the Ordinance Amendment, by itself, would not be in conflict with or interfere with the implementation of the CAP. (**No Impact**).

b) and c) Air Quality Standards

Significance Criteria: The Ordinance Amendment would have a significant environmental impact if it would exceed BAAQMD's mass emission rate threshold or result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Particulate Emissions from Construction Activities

Demolition, earth-moving activities, and exhaust emissions from construction-related vehicles and equipment comprise the major sources of construction dust and diesel emissions. Instead of requiring quantitative analysis of construction activity to determine significance, BAAQMD regards emissions of PM₁₀ and other pollutants from construction activity to be less than significant if dust and particulate control measures are implemented.

The Ordinance Amendment, in and of itself, would not involve construction and would therefore not generate any dust, exhaust or other sources of particulate matter. (**No Impact**).

Further, should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits under its terms would be subject to environmental review. If a future project is found to cause air quality impacts from construction activities, it would be subject to mitigation measures designed to reduce the impact to a less than significant level. Mitigation measures accepted by BAAQMD as reducing construction related dust and exhaust impacts include the following "Basic and Enhances Control Measures" to reduce the temporary air quality impact associated with construction dust.

Basic Measures

- Water all active construction areas at least twice daily.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction site.
- Water or cover stockpiles of debris, soil, sand or other materials that can be blown by the wind.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Sweep daily (preferably with water sweepers) all paved access road, parking areas and staging areas at construction sites.

⁵ Eden Area General Plan Revised Final EIR, certified February 9, 2010, Page 4.11-19.



- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
- Limit construction equipment idling time.
- Properly tune construction equipment engines, and install particulate traps on diesel equipment.

Enhanced Measures

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Additional mitigation measures accepted by the BAAQMD as being effective and feasible for reducing the effects of air pollution coming from construction equipment exhaust includes the following:

- At least 50 percent of the heavy-duty, off-road equipment used for construction shall be ARB-certified off-road engines or equivalent, or use alternative fuels (such as biodiesel or water emulsion fuel) that result in lower emissions.
- Use add-on control devices such as diesel oxidation catalysts or particulate filters.
- Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be prohibited from use on the site until repaired.
- The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors).
- Diesel equipment standing idle for more than two minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on site.
- Properly tune and maintain equipment for low emissions.

The BAAQMD guidelines accept implementation of the Basic and Enhanced Control Measures, and construction exhaust reduction measures, all listed above, as being effective in reducing air pollutant emissions for construction activities to levels considered less than significant. Compliance with these regulations would be achieved either as mandatory mitigation measures under CEQA, or as Conditions of Approval for the CUP.

Emissions of Hazardous Materials during Building Lot Demolition

The California Health and Safety Code requires local agencies to not issue demolition permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding asbestos, lead-based paint and other potentially hazardous materials. The BAAQMD is vested by the California Legislature with authority to regulate airborne pollutants through



both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition and must provide information on the amount and nature of any hazardous pollutants, nature of planned work and methods to be employed, and the name and location of the waste disposal site to be used. The purpose of BAAQMD regulations is to minimize potential hazards to the public and surrounding land uses.

Any future applicant for a Conditional Use Permit for a crematorium involving demolition will also need to comply with California Occupational Safety and Health Administration (Cal/OSHA) regulations, standards and procedures and California Department of Health Services (DHS) Lead Work Practice Standards. These regulations are designed to minimize worker and general public exposure to hazardous building materials. Compliance with these regulations would be achieved either as mandatory mitigation measures, under CEQA, or as Conditions of Approval for the CUP.

The above regulations and procedures, already established and enforced as part of the permit review process, would ensure that the impact of hazardous emissions during construction of future crematoria would be less than significant.

Air Pollutants from Operational Activities

Currently, the BAAQMD mass emission rate threshold considers projects that generate 54 pounds per day of reactive organic gases (ROG, which contributes to the formation of ozone), nitrogen oxides (NO_x, such as NO₂), and 82 pounds per day or 15 tons per year of PM₁₀ as having significant direct and cumulative air quality impacts (i.e., contributing substantially to the current exceedances of air quality standards for ozone and PM₁₀).

By way of example, a quantitative evaluation of the air quality impacts of a proposed crematory (Grissom’s Chapel and Mortuary in San Lorenzo) has been conducted by the BAAQMD.⁶ The proposed unit involved the use of a Multiple Chamber Crematory – CMS Millennium III, 2.25 MM BTU/hr, 100 lbs/hr capacity, equipped with a 0.75 MM BTU/hr burner in the primary chamber and one 1.5 MM BTU/hr burner in the secondary chamber. The operating assumptions used in the analysis were:

- Firing Rate = 2.25 MM Btu/hr (approx. 46,800 therms/yr)
- Natural Gas Gross Heating Value = 1020 BTU/ft³
- Bodies/yr/cremator = 500 (limited by permit condition)
- Average body weight = 150 lbs
- Burning Rate = 100 lb/hr
- Operating Schedule = 8 hours/day, 5 days a week, 52 weeks a year
- Hours of operation = (500 body/yr)(150 lb/body) / (100 lb/hr) = 750 hr/yr
- Fuel Usage = (750 hr/yr)(2.25 MMBTU/hr) = 1687.5 MM BTU/yr

The analysis produced the following results in terms of daily (lb/day) and annual (tons/yr) emissions, all of which were only a fraction of the current BAAQMD thresholds for significance.

⁶ Engineering Evaluation Report, Grissom’s Chapel and Mortuary, 267 E. Lewelling Blvd., San Lorenzo Plant #19463, Application# 19563, by Nancy M. Yee, Air Quality Engineer, BAAQMD.



Table 1. Emissions Example

Pollutant	Daily Emissions (lbs/day)	Annual Emissions (TPY)	BAAQMD Thresholds		Emissions as % of BAAQMD Threshold
			lbs/day	TPY	
PM10	0.22	0.028	82	15	< 1% of Threshold
NO _x	1.17	0.152	54	10	2% of Threshold
SO _x	0.32	0.043	54	10	< 1% of Threshold

Source: *Evaluation Report, Grissom’s Chapel and Mortuary*, Nancy M. Yee, Air Quality Engineer BAAQMD 2009; Lamphier-Gregory 2010.

Pursuant to the proposed Ordinance Amendment, any application for a CUP would be required to obtain a permit to operate from BAAQMD. Before such a permit would be issued, a similar quantitative analysis would be prepared by BAAQMD to assess whether the proposed use would generate air emissions within acceptable limits.⁷ Assuming that the crematory unit analyzed in the example shown above is illustrative of other, similar types of units, crematory facilities of this nature produce operational air quality impacts for criteria pollutants at levels far below applicable thresholds, and would be considered as having a less than significant impacts on regional air quality.

There are only three existing mortuaries (including funeral homes) or cemeteries (including columbaria) in the unincorporated part of western Alameda County that would be eligible for a CUP under the terms of the proposed Ordinance Amendment; a fourth possibility would exist (the Lone Tree Cemetery in Fairview) if the owner of that facility were to obtain an amendment to the General Plan and zoning of the site so that the existing cemetery would be considered a legal conforming land use. Finally, there is an existing cemetery (the Five Pillars Farm Cemetery east of Livermore) which could potentially be eligible for a CUP under the terms of the proposed Ordinance Amendment. If all five of these existing facilities were to apply for and obtain a CUP under the proposed ordinance amendment, and if all five were to generate emissions at the same levels as indicated for the one case presented in Table 1, the combined emissions from all five would still be well below threshold levels, as indicated in Table 2.

Table 2. Theoretical Emissions from Four Crematoria

Pollutant	Daily Emissions (lbs/day)	Annual Emissions (TPY)	BAAQMD Thresholds		Emissions as % of BAAQMD Threshold
			lbs/day	TPY	
PM10	1.10	0.14	82	15	1% of Threshold
NO _x	5.85	0.76	54	10	10% of Threshold
SO _x	1.60	0.21	54	10	3% of Threshold

Source: Table 1 data multiplied by 4. Lamphier-Gregory 2010.

Accordingly, even if all five sites were to be granted a CUP for a crematory unit, the cumulative impact from these five sites would be *less than significant*.

⁷ The methodology applied by BAAQMD for evaluating applications for operating permits for crematoria is found at http://hank.baaqmd.gov/pmt/handbook/rev02/PH_00_05_11_06.pdf.



d) Exposure of Sensitive Receptors to Substantial Pollution Concentrations

Significance Criteria: For the purpose of assessing impacts of a proposed Project on exposure of sensitive receptors to substantial pollution concentrations, the threshold of significance is exceeded when the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million. Examples of sensitive receptors include schools, hospitals, residential areas with children and convalescent facilities.

For the example described above, a health risk analysis was also performed by the BAAQMD, based on the level of cremation activity planned and the technical details of Grissom’s proposed crematory facility. Staff at the BAAQMD ran their model and generated the data shown below in Table 3 which presents the amounts of different compounds expected to be emitted from the facility, expressed in pounds per year, compared against the BAAQMD screening, or ‘trigger,’ levels. Screening levels are provided by BAAQMD as a guide for determining whether detailed technical analysis is required or not; if a project’s characteristics are such that its air emissions are below screening levels, then it is presumed to have a less than significant impact and technical analysis to document that finding is not required.

Table 3. Levels of Toxic Emissions from Crematorium (lbs./year)

Compounds	Emission Factors	Total lbs./Year	Trigger Levels
Acetaldehyde:	0.00013	0.065	72
Arsenic:	0.00003	0.015	0.025
Antimony	0.00003	0.015	7.7
Beryllium:	0.0000014	0.0007	0.014
Cadmium:	0.000011	0.0055	0.046
Chromium Hexavalent:	0.000014	0.007*	0.0013
Copper:	0.000027	0.0135	460
Formaldehyde:	0.000034	0.017	33
Hydrogen chloride:	0.072	36	1400
Hydrogen fluoride:	0.00066	0.33	1100
Lead:	0.000066	0.033	16
Mercury:	0.0011	0.55	58
Nickel:	0.000038	0.019	0.73
Selenium:	0.000044	0.022	97
Zinc:	0.0035	1.75	6800
Chlorinated dibenzo-dioxins and furans (expressed as 2,3,7,8 TCDD equivalents)	0.000000014	0.0000007	0.0000012
PAHs, benzo (a) pyrene equiv:	0.000000049	0.0000245	0.0404

* exceeds trigger levels

Toxic Risk Screen Analysis is required.

PAH = Polycyclic Aromatic Hydrocarbons

Source: Engineering Evaluation Report Grissom’s Chapel and Mortuary 267 E. Lewelling Blvd. San Lorenzo, CA 94580 Plant # 19463 Application # 19563



As shown above in **Table 3**, the emission rates were well below screening levels for all compounds except for the compound chromium hexavalent. As a result of this finding, BAAQMD prepared a toxic risk screen analysis for that one compound. The results of that analysis are presented here.

Toxic Risk Screening Analysis

The applicant is requesting a throughput limit of 500 bodies a year. In addition, the crematory retort may emit some TACs in amounts that exceed the risk screen trigger levels. (See Toxic Emissions from the Cremated Body section). The results of the health risk screening analysis, based on the crematory retort operating schedule of 8 hours per day, 5 days a week, 52 weeks per year and a maximum of 500 bodies cremated per year, are presented in **Table 4** below.

Table 4. Health Risk Assessment Example

Receptor	Cancer Risk in a Million	Chronic Hazard Index	Acute Hazard Index
Off-site Worker	2.3	0.2	0.8
Residential	2.2	0.2	0.9
Student (St. John)	0.2	0.03	0.1
Student (SLHS)	0.04	0.007	0.04
Student (Colonial Acres)	0.03	0.005	0.05

Source: BAAQMD

Under the District’s Risk Management Policy, the proposed project, with an incremental cancer risk less than ten in a million and a chronic hazard index less than one, is acceptable for operations that meet best available control technology for toxic emissions (TBACT). For the students who attend nearby schools, the maximum increased cancer risk is 0.2 chances in a million, the chronic hazard index is 0.03 and the acute hazard index is 0.1. These health risk values meet the criteria for acceptable levels established in Regulation 2, Rule 5.⁸

Assuming that the emissions analyzed in the Grissom example is illustrative of other, similar types of units, crematory facilities of this nature would be expected to produce health risks at levels far below applicable ‘trigger’ levels (and significance thresholds), and would therefore be considered as having *less than significant* impacts on sensitive receptors.

When BAAQMD reviews an application for a permit (for a crematorium or any other point source), it looks to see if there are other point sources within a radius of 1,000 feet of the applicant’s site.⁹ This is the approach BAAQMD takes in considering the potential for the compounding or cumulative effect if too many point sources are located too close to each other. The three legally existing mortuaries (including funeral homes) and the one potentially legal cemetery that would be eligible for a CUP under the terms of the proposed Ordinance Amendment are all farther apart than 1,000 feet. Therefore, under the limited terms of the proposed Ordinance Amendment, and within the framework of the BAAQMD

⁸ Id at p. 4

⁹ BAAQMD, *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May 2010, Section 5.0 Cumulative Analysis, p. 77.



evaluation methodology, it would be impossible for a sensitive receptor to be exposed to a health risk greater than the level resulting from one source which, as indicated in the example above, is substantially below the threshold level of 10 cases in 1 million. For these reasons, the cumulative impact on sensitive receptors would be *less than significant*.

Asthma

Although the actual cause of asthma is not known, studies have shown that several factors can lead to the outbreak of asthma. These factors include heredity, development and growth of a person's lungs and immune system, infections, allergies and response to the environment. Asthma can be triggered by anything and everything. It is usually flared by allergens (e.g., pollen, dust, smoke, etc.), strenuous exercise, smoke from burning wood or tobacco, viral infections (e.g., cold, flu, bronchitis, pneumonia, etc.), and/or strong odors. Particulate matter, which has been identified as an asthma trigger, is emitted from cremation ovens, as well as from other permitted stationary sources within the Bay Area.

Although nearby receptors with asthma conditions may be adversely affected by the minor amounts of additional TOCs and particulate matter emitted by a crematory unit, staff at BAAQMD has said that it would not be possible to trace or attribute specific impacts of a crematory unit to any one person's condition.¹⁰ Consequently, the cumulative impact on sensitive receptors would be *less than significant*.

e) Odors

Significance Criteria: The BAAQMD defines a source of objectionable odors affecting a substantial number of people as one that results in five or more confirmed complaints per year. BAAQMD provides a list of odor-producing land uses and screening distances in which potentially significant impacts are likely. The typical odor-producing land uses shown in BAAQMD's odor screening table include such things as a wastewater treatment plant, sanitary landfill and petroleum refinery; the BAAQMD list does not include crematoria.¹¹ BAAQMD has no regulation specific to crematoria although BAAQMD's Regulation 7: Odiferous Substances would generally apply. Regulation 7 disallows discharge of any odorous substance which causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air.

The Project is an amendment to the County General Ordinance Code. Amending the Code would have no direct effect on odors. (*No Impact*)

In assessing for odor impacts related to operational crematoria on sites or in areas with comparable meteorological characteristics to those present in unincorporated Alameda County, one would look, among other things, at the complaint history of such facilities to determine the degree to which crematoria have a history of odor complaints. Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County's Conditional Use Permit process, including environmental review and any potentially significant odor impacts would be identified and addressed with appropriate mitigation measures and/or conditions of approval. Review of odor complaint history would be part of this project-specific environmental review. The fact that odor was not discussed or evaluated in BAAQMD's review of the Grissom permit application shown previously suggests that odor was not a concern due to the high temperatures required for the cremation process (>1,500° F).

¹⁰ Email from Daphne Chong, BAAQMD, May 20, 2010.

¹¹ Bay Area Air Quality Management District. June 2010. *California Environmental Quality Act Air Quality Guidelines*, Table 3-3.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation polity or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) – (f): Special Status Species, Habitat, Wetlands, Wildlife Corridors; Plans and Policy Conflicts

The Project is an amendment to the County General Ordinance Code. Amending the Code would have no physical effect on biological resources, including special status species or their habitat, wetlands or wildlife corridors, and would not conflict with any policy or plans related to biological resources. (**No Impact**)

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process, including environmental review and any potentially significant impacts to biological resources would be identified and addressed with appropriate mitigation measures and/or conditions of approval.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) – (d): Historical, Archaeological, Paleontological Resources or Human Remains

The Project is an amendment to the County General Ordinance Code. In and of itself, amending the Code would have no physical effect on cultural, historic, archaeological or paleontological resources. (***No Impact***)

Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process, including environmental review. Any impacts that future projects might have to cultural, historic, archaeological or paleontological resources, or that would potentially disturb human remains, would be addressed at that time and the CUP would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.

In the case of human remains, for example, if human remains are found within a project site, the provisions of Section 7050.5 of the Health and Safety Code or, if the remains are Native American, Section 5097.98 of the Public Resources Code as per CEQA Section 15064.5(d) would apply. This would be a standard condition of any CUP approval so the impact would be considered less than significant.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to substantial risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publications 42)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18 - 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) – (e): Exposure to Risks related to Earthquakes, Fault Rupture, Seismic Ground Shaking, Seismic Ground Failure, Liquefaction, or Landslides; Result in Erosion; Be Located on Unstable or Expansive Soils, or Have Soils Incapable of Supporting On-Site Septic Systems.

Adoption of the proposed Ordinance Amendment would have no physical effect on issues related to geology, seismicity, soils or septic systems. ***(No Impact)***

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process. All projects would be required to comply with state and local standards and requirements including the Alquist-Priolo Earthquake Fault Zoning Act, the California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690-2699.6) and the California Building Code (Title 24 of the California Code of Regulations). Any impacts that future projects might have with respect to seismicity or soils would be addressed through the CUP process and would be required to implement



appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
VII. CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

In addition to the air pollutants discussed in the Air Quality section, other emissions may not be directly associated with adverse health effects, but are suspected of contributing to “climate change”. Climate change has occurred in the past as a result of natural processes, but the term is often used now to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases (GHG).

The Global Warming Potential (GWP) concept is used to compare the ability of each GHG to trap heat in the atmosphere relative to carbon dioxide (CO₂), which is the most abundant GHG. CO₂ has a GWP of 1, expressed as CO₂ equivalent (CO₂e). Other GHGs, such as methane and nitrous oxide are commonly found in the atmosphere at much lower concentrations, but with higher warming potentials, having CO₂e ratings of 21 and 310, respectively. Other trace gases, such as chlorofluorocarbons and hydro chlorofluorocarbons, which are halocarbons that contain chlorine, have much greater warming potential. Fortunately these gases are found at much lower concentrations and many are being phased out as a result of global efforts to reduce destruction of stratospheric ozone. In the United States in 2008, CO₂ emissions account for about 85 percent of the GHG emissions, followed by methane at about 8 percent and nitrous oxide at just under 5 percent.¹²

Senate Bill 97—Modification to the Public Resources Code

Pursuant to Senate Bill 97, the California Natural Resources Agency reviewed and adopted amendments to the CEQA Guidelines on December 30, 2010, prepared and forwarded by the Governor’s Office of Planning and Research (OPR). The Amendments became effective on March 18, 2010, including the addition of the above GHG emissions environmental topic and checklist items.

¹² *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2008*. U.S. EPA. April 15, 2010, Table 2-1: Recent Trends in U.S. Greenhouse Gas Emissions and Sinks.



AB 32 and the Air Resource Board’s Climate Change Scoping Plan

In 2006, the governor of California signed AB 32, the Global Warming Solutions Act, into legislation. The Act requires that California cap its greenhouse gas emissions at 1990 levels by 2020.

On December 11, 2008, the California Environmental Protection Agency Air Resources Board (ARB) adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB’s plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce GHG emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state’s projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the state’s GHG inventory. While ARB has identified a GHG reduction target of 15 percent for local governments themselves, it has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions. However, the Scoping Plan does state that successful implementation of the plan relies on local governments’ land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The measures approved by ARB must be enacted by 2012. As of April 2010, 14 ARB regulations had been approved, including all nine Discrete Early Actions, which will provide a reduction of approximately 78 MMT of CO₂e in 2020 (almost 50% of the goal).¹³

Bay Area Air Quality Management District

Sites where the Ordinance Amendment would be applicable are within the San Francisco Bay Area Air Basin and therefore under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD provides a guidance document titled, “Assessing the Air Quality Impacts of Projects and Plans” (CEQA Air Quality Guidelines), which provides guidance for consideration by lead agencies, consultants, and other parties evaluating air quality impacts conducted pursuant to the California Environmental Quality Act (CEQA). The document provides guidance on evaluating air quality impacts of development projects and local plans, determining whether an impact is significant, and mitigating significant air quality impacts. The current adopted version of the BAAQMD CEQA Guidelines was published in December 1999.

On September 4, 2009, BAAQMD published a new set of proposed CEQA Air Quality Guidelines (Draft Guidelines) for consideration by lead agencies, which propose screening levels, thresholds of significance, and methods of analysis for Greenhouse Gas (GHG) emissions. These Draft Guidelines have undergone review and revision, with the latest draft update published in May 2010.¹⁴ The thresholds of significance included in the May 2010 Guidelines were adopted on June 2, 2010.¹⁵ This GHG analysis is consistent with the adopted thresholds and intended to be consistent with the May 2010 guidelines and recommended methodologies.

¹³ California Air Resource Board. April 22, 2010. *AB 32 Scoping Plan Implementation Update*. Accessed at <http://www.arb.ca.gov/board/books/2010/042110/10-4-1pres.pdf>.

¹⁴ Bay Area Air Quality Management District. May 2010. *California Environmental Quality Act Air Quality Guidelines*.

¹⁵ Bay Area Air Quality Management District. June 2, 2010. News Release http://www.baaqmd.gov/~media/Files/Communications%20and%20Outreach/Publications/News%20Releases/2010/ceqa_100602.ashx.



IMPACTS

(a) & (b): Greenhouse Gas Emissions; Consistency with GHG Reduction Plans

The Project is an amendment to the County General Ordinance Code. In and of itself, amending the Code would have no physical effect on GHG emissions and would not conflict with GHG Reduction Plans. (*No Impact*)

Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process, including environmental review. Applicants seeking CUP approval will need to calculate the GHG emissions associated with the proposed crematory unit and relate that estimate to the BAAQMD threshold of 1,100 MT of CO₂e/year. In addition, applications will need to demonstrate that their project is consistent with the County’s GHG Reduction Strategy¹⁶ once it is adopted.

By way of example, a qualitative assessment of GHG emissions has been calculated for the same recently proposed crematory. That example is estimated to generate 89.77 MT CO₂e/year from the combustion of natural gas, as indicated in **Table 5** below.¹⁷ Assuming that the crematory unit analyzed in that example is illustrative of other, similar types of units, crematory facilities of this nature would produce GHG emissions at levels far below applicable thresholds, and would be considered as having a less than significant impacts on GHG. And even if all five potential mortuaries, funeral homes or cemeteries were to obtain CUP approvals for crematoria, the cumulative impact on GHG would be approximately five times the level calculated for the Grissom facility, or approximately 450 tons/year, still well below 1,100 tons/year threshold for significance. Accordingly, even if all potential sites were to be granted a Conditional Use Permit for a crematory unit, the cumulative impact on GHG would be *less than significant*.

Table 5. Greenhouse Gas Emissions Example

GHG from Use of Natural Gas (MMBtu per year)		1,687.50		
	CO2 (metric tons/yr)	CH4 (metric tons/yr)	N2O (metric tons/yr)	Total annual CO2e emissions (metric tons/yr)
Natural Gas GHG Emission Factor *	53.06	0.005	0.0001	
Units for Above	CO2 (kg/MMBtu)	CH4 (kg/MMBtu)	N2O(kg/MMBtu)	
Emissions in kg per year	89,538.75	8.438	0.1688	
Emissions in metric tons per year	89.54	0.008	0.0002	
GWP Factor (to convert to CO2e)	1	21	310	
CO2e Emissions	89.54	0.18	0.05	89.77

* Source: Climate Action Registry General Reporting Protocol, Version 3.1, January, 2009; Lamphier-Gregory 2010. Estimate does not include GHG emissions from mobile sources.

¹⁶ Alameda County Planning Department is currently spearheading a multi-agency effort to produce a Climate Action Plan (CAP) for the unincorporated areas of the County. The CAP is currently a “draft” document and consequently has not yet been accepted as a “Qualified GHG Reduction Strategy.”

¹⁷ The calculation shown in Table 5 was made with the help of the URBEMIS2007 air quality model and the Climate Action Registry General Reporting Protocol Version 3.1 (January 2009). The only input was the amount of natural gas estimated to be consumed in a year at the crematory (1,687.5 MMBTU) as indicated in the example discussed on pp.22-23 of this Initial Study.



Environmental Factors and Focused Questions for
Determination of Environmental Impact

Potentially Significant Impact Less Than Significant with Mitigation Less than Significant No Impact

VIII. HAZARDS AND HAZARDOUS MATERIALS -

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located with the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) - (h): Hazard to the public from transport of hazardous materials or release of hazardous materials into the environment; emit hazardous emissions within ¼ mile of an existing school; be located on a known hazardous materials site; result in a safety hazard due to proximity to a private airstrip; impair or interfere with an emergency response plan; expose the public to risk of wildfire.

Adoption of the proposed Ordinance Amendment would have no physical effect on issues related to hazards or hazardous materials. Issues associated with the potential generation of toxic air contaminants (TAC) are addressed in the Air Quality section of this Initial Study. (*No Impact*)

Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use permit process, including environmental review. Projects would be required to comply with state and local requirements regarding hazardous materials. Any impacts that future projects might have with respect to hazardous materials or hazards to the public would be addressed through the CUP process and would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels. The air emissions from a crematory unit, including particulate



matter and the possibility of emitting ashes during the creation process were addressed in the Air Quality section of this Initial Study. The residual from the crematory process – typically referred to as ‘ashes’ is not considered a hazardous substance. And while there are known hazards to which embalmers and other employees of funeral homes and crematoria are exposed in the normal course of their work, these hazards and the hazardous substances which are used in their work are regulated by the federal and state Occupational Safety and Health Administration agencies and would remain applicable whether the proposed Ordinance Amendment is adopted or not.

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
IX. HYDROLOGY AND WATER QUALITY –				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course a stream or river in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



IMPACTS

(a)- (j): Violate water quality standards or waste discharge requirements; Groundwater supplies and groundwater recharge; Alter the existing drainage pattern resulting in erosion or siltation or flooding on- or off-site; Exceed capacity of stormwater drainage system; Substantially degrade water quality; Place housing in a flood zone; Impede or redirect flood flows; Flooding as a result of the failure of a levee or dam

Adoption of the proposed Ordinance Amendment would have no physical effect on issues related to hydrology or water quality. (*No Impact*)

Should the Ordinance Amendment be adopted, applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County's Conditional Use permit process, including environmental review. All projects would be required to comply with state and local standards and requirements regarding hydrology and drainage including a storm water permit for compliance with the NPDES C.3 permit. Any impacts that future projects might have with respect to hydrology and water quality would be addressed through the CUP process and would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
X. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Research carried out for this Initial Study by the Alameda County Planning Department and Redevelopment Agency has identified only four, mortuaries (including funeral homes) or cemeteries (including columbaria) in unincorporated western Alameda County. There is one existing cemetery located in unincorporated east Alameda County. Of these, only the properties in commercial or agricultural General Plan land use designations could potentially apply for a CUP under the proposed ordinance language. This is because the General Plan land use designation dictates the zoning districts: in order for zoning ordinances to be consistent with General Plan land use designations as required by California State law, currently inconsistent zoning districts need to be updated to match the General Plan land use designations. Currently, cemeteries (including columbaria) are conditionally permitted only in agricultural zoning districts, and mortuaries (including funeral homes) are conditionally permitted only in C-1 (Retail Business), C-2 (General Commercial) zoning districts, and some Specific Plan land use designations such as the R-C (Residential Commercial) land use designation of the *Ashland Cherryland Business District Specific Plan* and the Subarea 9 (Lower Redwood Road – Retail/Office) land use designation of the *Castro Valley Central Business District Specific Plan*. Currently, the R-1 (Single Family Residence) zoning district does not list mortuaries (including funeral homes), or cemeteries (including columbaria) as permitted or conditionally permitted uses. The Deer Creek Funeral Services would need a zoning change to C-1 or C-2 to match the existing General Plan land use designation of Neighborhood Commercial Mixed Use in order to conditionally permit crematory units. The Lone Tree Cemetery is considered legal non-conforming and would need an R-1 zoning language change to allow cemeteries in residential zoning districts, in order to conditionally permit the crematory use, or a zoning and general plan land use change to Agriculture to conditionally permit cemeteries, and then a crematory use. Therefore, the Lone Tree Cemetery would not be considered relevant to this ordinance language change and, although described herein for reference purposes in case a cemetery is established within the Castro Valley canyon lands currently zoned as (A) Agriculture, it is not listed as a potential candidate site for crematory units.

The names, addresses and General Plan and zoning designations for each are shown below in **Table 6** and the locations are shown in **Figure 1**.



Table 6. Existing Mortuaries and Cemeteries in Unincorporated Alameda County

Site Location	General Plan Land Use	Zoning District
Grissom’s Chapel and Mortuary 267 E. Lewelling Blvd., San Lorenzo	General Commercial	R-C
Deer Creek Funeral Services, 16190 Foothill Blvd, Ashland	Neighborhood Commercial Mixed Use	R-1-RV
Jess C. Spencer, 21228 Redwood Rd, Castro Valley	Central Business District	Castro Valley Central Business District Specific Plan - Subarea 9
Lone Tree Cemetery, 24591 Fairview Rd, Fairview	Residential Single Family	R-1 B-E
Five Pillars Farm Cemetery, 1761 Laughlin Rd, Livermore	Large Parcel Agriculture	Agriculture

Source: Alameda County Planning Department; Lamphier-Gregory

Grissom’s Mortuary has applied for and received a permit to operate a crematory unit from the BAAQMD. Except for the Lone Tree Cemetery, each of these cases appears to be closer than 300 feet to the nearest residence. Depending on the location of the crematory unit building itself, the Lone Tree Cemetery and the Five Pillars Farm Cemetery could each house a crematory unit as an accessory use on cemetery property and not violate the existing regulations in the Alameda County General Ordinance Code Section 6.20.030. Because of the large size of the two existing cemetery parcels, it is possible that, should the cemeteries add cremation units, the cremation units would be located further than 300 feet from an established residence, and would therefore not need to make use of this ordinance amendment, and would not need to apply for a Conditional Use Permit.

Except for the Lone Tree Cemetery and Five Pillars Farm Cemetery, each would require a Conditional Use Permit to operate a crematory unit pursuant to the terms of the Ordinance Amendment.

REGULATORY SETTING

Alameda County’s General Plan is made up of several sub-area general plans, including Eden Area, Castro Valley, and East County. For the three sites relevant to this Initial Study, the sites are within three of the County’s area planning documents:

<i>Castro Valley Plan</i>	Jess C. Spencer
	Deer Creek Funeral Services
<i>Eden Area General Plan</i>	Grissom’s Chapel and Mortuary
<i>East County General Plan</i>	Five Pillars Farm Cemetery

The County adopted an updated version of the *Eden Area General Plan* in March 2010 and is currently working on an update to the *Castro Valley General Plan* which is likely to be adopted later in 2010. The *East County Area Plan* was adopted in 2002. None of these Plans specifically address the issue of crematoria.

The existing language of Section 6.20.30 of the County’s General Ordinance Code states that a crematorium must be at least 300 feet distant from the nearest residence. The proposed Ordinance Amendment would create the possibility of adding a crematory unit to an existing mortuary or cemetery even if the existing facility is within 300’ of a residence. The Ordinance Amendment would require each case to be evaluated against the criteria and required findings for a Conditional Use Permit. Local land use considerations in the immediate vicinity of the site would be important factors in determining whether



the required findings could be made for the CUP. Item B in the language of the proposed Findings - that “... *such operation is not a nuisance or threat to public health, safety, or the quiet enjoyment of neighboring occupants*” - would replace the arbitrariness of a quantitatively measurable standard (i.e., 300’ separation) with a more flexible standard to be applied on a case-by-case basis and involve consideration of the facts surrounding each case.

A review of codes and policies of other Bay Area jurisdictions (i.e., Contra Cost County, San Mateo County, Santa Clara County, the City of Hayward and the City of Oakland) found that funeral homes and cemeteries are addressed in different ways but each of these jurisdictions allow them as conditional uses, or by right, in industrial and commercial zones. None of the codes surveyed have provisions specific to crematory units or crematoria, either as principal uses or accessory uses, and none have policies or code provisions similar to Alameda County’s 300’ setback rule. The procedures for granting conditional use permits in the other jurisdictions tend to be similar to what would be required under the proposed Ordinance Amendment – namely, an evaluation of whether a Conditional Use Permit would be warranted in light of the facts of the case as applied against statutory criteria.¹⁸

IMPACT

a) Division of an Established Community

Significance Criteria: The Project would have a significant environmental impact if it were to physically divide an established community.

As a legislative action, adoption of the proposed Ordinance Amendment would not result in the physical division of an established community. (**No Impact**)

Further, should the Ordinance Amendment be adopted, and should each of the three potential cases identified above be granted Conditional Use Permits, the effect that these might have, as operating crematoria, would not rise to the level of dividing an established community because each one occupies only a relatively small site and each has been operating in the community as a mortuary / funeral home compatibly for many years. (Because of the large size of the two existing cemetery parcels, it is possible that, should the cemeteries add cremation units, the cremation units would be located further than 300 feet from an established residence, and would therefore not need to make use of this ordinance amendment, and would not need to apply for a Conditional Use Permit.)

b) Conflicts with Land Use Plan and Zoning

Significance Criteria: The Project would have a significant environmental impact if it were to result in a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect.

As stated previously, the Conditional Use process that would apply under the proposed Ordinance Amendment would call for an assessment of the compatibility of the proposed crematory unit with applicable local land use policies and the physical conditions in the vicinity. In weighing all relevant factors of a given case, it is possible that a proposal to add a crematory unit, closer than 300 feet to the nearest residence, to an existing mortuary or cemetery could be found incompatible with land use policies. The discretionary nature of the Conditional Use Permit process would leave it uncertain as to

¹⁸ Appendix C compares the treatment of mortuaries, funeral homes and cemeteries in other Bay Area Counties (Contra Costa, San Mateo and Santa Clara) and in the city of Oakland. None of the regulatory documents in these jurisdictions (i.e., general plans, zoning or other ordinance code sections) have an express minimum distance between a crematorium and a residence comparable to the Alameda County General Ordinance Code. In these other jurisdictions, mortuaries, and crematory units are typically considered “conditional uses” for which discretionary approval is required.



whether any of the three potential cases might – or might not – involve a conflict with land use plans and zoning. And while the legislative act of adopting the Ordinance Amendment, in and of itself, would not involve a conflict with adopted land use policy, the evaluation of subsequent cases might. (***No Impact.***)

Following are excerpts from the *Castro Valley Central Business District Specific Plan*, the draft *Castro Valley General Plan* and the *Eden Area General Plan* that would guide and inform the review and consideration of applications for Conditional Use Permit as provided in the proposed Ordinance Amendment. Compatibility with existing neighborhood character is a consistent theme reflected in the land use policies.

Castro Valley CBD Specific Plan

III. GOALS

- D. The range of services and merchandise available in the Castro Valley Central Business District should expand in order that a greater portion of purchases by residents can be made in the Castro Valley Central Business District and that the Central Business District can draw consumers from outside the community.
- E. The ratio of sales tax generated within the community, and in particular by the Central Business District, to overall County sales tax revenues should equal or exceed the ratio of Castro Valley's population to that of the County.
- F. Small businesses, and in particular incubator businesses, should be encouraged.
- G. Employment opportunities in the Central Business District should increase.
- H. Development in the Central Business District should be consistent in scale and character and compatible with adjacent land use.

Castro Valley General Plan (Draft)

CIVIC USES AND COMMUNITY FACILITIES GOAL

- GOAL 4.4-1 Provide civic uses and community facilities such as churches, schools, and day care within residential neighborhoods while minimizing the impacts of those facilities on residences in the immediately surrounding area.
- Policy 4.4-1 Scale and Character. Require new development to comply with zoning standards and be compatible with the scale and character of surrounding development.



Eden Area General Plan (2010)

Goal LU-4	Preserve the quality and character of existing Neighborhoods in the Eden Area.
Policy 4:	Permit applications for alterations, additions and infill development shall be reviewed to ensure that they enhance the character and quality of neighborhoods.
Policy 7:	The County shall utilize its Design Guidelines as an implementation tool to require higher quality and more appropriately scaled development in the Eden Area.

Whether a given application for CUP under the proposed ordinance amendment would be found consistent with the foregoing policies will depend upon the facts of each case, but in the end, issuance of a CUP will reflect compatibility and consistency with applicable policies, thereby reducing potential land use conflicts to a less than significant level.

c) Conflict with Conservation Plan

Significance Criteria: The Project would have a significant environmental impact if it were to result in a conflict with any applicable habitat conservation plan or natural community conservation plan.

There are no conservation plans either currently in force or proposed that are applicable anywhere within the area potentially affected by the proposed Ordinance Amendment. (**No Impact**).

Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As a legislative action, adoption of the proposed Ordinance Amendment would not result in the loss of mineral resources. (**No Impact**)

Further, should the Ordinance Amendment be adopted, it would only apply to existing mortuaries (including funeral homes) or cemeteries (including columbaria) and not to sites that would have the potential to affect mineral resources. (**No Impact**)



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
XII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Noise is generally defined as unwanted sound. Whether a sound is unwanted depends on when and where it occurs, what the listener is doing when it occurs, characteristics of the sound (loudness, pitch and duration, speech or music content, irregularity) and how intrusive it is above background sound levels. In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During nighttime, exterior background noises are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Further, most people sleep at night and are very sensitive to noise intrusion.

REGULATORY SETTING

Noise issues are addressed in the Alameda County General Ordinance Code at Section 6.60. Section 6.60.040 provides a table that states the allowable noise levels for different types of land uses and properties and the number of minutes in a given hour of the day that noise at certain levels is permissible; noise in excess of the levels indicated in the table are in violation of the code.

IMPACTS

a) - d) Exposure of Persons to or Generation of Noise Levels in Excess of Standards or to Excessive Groundborne Noise Levels, or a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Project Vicinity



Significance Criteria: The Project would have a significant environmental impact if it were to result in exposure of persons to or generation of noise levels in excess of standards established in the County’s General Plan or the County’s Noise Ordinance.

As a legislative action, adoption of the proposed Ordinance Amendment would have no effect on noise levels. (***No Impact***).

Should the Ordinance Amendment be adopted, applications for Conditional Use Permits would be subject to review under the County’s Conditional Use Permit process, including environmental review. Proper noise studies can be required in cases where noise is a potentially significant impact. If a noise study determines the noise generated by a crematorium unit would potentially exceed allowable noise levels, appropriate mitigation measures would be identified and would be enforceable as conditions of approval of the CUP. It is likely that the normal CUP review and approval process would ensure that any noise impacts of future CUP cases for crematoria would be less than significant.

Noise effects would either be short-term construction-related noise or would be an increase in ambient noise levels resulting from some aspect of the operation of the new facility.

Construction Noise

Standard mitigation measures typically used to address construction noise include limiting the hours during which construction activities can occur and by requiring the contractor to adhere to noise abatement measures that could include the following:

- Ensuring that construction equipment is properly muffled according to industry standards,
- Implementing noise attenuation measures such as noise barriers or noise blankets, and
- Requiring heavily loaded trucks used during construction to be routed away from noise and vibration sensitive uses.

Operational Noise

Ambient noise levels could potentially be affected by the operation of a new crematorium, as a result in an increase in traffic generated by the new facility or from noise generated by the mechanical or combustion equipment used in its operation. Noise effects of future cases would be evaluated to determine whether noise standards would be exceeded and if so, appropriate mitigation measures and/or conditions of approval would be required.

e) and f) Aircraft Noise

Significance Criteria: The Project would have a significant environmental impact if it were located within an airport land use plan (or, where such a plan has not been adopted, within two miles of a public airport or public use airport) or in the vicinity of a private airstrip and were to expose people residing or working in the Project area to excessive noise levels.

Adoption of the Ordinance Amendment would not expose people to aircraft noise because none of the three potential existing mortuary sites are located within two miles of an airport or within an airport land use plan or a private air strip, and neither of the potential cemetery sites are located in areas which are exposed to excessive airport noise. (***No Impact***)



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a): Substantial Population Growth

Adoption of the Ordinance Amendment would not lead to substantial population growth. (***Less than Significant Impact***)

Should the Ordinance Amendment be adopted, and should the new ordinance result in new cremation units operating within the unincorporated parts of Alameda County, there could be a slight increase in the number of employees but their numbers would not be substantial and the impacts associated with that level of employment growth would be considered ***less than significant***.

b) and c) Displace People and Housing

Significance Criteria: The Project would have a significant environmental impact if it would result in the displacement of substantial numbers of existing housing units or people living at the Project site.

Adoption of the Ordinance Amendment or future issuance of CUPs for cremation units would not displace any residents or housing units, and therefore, would have ***no impact*** on the displacement of housing or people.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
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XIV. PUBLIC SERVICES —

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities – Solid Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vi) Other public facilities – Library Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The proposed Ordinance Amendment would apply only to land within the jurisdiction of the County of Alameda where services are provided by County agencies and special districts.

IMPACTS

A (i) – (vi): Public Services

Adoption of the Ordinance Amendment would have no effect on the provision of public services. (**No Impact**)

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use Permit process, including environmental review. Any impacts that future projects might have regarding public services would be addressed at that time and the CUP would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
XV. RECREATION --				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) and b) Recreation

Significance Criteria: The Project would have a significant environmental impact if it were to result in an increase in the use of existing parks or recreational facilities such that substantial physical deterioration of these facilities could be anticipated, or if it were to include recreational facilities, the construction of which might have adverse physical effects on the environment.

Adoption of the Ordinance Amendment would have no effect on parks or recreation facilities. (**No Impact**)

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the proposed Ordinance Amendment would be subject to the County’s Conditional Use permit process, including environmental review. Any impacts that future projects might have regarding parks or recreational services would be addressed at that time and the CUP would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.



Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
<u>XVI. TRANSPORTATION/TRAFFIC</u> -- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IMPACTS

a) –g) Conflict with an Applicable Plan, Policy or Ordinance, Congestion Management Program, Alter Air Traffic Patterns, Create a Hazard Due to Design Features, Interfere with Emergency Access, or Conflict with Adopted Policies and Plans Regarding Public Transit, Bicycles and Pedestrians

Adoption of the Ordinance would not conflict with adopted plans, policies or ordinances or with the adopted Congestion Management Plan. It would not alter air traffic patterns, create hazards or interfere with emergency access plans and would not be in conflict with adopted policies and plans regarding public transit, bicycle use or pedestrian access. (***No Impact***).

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the Ordinance Amendment would be subject to the County’s Conditional Use permit process, including environmental review. Any impacts that future projects might have regarding transportation would be addressed at that time and the CUP would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.



Environmental Factors and Focused Questions for
Determination of Environmental Impact

Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
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XVII. UTILITIES AND SERVICE SYSTEMS -- Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) –e) Exceed wastewater treatment requirements of the RWQCB, Require Construction of new water or wastewater treatment facilities, Require New or Expanded Storm Water drainage facilities, Have sufficient water to serve the project, or Have sufficient wastewater service capacity to serve the needs of the Project.

Adoption of the Ordinance would have no effect on wastewater services, water supply and availability, or storm drain systems. (*No Impact*).

Should the Ordinance Amendment be adopted, all applications seeking Conditional Use Permits pursuant to the Ordinance Amendment would be subject to the County's Conditional Use permit process, including environmental review. Any impacts that future projects might have regarding utilities would be addressed at that time and the CUP would be required to implement appropriate mitigation measures and/or conditions of approval to avoid or reduce potential impacts to less than significant levels.



Environmental Factors and Focused Questions for
Determination of Environmental Impact

Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Quality of the Environment

As an act of the Alameda County Board of Supervisors, adoption of the Ordinance Amendment, by itself, would have no effect on the environment. Establishing a Conditional Use Permit process for existing mortuaries (including funeral homes) or cemeteries (including columbaria) who wish to add a crematory facility to an existing operation only creates the possibility that one or more of the three (3) existing mortuary uses would apply (or up to five existing total if the two existing cemeteries locate crematory units within 300 feet of an existing residence, which is unlikely given that there is so much land for the cemetery uses). All such applications would be required to demonstrate compliance with all requirements for a Conditional Use Permit in order that the required findings can be made and each such case would be subject to environmental review under CEQA.

b) Cumulative Impacts

Cumulative air quality impacts resulting from the adoption of the Ordinance Amendment might occur in the event that multiple CUPs are ultimately issued for crematoria located within a 1,000 foot radius. None of the possible cases for future crematoria are located within 1,000 feet of each other. Therefore the chance of the Ordinance Amendment setting the stage for a future cumulative air quality impact, for example, is not possible. As discussed in the preceding sections of this checklist, adoption of the ordinance amendment would not cumulatively impact the environment provided all policies, rules and regulations of all relevant governing bodies are applied as Conditions of Approval for future CUPs issued to existing mortuaries (including funeral homes) and cemeteries (including columbaria).

c) Adverse Effects on Human Beings

While human beings could be affected by a variety of impacts described above from the approval of any given application for a CUP under the proposed Ordinance Amendment, the act of amending the ordinance, by itself, would not have environmental effects that would cause adverse effects on human beings, either directly or indirectly. Air quality, noise, hazardous materials, and traffic impacts on nearby land uses in the vicinity of future applications could result in significant impacts, but the level of



significance of future cases cannot be determined at this time. The Project would not expose people to new hazards. There would be no other adverse effects on human beings.



APPENDIX A

CONDITIONAL USE PROCEDURES FOR CEMETERIES AND CREMATORIA, ALAMEDA COUNTY AND OTHER JURISDICTIONS

ALAMEDA COUNTY CUP

Conditional uses are described in Section 17.54.130 of the Alameda County Code. A use in any district which is listed, explicitly or by reference, as a conditional use in the district's regulations, or in Section 17.52.580 shall be approved or disapproved as to zoning only upon filing an application in proper form and in accordance with the procedure governing such uses set forth hereinafter.

Conditional uses are uses identified in the zoning code that possess characteristics that require special review prior to approval. In Alameda County the following findings are required to be made prior to the use is approved:

- It is required by the public need
- It is properly related to other land uses, transportations and service facilities in the vicinity
- It must not materially affect adversely the health or safety of persons residing or working in the vicinity, or be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, and
- It must not be contrary to the specific intent clauses or performance standards established for by the district in which is to be located.

SURROUNDING JURISDICTION SURVEY

Lamphier-Gregory reviewed the codes and policies of Contra Cost County, San Mateo County, Santa Clara County and the City of Oakland. The survey identified similar procedures for granting conditional use permits in these jurisdictions and the manner in which these jurisdictions use their CUP process to permit crematorium services. The attached table provides a summary of the survey findings.

None of the jurisdictions reviewed have a policy such as Alameda County Ordinance Code 6-20-30 requiring the maintenance of a 300-foot radius buffer from residential uses. Crematoria, funeral homes and cemeteries are addressed in a number of different ways among these jurisdictions, but the commonality is that these uses are typically allowed as conditional uses, or by right, in industrial and commercial zones. The City of Oakland, the only city jurisdiction reviewed, classifies “Undertaking and Funeral Services” as a commercial activity, and

cemeteries, mausoleums, and columbaria as “Extensive Impact Civic Activities.” Neither definition includes “crematoria,” per se; however, “Undertaking and Funeral Services” uses are allowed in most of Oakland’s Commercial Zones with a CUP, and “Extensive Impact Civic Activities” are allowed in nearly every Commercial and Residential Zone in the City with a CUP.

The one jurisdiction that takes an approach somewhat similar to Alameda County is Contra Costa County. Contra Costa County includes cemeteries and crematory services as a “Special Land Use.” The section of the special land use division that discusses cemeteries expressly delineates seven zoning districts in which this special use is allowed. Although Contra Costa County doesn’t require a CUP for this use, a specific cemetery permit is required and issuance of the permit requires a finding that specific conditions are present. The required conditions include that the

“board of supervisors shall review the location, design, and layout of the proposed cemetery and may condition the permit on requirements as to design, location, layout screening, and design of entrances and exits as the board of adjustment or the board of supervisors finds reasonably necessary to protect the health, safety, and welfare of the people of the county and to protect property values and the orderly and economic development of land in the neighborhood.”

Therefore, while Contra Costa County doesn’t have a separate policy requiring a 300-foot buffer from residential use, granting a permit requires the Board of Supervisors to conduct a review to ensure the health, safety and welfare of the surrounding area.

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Juris-diction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
Contra Costa County	82-4.218 - Cemetery. “Cemetery” means land used or dedicated for any one, or a combination of more than one, of the following land uses: (1) A burial park for earth interments; (2) A mausoleum for crypt or vault interments; (3) A columbarium for cinerary interments.	26-2.2008 - Variance, conditional use and special permits— Conditional use permit standards. An application for a conditional use permit is an application to establish a conditional land use within a land use district which does not allow establishment by right, but does allow the granting of a land use permit after a public hearing. The division of the planning agency hearing the matter either initially or on appeal, shall find the following before granting the permit: (1) That the proposed conditional land use shall not be detrimental	CCC Zoning Code Division 88: Special Land Uses (excerpted) Chapter 88-2: Cemeteries 88-2.206 - Permit— Authorized in only certain land use districts. An application may be made and a land use permit may be granted for the establishment of a cemetery in land use districts established by Division 84, except that no application shall be	No	No

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
		<p>to the health, safety and general welfare of the county;</p> <p>(2) That it shall not adversely affect the orderly development of property within the county;</p> <p>(3) That it shall not adversely affect the preservation of property values and the protection of the tax base within the county;</p> <p>(4) That it shall not adversely affect the policy and goals as set by the general plan;</p> <p>(5) That it shall not create a nuisance and/or enforcement problem within the neighborhood or community;</p> <p>(6) That it shall not encourage marginal development within the neighborhood;</p> <p>(7) That special conditions or unique characteristics of the subject property and its location or surroundings are established. Failure to so find shall result in a denial.</p>	<p>accepted or permit granted for premises located in A-O, N-B, R-B, C, C-M, L-I, and H-I districts.</p> <p>88-2.604 - Uses— Permittable.</p> <p>In addition to the uses included within the definition of “cemetery” contained in Section 82-4.218, land use permits may be granted, at the time of initial application or by subsequent application, pursuant to the provisions of Sections 26-2.1602 and 26-2.208 for the following uses:</p> <p>(1) Crematory of calcinatory;</p> <p>(2) Mortuary;</p> <p>(3) Sale of markers;</p> <p>(4) Sale of caskets;</p> <p>(5) Sale of flowers or decorations;</p> <p>(6) Manufacture and sale of liners and/or vaults</p>		
<p>Santa Clara County</p>	<p>Funeral and cremation services. (Institutional/commercial) Services involving the preparation of human dead, visitation and other pre-interment services. Excludes cemeteries and columbaria (see “Cemeteries”).</p>	<p>§ 5.65.030. - Findings. The Planning Commission may grant a use permit if it is able to make all of the following findings:</p> <p>A. The proposed use conforms with the General Plan, with the Zoning Ordinance, and with all other standards and guidelines applicable to the proposed use that have been adopted by the Planning Commission or Board of Supervisors;</p> <p>B. The site is adequate for the proposed use, including, but not limited to being of adequate size and shape to accommodate all facilities and development features to integrate the use into</p>	<p>Funeral and cremation services are allowed by either use permit with architectural and site development review (U), or by architectural and site development review (A) in the following zones:</p> <p>CG: General Commercial (U), ML: Light Industrial (A), MH: Heavy Industrial</p>	<p>Yes</p>	<p>No</p>

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
		<p>the surrounding area and to provide any necessary or appropriate buffers between the use and the surrounding area;</p> <p>C. The proposed use, by its nature, scale, intensity or design, will not impair the integrity and character of the zoning district or neighborhood, and will not be significantly detrimental to any important and distinctive features of the site's natural setting;</p> <p>D. The proposed use will not be detrimental to the public health, safety or general welfare. In this respect the Planning Commission shall further find, without limitation, that:</p> <ol style="list-style-type: none"> 1. Adequate off-street parking, loading and unloading areas (if applicable), and handicapped access will be provided; 2. Appropriately designed site access will be provided, including safe and adequate access for fire and emergency vehicles (including secondary access where deemed necessary by the Fire Marshal); 3. The use will not adversely affect water quality. Adequate wastewater treatment, disposal and sanitation facilities will be provided and will satisfy all applicable local, state and federal requirements; 4. The use will not be detrimental to the adjacent area because of excessive noise, odor, dust or bright lights; 5. The use will not substantially worsen traffic congestion affecting the surrounding area; 6. Erosion will be adequately controlled; and 7. Adequate storm drainage management exists or will be provided and will comply with all applicable local, state and federal 			

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
		<p>requirements. If all of the above findings cannot be made, the application shall be denied.</p>			
<p>San Mateo County</p>	<p>CHAPTER 2.10 DEFINITIONS: USE CLASSIFICATIONS Cemeteries. (Institutional) Grounds or facilities for the burial or other interment of deceased humans or animals. Uses include cemeteries, columbaria, and mausoleums, and limited associated facilities such as offices and chapels. [Criteria/Findings § 4.10.080] Funeral & Cremation Services. (Institutional/ Commercial) Services involving the preparation of human dead, visitation and other pre-interment services. Excludes cemeteries and columbaria (see Cemeteries).</p>	<p>CHAPTER 5.65 USE PERMIT § 5.65.030 Findings The Planning Commission may grant a use permit if it is able to make all of the following findings: A. The proposed use conforms with the general plan, with the zoning ordinance, and with all other standards and guidelines applicable to the proposed use that have been adopted by the Planning Commission or Board of Supervisors; B. The site is adequate for the proposed use, including but not limited to being of adequate size and shape to accommodate all facilities and development features to integrate the use into the surrounding area and to provide any necessary or appropriate buffers between the use and the surrounding area; C. The proposed use, by its nature, scale, intensity or design, will not impair the integrity and character of the zoning district or neighborhood, and will not be significantly detrimental to any important and distinctive features of the site's natural setting; D. The proposed use will not be detrimental to the public health, safety or general welfare. In this respect the Planning Commission shall further find, without limitation, that: 1. Adequate off-street parking, loading and unloading areas (if applicable), and handicapped access will be provided; 2. Appropriately designed site access will be provided, including safe and adequate access for fire</p>	<p>Allowed in following Zoning Districts with use permit: Commercial & Industrial Base Districts: General Commercial (CG), Light Industrial (ML), Heavy Industrial (MH); Special Purpose Base Districts: General Use (A1)</p>	<p>Yes</p>	

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
		<p>and emergency vehicles (including secondary access where deemed necessary by the fire marshal);</p> <p>3. The use will not adversely affect water quality. Adequate wastewater treatment, disposal and sanitation facilities will be provided and will satisfy all applicable local, state and federal requirements;</p> <p>4. The use will not be detrimental to the adjacent area because of excessive noise, odor, dust or bright lights;</p> <p>5. The use will not substantially worsen traffic congestion affecting the surrounding area;</p> <p>6. Erosion will be adequately controlled; and</p> <p>7. Adequate storm drainage management exists or will be provided and will comply with all applicable local, state and federal requirements.</p> <p>If all of the above findings cannot be made, the application shall be denied.</p>			
<p>City of Oakland</p>	<p>17.10.520 Undertaking Service Commercial Activities. Undertaking Service Commercial Activities include the provision of undertaking and funeral services involving the care and preparation of the human dead prior to burial. This classification also includes certain activities accessory to the above, as specified in Section 17.10.040. (Prior planning code § 2389)</p> <p>17.10.240 Extensive Impact Civic Activities. Extensive Impact Civic Activities include the activities typically performed by, or the maintenance and</p>	<p>17.134.050 General Use Permit criteria. Except as different criteria are prescribed elsewhere in the zoning regulations, a conditional use permit shall be granted only if the proposal conforms to all of the following general use permit criteria, as well as to any and all other applicable use permit criteria:</p> <p>A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage,</p>	<p>Commercial: Undertakers & Funeral Services C-40: Comm. Thoroughfare Commercial (CUP); CBD-C, -X: Central Business District (CUP); C-51: Central Business Serving Commercial (CUP); C-55: Central Core Commercial Zone (CUP); C-60: City Service Commercial Zone (Permitted use); CliX-1: Industrial (Permitted use), CIX-2: Industrial (CUP), IG: Industrial (CUP), IO: Industrial (not permitted</p>	<p>Yes (see adjacent column)</p>	<p>No</p>

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
	<p>operation of, the following institutions and installations:</p> <p>A. Airports, heliports, and helistops;</p> <p>B. Cemeteries, mausoleums, and columbaria;</p> <p>(Funerals are considered commercial activities; cemeteries are “Extensive Impact” Civic Activities. Both include “and other uses” but neither specify cremation, per se)</p>	<p>and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development;</p> <p>B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant;</p> <p>C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region;</p> <p>D. That the proposal conforms to all applicable regular design review criteria set forth in the regular design review procedure at Section 17.136.050;</p> <p>E. For proposals involving a One- or Two-Family Residential Facility: If the conditional use permit concerns a regulation governing maximum height, minimum yards, or maximum lot coverage or building length along side lot lines, the proposal also conforms with at least one of the following criteria:</p> <p>1. The proposal when viewed in its entirety will not adversely impact abutting residences to the side, rear, or directly across the street with respect to solar access, view blockage and privacy to a degree greater than that which would be possible if the residence were built according to the applicable regulation, and, for</p>	<p>in this zone).</p> <p>Extensive Impact Civic Activities: Cemeteries, Mausoleums, Columbaria</p> <p>The City of Oakland allows “Extensive Impact Civic Activities” in nearly all commercial and residential zoning districts with a Conditional Use Permit</p>		

Appendix A Table 1. Conditional Use Procedures for Cemeteries and Crematoria, Other Jurisdictions

Jurisdiction	Definition	CUP Procedure	Zoning	CUP?	300' Buffer?
		<p>conditional use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height; or</p> <p>2. At least sixty (60) percent of the lots in the immediate context are already developed and the proposal would not exceed the corresponding as-built condition on these lots, and, for conditional use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height. The immediate context shall consist of the five (5) closest lots on each side of the project site plus the ten (10) closest lots on the opposite side of the street (see illustration I-4b); however, the Director of City Planning may make an alternative determination of immediate context based on specific site conditions. Such determination shall be in writing and included as part of any decision on any conditional use permit.</p> <p>F. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan or development control map which has been adopted by the Planning Commission or City Council. (Ord. 12376 § 3 (part), 2001: prior planning code § 9204)</p>			

APPENDIX B

**Engineering Evaluation Report
Grissom's Chapel and Mortuary
267 E. Lewelling Blvd.
San Lorenzo, CA 94580
Plant # 19463
Application # 19563**

BACKGROUND

Grissom's Chapel and Mortuary is applying for an Authority to Construct/Permit to Operate a crematory at their facility in San Lorenzo. The applicant is applying for an Authority to Construct the following unit:

S-1 MULTIPLE CHAMBER CREMATORY – CMS Millennium III, 2.25 MMBtu/hr, 100 lbs/hr capacity

The cremator is equipped with a 0.75 MM BTU/hr burner in the primary chamber and one 1.5 MM BTU/hr burner in the secondary chamber. A similar unit is currently operating at Fernwood in Mill Valley (Plant # 15949).

The source will be within 1000 feet of the following schools:

*St. John Elementary School
270 E Lewelling Blvd.
San Lorenzo, CA 94580
(510) 276-6632
Enrollment: ~271 students*

*San Lorenzo High School
50 E. Lewelling Blvd.
San Lorenzo, CA 94580
(510) 317-3000
Enrollment: ~1605 students*

*Colonial Acres Elementary
17115 Meekland Ave.
Hayward, CA 94541
(510) 317-4500
Enrollment: ~574 students*

EMISSIONS CALCULATIONS

Basis:

Firing Rate = 2.25 MM Btu/hr (approx. 46,800 therms/yr)

Natural Gas Gross Heating Value = 1020 BTU/ft³

Bodies/yr/cremator = 500 (limited by permit condition)

Average body weight = 150 lbs

Burning Rate = 100 lb/hr

Operating Schedule = 8 hours/day, 5 days a week, 52 weeks a year

Hours of operation = (500 body/yr)(150 lb/body) / (100 lb/hr) = 750 hr/yr

Fuel Usage = (750 hr/yr)(2.25 MMBTU/hr) = 1687.5 MM BTU/yr

a. Natural Gas Combustion

Pollutant	Emission Factor, lbs/MMscf	Emission Factor, lbs/MMBtu ⁽¹⁾	Daily Emissions Lb/day ⁽²⁾	Annual Emissions lbs/year ⁽³⁾	TPY
PM ₁₀	7.6	7.45E-03	0.05	12.57	0.006
NO _x	100	9.80E-02	0.64	165.37	0.083
SO _x	0.6	5.88E-04	<0.01	0.99	<0.001
CO	84	8.24E-02	0.53	139.05	0.069
POC	5.5	5.39E-03	0.03	9.10	0.005

1. Emission Factor, lbs/MMBtu = (emission factors, lbs/MMscf) / (1020 Btu/scf)
2. (500 body/yr)(150lb/body)/[(100 lb/hr)(260 day/yr)]= 2.88 hr/day
 Daily Fuel Usage = (2.88 hr/day)(2.25 MMBTU/hr) = 6.48 MMBTU/day
 Daily Emissions, lbs/day = (daily fuel usage, MMBTU/day)(emission factors, (lbs/MMBTU))
3. Annual Emissions, lbs/yr = (fuel usage, MMBtu/yr) *(emission factors, lbs/MMBtu)

b. Emissions from Cremations - In addition to natural gas combustion, there are also emissions attributed to the combustion of the casket and body.

Basis: Number of bodies: 500 per year
 Average body weight: 150 lbs/body
 Personal effects: 5 lbs/body

Pollutant	Emission Factor, lbs/ton	Daily Emissions lbs/day ⁽¹⁾	Annual Emissions lbs/year ⁽²⁾	Annual Emissions TPY
PM ₁₀	1.13	0.17	43.79	0.022
NO _x	3.56	0.53	137.95	0.069
SO _x	2.17	0.32	84.09	0.042
CO	2.95	0.44	114.31	0.057
POC	2.99	0.45	115.86	0.058

⁽¹⁾ Daily Emissions lbs/day = (Annual Emissions, lbs/yr)/ 260 day/yr)

⁽²⁾ Annual Emissions, lbs/yr = (emission factor lb/ton)(500 body/yr)(155 lb/body)/(ton/2000 lb)
 Annual Emissions, TPY = (Annual Emissions, lbs/yr)/(2000 lb/tons)

Summary of Total Emissions from Fuel Usage and Cremation of Human Remains

Pollutant	Daily Emissions (lbs/day)	Annual Emissions (lb/yr)	Annual Emissions (TPY)
PM10	0.22	56.36	0.028
NO _x	1.17	303.32	0.152
SO _x	0.32	85.08	0.043
CO	0.97	253.36	0.127
POC	0.48	124.96	0.063

Toxic Emissions from the Cremated Body

Toxic Pollutant Emission Factors taken from Permit Handbook, Section 11, Misc.

Sources – Crematory

(Emission Factor (lbs/body))(500 bodies/yr) = Lbs/yr Trigger Levels

Compounds	Emission Factors	Lbs/year	Trigger Levels
Acetaldehyde:	1.30E-04	6.50E-02	7.2 E +01
Arsenic:	3.00E-05	1.50E-02	2.5 E -02
Antimony	3.00E-05	1.50E-02	7.7 E+00
Beryllium:	1.40E-06	7.00E-04	1.4 E -02
Cadmium:	1.10E-05	5.50E-03	4.6 E -02
Chromium Hexavalent:	1.40E-05	7.00E-03*	1.3 E -03
Copper:	2.70E-05	1.35E-02	4.6 E +02
Formaldehyde:	3.40E-05	1.70E-02	3.3 E +01
Hydrogen chloride:	7.20E-02	3.60E+01	1.4 E +03
Hydrogen fluoride:	6.60E-04	3.30E-01	1.1 E +03
Lead:	6.60E-05	3.30E-02	1.6 E +01
Mercury:	1.10E-03	5.50E-01	5.8 E +01
Nickel:	3.80E-05	1.90E-02	7.3 E -01
Selenium:	4.40E-05	2.20E-02	9.7 E +01
Zinc:	3.50E-04	1.75E-01	6.8 E +03
Chlorinated dibenzodioxins and furans (expressed as 2,3,7,8 TCDD equivalents)	1.40E-09	7.00E-07	1.2 E -06
PAHs, benzo (a) pyrene equiv:	4.90E-08	2.45E-05	4.04 E-02

*** exceeds trigger levels**

Toxic Risk Screen Analysis is required. (See below)

PAH = Polycyclic Aromatic Hydrocarbons

PLANT CUMULATIVE INCREASE EMISSIONS

The cumulative increases from this application are from the natural gas combustion and cremations. There are no existing cumulative emissions.

Pollutant	Current (TPY)	Proposed (lb/yr)	Total Emissions (TPY)
PM10	0	56.36	0.028
NO _x	0	303.32	0.152
SO _x	0	85.08	0.043
CO	0	253.36	0.127
POC	0	124.96	0.063

POC = Precursor Organic Compounds

TOXIC RISK SCREENING ANALYSIS

The applicant is requesting a throughput limit of 500 bodies a year. In addition, the crematory retort may emit some TACs in amounts that exceed the risk screen trigger levels. (See Toxic Emissions from the Cremated Body section). The results of the health risk screening analysis, based on the crematory retort operating schedule of 8 hours per day, 5 days a week, 52 weeks per year and a maximum of 500 bodies cremated per year, are presented in the table below.

Receptor	Cancer Risk in a Million	Chronic Hazard Index	Acute Hazard Index
Off-site Worker	2.3	0.2	0.8
Residential	2.2	0.2	0.9
Student (St. John)	0.2	0.03	0.1
Student (SLHS)	0.04	0.007	0.04
Student (Colonial Acres)	0.03	0.005	0.05

Under the District's Risk Management Policy, the proposed project, with an incremental cancer risk less than ten in a million and a chronic hazard index less than one, is acceptable for operations that meet best available control technology for toxic emissions (TBACT). For the students who attend nearby schools, the maximum increased cancer risk is 0.2 chances in a million, the chronic hazard index is 0.03 and the acute hazard index is 0.1. These health risk values meet the criteria for acceptable levels established in Regulation 2, Rule 5.

BACT ANALYSIS

BACT is not triggered for PM₁₀, POC, NO_x, CO and SO₂ emissions, each of which does not exceed 10 pounds per highest day. However, TBACT is required for projects that result in an incremental cancer risk of more than one, but less than ten in a million. This facility will meet TBACT by operating the natural gas-fired crematory retort with the secondary combustion chamber operating at or above 1650°F, a residence time greater than one second, and exhaust gas grain loading less than 0.06 grains per dry scf adjusted to 7% O₂.

OFFSET ANALYSIS

Total facility emissions, including this project, will be less than 10 tons per year of POC or NO_x. Therefore, offsets are not required.

CEQA REVIEW

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors and therefore is not discretionary as defined by CEQA (Permit Handbook Chapter 11.6).

STATEMENT OF COMPLIANCE

S-1 is subject to the following requirements:

- Regulation 6 - 301 - Ringelmann No. 1 Limitation
- Regulation 6 - 302 - Opacity Limitation
- Regulation 6 - 310 - Particulate Weight Limitation
- Regulation 1 - 301 - Public Nuisances.

Grissom's Chapel and Mortuary is located within 1000 feet of the following schools:

St. John Elementary School
270 E Lewelling Blvd.
San Lorenzo, CA 94580
(510) 276-6632
Enrollment: ~271 students

San Lorenzo High School
50 E. Lewelling Blvd.
San Lorenzo, CA 94580
(510) 317-3000
Enrollment: ~1605 students

Colonial Acres Elementary
17115 Meekland Ave.
Hayward, CA 94541
(510) 317-4500
Enrollment: ~574 students

Grissom's Chapel and Mortuary is subject to the public notification requirement of Regulation 2-1-412. Over 3,000 public notices were distributed on June 3, 2009 to the parents and guardians of students at the schools listed above and all addresses within 1000 feet of the cremator.

A total of sixteen responses (7 phone calls, 7 email, two US mail) from fourteen different persons were received. One person called twice and another one left a phone message as well as sent a letter. All the respondents were against the project.

All the calls, emails and regular mail were addressed by contacting the respondents via email and/or regular mail with the standard public comment response letter. If the respondent was home when the call was made, they were informed that the District understand their concerns about this project and the potential impact to the surrounding community. However, for a project that satisfies the District's Regulation 2, Rule 5 and meets all other applicable District regulations, we are obligated to grant an Authority to Construct. We do not have the authority to deny a project that meets our regulations, based on public opposition. Therefore, the District has approved this application. If they wish to pursue this issue, they could contact the local county regarding any zoning or planning ordinances governing the location of this business in San Lorenzo. All other related questions were also answered.

PSD, NSPS and NESHAPS do not apply to this project.

CONDITIONS:

1. The owner/operator shall operate cremator S-1 in such a way that the unit's processing rate shall not exceed 100 pounds per hour and the maximum firing rate shall not exceed 2.25 MM BTU/Hr.
2. The owner/operator of S-1 shall not perform more than a total of 500 cremations in any consecutive 12-month period. (Basis: cumulative increase; toxic risk screen)
3. The owner/operator shall maintain the operating temperature in the secondary chamber of the cremator at or above 1650 degree Fahrenheit during the cremation mode. Any temperature excursion below 1600 degree Fahrenheit during the cremation mode will be

considered a violation of this permit condition. The owner/operator shall equip the cremator with a District approved continuous temperature monitoring and recording device to ensure compliance with this condition. The location of the thermocouple shall be approved by the Source Test Section of the District. Natural gas input to the secondary chamber burner shall be increased, if necessary, to increase temperature sufficiently to control odor and visible plume.

(Basis: Regulation 6-301, 6-310; TBACT)

4. After the shutdown, the owner/operator shall not cremate until the cremator has been preheated so that the temperature in the secondary chamber is at least 1650 degree Fahrenheit. (Basis: Regulation 6-301, 6-310; TBACT)
5. The owner/operator shall fire the cremator with natural gas only. (Basis: cumulative increase; TBACT)
6. The owner/operator shall use the cremator to cremate only human remains. No other material contaminated with toxic air contaminants as listed by Air Resources Board, including radioactive and biohazardous waste shall be incinerated in this cremator without prior approval of the District. (Basis: cumulative increase; toxic risk screen)
7. The District may require the owner/operator of the cremator to conduct a District approved source test to determine particulate matter, hydrocarbon, NOX, CO, O2, HCl, and toxic emissions under unusual conditions, such as: obese case, disaster bags. The Source Test Section of the District shall be contacted to obtain approval for the source test method. The Source Test Section shall be notified at least 7 days in advance of any expected source test. A copy of source test report for each test shall be provided to the District within 30 days of source test date. (Basis: cumulative increase; toxic risk screen)
8. The owner/operator shall have the cremator equipped with sampling ports and platforms, the location of which shall have the approval of the Source Test Section of the District. (Basis: Regulation 6-310)
9. The owner/operator shall have an operator present at all times during cremations. (Basis: Regulation 6-301)
10. The owner/operator shall keep the cremator in good working condition. The date and detailed description of the type of maintenance done on cremator shall be recorded in a District approved logbook. (Basis: Regulation 6-301, 6-310)
11. To determine compliance with the above conditions, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above conditions, including but not limited to daily records of the following information:
 - a. operating hours
 - b. number of cremations
 - c. weight of the human remains
 - d. processing rate

(Basis: Regulation 1-441, cumulative increase, TBACT, toxic risk screen)

12. The owner/operator shall keep all monitoring, source test, and maintenance records as required per parts 7, 10, and 11 on site for at least two years from the date of data entry, and the records shall be made available to the District staff for inspection. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations.
(Basis: cumulative increase, TBACT; Regulation 6-301, 6-310).
13. The exhaust stack from S-1 shall be at least 28 feet above grade. (Basis: toxic risk screen)

RECOMMENDATION

It is recommended that an Authority to Construct shall be issued to Grissom Chapel and Mortuary for the following:

S-1 MULTIPLE CHAMBER CREMATORY – CMS Millennium III, 2.25 MMBtu/hr, 100 lbs/hr capacity

By: _____
Nancy M Yee
Air Quality Engineer

Date