APPENDIX A

NOTICE OF PREPARATION AND COMMENT LETTERS

LIVERMORE
CALIFORNIA

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LIVERMORE MUNICIPAL AIRPORT REZONING PROJECT

TO: INTERESTED PERSONS AND AGENCIES

SUBJECT: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Livermore Municipal Airport Rezoning Project

Lead Agency:
Susan Frost, Principal Planner
Community Development Department
1052 S. Livermore Ave.
Livermore, CA 94550
Phone: (925) 960-4462
Fax: (925) 960-4459

Consultant:
Judith Malamut, Principal
LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94710
Phone: (510) 540-7331
Fax: (510) 540-7344

Notice is hereby given that the City of Livermore will be the Lead Agency and will prepare an EIR for the Livermore Municipal Airport Rezoning Project (project), as described below. The EIR will evaluate potentially significant environmental impacts of the project. If you represent a public agency, we would like the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Comments should be forwarded to the Lead Agency (see address above) within 30 days after receipt of this notice.

Project Title: Livermore Municipal Airport Rezoning Project

Project Location: The Livermore Municipal Airport is located in the City of Livermore (City) in the northeastern portion of Alameda County, approximately 3 miles northwest of Downtown Livermore and 2 miles east of the City of Pleasanton. The 395-acre part of the Airport that would be rezoned as part of the proposed project (the project site) is generally bounded by Club House Drive and Airway Boulevard on the north; parcels bordering Rutan Drive and the Water Reclamation Plant on the east; the Water Reclamation Plant and Jack London Boulevard on the south; and agricultural lands and Las Positas Golf Course on the west. A location map of the Livermore Municipal Airport is attached (see Figure 1).

Livermore Municipal Airport (Airport) is a general aviation facility used as a base of operations for local pilots, a point of air access to the community, and a place to conduct flight training. The Airport comprises 643 acres, including two runways, 22 hangar buildings, 249 tiedown spaces, helicopter parking, an airport terminal/pilots' lounge, and associated facilities. The project site is currently zoned for the following uses: Education and Institution (E), which permits public and quasi-public uses; and Planned Development (PD), which is intended to

allow for flexible development standards and development that is consistent with the underlying General Plan land use designation.

Project Description: Under the proposed project, the project site would be rezoned to provide the City with a unique area occupied by aviation-oriented uses, and to ensure that permitted uses are consistent with those outlined in the existing 1975 Airport Master Plan. (As a point of information, the Master Plan Update of 2004 was abandoned and is no longer being considered by the City.)

The proposed Airport (AIR) Zoning District, which would encompass the entire project site, would consist of two zoning subdistricts: 1) the Airport Operations (AIR-OP) Zoning Subdistrict and 2) the Airport Service (AIR-SE) Zoning Subdistrict. These subdistricts would not permit the development of new land uses other than those already permitted as part of the existing Master Plan. The purpose of the AIR-OP Zoning Subdistrict is to provide standards for Airport operations facilities and to allow for the development of aviation land uses and related facilities that are necessary for the safe operation of the Airport. Uses that would be permitted under the AIR-OP Subdistrict include runways, taxiways, run-up aprons, lighting signage, and similar uses. Generally, these facilities are regulated by State and federal agencies. The purpose of the AIR-SE Zoning Subdistrict is to provide standards for Airport support facilities and to allow for the development of aviation-related land uses and associated facilities to support Airport operations. Uses that would be permitted under the AIR-SE Subdistrict include access taxi lanes, aircraft hangars, aircraft manufacturing and research uses, aircraft sales, ancillary support services, and similar uses. The proposed zoning district would include limits on maximum development allowed and would not allow for development at intensities that exceed those outlined in the existing Master Plan. The project would not require a General Plan amendment and is not expected to change flight operations.

The proposed project does not include specific development projects. However, future uses anticipated at the Airport could include a fixed-base operation facility (FBO), a new hangar facility on the south side of the Airport, and a new administration building on the north side of the Airport that would replace the existing building. Because development applications have not been submitted for these facilities, these specific development projects will be subject to independent environmental review once a development application is received and will only be discussed in this EIR to the extent that these future projects may create cumulative impacts.

Scope of the EIR: The EIR will evaluate each of the following environmental topics: Land Use and Planning Policy; Hydrology and Water Quality; Geology, Soils and Seismicity; Transportation, Circulation and Parking; Air Quality (including Global Climate Change); Noise; Hazardous Materials and Public Health and Safety; Public Services; Utilities; Biological Resources; Cultural and Paleontological Resources; and Aesthetic Resources.

Comment Deadline: The City of Livermore invites you to comment on the proposed scope of the Draft EIR. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***no later than Monday, December 1, 2008 at 5:00 p.m.***. Written comments on the proposed scope of the EIR may be sent by mail or fax to the Lead Agency (see address above).

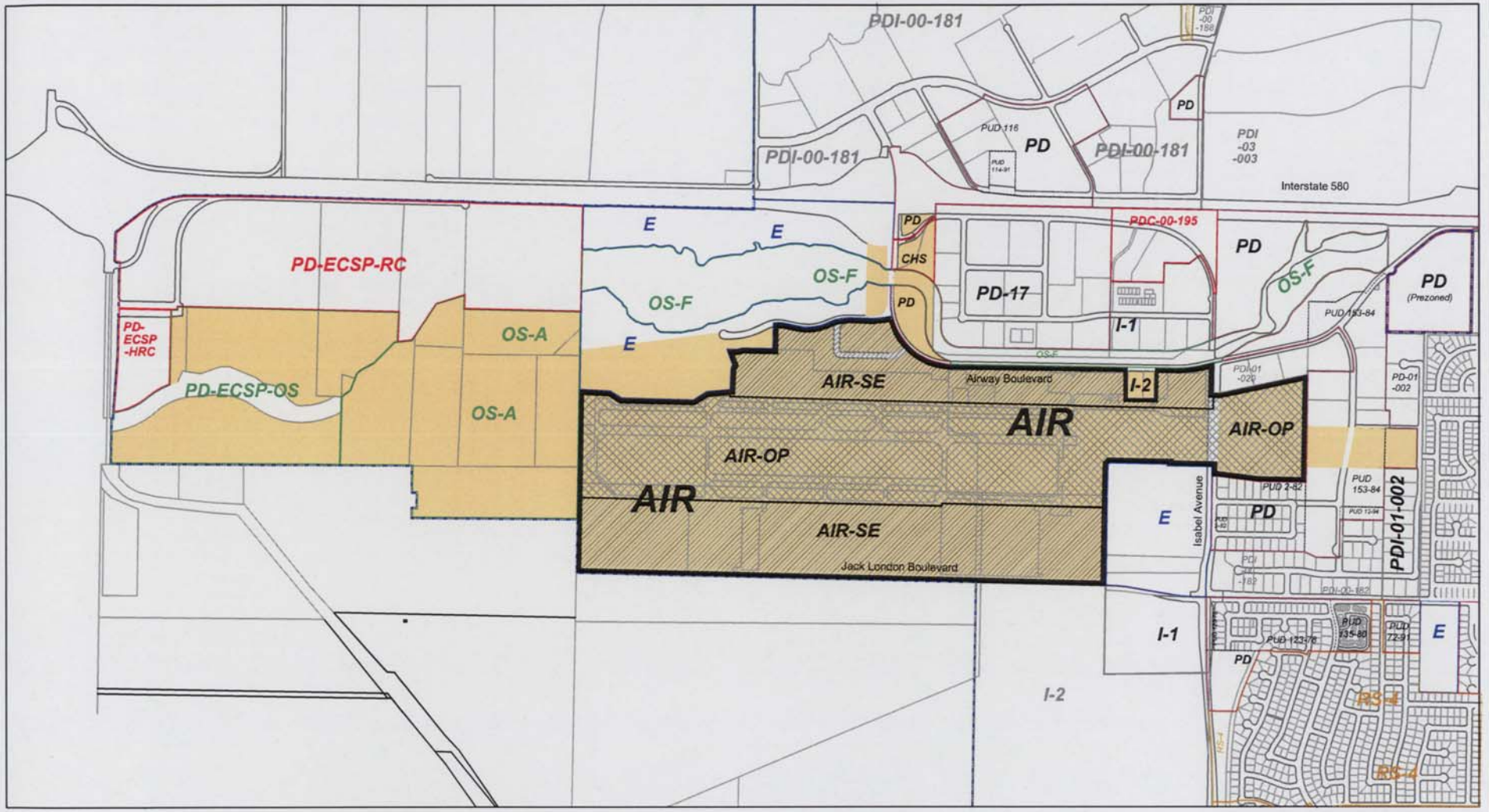
Scoping Meeting: A Scoping Meeting/Open House is scheduled for Tuesday, November 25, 2008, from 6:00 p.m. to 9:00 p.m. in the Livermore Council Chambers, 3575 Pacific Avenue. All interested persons are invited to attend.

Susan Frost

Susan Frost, Principal Planner

October 28, 2008

Date



PROPOSED AIRPORT REZONING

Airport / City Owned Parcels (643 Acres)

AIR — Proposed Airport (AIR) Zoning District

Proposed Airport Service (AIR-SE) Zoning Subdistrict

Proposed Airport Operations (AIR-OP) Zoning Subdistrict

N

Date: 10/24/2008

LIVERMORE
CALIFORNIA

AMENDED NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE LIVERMORE MUNICIPAL AIRPORT REZONING AND GENERAL PLAN AMENDMENT PROJECT IN THE CITY OF LIVERMORE

TO: INTERESTED PERSONS AND AGENCIES

SUBJECT: Amended Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Livermore Municipal Airport Rezoning Project

Lead Agency:
Susan Frost, Principal Planner
Community Development Department
1052 S. Livermore Ave.
Livermore, CA 94550
Phone: (925) 960-4462
Fax: (925) 960-4459

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Notice is hereby given that the City of Livermore will be the Lead Agency and will prepare an EIR for the Livermore Municipal Airport Rezoning and General Plan Amendment Project (project), as described below. The EIR will evaluate potentially significant environmental impacts of the project. If you represent a public agency, we would like the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Comments should be forwarded to the Lead Agency (see address above) within 30 days after receipt of this notice. This Notice of Preparation (NOP) is an amended version of the one originally distributed by the City on October 28, 2008. The amendment to the General Plan concerns deletions of references to the 1975 Airport Master Plan as it is no longer effective due to its age and obsolescence.

Project Title: Livermore Municipal Airport Rezoning and General Plan Amendment Project

Project Location: The Livermore Municipal Airport is located in the City of Livermore (City) in the northeastern portion of Alameda County, approximately 3 miles northwest of Downtown Livermore and 2 miles east of the City of Pleasanton. The 395-acre part of the Airport that would be rezoned as part of the proposed project (the project site) is generally bounded by Club House Drive and Airway Boulevard on the north; parcels bordering Rutan Drive and the Water Reclamation Plant on the east; the Water Reclamation Plant and Jack London Boulevard on the south; and agricultural lands and Las Positas Golf Course on the west. A location map of the Livermore Municipal Airport is attached (see Figure 1).

Livermore Municipal Airport (Airport) is a general aviation facility used as a base of operations for local pilots, a point of air access to the community, and a place to conduct flight training. The Airport comprises 643 acres, including two runways, 22 hangar buildings, 249 tiedown spaces, helicopter parking, an airport terminal/pilots' lounge, and associated facilities. The project site is currently zoned for the following uses: Education and Institution (E), which permits public and quasi-public uses; and Planned Development (PD), which is intended to allow for flexible development standards and development that is consistent with the underlying General Plan land use designation.

Project Description: Under the proposed project, the project site would be rezoned to provide the City with an area occupied by aviation-oriented uses. The proposed Airport (AIR) Zoning District, which would encompass the entire project site, would consist of two zoning subdistricts: 1) the Airport Operations (AIR-OP) Zoning Subdistrict and 2) the Airport Service (AIR-SE) Zoning Subdistrict. The purpose of the AIR-OP Zoning Subdistrict is to provide standards for Airport operations facilities and to allow for the development of aviation land uses and related facilities that are necessary for the safe and efficient operation of the Airport. Uses that would be permitted under the AIR-OP Subdistrict include runways, taxiways, run-up aprons, airfield lighting, signage, and similar uses. Generally, these facilities are regulated by State and federal agencies. The purpose of the AIR-SE Zoning Subdistrict is to provide standards for Airport support facilities and to allow for the development of aviation-related land uses and associated facilities to support Airport operations. Uses that would be permitted under the AIR-SE Subdistrict include access taxilanes, aircraft hangars, aircraft manufacturing and research uses, aircraft sales, ancillary support services, and similar uses. Although these subdistricts would permit the development of specific aviation-related land uses at the Airport, the intensities associated with these land uses would be reduced and more restrictive than those rather broadly envisioned under the 1975 Airport Master Plan, which is outdated and will not be updated or replaced. The General Plan will be amended to delete references to the 1975 Airport Master Plan. In addition, and pursuant to requests by airport neighbors and the communities surrounding the Airport, the proposed project scope will provide new analyses of all potential environmental impacts and development assumptions (see Scope of EIR below).

The City's guidance for any Airport development would be the new Airport (AIR) district with its two subdistricts, the amended General Plan, and the findings of the project's cumulative environmental impacts.

The proposed project does not include changes to the current runway environment and hence, no changes to flight operations are expected. The project would consider certain access taxiways and aprons that are required for safe and efficient access to the presumed hangar and aviation facility development areas. The proposed project does not include specific development projects. However, future uses anticipated at the Airport include a full-service fixed-base operator facility (FBO), a new hangar facility on the south side of the Airport, and a new administration building on the north side of the Airport that would replace the existing building. Specific development projects, such as the projects listed above, will be subject to independent environmental review and will only be discussed in this EIR to the extent that these future projects may create cumulative impacts.

Scope of the EIR: The EIR will evaluate each of the following environmental topics: Land Use and Planning Policy; Hydrology and Water Quality; Geology, Soils and Seismicity; Transportation, Circulation and Parking; Air Quality (including Global Climate Change); Noise; Hazardous Materials and Public Health and Safety; Public Services; Utilities; Biological Resources; Cultural and Paleontological Resources; and Aesthetic Resources.

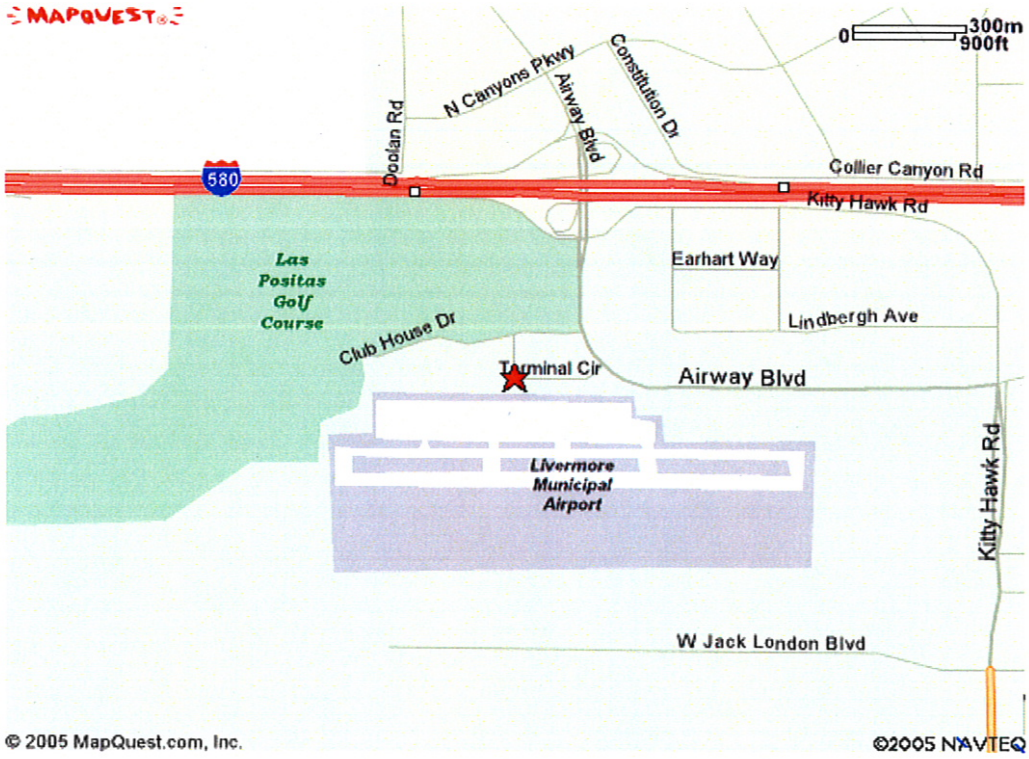
Comment Deadline: The City of Livermore invites you to comment on the proposed scope of the Draft EIR. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***no later than 30 days after receipt of this notice***. Written comments on the proposed scope of the EIR may be sent by mail or fax to the Lead Agency (see address above).

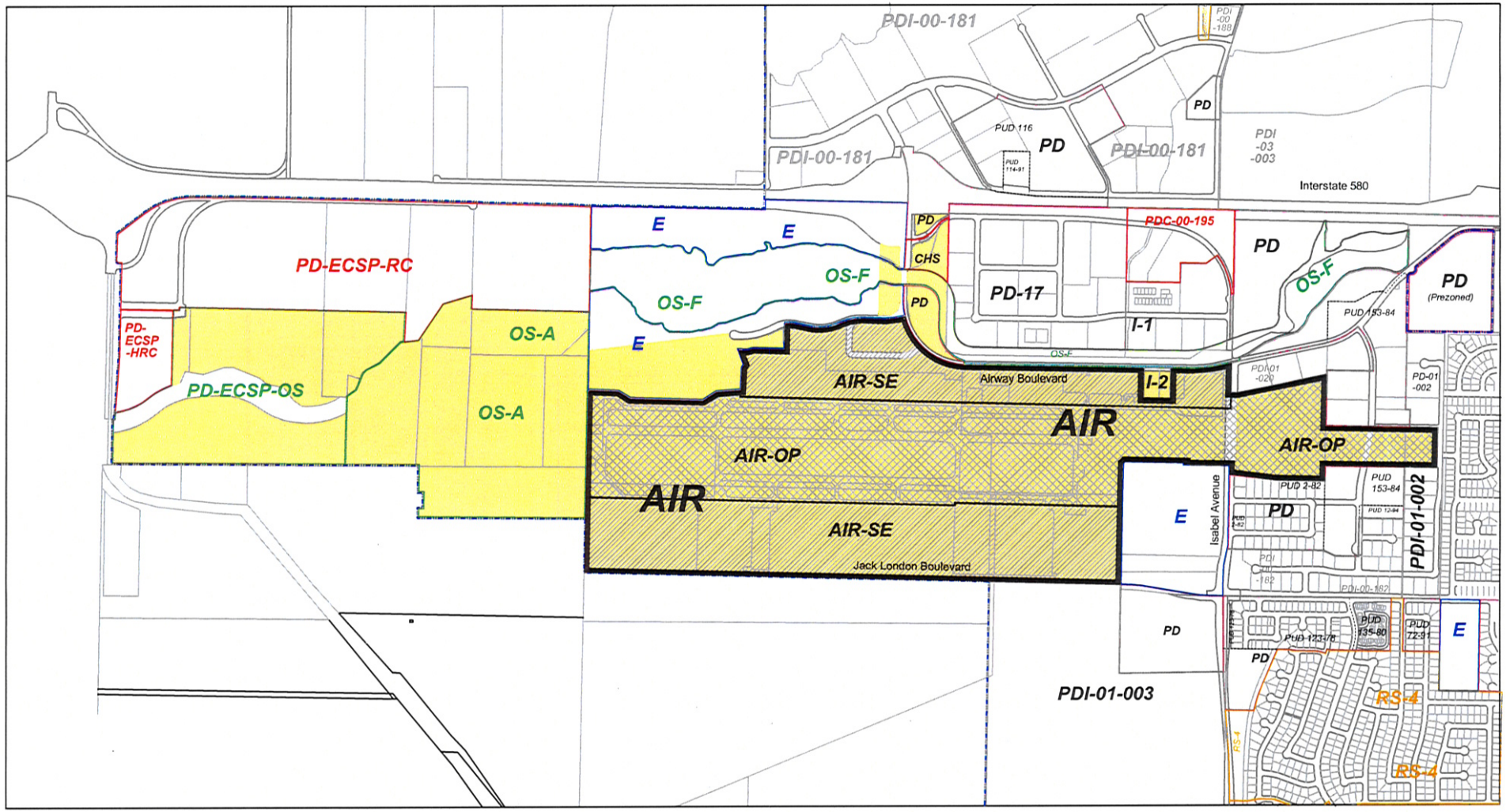
Scoping Meeting: A Scoping Meeting/Open House is scheduled for ***Thursday, May 28, 2009*** at the ***Livermore Airport Terminal Building, 636 Terminal Circle***, Livermore, from 6:30 p.m. to 8:30 p.m. All interested persons are invited to attend.

_____
Susan Frost, Principal Planner

_____
Date

Livermore Airport Terminal Building
636 Terminal Circle





PROPOSED AIRPORT REZONING

Airport / City Owned Parcels (643 Acres)

AIR — Proposed Airport (AIR) Zoning District

Proposed Airport Service (AIR-SE) Zoning Subdistrict

Proposed Airport Operations (AIR-OP) Zoning Subdistrict

N

Date: 05/10/2009

THE CITY OF

PLEASANTON

June 10, 2009

Susan Frost, Principal Planner
City of Livermore
Community Development Department
1052 S. Livermore Avenue
Livermore, CA 94550

Dear Susan:

Subject: Amended Notice of Preparation of a Draft Environmental Impact Report for the Livermore Municipal Airport Rezoning and General Plan Amendment Project

Thank you for the opportunity to comment on the City of Livermore's Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Livermore Municipal Airport Rezoning and General Plan Amendment Project (Project). The following comments are based on the Notice of Preparation (NOP) received May 15, 2009. We would greatly appreciate it if the comments below could be addressed in the EIR.

1975 Livermore Municipal Airport Master Plan

The NOP states that the 1975 Livermore Municipal Airport Master Plan is now obsolete and will not be updated. As a matter for your consideration, City of Pleasanton staff question whether the Plan can be determined to be obsolete and no longer valid without a formal action repealing the Plan by your City Council. Likewise, §21676 of the Public Utilities Code requires a repeal of an airport master plan to be referred to the Alameda County Airport Land Use Commission (ALUC) for review and decision. Is a repeal and referral to the ALUC part of the Project? The answer is unclear to us, since these items are not described in the NOP.

The NOP states that with the proposed Project, intensities associated with the proposed land uses would be reduced and more restricted than those in the 1975 Airport Master Plan. Specifically, in regard to the proposed subdistricts, the NOP states:

> *"Although these subdistricts would permit the development of specific aviation-related land uses at the Airport the intensities associated with these land uses would be reduced and more restrictive that those rather broadly envisioned under the 1975 Airport Master Plan."*

COMMUNITY DEVELOPMENT P. O. BOX 520, Pleasanton, CA 94566-0802

Planning	Building & Safety	Engineering	Traffic	Inspection
200 Old Bernal Ave.	200 Old Bernal Ave.	200 Old Bernal Ave.	200 Old Bernal Ave.	157 Main Street
(925) 931-5600	(925) 931-5300	(925) 931-5650	(925) 931-5650	(925) 931-5680
Fax: 931-5483	Fax: 931-5478	Fax: 931-5479	Fax: 931-5479	Fax: 931-5484

Details regarding the proposed reductions and restrictions are not provided in the NOP, and we assume such detail would be forthcoming in the EIR.

In May 2007, Walter Gillfillan and Associates, an airport planning consulting firm, prepared a report for the City of Pleasanton assessing the potential impacts of Livermore's Request for Proposal (RFP) for the management of a full-service Fixed Base Operator (FBO) and hanger facilities at the Livermore Airport. Per the NOP, these facilities and operation changes are still anticipated. The Walter Gillfillan and Associates report concluded that the proposal for the management of a full-service FBO and new hangers could result in an increase in average daily jet operations from 6.1 to 50.6 in 2020, or from 2,196 to 18,216 operations per year. This information is not consistent with the NOP's statement that "intensities associated with land uses would be reduced and more restrictive." We are concerned that the NOP project description could be misleading for those who have a concern about increased jet flights as a result of the Project.

Potential Impacts

Impacts from jet travel could be significant in those portions of Pleasanton lying under the flight path and those portions near the airport. There are numerous existing residences, parks, and an elementary school under/near the flight path. For this reason, the City urges Livermore to discourage jets and noisy planes from using the airport. As you know, Livermore staff has regularly received complaints from Pleasanton residents about existing airport operations, and any increase in air travel will inevitably lead to additional complaints, unless effective mitigations are implemented. Based on these concerns, we request that the EIR address an increase in flights and jet flights (as anticipated by Livermore and as described in the attached Gillfillan report), as well as:

- Address how many flights will fly over Pleasanton and how this volume of flights may impact Pleasanton;
- Show anticipated flight paths;
- Show the differing noise levels, including single event noise levels (SEL and L_{max}), generated from the differing types of planes anticipated to use the airport as a result of the Project;
- Compare the proposed noise levels to Pleasanton's General Plan standards and the guidelines prepared by the US Environmental Protection Agency to protect public health and welfare with an adequate margin of safety (see the California Airport Land Use Planning Handbook, Chapter 7 for more information);

- Provide an analysis of potential noise impacts on learning, especially recent studies on the relationship between noise and children's reading ability and other cognitive impacts (see the California Airport Land Use Planning Handbook, Chapter 7 for more information);
- Provide an analysis which addresses the FAA's recommendation of a Leq 45 dB maximum noise level at schools, and interior noise levels at the existing Mohr Elementary school in Pleasanton;
- Provide an analysis of potential physiological and behavioral impacts on populations under and near the flight path (see the California Airport Land Use Planning Handbook, Chapter 7 for more information);
- Assess the times flights are likely to occur over Pleasanton and how these times may impact Pleasanton residents, including sleep disturbance impacts;
- Assess the altitude of the flights over Pleasanton and how these altitudes may impact Pleasanton;
- Assess how an increase in flights may impact local and regional air quality;
- Assess increased traffic impacts from increased operations at the airport;
- Assess safety impacts in those portions of Pleasanton underlying the flight path;
- Assess safety impacts on the roadways where the additional fuel (for plane refueling) would be transported; and
- Assess whether the anticipated number of flights and jet flights is consistent with the anticipated number of flights assumed when the Airport Planning Area (APA) boundary was approved, and if it isn't consistent, assess whether there are significant impacts to areas near the APA.

Finally, the NOP states that only cumulative impacts will be assessed since the Project does not contain specific development projects. However, we understand that the City of Livermore has already entered into a lease with a fixed base operator for the facilities and uses described in the NOP. We are concerned that an environmental review for that lease has not been conducted and have voiced that concern to Livermore in the past. We also request that the EIR describe in detail what the public review process will be for future projects at the airport such as the anticipated fixed base operator facility and lease. Specifically, we would be interested in knowing who will be responsible for their approval, what entitlements will be required, what public noticing will occur, and what environmental review process will be required.

We are hopeful that the City of Livermore will continue to work to reduce all airport-related impacts in general. There is a significant level of public concern, especially from Pleasanton residents, about the above-mentioned items.

Thank you for your consideration of our concerns and request for analysis in the Livermore Municipal Airport Rezoning and General Plan Amendment Draft EIR. We very much appreciate the cooperative working relationship we enjoy with the City of Livermore and are confident it will continue as we work together through these issues. If you have any questions regarding our concerns expressed in this letter, please feel free to contact Robin Giffin, Associate Planner, at (925) 931-5612 or rgiffin@ci.pleasanton.ca.us.

Sincerely,

Brian Dolan
Director of Community Development

c: Mayor Jennifer Hosterman and City Councilmembers
Nelson Fialho, City Manager

WALTER E. GILLFILLAN AND ASSOCIATES
AIRPORT PLANNING

KENSINGTON:
744 Coventry Road
Kensington, CA 94707
Tel (510) 524-3966
Fax (510) 527-1038
walter@gillfillan.com

NEWPORT BEACH:
P.O. Box 3582
Newport Beach, CA 92663
Tel/Fax (949) 673-3918

MEMORANDUM REPORT

May 25, 2007

TO: Rob Wilson, Director of Public Works
FROM: Walter Gillfillan
SUBJECT: Implications of Livermore Airport RFP

At your request, I have reviewed the recent RFP by the City of Livermore for the design, construction and management of a full-service Fixed Base Operator (FBO) and hangar facilities at the Livermore Airport. The question that you have posed is the effect that such a development would likely have on the airport operations and how that that might affect the City of Pleasanton.

In doing this work, I have utilized the following materials:

- Livermore Airport Master Plan, December 1975
- Livermore Municipal Airport Master Plan Update – Public Review Draft, March 2004
- City of Livermore, Notice to Proposers
- Initial Study and Mitigated Negative Declaration for the Livermore Municipal Airport Master Plan Update, February 2004
- City of Pleasanton staff report, Review of the Livermore Municipal Airport Master Plan Update and Mitigated Negative Declaration, April 6, 2004
- Livermore Municipal Airport, Altitude and Noise Study, Prepared for the City of Pleasanton, Brown-Buntin Associates, September 14, 2001
- CALTRANS, Airport Land Use Planning Handbook, 2002

This evaluation considers the projections developed in the Draft Master Plan Update, 2004. While this plan was not adopted by the City of Livermore, it provides an insight into the demographics and future growth envisioned for the Tri-Valley region. The forecasts of the aviation activity also provide an indication of the demand for general aviation services related to a fast-growing area, with an economy and with demographics that do and will generate demand by general aviation users, particularly high-end users.

The existing, adopted airport master plan from 1975 provides in insight into the changes that have occurred in the 30-year period as the Livermore Municipal Airport has developed. The developments planned and implemented based on this master plan included land acquisition, apron areas, a new parallel runway and a runway extension.

Work done for the City of Pleasanton in the Altitude and Noise Study provided community perceptions of noise impacts and identified loud noise from jet aircraft operations as a principal concern.

This evaluation begins with a brief **background** on premises that underlay the airport planning process that guide and limit the actions of the parties-at-interest who are involved. That information is followed by a recap of the **factors** that should be considered when evaluating the likely impact of developments at the airport. Finally, there is a **summary** that can assist in judging the significance of the proposed FBO lease to the Pleasanton community.

BACKGROUND

Land use compatibility issues have been a concern to both airport operators and adjacent communities for a very long time. However, in recent years the, outward growth of urban areas has accelerated and encapsulated airports that were once located in rural settings. Not only has the current airport operations been a focus of concern, the airport master plans and local government general plans are more frequently coming into conflict. The evolution of the NEPA and CEQA requirements have provide a process for further focusing the competing interests during the planning phase.

Noise from aircraft operations is the dominant and most often cited concern of communities near airports.

The following is a listing of selected areas where regulation, laws and guidelines can interact to limit the ability of the parties involved to identify impacts and to mitigate them:

Premise - The FAA has historically encouraged and funded the airport master planning effort in support of its grant-in-aid program. An important, basic premise of the airport master plan is that the airport's present and future needs are identified. Adjacent communities are expected to accommodate that development.

ALUC – California's Airport Land Use Commission provisions are unique in the U.S. in addressing noise, safety on the ground and safety in the air. However, the provisions only apply to the development of vacant lands, not to areas in the community that are already developed. Further, like the premise used by the FAA, the development of the compatible land use plan for each airport is for the protection of that airport based on the present and future use as identified in the airport master plan.

Preemption – In the past, there have been measures, adopted by local airport owners, to mitigate noise impacts, such as nighttime curfews. Enactment of the Airport Noise and Capacity at of 1991 has severely limited the ability of an airport proprietor to apply local, operational restrictions to Stage 2 or 3 jet aircraft weighing more than 75,000 pounds.

Impact definition – In the impact analysis used in preparing EIS and EIR documents, the federal and state guidelines use the DNL/CNEL noise metric, together with significance level of 65dB DNL/CNEL. The underlying research indicates that about 12% of the population would be "highly annoyed" at this exposure level. Applying this metric and criterion to local projects often results in findings of no noise impact, hence no mitigation is required. This occurs despite the fact that the community perceives significant impacts are occurring or will result in the future.

There is a continuing effort to apply lower criteria levels and/or to provide some single event noise metrics that more reasonably reflect what people actually experience.

Assurances – There are restrictions to what an airport proprietor can do to limit aircraft operations at the airport. When an airport receives grant-in-aid funds from the FAA, the Grant Agreement document includes a number of Grant Assurances that the sponsor gives. Among these are assurances that the airport owner will not compromise safety nor take actions that are unreasonable, arbitrary or discriminatory. The regulation of aircraft in flight is preempted by the federal government.

FACTORS TO CONSIDER

There are a number of factors that are a part of the current and projected activities at the airport that are related to the potential impacts on the City of Pleasanton. These include the market demand, airport capacity, financial strength, business plan and environmental issues.

Market – The growth projections included in the 2004 Draft Master Plan provide an insight into the overall demographics of the Tri-County region. The City of Livermore itself is shown to grow from about 73,000 to 94,000 by 2020 with a strong employment base and high income level.

Demand – The market area draws aircraft owners and itinerant visitors. It is suggested that there would be growth in demand for aviation services at the Livermore Municipal Airport by the year 2020. Specifically, there could be:

- An increase in total based aircraft from 594 to 898
- Based jet aircraft from 2 to 30
- Increase in annual operations from 257,500 to 370,000
- Average daily jet operations from 6.1 to 50.6

Trends – Industry experience and projections indicate an increasing growth in the business jet portion of the aviation industry with the introduction at the lower end of the spectrum of Very Light Jets (VLJ) capable of operating from smaller airports. At the upper end of the fleet are business versions of passenger aircraft having long distance non-stop abilities, but requiring larger airports and more sophisticated servicing.

Airside Capacity – The analysis done for the 2004 master plan indicates that the existing runway system is adequate to accommodate the 20 year projected demand. The study concluded that the main runway would be able to serve 75% of the medium-sized jet fleet with 60-90% of a passenger/cargo load. An extension to the smaller runway was suggested to serve 100% of the small aircraft and to provide flexibility, reduce crossings and taxiing time.

Landside Capacity – There were a number of actions suggested to increase the landside capacity to accommodate future growth in the number of based aircraft and in the number of transient operations. These included:

- Replacement of the existing terminal building
- Additional FBO facilities on the north and south sides of the airport
- Reduction in the number of outside tie-downs
- Increase in the number of hangars for small aircraft
- Provide larger box hangars for jet aircraft

- Increase the apron area for transient aircraft

A significant finding was that there is adequate land area within the existing airport property to expand the landside capacity.

Airport Financial Strength – The financial information included in the 2004 master plan indicates a current net operating income of $114,000 per annum. With a scenario that provides for enlarged FBO operations, including aircraft fueling, the net operating income is projected to increase to $254,000.

Business Plan – Essentially, this plan provides for an increase in the landside capacity using leasing of available land areas to affect private capital investments in facilities that would accommodate the anticipated growth in aviation activity. This includes the transfer of current city-operated fueling services to fixed base operators.

Environmental Issues – Aircraft noise was identified by the City of Pleasanton in the 2001 Altitude and Noise Study as an issue, particularly jet aircraft noise. This topic was considered in this report by reviewing Section XI, Noise, in the Draft Initial Study and Mitigated Negative Declaration for the Livermore Municipal Airport Master Plan Update.

"No impact" was the finding in the negative declaration in all six of the noise exposure categories. The primary basis for this finding was that these impacts were already considered in the EIR for the 2003 City of Livermore General Plan and that a mitigation measure (NOISE-GP-2) "specifically addresses reducing future aircraft operation noise impact on near by residences".

PROPOSED FBO LEASE

Noted in the Draft Master Plan 2004, was the need to accommodate the demand for business jet aircraft in terms of storage for based aircraft and service amenities for transient aircraft. There are three levels of service needed to accommodate the range of aircraft types and uses. The basic parking ramp and fuel service for itinerant visitors, particularly jet aircraft; hangar storage, fuel support, mechanic service, for small and medium sized, locally based aircraft; and finally, the full service for the larger transient jet aircraft with the added need for fuel, water, catering, lavatory service, crew waiting/briefing/layover, conference/waiting/office room and rental car.

The RFP is requesting the following:

1. A long-term FBO and hangar ground lease agreement to include a FBO operation on the north side of the airport and hangars and apron area on the south side.
2. Provide exclusive fueling service on the FBO site and non-exclusive service on other areas of the airport
3. An option to replace the existing terminal building with a new airport administration building

In terms of the projected growth of the airport, this lease would provide hangar capacity to accommodate the projected based jet aircraft growth as well as the current demand for inside storage for other aircraft. It would also provide for the transient jet aircraft servicing for fuel and the other amenities noted above. It would include the need for additional fuel storage and handling capability.

POTENTIAL IMPACT SUMMARY

The question that has been posed is the extent that a FBO lease would have on the airport operations and how that that might affect the City of Pleasanton. A large amount of information, relevant to that question, has been presented in the reference material and in this report. The following tabular format is offered as a way of summarizing this information so that judgments can be made by the City of Pleasanton on the significance of the proposed action and the likely effects on the community.

Factors	Significance
Market/Demand	Projections indicate growth in the Tri-County region with a strong employment base and high income level. Such a market area draws aircraft owners and itinerant visitors and could support growth in demand for aviation services at the Livermore Municipal Airport.
Trends	A declining growth rate for light aircraft based at the airport and in operations. The larger growth rates in business jet based at the airport, jet operations and transient aircraft operations.
Airside Capacity	Existing facilities are adequate for present and projected future demand
Landside Capacity	Land area is available to accommodate growth. Additional Hangar and FBO facilities are needed.
Financial	Current situation is strong; New FBO/fueling option makes it stronger
Business Plan	Increase in the landside capacity using leasing of available land areas to affect private capital investments in facilities, including the transfer of current city-operated fueling services to fixed base operators.
Environmental	The City of Livermore was depending on the environmental assessments done for its 2003 General Plan as the basis for a "no impact" determination in the Negative Declaration.

Effect Of The FBO Lease

Over all, the FBO expansion will be necessary to provide:

- Additional covered storage for all aircraft
- Essential for covered storage for jet aircraft based at Livermore
- Important parking and support services for transient aircraft, particularly jet aircraft

Effect On The City Of Pleasanton

From the past noise work for the City of Pleasanton, the noise from jet aircraft was an important concern. In this regard, the FBO proposal would provide for future growth in based jet aircraft at the airport and support services for transient aircraft. In the first case, covered storage is an essential facility to support locally based jet aircraft. In the second, the servicing of transient jet aircraft is not as definite. Some, but not all, transient jet traffic might be diverted to other locations because of the lack of service beyond fueling and parking.

Projections suggest a possible growth in which the average daily business jet operations could evolve from the current level of 6.1 to 50.6 in 2020. Twenty percent of these jet operations are projected to occur between 7:00 p.m. and 10:00 p.m. (15%) and 10:00 p.m. and 7:00 a.m. (5%). These are the same proportions that are currently experienced.

The current FAA/CALTRANS CNEL metric with a 65 dB CNEL criteria is not likely to show an impact, hence the need for mitigation is negated. It is true that the newer business jets are quieter, particularly the smaller versions represented by the Very Light Jet (VLJ). Some measure of the actual impacts can be identified at various locations in the community with single noise event metrics like Time Above (TA) at locally specified noise levels or Number of Events Above (NEA) at locally specified noise levels.

There are two competing interests – that of the City of Livermore to provide airport facilities to accommodate the demand generated by growth in the region and the City of Pleasanton to minimize the noise impacts on its citizens. Livermore may also have an interest in managing noise impacts. However, there is not an institutional structure in which to mediate the conflicts, unless the parties-at-interest can create a forum for communication coordination, cooperation and negotiation.

In summary, the bottom line is that the:

- Demand for aviation use is there and more is coming
- Basic airfield capacity is in place for current and projected future demand levels
- Land for expansion of support facilities is currently owned by the airport
- Only need is for facilities to support storage and service, particularly for high-end users
- Noise will increase to some extent without the FBO – potentially more with the FBO
- Extent that noise is significant to Pleasanton can only be perceived at this point in time because of the impact limitations associated with the CNEL noise metric.
- Single noise event data may be useful to both cities, possibly with some forum to meet-and-confer with the results and negotiate mitigations within the constraints imposed by the FAA
- An airport proprietor is very limited in his ability to control access to existing airport capacity due to federal preemptions and assurances. However, the decision to provide additional capacity is a local decision

SELECTED GENERAL AVIATON AIRCRAFT CHARACTERISTICS

Aircraft Types	Aircraft Size*					Performance*			Noise Level (dBA)**	
	Wing Span (ft)	Height (ft)	Length (ft)	Weight (Lbs)	Number of Passengers	Range (miles)	Takeoff Distance (ft)	Landing Distance (ft)	Approach	Departure
Small Piston:										
Cessna 172R	36.1	8.9	27.2	2,457	4	668	1,685	1,295	62.0	63.0
Beech Baron G58	37.8	9.8	29.8	5,500	6	1,798	2,300	2,450	73.3	65.1
Turboprop:										
Beech King Air 350	57.9	14.3	46.7	15,000	10-16	1,979	3,300	2,390	75.9	64.7
Very Light Jet:										
Cessna Mustang	43.2	13.4	40.6	8,645	5	1,150	3,110	2,390	N.A.	N.A.
Eclipse	37.9	11.0	33.7	5,950	6	1,496	2,297	2,155	N.A.	N.A.
Small Jet:										
Cessna Encore	54.1	15.2	48.1	16,630	7-11	2,269	3,560	2,865	83.0	58.3
Medium Jets:										
Falcon 900DX	63.4	24.8	66.3	46,900	12-19	4,350	4,890	2,365	82.6	69.9
Large Jets:										
Gulf Stream V	93.5	25.8	96.4	90,900	3-19	7,878	6,110	2,760	82.0	68.0
Boeing Business Jet	117..4	41.2	129.5	174,200	2-100	6,502	6,950	2,485	87.4	73.2

Sources: * Aviation Week. Aerospace Source Book. January 15, 2007; **FAA. Advisory Circular 36-3H. April 25, 2002

Frost, Susan

From: ,,,>^..^<,,,~~c [writeway@comcast.net]

Sent: Sunday, June 07, 2009 10:38 PM

To: Airport-Rezoning

Cc: INDEPENDENT; Marchand, John; Kamena, Marshall; McIntyre, Dan; Horner, Doug; Leider, Marjorie; Williams, Jeff

Subject: Livermore Airport Rezoning/EIR Concerns

Importance: High

June 7, 2009

Susan Frost, Principal Planner
Community Development Department
1052 South Livermore Avenue,
Livermore, CA 94551

Dear Ms. Frost,

I am gravely concerned about proposed changes to airport zoning and scrapping of the 1975 Airport Master Plan, which is part of the City General Plan. My family has lived in the same home just a few blocks off the flight path and less than a mile from the airport for over 40 years. We strongly support recreational and emergency use of the Livermore Airport, and consider the airport an asset to our community as currently used. We love seeing the old 'war birds', biplanes, and small, privately owned recreational airplanes in the air over our home, as well as the visiting military airplanes that provide living history lessons. Unfortunately, over the past several years we are seeing (or should I say hearing?) more and more commercial jets that increase noise in our neighborhood, both when flying over and when on the ground preparing for take-off. We cannot support airport expansion that will increase noise and pollution and decrease quality of living and property values in our neighborhood. We do not want the airport to become a facility that wakes us from sleep and interferes with our ability to talk on the telephone, listen to television, or enjoy the peaceful quiet of our backyard.

Increased availability of airport services can only lead to increased flight volume, and increased air traffic comes with increased hazards. While I hear continued denials from the Livermore City Council, I cannot comprehend how increasing airport services and building more hangers can have any effect other than to increase air traffic. I am distressed to hear that the Livermore City Council is proposing to rescind the 1975 Airport Master Plan. Rezoning the airport, if done incorrectly, can only mean trouble for neighborhoods near the Livermore airport or in the vicinity of the flight paths. The Livermore city staff claim that 'nothing will change' with rezoning rings hollow. If that were the case, rezoning would be a complete waste of time and energy. In this time of severe federal, state, and local budget deficits, and when airport employees have been laid off for lack of funds to pay them, an EIR and potential rezoning are surely not being done for the purpose of 'changing nothing.' Building an FBO will be costly, and is unnecessary. City staff asserts the FBO can be built without rezoning, begging the question of why rezoning is being considered, particularly now. Why do I suspect that some large commercial entity that cares nothing for Livermore and is interested only in filling its own pockets must be backing this effort?

The City Council owes it to Livermore residents to ensure that quality of life of those affected by the airport is maintained or improved, not diminished by increased noise and pollution caused by burgeoning air traffic. The EIR must to take into consideration the increased air traffic that would be an obvious result of construction of an FBO and new hangers and how these changes will adversely affect residents near the airport. If 'airport zones' are to be created, those zones need to be more clearly defined in terms of location, character, and risk.

I call upon the Livermore City Council to provide complete transparency and honesty in what changes they envision for the airport, who is bank-rolling the effort to bring about rezoning of the airport and construction of an FBO, and what impacts can reasonably be anticipated as a result of these proposed changes. The Council should also explain why these changes are essential at a time when many other programs and services are on the chopping block. I further call upon the Livermore City Council to ensure that any new zoning include protections at least as restrictive as those in the 1975 Airport Master Plan. At an absolute minimum, these restrictions should include:

* Restricting the size of airplanes allowed to utilize Livermore airport to prevent large charters and air cargo
* Restricting the number of runways to a maximum of two
* Restricting runway lengths to prevent larger airplanes than those currently using the airport from being able to use Livermore airport
* Restricting the load of air traffic allowed through the Livermore airport, and particularly the size and number of Livermore-based charter jets, air taxis, and/or air cargo jets
* Restricting allowed hours of operation for the airport

Thank you for your consideration.

Sincerely,

Gail Requa
563 Brookfield Drive
Livermore CA 94551
925-784-4845
writeway@tdl.com

CC: Marshall Kamena, Mayor, City of Livermore
Doug Horner, Livermore City Council
Marge Leider, Livermore City Council
John Marchand, Livermore City Council
Jeff Williams, Livermore City Council
Dan McIntyre, Livermore Public Works Director
Janet Armantrout, Independent Newspaper

Frost, Susan

From: A & L Jacques [lj5408@hotmail.com]

Sent: Sunday, June 14, 2009 6:19 PM

To: Airport-Rezoning; Kamena, Marshall; Marchand, John; Horner, Doug; Leider, Marjorie; Williams, Jeff

Subject: Livermore Airport to Eliminate Many Restrictions!

Ms. Frost and all,

I have to say I continue to be frustrated by the lack of listening that is done by Livermore planning committee and council. This community has stood strong since the very beginning that we don't want the 1975 master plan rescinded yet you continue to push your plan.

I've been a resident of Livermore for more than 18 years and community and the plans to keep Livermore where everyone had a voice, everyone was heard, decisions were made for the betterment of the community and NOT the ole might buck were a huge selling point. Over the last 5+ years the planning in Livermore is worse than ever. YOUR community has spoken we DO NOT want the airport to expand. We DO NOT want to rescind the 1975 Master plan. We DO NOT want to spend any more of our limited tax dollars to investigate, plan or implement something we DON'T want. We have demonstrated year after year we DO NOT want to implement your proposed changes to the airport and surrounding area, yet the planning and council continue to waste our tax dollars and push them. They degrade our property values and quality of life for the surrounding area of the airport.

We all know it comes down to the ole mighty buck ... and I have to say this community is appalled that you continue pushing something we have told you over and over we DO NOT want, I'm sure you have a better use of our tax payer dollars than to do something that we don't want.

I don't know how to say it another way.. PLEASE, PLEASE listen to us and DO NOT rescind the 1975 Airport Master plan. Use our tax payer dollars on other viable projects.

BCC: Livermore Independent, Pleasanton Weekly, Valley Times: editmail@compuserve.com > editor@pleasantonweekly.com ccnletters@bayareanewsgroup.com

Frost, Susan

From: Allyn DeGraw [wchimserve@sbcglobal.net]

Sent: Tuesday, June 09, 2009 7:14 AM

To: Airport-Rezoning

Cc: INDEPENDENT; dbmcintyre@ca.livermoe.ca.us; webmaster3@lacg.org; jdhorner@ca.livermore.ca.us; mrleider@ca.livermore.ca.us; jdwillians@ca.livermore.ca.us; jpmarcharnd@ci.livermore.ca.us; Kamena, Marshall

I am not in favor of proposed changes for the Livermore Airport. This airport was never intended to suffer the scope and type of air traffice that has repeatedly been proposed and repeatedly shot down by the members of the communities. Increased Air traffic is unacceptable and will have a harmful and negative impact to the communities and this valley.

Again we must sit as watchdogs over those who risk the health and welfare of our community to cater to outside interests and a small number of individuals who do not represent the majority of voting residents of our communities.

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Mary Williams
751 Yosemite Drive
Livermore, CA 94551
925-606-4290

Frost, Susan

From: Angie Edgar [astarwannabe@comcast.net]

Sent: Monday, June 08, 2009 9:14 PM

To: Airport-Rezoning

Subject: All Livermore residents matter! Be honest!!!

I beg you not to make any decisions that will increase pollution, noise pollution and drive the property values of hundreds of homes into the toilet!! An increase in airport traffic will effect hundreds of Livermore residents in a negative way financially and in the quality of home life. You can not put a monetary value on a persons peace in their home and neighborhood. The number of planes that fly over these affected neighborhoods already, excuse my french, SUCKS!!! It wakes up my new born!
Please consider the RESIDENTS!! We are what matters, not the potential number of dollars! No one with a soul would trade their families quality of life for financial incentives. People first!
Thank you
Please feel free to put yourself in my "shoes",
Angie Edgar
549 Highland St
Livermore CA 94551

Frost, Susan

From: Artmundis@aol.com

Sent: Monday, June 08, 2009 3:29 PM

To: Airport-Rezoning

Cc: Kamena, Marshall; Horner, Doug; Leider, Marjorie; Williams, Jeff; INDEPENDENT; editor@pleasantonweekly.com; ccnletters@bayareanewsgroup.com; lacg@lacg.org

Subject: Airport rezoning and rescinding 1975 plan.

City Council (Susan Frost): My wife and I are more than concerned with the clear effort by the Council to go around the will of the electorate in rezoning the Airport Master Plan of 1975. While updates are to be expected to bring zoning into line with the changes occurring over time, we cannot image how you could wish to increase the runway length and thus increase the type and amount of air traffic at our regional airport to include commercial air traffic. We live under the approaching flight path and we are more than aware viz. the noise of the executive jets landing now.

As to increased exhaust emissions one needs to just come down the 580 on the Dublin Grade and look out on the Livermore Valley. It is quite apparent from the brown smog that already resides in our valley that this basin is an air trap at present with poor cross ventilation. This is occurring without adding additional sources of pollution.

If we understand this all correctly once our town increases the runway length, we no longer have control over the type of traffic that can utilize the airport. It falls under the authority of the FAA. If this is correct, then any promises of local control and intent are simply "hot air" of which we already have enough here. The law of unintended consequences takes over. Private interest groups with no grounding in our local community with access to the FAA decision makers will assert their will, and we cannot prevent it. It would seem that after seeing the results of the last 15 years of special interest groups on our national and state level, we would be more than wary of their efforts and the corresponding results at our local level. We are sure that no one would really object driving to Tracy to experience the joy of increased air traffic at a local level.

Over the next 25 years we can also expect rapidly expanding residential construction. We can only imagine the horror of an air crash in our densely populated residential area. We firmly believe that if an air crash can happen, it will happen. Like earthquakes it is only a matter of when.

We ask you please to put aside the commercial interests in this case and consider the people who live here in the Livermore Valley. If we really have an excess of energy and funds, let's direct them at bringing BART to Livermore after more than 30 years of paying taxes to achieve this result. Then we can take the BART to the airport. Thank you for your consideration.

Arthur & Linda Mundis
724 Tennyson Drive
Livermore, CA 94566

Frost, Susan

From: Brajesh Kumar [ucb.brajesh@yahoo.com]
Sent: Monday, June 15, 2009 6:43 PM
To: Airport-Rezoning
Cc: Brajesh Kumar; webmaster3@lacg.org
Subject: Livermore Airport

Susan Frost, Principal Planner

Community Development Department,
Livermore, CA

We appreciate the difficult job you and your team has in meeting evolving challenges of the city and it's growing population. Livermore is a great place to live and work, it's one of the best in California to raise our children.

As concerned citizen of Livermore, I would like to share my concerns with you. Among other things, one of the greatest asset we have is the Livermore Municipal Airport and in particular it's character.

I grew-up in an air-force family and always lived near an airport wherever my Dad and family moved. Selecting a place to live and buy home in Bay area naturally drew me to Livermore. Recreational, Training, Business and (one of the least known I think) Emergency preparedness site.

We love the sight of small airplanes that take-off and land at the airport. It has just the right balance (my opinion) of air traffic (though some stragglers that do coming in late in night violating the voluntary night curfew, but they are few and infrequent). I love the sight of eclectic set of historic airplanes that come-in with Wings of Freedom and other events that happen at the airport. When our friends and family visit, their kids are the most excited to watch the air-crafts fly overhead. It's just amazing to see it.

City have been struggling with request to reclassify the Airport as it gets ready to deal with the future challenges (for some good and other not so good reasons).

Coming to the passionate discussions on the Airport, we are definitely there to support something meaningful and is good for the community and I am sure that's exactly the challenge you face in this public service.
We are in a very tough economic environment and therefore our priority and effort should be focused on those important issue. Namely - Health, Jobs, Housing etc. many unfortunate people are struggling on daily basis in our community.
It is therefore we think, it's not the right time to do any change and spend our energies with respect to Airport and it's use as mentioned in the City's

general plan/Airport Master plan.

We think the city's General Plan/Airport Master plan allows for needs of the Airport while preserving it's most important asset, -it's character. This is our primary reason to strongly argue in favor of preserving and protecting it.

One of the arguments that has come from people with disagreement is, the changes will not affect the airport. Well, then why do anything that is not going to benefit anyone and spend precious little funds that City has.

Here are some of the points that have come up in my discussions with fellow citizens of Livermore and would like to record with you:

a. Please stop any work on changing the General Plan/Airport Master plan. Please ensure that existing 1975 Mater Plan to remain in effect.
b. Please do focus time and resources on noise monitoring and reduction, and foster the reduction of aircraft noise through any legal means available to the city. Increase aircraft noise monitoring activities at appropriate monitoring locations.
c. Please work with the Federal Aviation Administration (FAA) to minimize the impacts to the Tri-Valley from flights to and from regional and international airports.
d. Please do operate the airport in such a way as to promote the reduction of noise below current levels.
e. Please emphasize consistency between the improvements at the Livermore Municipal Airport and the General Plan policies as it relates to noise reduction goals.
f. Please do continue to operate the Livermore Municipal Airport as an unsubsidized and self-sustaining public enterprise in a safe and efficient manner.
g. Please participate in Federal lobbying efforts to legislate the phase-out of high noise producing aircraft.
h. Please do improve customer service procedures in taking and responding to complaints.
i. Please staff to report to Council Quarterly on these items and include cost analysis relative cost options.

We really appreciate your time on this and we hope our concerns are noted in the right spirit.

your sincerely,
Brajesh and Nalini Kumar
1420 Saybrook Rd,
Livermore, CA
925.373.3589

Frost, Susan

From: Clifford Sprague [spragcl@sbcglobal.net]

Sent: Wednesday, June 10, 2009 9:16 AM

To: Jeff Willliams; Kamena, Marshall; INDEPENDENT; Doug Horner; Dan McInyre; Marge Leider; John Marchand; Airport-Rezoning

Subject: EIR for Airport

To All,

My name is Cliff Sprague. I live at 884 Yosemite Drive, Livermore, CA 94551, just south of the airport.

First off, let me say I don't really mind the way the airport is operating at the present. We knew what we were getting into when we moved in in 1996. What concerns me, in addition to the items below, is what is being planned for the area in the Discovery Circle, specifically, repairs to jet aircraft. Is the rezoning going to address 24 hour a day business operation, noise levels and abatement (air tools, impact wrenches, testing of jet engines, since this is not part of the airport, per se, but a commercial concern, the City should have some say so here?), chemical/exhaust release and abatement. Also, the idea that jet aircraft might operate 24 hours a day concerns me greatly. An occasional jet taking off & landing is one thing, but constant operation would make me move and I happen to like my place.

Please be as forthright and transparent as possible in your consideration and implementation.

Thank you,

Cliff Sprague

884 Yosemite Drive

Livermore, CA 94551-6034

925-449-0258

spragcl@sbcglobal.net

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Frost, Susan

From: crazy.diamond@comcast.net
Sent: Sunday, June 07, 2009 1:13 PM
To: Airport-Rezoning
Subject: AIRPORT EIR FROM CONCERNED HOME OWNER

SUSAN FROST,

MY NAME IS TERRI STOWERS, I LIVE IN "THE MEADOWS" OFF N LIVERMORE AVE. OVER BY THE FREEWAY.THIS LETTER IS TO VOICE MY CONCERN TO MAKE SURE THE EIR REPORT INCLUDES ISSUES LIKE THE UNBEARABLE NOISE I ALREADY HAVE TO TOLERATE.THE LARGE JETS AND OLD JETS THAT FLY OVER MY HOUSE DAILY. AND DURING THE SUMMER BBQING IN MY BACK YARD IS HORABLE WITH THE LOUD PLANES!!!!! ARE THEIR NO RULES TO HOW LOW THEY CAN FLY. CAN THE FLIGHT PATH BE CHANGED SO THE APPROACH FOR LANDING SWINGS IN MORE OVER TOWARDS WAL MART AND HOME DEPOT. I AM NOT FOR MORE LARGE PLANES ,CARGO , CHARTER
OR OTHERWISE. THE SMALL PRIVATE PLANES AREN'T BAD I KIND OF ENJOY THE VARIETY. BUT THERE ARE TIMES THE LARGE JETS ARE SO LOUD AND LOW IT SOUNDS AS IF THE TILES ON MY ROOF ARE BEING BLOWN OFF!!!!! I HAVE TALKED WITH MANY OF MY NEIGHBORS WHO FEEL THE SAME WAY..... WE ARE CONCERNED WITH OUR PROPERTY VALUES ALREADY DURING THESE HARD TIMES. AND WE HAVE TO DISCLOSE TO A BUYER ABOUT THE AIRPORT NOISE LET'S NOT MAKE IT WORSE.....PLEASE..... THANK YOU TERRI STOWERS 925 784-5522

Frost, Susan

From: dcsalas@sbcglobal.net
Sent: Monday, June 08, 2009 6:12 PM
To: Airport-Rezoning
Cc: lacg@lacg.org
Subject: airport rezoning

Dear Ms Frost:

I am not an activist but do care what happens to our beutiful city. I live on the flight path approach to the airport and hear the couple of big Jets that fly in to Livermore periodically. I do hope that as a public servant, you will (please) represent the best interest of the citizens of Livermore. Please consider the following statements as they do represent my views

Thank you very much.

Dan Salas
4030 Camrose Ave
Livermore, CA 94551

The EIR must reflect on the increase of plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Frost, Susan

From: Deanna Godinez [DeannaG@mortgagemarket.net]
Sent: Monday, June 08, 2009 4:30 PM
To: Airport-Rezoning
Subject: Airport Rezoning

Why is the city spending money to rezone? We have enough financial hardship in our city and should be concentrating any available funds for education of our children.

Why are we discarding the 1975 Master Plan? What items in the Master Plan will be eliminated through the rezoning?

We need restrictions to the size & number of flights that disturb our homes. I own a home on Humboldt Way and I am concerned by the proposed changes.

Sincerely,
Deanna Godinez

Frost, Susan

From: Dennis Mastrantonio [dmastrantonio@farmersagent.com]
Sent: Tuesday, June 09, 2009 10:58 AM
To: Airport-Rezoning
Cc: lacg@lacg.org
Subject: Master Site Plan

Dear Susan Frost, I've been a resident on the west side of Livermore in the vicinity of the airport for 30 yrs. I've seen a lot of changes in that time. I honestly feel the airport has tried to be a good neighbor, but much had to do with awareness campaigns and the guidelines placed in writing. I believe that the tri-valley community and the airport can co-exist, however, the last thing I want is to see is this airport turning into San Jose International. It is imperative that the listed concerns be addressed and communicated with full transparency for the sake of the entire tri-valley area. You know as well as I, that once the airport is allowed to expand, the FAA can pretty much mandate how the facility gets used. It's vital to keep this small general aviation facility or it will impact the quality of life for many in the area. For the benefit of a few, and mostly people out of the area, any expandsion will increase traffic congestion, air pollution,noise pollution, and the health of this community. Sincerely, Dennis Mastrantonio

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Frost, Susan

From: dpruette@comcast.net
Sent: Tuesday, June 09, 2009 9:29 AM
To: Airport-Rezoning; Kamena, Marshall
Cc: lacg@lacg.org
Subject: livermore airport

Every time I see a plane flying overhead heading into Livermore airport I cannot stop and think about the tragedies that occurred most recently in Buffalo, N.Y. and in San Diego, CA where pilots missed the airport or their plane malfunctioned and came down into residential neighborhoods. When I bought my house 10+ years ago in Pleasanton I occasionally saw small planes flying over. It is very different today - the planes are bigger and louder and the air traffic has noticeably increased. My neighborhood is a typical one with many houses, an elementary school and small shopping near by. An additional increase in air traffic and plane size will affect my property values and my sense of well being to the point of possiby moving to a another neighborhood.
I know that greed tends to override common sense. Lets do the right thing and keep the airport as it was intended for small community use or do away with it altogether. Because of the increasing population in the surrounding areas, community obligations such as safety and well being should prevail.

Please consider the following pts:

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Sincerely,

Deborah Pruette

Pleasanton Meadows Resident

Frost, Susan

From: Duncan Patterson [cpq94550@yahoo.com]

Sent: Sunday, June 07, 2009 5:17 PM

To: Airport-Rezoning; Kamena, Marshall; Marchand, John; Horner, Doug; Leider, Marjorie; Williams, Jeff

Cc: INDEPENDENT; editor@pleasantonweekly.com; ccnletters@bayareanewsgroup.com; lacg@lacg.org

Subject: Airport expansion plans.

Hi, I am so disappointed that the Livermore government is not listening to it's own residents. I have lived in Livermore for over fifteen years and am under the landing path of the airport (across from Luckys). I knew that at the time I purchased my home, but back then, it was just about all prop planes and I barely heard them. It was a nice little rural airport, befitting Livermore. Over the years more and more jets have been flying into the Livermore airport, even at night and early morning. I have been to the council meetings and whoever says that jets are no loader than prop planes, has never been under one. Prop planes are throttled down when they land and are almost silent, but jets are not, and the loud whine of the engines goes right through my double pane windows. There has been so much opposition to the expansion, but you just keep trying different methods to pull it off. I understand that we are in a recession, your tax base is smaller and this would be good additional tax revenue. I understand you have wonderful plans for the future of Livermore (some of them I think are crazy), but your grandiose plans for the airport expansion are hurting the residents of Livermore (the very same people that vote for you). I grew up in this valley, it's a great place to live, I don't want to see that go away just because a few people seem to think they have a better plan. Something I've learned from where I work rings true here..... We are Livermore, not Pleasanton, Danville, Blackhawk, or Walnut Creek, stop trying to be just like them and let Livermore be itself.

Duncan Patterson

Frost, Susan

From: Georg Korsak [ckorsak@pacbell.net]
Sent: Monday, June 15, 2009 3:32 PM
To: Airport-Rezoning
Cc: lacg@lacg.org; INDEPENDENT; Horner, Doug; McIntyre, Dan; Leider, Marjorie; Williams, Jeff; Marchand, John; Kamena, Marshall
Subject: Re: Re-Zoning of Livermore Airport

Special thanks to the independent for an article that recently addressed many of my concerns (attached in Bold Below). Timely in a sense but contradictory to concerns pasted below from a local community group concerned with the potential changes to the 1975 Airport Master Plan. The article informs that a revised Master Plan will place more rather than fewer conditions on the re-zoning implications as the statements below suggest.
As a resident, it is my responsibility to differentiate between truths, building confidence and trust with a constituency through clarity and better communication.
The group below wants guarantees/assurances and that has not been provided.
Thanks for the open to listen.

From a local community group.....
* Please take action by June 15 or else....*
- Livermore proposing to recind the 1975 Airport Master Plan and replace with 2 "airport zones".
- All restrictions from the 1975 Airport Plan will no longer hold!
- The Livermore Airport Update was denied by City Council -- this is another attempt to circumvent this by "re-zoning" the airport and removing the 1975 Airport Master Plan!
- Any references or noise mitigations in the Livermore Master Plan will be eliminated or not hold?
- New zoning proposal does not identify any restrictions/allowances explicitly - leaving it upto the staff to define -- it must be defined explicitly and must match or be more restrictive than the 1975 Master Plan
-- How can anyone give EIR comments, if they don't know what it is changing into?
- The new proposal will NOT have the EIR explicitly take into the account the exact FBO impacts (it is left for a "future" notice when the FBO details are "available")
- The new zoning has no indication or indirect restrictions to prevent larger cargo or other air services.
- The new zoning, as provided, does not specify any restrictions on runway lengths, or even the number of runways!
- Staff has indicated that the re-zoning is not required to build the FBO's, yet still goes forward and has spent over $234,000 --- meanwhile the Airport has layed off employees due to lack of funds.
Comments must be sent by June 15
Proposal available on www.lacg.org
Send your comments and concerns immediately, (Please copy lacg@lacg.org)
City Planning .(Susan Frost):
airport-rezoning@ci.livermore.ca.us
Copy City Council:
mayor@ci.livermore.ca.us ; jpmarchand@ci.livermore.ca.us; jdhorner@ci.livermore.ca.us; mrleider@ci.livermore.ca.us; jdwilliams@ci.livermore.ca.us
Livermore Independent, Pleasanton Weekly, Valley Times:
editmail@compuserve.com

editor@pleasantonweekly.com
ccnletters@bayareanewsgroup.com

--- On **Tue, 6/9/09, Georg Korsak** ***<ckorsak@pacbell.net>*** wrote:

From: Georg Korsak <ckorsak@pacbell.net>
Subject: Re-Zoning of Livermore Airport
To: Airport-Rezoning@ci.livermore.ca.us
Cc: lacg@lacg.org, editmail@compuserve.com, jdhorner@ci.livermore.ca.us, dbmcintyre@ci.livermore.ca.us, mrleider@ci.livermore.ca.us, jdwilliams@ci.livermore.ca.us, jpmarchand@ci.livermore.ca.us, mayor@ci.livermore.ca.us
Date: Tuesday, June 9, 2009, 12:47 PM

Susan Frost
Principal Planner
Community Development Department

RE: Re-zoning of the Livermore Airport:

Ms. Frost and honorable mayor and councilmembers,

As a citizen of Livermore (6 years), a relative short-timer compared to the established majority, I have come to trust and respect the decision of our local government. My confidences attributed to the reasonable disclosure and inclusion of the community in the decisions influencing the direction of the city, made with the best intentions and in the best interest of its stakeholders.
I believe the decisions made by this termed government and members prior have allowed the city of Livermore to ride this recessionary wave with the least impact to the community - however naive that may be of me to think.
The blend of small to large business opportunities allowed me to recover from job loss almost a year ago, maintain my residence and continue raising my children in the community I call home.
Which is why I feel compelled to share my concern over the actions/inactions taken during the process of rezoning the airport.
While others may focus on the semantics of legal language and jargon allowing for the greatest flexibility in producing a long term plan, I would respectfully ask to consider or more directly address the long term effects on the adjacent residents and children attending nearby schools (i.e. Rancho)

* Noise, Engine Exhaust and respective pollutants - sincerely, lets be careful about what we consider reasonable levels today v. tomorrow - my kids are under there.

* Airfield Management - currently cannot manage flight paths of current traffic with directed patterns - how will this improve with additional aircraft in the pattern? can we share how much traffic will increase (both air and ground)?
what steps are being taken to address increase? Freeway to surface streets.

* Budget and Fiscal responsibility - if nothing is intended to change with the rezoning, then is this the best time to be spending money on research. I can respect the desire to maximize a return on investment, let alone have one on unproductive zones; this would rationalize the spend and therefore imply an intent to develop thus the need for clarity and

further communication. If its just a rezoning or restatement of a zone, why can't the council just make the call and save time and money on the inevitable.

If this is a rezoning effort, then lets cut to the chase and do so.
Given nothing is to change anyway, no harm no foul, however.....
Asterisk - no development can progress without a Master Plan that comprehensively captures the vision for Airport to develop, the fiscal needs of the city and the safety and sensitivity of its residents.
It would appear the actions taken to date align with development and expansion and do not align with the message being communicated at respective re-zoning meetings.
Please help me to understand the association of the re-zoning efforts and the Master Plan revision so I may better inform my neighbors.

Sincerely,
Chris Korsak
637 Dover Way
Livermore, CA 94551
925.487.0559 (cell)

Frost, Susan

From: Georg Korsak [ckorsak@pacbell.net]

Sent: Tuesday, June 09, 2009 12:48 PM

To: Airport-Rezoning

Cc: lacg@lacg.org; INDEPENDENT; Horner, Doug; McIntyre, Dan; Leider, Marjorie; Williams, Jeff; Marchand, John; Kamena, Marshall

Subject: Re-Zoning of Livermore Airport

Susan Frost
Principal Planner
Community Development Department

RE: Re-zoning of the Livermore Airport:

Ms. Frost and honorable mayor and councilmembers,

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I believe the decisions made by this termed government and members prior have allowed the city of Livermore to ride this recessionary wave with the least impact to the community - however naive that may be of me to think.
The blend of small to large business opportunities allowed me to recover from job loss almost a year ago, maintain my residence and continue raising my children in the community I call home. Which is why I feel compelled to share my concern over the actions/inactions taken during the process of rezoning the airport.
While others may focus on the semantics of legal language and jargon allowing for the greatest flexibility in producing a long term plan, I would respectfully ask to consider or more directly address the long term effects on the adjacent residents and children attending nearby schools (i.e. Rancho)

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It would appear the actions taken to date align with development and expansion and do not align with the message being communicated at respective re-zoning meetings.
Please help me to understand the association of the re-zoning efforts and the Master Plan revision so I may better inform my neighbors.

Sincerely,
Chris Korsak
637 Dover Way
Livermore, CA 94551
925.487.0559 (cell)

Frost, Susan

From: greggie52@comcast.net

Sent: Monday, June 15, 2009 9:24 AM

To: Horner, Doug; Leider, Marjorie; Williams, Jeff; Marchand, John; Kamena, Marshall; Airport-Rezoning

Cc: Max Curtis

Subject: Livermore Airport zoning and other issues

We live on Amberwood Way in Livermore - approx. 3 miles to the east of Livermore Airport. We are in the flight path area (up on the hill) so we are very familiar with flight operations of the airport. We purchased our home (new) in 1992 and were aware that the airport was to the west of us. Pulte Corp. told us before our purchase that the airport would only serve recreational pilots. We are very concerned about any expansion of the airport as it greatly affects the quality of life for many residents of Livermore and also lowers many homeowners property values. We have attended many City Council meetings in the last several years and have voiced our concerns regarding any expansion of the airport. I have also called the hotline many times to report noisy aircraft, report aircraft that are flying too low over our neighborhood and to report aircraft that are not approaching our airport in a safe manner. I have a feeling that no one employed by the city follows up on aircraft complaints called in by the residents. If the city does follow up on complaints, the city should communicate this to the residents.

In the past, it was a rare site to see a jet using our airport. Slowly we started seeing a few and in the last few years, there has been a very large increase in the number of jets using our airport. They are very noisy flying over our neighborhood and we are very concerned that if facilities are built to service them, the number of jets will increase in the coming years.

We do not have any issue with building some new hangers that would be used by local recreational pilots. Seems like that would be the right thing to do. But we are against any increase of aircraft traffic, against a FBO doing maintenance and repairs of jet aircraft , against air cargo service, against any aircraft using our airport between the hours of 10 pm to 6 am. Our airport should be used by recreational pilots only.

Thank you,

Greg Olsen

Frost, Susan

From: John Skaff [skaffres@sbcglobal.net]
Sent: Sunday, June 14, 2009 1:56 PM
To: Airport-Rezoning
Cc: lacg@lacg.org
Subject: Fw: Livermore Airport

Please do not pass any proposals that would increase air traffic of any kind at the Livermore airport. Listen to the citizens that live in Livermore.
John Skaff
3757 Hillside Ave
Livermore

Frost, Susan

From: Joshua Brysk [jdbrysk@gmail.com]
Sent: Monday, June 08, 2009 8:46 AM
To: Airport-Rezoning
Cc: Kamena, Marshall; Marchand, John; Horner, Doug; Leider, Marjorie; Williams, Jeff
Subject: Airport re-zoning

The newest proposal concernng the Airport is not actually new.
It is a re-hashing of the airport expansion already rejected repeatedly by the community and the government.
This is simply an end around attempt to achieve a bad result not wanted by the majority and potentially harmful to the commuinity and the
environment.
Let's put an end to this once and for all.

Frost, Susan

From: lbjarrell@comcast.net
Sent: Tuesday, June 09, 2009 7:32 AM
To: Airport-Rezoning
Subject: Livermore Airport Rezoning

Dear Ms. Frost,

I am writing to you in regards to this issue as a concerned citizen and resident of Livermore. It is my hope that you will fully read the brief statement below and consider the contents as the city navigates this sensitive issue.

I have been a resident of the Tri-Valley for 38 years and lived in Livermore for 13. I share the same concern many residents have with the conversations about re-zoning/expanding 'whatever you want to call' it at the small Livermore Airport. I am strongly opposed to any expansion in terms of size, location or usage of this existing facility. Our quality of life is important and with that we would be foolish to think that allowing an increased number of flights wouldn't impact that for all of us in Livermore AND the surrounding cities of Pleasanton and Dublin at minimum. During one of the City Counsel meetings it was voiced that the airport has been intact longer than most of Livermore's residents have lived here ie "we knew the airport was there when we moved here". Point taken. We also knew it to be a *small municipal airport* with minimal traffic and no scheduled flights which is very different than what we are discussing today with the re-zonging/improvement 'whatever you want to call it' project.

Increased noise and pollution are only 2 factors to the equation. We live in a very different world today than we did pre-9/11 and we have to be concerned with our public and national safety. The Lawrence Livermore National Lab and Sandia National Labs are in their respective locations for a reason. By allowing increased traffic to the airport we also increase our security risks. The security statement from the Public Works department website is laughable "With a newly installed airport gate access control system, and an active Airport Watch Program supported by the Livermore Police Department security is intact." NOTE: LPD is 4.5 miles away

I firmly believe that our community would be better served with a BART train expansion over the Altamont into Tracy to alleviate the horrific commute traffic our valley faces each day and to aid in the reduction of auto emissions. All factors considered and dollar for dollar a BART improvement would provide a greater public good.

Lastly, in paricipating in many of these conversations it seems that the resounding theme is that the residents just don't understand the 'true intent' of the 'improvements' to be made to the airport. Maybe I'm stupid. I need the city to spell it out for me, specifically what will and will not be included. What will the rules to the new game be? What is the reasoning behind the changes?

- The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.
- The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.
- If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

- The definitions for the proposed new zoning districts must be more specific and defined.
- Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?
- How will security be managed?
- Will their be curfews for flights?
- Will scheduled flights be allowed?
- Specifically which businesses are expected to benefit from these airport improvements and what is their contribution?
- Walter Gillfillan is quoted in the Oakland Tribune as stating "improvements won't increase the number of flights" nor "It will be able to accommodate growth, it may not cause it," Then in the same article it is stated that airport traffic has declined by 35% in the past 7 years. SO, if we're operating at 35% less traffic than we used to, why do we need to expand/rezone? Shouldn't our existing facility be sufficient?

Please don't wreck our city - the one we've worked so hard to build into the beautiful, quiet, peaceful, diverse place it is today.
Thank you for your consideration.

Linda Jarrell

Frost, Susan

From: Len Herberth [l.herberth@comcast.net]
Sent: Friday, June 12, 2009 5:31 PM
To: Airport-Rezoning
Cc: Kamena, Marshall; Marchand, John; Williams, Jeff; Leider, Marjorie; Horner, Doug
Subject: Airport EIR Rezoning - Further Comment

To: Susan Frost:

I sent several comments to you on June 10th regarding scoping of the EIR. I would like to add this additional item which should be included within the scope of the EIR:

1. F light training schools are tenants of the Livermore airport. Pilot training requires multiple take offs and landings by a single aircraft. Because the volume of activity required by this use of airport facilities is high the resulting noise and air pollution affect is also high.
2. F light training practice takes place above our homes, creating issues of excessive noise and concerns about safety.

Thank you,

Len Herberth
Livermore

Frost, Susan

From: Len Herberth [l.herberth@comcast.net]

Sent: Wednesday, June 10, 2009 3:31 PM

To: Airport-Rezoning

Cc: Kamena, Marshall; Marchand, John; Williams, Jeff; Leider, Marjorie; Horner, Doug

Subject: Concerns Regarding Rezoning

Susan Frost, Principal Planner
Community Development Department
1052 South Livermore Avenue
Livermore, California 94551

Dear Ms. Frost:

In response to your request for comments regarding the Airport Re-zoning EIR the following is offered:

The scope of the EIR should include:

1. The impact of all future development within the AIR. This should include the impact of all anticipated development discussed by city personnel with consultants and staff during the process of deciding to pursue rezoning, whether or not such discussions are preserved in written form and whether or not plans are immediate or have been discussed for possible future completion.
2. An analysis of the nature and volume of new traffic that will be allowed as the capacity of the airport is expanded. This is important because the FAA will not allow restrictions on a use of the airport if the airport has the capacity for that use. Thus, increased use to capacity must be anticipated in the EIR.
3. The impact of removing any restrictions included in the 1975 Airport Master Plan. These include any restrictions that were included in the 1975 Airport Master Plan and will not be included in the AIR.
4. The effect of the City's lack of authority to control important aspects of airport operation due to FAA requirements. Those aspects of airport operation include noise level, hours of operation, type and use of aircraft, night lighting, air pollution, size of aircraft and other. Because the City does not have authority to control these aspects, the scope of the EIR should assume that the airport will be utilized to the absolute maximum of its potential developed capacity (item 2. above). The city cannot promise otherwise and the citizens have no recourse once additional airport capacity has been established.
5. The City has attempted to rely on voluntary compliance by aircraft operators to certain operating restrictions such as "Livermore Airport Voluntary Restraint from Night Flying Time Period". The EIR scope should assume that aircraft operators will not volunteer to comply with any such requests.
6. All citizens in homes in Livermore and surrounding cities will be affected. The scope of the EIR should include the impact on this broad area. Additionally, many facilities including parks, schools, hospitals, nursing homes, senior residences, wineries, restaurants, and playgrounds will all be subject to negative impact by the potential increase in airport activity.

Thank you,

Len Herberth
Livermore
6/9/2009

Frost, Susan

From: Madeline Doucas [hemhangr@pacbell.net]
Sent: Monday, June 08, 2009 5:21 PM
To: Airport-Rezoning
Subject: Airport expansion

**

*Dear Ms. Frost:
*

*I represent 3 voting residents of Livermore who are concerned about the planning for the expansion of services at the airport. I wold like some information on the following points:
*

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

*Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?
*

*Please reply by email.
*

*Thank you
*

*Madeline Doucas, Ross Williams and Michael Williams
2684 Wellingham Drive
Livermore, CA 94551
*

Frost, Susan

From: Nancy Mulligan [n.mulligan@comcast.net]
Sent: Friday, June 12, 2009 1:26 PM
To: Airport-Rezoning
Cc: INDEPENDENT; McIntyre, Dan; Horner, Doug; Leider, Marjorie; Williams, Jeff; pmarchand@ci.livermore.ca.us; Kamena, Marshall
Subject: Airport Rezoning

We need to control expansion of the Livermore airport. Please note the following items.

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.
If as has been stated by City staff that nothing will change due to the re-zoning, then why are we spending the time and money to do so?
The definitions for the proposed new zoning districts must be more specific and defined.
Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

As a concerned citizen, I want Livermore to maintain it's small town feel and not turn into a Hayward. With three major airports just minutes away, all the area needs is a place for local pilots to fly their planes as they've done for years. Keep the airport we all love.
Nancy

--

~*~ *~ *~* ~ *~* ~ *~ *~ *~
Nancy Mulligan

E-mail: n.mulligan@comcast.net

Frost, Susan

From: Nancy Storch [na_storch@yahoo.com]
Sent: Sunday, June 14, 2009 5:17 PM
To: Airport-Rezoning
Cc: Kamena, Marshall; Marchand, John; Horner, Doug; Leider, Marjorie; Williams, Jeff; Mary Lu Campbell; lacg
Subject: Livermore Airport Zoning Changes

To: Susan Frost, Livermore City Planner for Livermore Airport Changes

Dear Ms. Frost,
Livermore Airport policy and planning directly affects my Pleasanton neighborhood, because our homes are under one of the commonly used
flight paths used by aircraft approaching or leaving the airport.
Residents are subjected to unwanted overhead aircraft noise. At my home, there is no getting away from the noise if you are outside in the yard, or inside the house in a room with vaulted ceilings. Even though most homes already have dual-pane windows, aircraft noise enters and interferes with trying to sleep, or carrying a conversation.

I've heard that changes are underway to rescind the 1975 Airport Master Plan and rezone the Airport without full consideration for environmental impacts. To those with responsibilities for planning, reviewing, approving and implementing changes to the Livermore Airport, its zoning and operations, I request that you always include public input and always address environmental impacts. When necessary, restrictions and mitigations should be put in place to avoid further negative impacts to the quality of life of residents of Pleasanton, Livermore and Dublin.

Sincerely,

Nancy Storch
3193 Chardonnay Drive
Pleasanton, CA 94566

Frost, Susan

From: Nick Fitton [ncfitton@gmail.com]
Sent: Saturday, June 13, 2009 5:35 PM
To: Airport-Rezoning; Marchand, John; Kamena, Marshall; ncfitton@gmail.com
Subject: Noise impacts from airport

Dear Susan,
The study on aircraft noise levels at the airport raises some interesting issues.

Average noise levels (CNEL) is a flawed measure of aircraft noise. Single event noise levels (SEL) is what really has an impact on the local community. Think about it: If your neighbors are quiet all day and then start up a live band at midnight that wakes your entire family, do your ears average out the noise so you think, "overall they are pretty quiet, and i'm enjoying this experience" ? Maybe once you would tolerate this, but even once a week would not be tolerated by most people.

I hope the council can find a growth plan for the local business community and the community at large that does not continue to ignore the voice and ears of the residents. Sure, build more hangars, let the FBO pump gas and wrench planes, but PLEASE regulate the noise and impact on the community in a sensible and fair way that considers Single Event Noise Levels. If the airport can grow and be profitable without impacting our daily conversations and we can sleep easily at night, then we have a solution for the entire community.

Thank you,
Nick Fitton (Livermore Resident)

Frost, Susan

From: Purnam Sheth (pasheth) [pasheth@cisco.com]
Sent: Saturday, June 13, 2009 1:48 PM
To: Frost, Susan
Cc: Kamena, Marshall; Marchand, John; Horner, Doug; Leider, Marjorie; Williams, Jeff; INDEPENDENT; editor@pleasantonweekly.com; ccnletters@bayareanewsgroup.com; Airport-Rezoning
Subject: RE: Livermore to remove many of restrictions on Airport?

Susan,

I have not yet had any replies to my multiple queries -- I am now particularily concerned on the lack of response and clarity. The City of Livermore is usually exceptionally good at replying and clarifying questions.
[I have copied the editors of the various newspapers, since lack of response, as well as now adding the removal of the 1975 Airport Master Plan without details of what supercedes it -- "feels" like the City of Livermore is short circuiting the update of the Livermore Airport Master Plan.]

thanks, Purnam

From: Purnam Sheth (pasheth)
Sent: Saturday, June 06, 2009 10:05 AM
To: 'Frost, Susan'
Cc: 'mayor@ci.livermore.ca.us'; 'jpmarchand@ci.livermore.ca.us'; 'jdhorner@ci.livermore.ca.us'; 'mrleider@ci.livermore.ca.us'; 'jdwilliams@ci.livermore.ca.us'
Subject: RE: Livermore to remove many of restrictions on Airport?

[resending the message-some e-mail address were incorrect].

Susan,

I didn't see a reply on this? I am very concerned.

To summarize:

1) Is the new proposed zoning supposed to SUPERCEDE the 1975 Airport Master Plan in it's entirety (ensuring clarity of staff response below) -- i.e the 1975 Airport Master Plan will be recinded?

The announcement/proposal DOES NOT explicitly indicate that staff are planning to recind the 1975 Airport Master Plan AND furthermore remove many of the restrictions that the 1975 Airport Master Plan imposed?

Why wasn't this explicitly stated in the notice for Proposed changes i.e "Staff proposed to recind the 1975 Airport Master Plan and replace with the New Zoning --- A number of of 1975 Airport Master Plan restrictions to be amended/removed"?

The current documentation provided in the notice does not outline any of the restrictions that are removed (or added). How can anyone legitimately understand the impact (and comment on the proposed amendment/EIR) without this information?

2) What are the restrictions and allowance from the 1975 Airport Master Plan that will no longer be restricted/allowed of the New Proposed Zoning? THIS IS NOT STATED ANYWHERE.

I am very concerned that with the "new zoning" being quite broad (and actually not defined in detail in the

notice), it will be much easier for the airport to have additional night lighting, extend the runways,etc -- without the same level of public scrutiny that the LAMP update required.
Could you clarify the difference in the effort, scrutiny required to say, extend the runway length under the existing 1975 plan vs the new proposed zoning?
Or if the new zoning does not say anything about runway length, then it is a now a simplier activity to propose a runway extension and then say "the new zoning does not restrict it", so it will just go through -- it is not a zoning change?

3) If the above two items are true, then I am very concerned on both the public and legal ramications:
a) Clarity to the public on the proposed 1975 Airport Master Plan recinding action -- this is not at all clear in both the announcement and proposal
b) The legal ramications -- this "feels" like another way the airport/staff are trying to slide something through, and get around the fact that the LAMP Update (which it sounds like what the new Zoning is) was denied by City Council
- Not explicitly stating the recinding of the 1975 plan and superceding by the new zoning
- Not explicitly stating the difference in restrictions/allowance by the new zoning in the notice, make it almost impossible to understand and comment on what should be covered in the EIR and any concerns with the planned re-zoned
The public, public agencies that must comment are not given enough information to adequately assess and comment

thanks, Purnam

From: Purnam Sheth (pasheth)
Sent: Tuesday, June 02, 2009 11:11 AM
To: 'Frost, Susan'
Subject: RE: Livermore Airport re-zone and General Plan amendment

Susan,

Thanks very much for your reply.

I didn't see anywhere in the documentation (or announcement) that the 1975 Master Plan will be recinded -- from the description in the announcement/report, it indicated that all references to the 1975 Master Plan be taken out of the General Plan --- recinding the 1975 Master Plan and overriding it with the new zoning, is an entirely different statement.

Is the new zoning supposed to supercede the 1975 Master Plan in it's entirety?

Could you please provide the advantages and disadvantages of taking this out of the Livermore Master Plan, in terms of future construction or changes at the airport? I would think this is a critical aspect of the check and balances of changes.

What are the differences in process/scrutiny in having changes made to the 1975 Master Plan vs future changes to the New zoned areas?

thanks,
Purnam

From: Frost, Susan [mailto:smfrost@ci.livermore.ca.us]
Sent: Tuesday, June 02, 2009 10:49 AM
To: Purnam Sheth (pasheth)
Subject: RE: Livermore Airport re-zone and General Plan amendment

Purnam,
Thank you for your e-mail regarding the Airport Rezoning project. Please see responses to your questions below. Please contact me if you have any further questions.

Susan Frost
Principal Planner

LIVERMORE
CALIFORNIA

From: Purnam Sheth (pasheth) [mailto:pasheth@cisco.com]
Sent: Wednesday, May 27, 2009 10:30 AM
To: Frost, Susan
Subject: Livermore Airport re-zone and General Plan amendment

Susan,

Good morning.

I had several questions regarding this project, and would appreciate it if you could help me out here:

1) I know the city council approved the building of the FBOs and on the airport.

Does the airport re-zoning have to be done in order to allow this? Or can the airport FBOs be built with the existing 1975 Master Plan?

The rezoning does not have to be done in order to for the FBO developer to seek entitlements for the proposed improvements (hangars and fueling station).

I didn't recall Council giving direction staff to re-zone the airport?

Staff is recommending the Council consider rezoning the airport. The Council is aware of the recommendation since they approved the agreement with LSA Associates for preparation of the environmental impact report.

2) On the removal of the 1975 Airport Master Plan references from the Livermore General Plan

- Did Council give direction to staff to pursue removing this restriction/statement from the Livermore General Plan?

Staff is recommending that the 1975 Airport Master Plan be rescinded due to its age and obsolescence. Since the General Plan references the Airport Master Plan, if the Master Plan is rescinded, those references should be removed. Staff apprised the Council that it would be making this recommendation. The proposed zoning district, instead of the Master Plan, would provide standards and regulations for development and uses at the Airport.

- Why, at this time, is staff pursuing to remove references to the Airport Master Plan from the Livermore General Plan?
What advantages does it allow in the future for any other kinds of modifications?
What disadvantages does it have in the future for any other kinds of modifications?

Inasmuch as the City is preparing an EIR for the new Airport zoning and staff will be recommending that

Council rescind the old, outdated Airport Master Plan, it is most appropriate to also delete the General Plan references to the Master Plan using the same environmental clearance. The rescission of the Master Plan at this time removes confusion because, due to the Plan's age, it is no longer relevant. Staff has not determined if there are any specific advantages or disadvantages relating to other kinds of modifications.

- The notice document indicates that the 1975 Airport Master Plan references are being removed since they are "out of date".
But City Council explicitly included it in the Livermore General Plan for a reason.
City Council also chose not to update the Livermore Airport Master Plan (LAMP) --- so I am very confused why the City Council chose to keep the existing plan, but staff is now removing any reference to the existing plan?

When the Council expected the 1975 Airport Master Plan to be regularly updated, it made sense to include references to the Master Plan in the General Plan. However, those updates were not completed. Since the rezoning process began last year, staff has reviewed the Master Plan and concluded that it is based on outdated data and, therefore, it is no longer meaningful. Thus, staff is recommending that the Master Plan be rescinded. The proposed zoning district will, instead, be used to provide standards and regulations for development and uses at the Airport.

3) Approx how many $$$ has been spent on consulting and approx staff hours on pursuing this latest re-zoning and now expanded scope to remove the 1975 airport master plan references from the general plan?

The agreement with LSA Associates for preparation of the Environmental Impact Report is $323,280. Staff time has not been calculated.

Thanks so much,
Purnam Sheth

Frost, Susan

From: Rickey Juarez [rickeyjuarez@comcast.net]
Sent: Monday, June 08, 2009 4:34 PM
To: Airport-Rezoning
Subject: NO expansion period. I live in pleasanton and it already is to noisy.! Do not change the general plan of 75

Rate sheets and Broker Package online go to www.plazahomemortgage.com
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Click on become a broker!

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Rickey Juarez
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E-FAX -916-608-9726
sjennings@plazahomemortgage.com

Plaza Home Mortgage offers:
Online Pricing Engine
Locking Online (7:30am to 4:00pm, West Coast)

Frost, Susan

From: Robert and Lisa [rlurbina@comcast.net]
Sent: Tuesday, June 09, 2009 7:05 PM
To: Airport-Rezoning
Cc: lacg@lacg.org; INDEPENDENT; Horner, Doug; Leider, Marjorie; Kamena, Marshall
Subject: Airport rezoning---my concerns - Susan Frost and everyone

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

I am directly within the flight zone of anyone going in and out of the Livermore Airport. I am an understanding citizen and believe that growth is good, but when did common courtesy no longer prevail over growth? There have been some planes that I felt were going to land on the room of my house. I live in Pleasanton and even if I owned my own private jet, I wouldn't want to disturb my family or neighbors whenever I "came home".

Thank you,

Robert and Lisa Urbina

Frost, Susan

From: Ronald Hahn [rshahn@sbcglobal.net]
Sent: Monday, June 08, 2009 9:51 PM
To: Airport-Rezoning
Cc: Leider, Marjorie
Subject: Fw: Major Concerns about Airport Re-Zoning

--- On **Tue, 6/9/09, Ronald Hahn** *<rshahn@sbcglobal.net>* wrote:

From: Ronald Hahn <rshahn@sbcglobal.net>
Subject: Major Concerns about Airport Re-Zoning
To: Airport-Rezoning@ci.livermore.ca.us
Cc: mrleider@ci.livermore.ca.us
Date: Tuesday, June 9, 2009, 4:37 AM

Susan Frost

I have lived in Livermore since 1973. During the past 6 years I have owned a business

in the city. I have concerns about the following.

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO and hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

The big question is---Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan???By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning??

Concerned Citizen about the noise from expanded jet service.

Ronald Hahn
3522 Edinburgh Drive
Livermore, Calif. 94551

Frost, Susan

From: Ronald Hahn [rshahn@sbcglobal.net]
Sent: Monday, June 08, 2009 9:37 PM
To: Airport-Rezoning
Cc: McIntyre, Dan; Horner, Doug; mrleider@ci.livermore; Williams, Jeff; Marchand, John; Kamena, Marshall
Subject: Major Concerns about Airport Re-Zoning

Susan Frost

I have lived in Livermore since 1973. During the past 6 years I have owned a business

in the city. I have concerns about the following.

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO and hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

The big question is---Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan???By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning??

Concerned Citizen about the noise from expanded jet service.

Ronald Hahn
3522 Edinburgh Drive
Livermore, Calif. 94551

Frost, Susan

From: Steven rego [regs4@comcast.net]
Sent: Monday, June 08, 2009 5:34 PM
To: Airport-Rezoning

Susan Frost,

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Thank You, Steven Rego

Pleasanton resident

Frost, Susan

From: vanreg@comcast.net
Sent: Tuesday, June 09, 2009 10:19 AM
To: Airport-Rezoning
Cc: lacg@lacg.org
Subject: Airport Re-zoning Scoping Meeting

The Airport Re-zoning Scoping Meeting went well the other night. There were approximately 15 of us there and pretty much everything that needed to be said was said. Some comments were:

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Frost, Susan

From: wkruer2@aol.com
Sent: Monday, June 08, 2009 6:48 PM
To: Airport-Rezoning
Cc: lacg@lacg.org; INDEPENDENT; McIntyre, Dan; Horner, Doug; mrlleider@ci.livermore.ca.us; Williams, Jeff; Marchand, John
Subject: Airport rezoning

Dear Ms Frost, Please, please be aware of our concerns about the Livermore airport. This is a small valley, already very strongly impacted by remarkable traffic on interstate 580! The entire valley will suffer from increased airport traffic. We must be very careful in proceeding! Please hear our concerns, including

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Thank you for your consideration, William L. and Elizabeth A. Kruer

4055 Suffolk Way
Pleasanton, CA 94588

Frost, Susan

From: Xian-Huan Wen [xhwen@yahoo.com]
Sent: Monday, June 08, 2009 4:44 PM
To: Airport-Rezoning
Subject: Airport Re-zoning

Dear Susan,

I have the following concerns on Airport re-zoning:

1. The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

2. The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

3. If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

4. The definitions for the proposed new zoning districts must be more specific and defined.

5. Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

6. Afterall, why we need another airport considering we have already one in Oakland? Are you concerning about the noise and the potential impact on home values in Livermore and Pleasanton?

Regards

Xian Wen

Frost, Susan

From: Elizabeth Jane Regan Gleffe - Home [ejrg@comcast.net]
Sent: Thursday, June 04, 2009 10:09 AM
To: Airport-Rezoning
Subject: Livermore Airport Re-Zoning Scoping Meeting

To: Susan Frost, Principal Planner Livermore Community Development Department,

Regarding the Airport Re-zoning Scoping Meeting the other night.

I urge you to meet the following:

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

I am a very concerned Pleasanton citizen that lives in the airport path, directly behind Staples Ranch. I urge you to consider all of these points as if it were in your backyard and affecting your homeownership and quality of living.

thank you,
Elizabeth

Elizabeth Jane Regan Gleffe - Home
3358 Vermont Place
Pleasanton, CA 94588

Frost, Susan

From: Jill & Mark Wilson [redwiner@sbcglobal.net]
Sent: Thursday, June 04, 2009 10:44 PM
To: Airport-Rezoning
Subject: We oppose expansion & re-zoning of the airport!
Importance: High

Ms Frost,

We oppose any expansion to the Livermore Airport and the Re-zoning!

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

It has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Thank you.

Jill & Mark Wilson

Roselli Dr, Livermore

Frost, Susan

From: lbjarrell@comcast.net

Sent: Thursday, June 04, 2009 12:17 PM

To: Airport-Rezoning; INDEPENDENT; Horner, Doug; Leider, Marjorie; Williams, Jeff; Marchand, John; Kamena, Marshall

Subject: Livermore Airport Re-zoning

I am writing to you in regards to this issue as a concerned citizen and resident of Livermore. It is my hope that you will fully read the brief statement below and consider the contents as the city navigates this sensitive issue.

I have been a resident of the Tri-Valley for 38 years and lived in Livermore for 13. I share the same concern many residents have with the conversations about re-zoning/expanding 'whatever you want to call' it at the small Livermore Airport. I am strongly opposed to any expansion in terms of size, location or usage of this existing facility. Our quality of life is important and with that we would be foolish to think that allowing an increased number of flights wouldn't impact that for all of us in Livermore AND the surrounding cities of Pleasanton and Dublin at minimum. During one of the City Counsel meetings it was voiced that the airport has been intact longer than most of Livermore's residents have lived here ie "we knew the airport was there when we moved here". Point taken. We also knew it to be a *small municipal airport* with minimal traffic and no scheduled flights which is very different than what we are discussing today with the re-zonging/improvement 'whatever you want to call it' project.

Increased noise and pollution are only 2 factors to the equation. We live in a very different world today than we did pre-9/11 and we have to be concerned with our public and national safety. The Lawrence Livermore National Lab and Sandia National Labs are in their respective locations for a reason. By allowing increased traffic to the airport we also increase our security risks. The security statement from the Public Works department website is laughable "With a newly installed airport gate access control system, and an active Airport Watch Program supported by the Livermore Police Department security is intact." NOTE: LPD is 4.5 miles away

I firmly believe that our community would be better served with a BART train expansion over the Altamont into Tracy to alleviate the horrific commute traffic our valley faces each day and to aid in the reduction of auto emissions. All factors considered and dollar for dollar a BART improvement would provide a greater public good.

Lastly, in paricipating in many of these conversations it seems that the resounding theme is that the residents just don't understand the 'true intent' of the 'improvements' to be made to the airport. Maybe I'm stupid. I need the city to spell it out for me, specifically what will and will not be included. What will the rules to the new game be? What is the reasoning behind the changes?

- The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.
- The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.
- If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

- The definitions for the proposed new zoning districts must be more specific and defined.
- Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?
- How will security be managed?
- Will their be curfews for flights?
- Will scheduled flights be allowed?
- Specifically which businesses are expected to benefit from these airport improvements and what is their contribution?
- Walter Gillfillan is quoted in the Oakland Tribune as stating "improvements won't increase the number of flights" nor "It will be able to accommodate growth, it may not cause it," Then in the same article it is stated that airport traffic has declined by 35% in the past 7 years. SO, if we're operating at 35% less traffic than we used to, why do we need to expand/rezone? Shouldn't our existing facility be sufficient?

Please don't wreck our city - the one we've worked so hard to build into the beautiful, quiet, peaceful, diverse place it is today.
Thank you for your consideration.

Linda Jarrell

Frost, Susan

From: Madeline Doucas [hemhangr@pacbell.net]
Sent: Wednesday, June 03, 2009 5:43 PM
To: Airport-Rezoning
Subject: Airport EIR

*To whom it may concern:
*

*Please respond to the following points presented by concerned citizens at the scoping meting:

*

The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

* Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

In particular, we would like to know what the impact will be on air quality and increased noise with further development of the airport.
Please respond to this email address.

Thank you

Madeline Doucas
Ross Williams
Michael Williams
2684 Wellingham Drive
Livermore 94551
*

Frost, Susan

From: markkraft1@comcast.net
Sent: Wednesday, June 03, 2009 9:28 PM
To: Airport-Rezoning
Subject: Fwd: Airport EIR

----- Forwarded Message -----
From: "Max Curtis" <max@maxinspect.com>
To: Undisclosed-Recipient:;
Sent: Wednesday, June 3, 2009 5:19:25 PM GMT -08:00 US/Canada Pacific
Subject: Airport EIR

The Airport Re-zoning Scoping Meeting went well the other night. There were approximately 15 of us there and pretty much everything that needed to be said was said. Some comments were:

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

What we now need each & everyone (and I mean everyone—no slackers please) to do is send an e-mail to the City voicing the above concerns and any other concerns you may have.
Comments may be mailed, faxed or e-mailed no later than Monday, June 15, 2009 at 5:00 p.m. to:

Susan Frost, Principal Planner
Community Development Department
1052 South Livermore Avenue,
Livermore, CA 94551
FAX - 925-960-4459
Airport-Rezoning@ci.livermore.ca.us

In addition please copy your e-mail to: webmaster3@lacg.org so we have a record.
Others you may want to copy are:

Janet Armantrout	editmail@compuserve.com	The Independent Newspaper
Dan McIntyre	dbmcintyre@ca.livermoe.ca.us	Livermore Ass. Public Works Dir.
Doug Horner	jdhorner@ca.livermore.ca.us	Councilman
Marge Leider	mrleider@ca.livermore.ca.us	Councilman
Jeff Willliams	jdwillians@ca.livermore.ca.us	Councilman
John Marchand	jpmarcharnd@ci.livermore.ca.us	Councilman
Marshell Kamena	mayor@ci.livermore.ca.us	Mayor

Frost, Susan

From: Matt and Cheryl [mlawer1@comcast.net]
Sent: Wednesday, June 03, 2009 6:41 PM
To: Airport-Rezoning
Cc: webmaster3@lacg.org

I am in support of the vote to object to the airport in Livermore, ca expansion and the movement to block it and everything the group stands for.

Matt Lawer

3750 Cameron ave

Pleasanton, ca 94588

Some topics are:

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

The definitions for the proposed new zoning districts must be more specific and defined.

Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

Frost, Susan

From: Max Curtis [max@maxinspect.com]
Sent: Wednesday, June 03, 2009 4:55 PM
To: Airport-Rezoning
Subject: EIR

Comments regarding scope of Draft Environmental Impact report for the proposed Airport Rezoning Project.

The EIR must reflect the increase is plane traffic that will occur with the completion of the FBO & hanger projects.

The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

The definitions for the proposed new zoning districts must be more specific and defined.

Thank you,

Max Curtis

604 Amberwood Wy

Livermore

Frost, Susan

From: Max Curtis [max@maxinspect.com]
Sent: Monday, December 01, 2008 3:06 PM
To: Airport-Rezoning
Cc: Williams, Jeff; Horner, Doug; Leider, Marjorie; Marchand, John; Kamena, Marshall
Subject: airport rezoning

Dec. 1, 2008

Comments regarding scope of Draft Environmental Impact Report for the proposed Airport Rezoning Project.

My main environmental concerns with rezoning and expanding the airport are with noise and air pollution. I am at a quandary as to how a consulting firm, who has been contracted by the City, can perform a viable EIR as the City has refused to admit they are expanding airport capacity. What parameters of expansion will the EIR be based on?

The proposal from Livermore Air Center (LAC) and testimony presented to the City Council by James Ghielmetti say the FBO will increase air traffic, consultant reports done for the City of Pleasanton says air traffic will increase, and a letter from the Bay Area Air Quality Management Board dated May 2005 says expansion will increase air pollution. Only the City Council & staff refuse to admit and address the negative aspects of airport expansion.

Why is the rezoning necessary in the first place? Do we have a Parcel Map land use issue? Susan Frost stated at the Scoping Meeting the FBO could be built under the present zoning designations. The accepted proposal from LAC stipulates the developer would be responsible for all EIR expenses. Could it be the developer now finds himself short of funds and the City is so determined to expand the airport, they are shifting the cost of the EIR to the current airport tenants? My guess is the rezoning EIR is being done to shift the cost and so future facilities can be constructed without full EIR's, but rather with simple Negative Declarations.

How many EIR has LSA & Ass. preformed for the City in the past? Have any of these reports been unfavorable to what the City was attempting to accomplish. While the Mayor sees airport expansion as another feather is his cap of making Livermore a "Destination City", I see expansion contributing more to Livermore's moniker of the "Most Polluted City in the Bay Area".

Max Curtis
604 Amberwood Way
Livermore

Frost, Susan

From: pake@ix.netcom.com
Sent: Thursday, June 04, 2009 11:07 AM
To: Airport-Rezoning; Kamena, Marshall; Horner, Doug; Leider, Marjorie; Marchand, John; Williams, Jeff; McIntyre, Dan
Cc: INDEPENDENT; webmaster3@lacg.org
Subject: Concerns Regarding LIVERMORE AIRPORT EIR

To: Susan Frost, Principal Planner, Marshell Kamena, Mayor, Members of the Livermore City Council, Dan McIntyre, Ass't Public Works Director

Re: Concerns Regarding the Livermore Airport EIR

I have the following concerns regarding the Livermore Airport Rezoning:

1. The EIR must reflect the increase in plane traffic that will occur with the completion of the FBO & hanger projects.

2. The new zoning must prohibit Air Cargo service and must restrict the size and number of based charter jets.

3. If as has been stated by City staff that "nothing will change due to the re-zoning", then why are we spending the time and money to do so?

4. The definitions for the proposed new zoning districts must be more specific and defined.

5. Why is the City proposing to eliminate the 1975 Airport Master Plan from the City's General Plan? By eliminating the Master Plan from the General Plan, what items that are now covered under the Master Plan will not be covered by re-zoning?

I live at the end of the runway in Pleasanton and will be directly affected by any change to the Livermore Airport. Please keep me informed to any changes regarding the Re-zoning. Thank you.

Stephanie Yue

Frost, Susan

From: Purnam Sheth (pasheth) [pasheth@cisco.com]
Sent: Tuesday, November 25, 2008 10:46 PM
To: Airport-Rezoning
Subject: Airport Rezoning

Dear City of Livermore,

With regards to the proposed re-zoning of the 395-acre± portion of the Livermore Municipal Airport, please take these as my comments regarding this. Please acknowledge this e-mail as proof of receipt.

1.) It has been very difficult to determine why the re-zoning is even necessary, and what prompted the city to undertake this re-zoning? Could you please provide this information?

2) The EIR should absolutely include the proposed FBO that by it's nature will require an EIR as well. Splitting the two projects into 2 separate EIR processes, is an attempt to circumvent the true impact of the projects (by handling them both separately), and will be seen as deceptive in possible future court actions.

AGAIN: The EIR must be made inclusive of the proposed FBO (for which the lease has already been granted, and hence all necessary parts are understood).

3) The EIR should include single event noise studies that are done by consultants that do not have any ties to Livermore or the airport – this should be done with normal double-blind studies to ensure that no information is "leaked" ahead to anyone regarding when this monitoring will be done. In the past, it is well known, that the information regarding exactly when noise measurements were to be taken, were well known (and/or known by Airport officials). Although there are no standards for SNEL, that does not preclude the EIR from measuring them, as well as setting a reasonable standard consistent with the Tri-valley populations consideration of what is "acceptable" noise. i.e. The city of livermore already sets standards for "dangerious" car traffic areas (for corrective action) based on some standards they create themselves — and similiar standards can be created based on the Tri-valley populations definition of acceptable noise – the Tri-valley is important since the airport impacts all three city residents.

4) The EIR should include:

- Comments from the general public. A well documented process where the public's input will actually be heard and action taken. Previous inputs at various city planning and workshops have dismissed the people's objections (even when vocally presented and in the majority) — how will this not happen again? What neutral parties will be involved to ensure a balanced analysis of the public's input will be actually be considered?
- a clear description indicating what the public will be losing by having this rezoning occur.
- Historical evidence included through the over 2000 letters send to the city council that indicated they did not want to approve the LAMP update — of which one of the major parts was the re-zoning of the airport areas and changing it from "educational" to other airport uses.
- Expected increases in car traffic due to the rezoning
- Expected increases in air traffic and the types of air traffic (these can be based on the previous studies done by the City that show with the rezoning and the FBO, that air traffic will grow emensely > 280,000 operations — from the LAMP consultant figures).
- Expected impact to Bay Area Air Quality
- Any expected additional water run off and how it will be handled, due to the rezoning

Thank you,

Purnam Sheth

Frost, Susan

From: rods4collin@comcast.net
Sent: Thursday, June 04, 2009 10:35 AM
To: Airport-Rezoning
Cc: webmaster3@lacg.org
Subject: Re:re zoning

Hi Susan, I am a concerned citizen regarding the Livermore airport . I want to know more specifically about the re zoning definition and what all is included.Also if nothing will change as mentioned in the recent meeting with the re zoning ,then why are you the city doing it?Does it limit the size and number of charter jets flying over my house to land here in Livermore?
Thank you, Sharon Collins and family

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711

Flex your power!
Be energy efficient!

June 5, 2009

Ms. Susan Frost
City of Livermore
1052 S. Livermore Avenue
Livermore, CA 94550

Dear Ms. Frost:

City of Livermore's Notice of Preparation of a Draft Environmental Impact Report for the Livermore Municipal Airport Rezoning and General Plan Amendment Project; SCH# 2008102103

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA).

The proposal consists of a rezone to create two zoning subdistricts for the Livermore Municipal Airport. According to the Notice of Preparation, the Airport Operations (AIR-OP) Zoning Subdistrict would provide standards for airport operations facilities and "allow for the development of aviation land uses and related facilities that are necessary for the safe and efficient operation of the Airport." Uses that would be permitted under the AIR-OP Subdistrict include "runways, taxiways, run-up aprons, airfield lighting, signage, and similar uses." The Airport Service (AIR-SE) Zoning Subdistrict would provide standards for airport support facilities and "allow for the development of aviation-related land uses and associated facilities to support Airport operations." Permitted uses would include "access taxilanes, aircraft hangars, aircraft manufacturing and research uses, aircraft sales, ancillary support services, and similar uses."

The Division has technical expertise in the areas of airport operations safety and airport land use compatibility and we are a funding agency for airport. Caltrans also is the primary State agency responsible for permitting airports and heliports. Our mandated process is further described in the California Code of Regulations (CCR), Title 21, Section 3534(b). Livermore Municipal Airport operates with an airport permit issued by the Division. From the information provided, it does not appear that the proposal will affect the State airport permit. Any future runway modifications, however, will require an amended State airport permit. New construction projects must meet or exceed the minimum design standards for a permitted airport, as specified in the CCR, Title 21, Article 3, "Design Standards, Airports Only."

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise, safety, and regional land use planning issues. We advise you to contact our District 4 office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. We also look forward to reviewing the Draft Environmental Impact Report. If you have any questions, please call me at (916) 654-5314 or by email at sandy_hesnard@dot.ca.gov.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, Alameda County ALUC, Livermore Muni Airport

Judicial Council of California
Administrative Office of the Courts

Information Services Division
455 Golden Gate Avenue ◆ San Francisco, CA 94102-3660
Telephone 415-865-4600 ◆ Fax 415-865-4503 ◆ TDD 415-865-4272

Fax

To: Susan Frost From: Michael Radovolsky

Fax: 415 865-4503 Phone: (415) 865- 4634

Pages: 2 Date: 6/9/2009

Re: EIR

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

● **Comments:**

Livermore Municipal Airport
General Plan Amendment and Rezoning Project
Environmental Impact Report
Scoping Meeting, May 28, 2009

Comments regarding scope of Draft Environmental Impact Report for the proposed Airport Rezoning Project

I have attended the meeting in person. My impression was that this project is misguided and wasteful. The city staff and the consulting firm could not clearly explain project's necessity, goals and objectives. In the meantime, with no public approval, funds are being wasted for the EIR and rezoning for undefined construction projects.

Even with no EIR, it is obvious that the proposed rezoning will facilitate the airport expansion and consequently negatively impact the surrounding environment. So, why should we pay for this study?

Thanks,
Michael 925 846-5811 h
415 865-4634 w

Submit comments no later than ***Monday, June 15, 2009*** at 5:00 p.m. to:

Susan Frost, Principal Planner
Livermore Planning Division
1052 S. Livermore Avenue
Livermore, CA 94550

Phone: (925) 960-4450
FAX: (925) 960-4459
E-Mail: Airport-Rezoning@ci.livermore.ca.us

THE CITY OF

PLEASANTON©

November 25, 2008

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DEC 01 2008

PLANNING DIVISION

Susan Frost, Principal Planner
City of Livermore
Community Development Department
1052 S. Livermore Avenue
Livermore, CA 94550

Dear Ms. Frost:

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Livermore Municipal Airport Rezoning Project

Thank you for the opportunity to comment on the City of Livermore's Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Livermore Municipal Airport Rezoning Project (Rezoning Project). The following comments are based on the Notice of Preparation dated October 28, 2008. I kindly request that staff's comments be addressed in the EIR.

Consistency with the 1975 Livermore Municipal Airport Master Plan
The Notice of Preparation states that the Rezoning Project would be consistent with the 1975 Livermore Municipal Airport Master Plan.

The 1975 Master Plan only includes analysis to the year 1995. It is now 2008, and residential and commercial growth and development have occurred in the Tri-Valley area between 1995 and 2008 which does not appear to be addressed by the 1975 Master Plan, thus diminishing its relevance and applicability.

There are also elements of the current proposal which appear to be inconsistent with the 1975 Master Plan. For example, page two of the Notice of Preparation states that as to the proposed Rezoning Project:

> Future uses anticipated at the Airport could include a fixed-base operation facility (FBO), a new hanger facility on the south side of the Airport, and a new administration building...

Walter Gillfillan and Associates, an airport planning consulting firm, prepared a report in May 25, 2007 assessing the potential impacts of Livermore's Request for Proposal (RFP) for the design, construction, and management of a full-service Fixed Base Operator (FBO) and hanger facilities at the Livermore Airport. The Walter Gillfillan and Associates report provides that particular proposal could result in an increase in average daily jet operations from 6.1 to 50.6 in 2020, or from 2,196 to 18,216

operations per year. Assuming, therefore, that the Rezoning Project is the same or similar to the RFP described in the Gillfillan report, there appears to be a discrepancy between that Rezoning Project and the 1975 Livermore Municipal Airport Master Plan which, at page 81, states the following:

> The forecast mix of based aircraft for 1995 includes 65 multi-engine aircraft of which ten will be turbine powered. It is anticipated that turbine aircraft will generate 3400 to 6800 operations per year.

The Master Plan does not provide an analysis past 1995, and, consequently, does not assess more than 6,800 operations per year. As such, the information from the 1975 Master Plan appears to be outdated and in conflict with the Gillfillan report, a copy of which is attached for your information.

In addition, we have the understanding that Livermore has already entered into a lease with a fixed based operator for the facilities and uses described in the Rezoning Project. We were concerned that an environmental review for that lease had not been conducted and voiced that concern to Livermore. We were assured that appropriate environmental review would be conducted in the future. Would you confirm that this EIR is intended to cover the operations contemplated by the previously approved lease? Along those same lines, assuming that Livermore approves this Rezoning Project, what other projects to implement this Rezoning Project are contemplated by Livermore and is this EIR intended to cover such projects?

Potential Impacts

Impacts from jet travel could be significant in those portions of Pleasanton lying under the flight path and those portions near the airport. There are numerous existing residences, parks and an elementary school under/near the flight path. For this reason, the City is compelled to encourage Livermore to discourage jets and noisy planes from using the airport. Livermore staff has regularly received complaints from Pleasanton residents about existing airport operations, and any increase in air travel will inevitably lead to additional complaints, unless effective mitigations are implemented. Based on these concerns, I am requesting that the EIR address an increase in flights and jet flights (as anticipated by Livermore and as described in the attached Gillfillan report), as well as:

- Address how many flights will be over Pleasanton and how this volume of flights may impact Pleasanton;
- Show anticipated flight paths;
- Show the differing noise levels, including single event noise levels (SEL and L_{max}), generated from the differing types of planes anticipated to use the airport as a result of the Rezoning Project;
- Compare the proposed noise levels to Pleasanton's General Plan standards and the guidelines prepared by the US Environmental Protection Agency to protect public health and welfare with an adequate margin of safety (see the California Airport Land Use Planning Handbook, Chapter 7 for more information);
- Provide an analysis of potential noise impacts on learning, especially recent studies on the relationship between noise and children's reading ability and other cognitive impacts (see the California Airport Land Use Planning Handbook, Chapter 7 for more information);

- Provide an analysis which addresses the FAA's recommendation of a Leq 45 dB maximum noise level at schools, and interior noise levels at the existing Mohr Elementary school in Pleasanton;
- Provide an analysis of potential physiological and behavioral impacts on populations under and near the flight path;
- Assess the times flights are likely to occur over Pleasanton and how these times may impact Pleasanton residents, including sleep disturbance impacts;
- Assess the altitude of the flights over Pleasanton and how these altitudes may impact Pleasanton;
- Assess how an increase in flights may impact local and regional air quality;
- Assess increased traffic impacts from increased operations at the airport;
- Assess safety impacts in those portions of Pleasanton underlying the flight path;
- Assess safety impacts on the roadways where the additional fuel (for plane refueling) would be transported;
- If the Rezoning Project would allow for taller buildings, assess how the proposed height would impact the visual character of the Tri-Valley area; and
- Address the significant level of public concern, especially from Pleasanton residents, about the above-mentioned items.

Pleasanton appreciates the City of Livermore's cooperation with the recently approved cost-sharing and cooperation agreements regarding El Charro Road and Staples Ranch. These agreements include airplane noise mitigation measures for the proposed senior care community at Staples Ranch. Based on this cooperation, I am hopeful that the City of Livermore will continue to work with us to reduce all airport-related impacts in general. Thank you for your consideration. If you have any questions, I can be reached at (925) 931-5600.

Sincerely,

Brian Dolan
Community Development Director

Enclosure: Walter Gillfillan and Associates Report

LIVERMORE
CALIFORNIA

Frequently Asked Questions

Livermore Municipal Airport
Rezoning and General Plan Amendment Project and
Environmental Impact Report

These questions and answers are provided by the City of Livermore to address questions from the public which have arisen related to the City's Airport rezoning project, including what an Environmental Impact Report (EIR) is and the process that is being undertaken. Since we are at the beginning (or "scoping") stage of the rezoning effort and the required environmental review that must accompany the rezoning, many questions are yet to be answered. As stated in the Notice of Preparation published (May 15, 2009), the City as Lead Agency has hired LSA Associates, Inc. (LSA) to prepare an EIR for the Livermore Municipal Airport Rezoning and General Plan Amendment Project. The EIR will evaluate potentially significant environmental impacts of the project and will be available by early fall 2009 for public review.

The City of Livermore is dedicated to working with the various agencies and stakeholders to achieve understanding of the proposed project, to carefully consider all input received and ultimately to provide information to decision makers that may help them in their decision.

The EIR process is a collaborative public process designed to assist the lead agency (the City) in gaining insight and information from other agencies and stakeholders about the potential environmental impacts associated with the project (the rezoning and General Plan Amendment). This input can assist in determining areas of controversy and identifying issues to be identified as well as preferred mitigation measures.

The City will continue to engage interested agencies and stakeholders throughout the process.

Frequently Asked Questions (FAQ's)

1. Why is the City undertaking a rezoning of the Airport?

The current zoning of the Airport is the Education and Institutions (E) zoning district. The E zoning district provides broad development standards for a wide range of public facilities and uses, which would include the Airport. Given the unique nature of an airport, the Airport zoning district is proposed to clarify the nature and extent of development at the Airport. The proposed zoning will constrain development more than the existing 1975 Airport Master Plan and the current E zoning district in an effort to address community concerns about the Airport. The City Council authorized staff to develop a rezoning proposal and an EIR when it approved the contract with LSA, an environmental consulting firm, on August 4, 2008.

2. What will the rezoning of the Airport consist of?

The specific details of the proposed Airport rezoning have not been finalized. In general, a zoning district addresses allowed uses, development standards (such as setbacks and building heights) and any applicable special considerations, including uses that would be prohibited or permitted under certain circumstances.

3. Will the rezoning of the Airport bring more flight operations to the Airport?

The rezoning will not include changes to the current runway environment. While the EIR is not complete and thus the forecasts of flight operations and the potential impacts on flight operations of the rezoning are not yet available, the City does not anticipate at this time that the rezoning will affect the forecast of flight operations. All relevant environmental impacts of the rezoning will be included in the Draft EIR, which will be released for a 45-day public comment period later this year. Once comments on the Draft EIR have been received, a Response to Comments document will be prepared and circulated that includes responses to comments on the Draft EIR. The Response to Comments document, the Draft EIR and all comments received by the City will be considered by the Planning Commission and the City Council in public hearings prior to taking action on the proposed rezoning, the General Plan amendment, and the EIR.

4. What will be the impact of the Airport rezoning on the community?

All relevant environmental impacts of the Airport rezoning will be evaluated in the Draft EIR, which will be released for a 45-day public comment period by the fall of this year.

5. When will the draft text of the Airport zoning district be made available for public review and comment?

The exact text of the proposed Airport zoning district is being prepared concurrently with the Draft EIR for the rezoning. Both the text of the zoning district and the Draft EIR will be released by fall of this year.

6. Is this rezoning necessary as part of the development of the Fixed Base Operator (FBO) that Council approved in 2007?

No. The Fixed Base Operator (FBO) known as the Livermore Air Center LLC, received approval of a license and lease agreement in June of 2007. However, the Livermore Air Center LLC must still receive approval for its site plan, including approval of its own environmental review document. The Livermore Air Center LLC may make application at a time of its own choosing for their project under the current "Education and Institutions" zoning.

7. When is the Fixed Base Operator (FBO) development going to be built?

The Fixed Based Operator known as the Livermore Air Center LLC ("LAC") was granted a license and lease agreement by the City Council in June of 2007. LAC is at liberty to make a formal project approval application to the Community Development Department at a time of its own choosing. The City has not yet received an application from LAC.

8. Does approval of the Fixed Base Operator require environmental review?

Yes, development of the Fixed Base Operator (LAC) will require an independent environmental review of its project. This environmental review is separate from the EIR being prepared for the proposed Airport rezoning.

9. Why is the City considering rescinding the 1975 Airport Master Plan?

During the initial steps in preparing the Airport zoning district language and the preparation of the EIR , staff concluded that the 1975 Airport Master Plan is based on outdated data with impacts projected out only until the year 1995, and is, therefore, no longer relevant. Moreover, the creation of a more restrictive, new zoning would be inconsistent with the out-of-date 1975 Airport Master Plan, also arguing for rescission of the old Master Plan. The Council will consider this action when it reviews the proposed Airport rezoning later this year.

10. Is the rezoning replacing the 1975 Airport Master Plan?

The Airport rezoning is replacing the existing "Education and Institutions" zoning. The recommendation for the Council to rescind the 1975 Airport Master Plan will be heard concurrently.

11. Is an Airport Master Plan mandatory for controlling development at the Airport?

No. An Airport Master Plan is an optional policy document under both state and federal regulations and is not legally required. The proposed Airport zoning district will define allowed uses and development standards for the Airport.

12. What changes to the Airport will occur with the rescission of the 1975 Airport Master Plan and the approval of an Airport Rezoning?

In response to comments from the public during the last five years, staff will be recommending that in general, the allowed "build-out" development of the Airport will be more restrictive under the new zoning than that currently envisioned in the 1975 Airport Master Plan and the "Education and Institutions" zoning. The exact details of the Airport rezoning are still being drafted, and will be released for public comment concurrently with a Draft EIR in fall of this year.

13. Why is staff recommending the General Plan be amended?

A minor change is being proposed to the Livermore General Plan. Specifically, some text references to the existence of an Airport Master Plan and an Airport Master Plan Update are being deleted. No other changes to the General Plan are proposed.

14. With the new rezoning, are any changes proposed to the runway lengths at the Livermore Airport?

No changes to the runway lengths are proposed with the Airport rezoning.

15. Can the Airport rezoning restrict the length of the Airport runways?

The City cannot reduce the length of the current runways without approval of the Federal Aviation Administration. Further, there are no plans to lengthen either of the two runways in the future. The proposed rezoning will reflect the City's intent on this matter.

16. Can the proposed Airport zoning district restrict the number of flight operations, the number of jets based at the Livermore Airport, and preclude air taxi or air cargo service to the Livermore Airport?

No. Under both federal law, and under the contractual "Grant Assurances" required by the Federal Aviation Administration when the City received funds to build the Airport in the 1960's, the City is precluded from discriminating against various types, kinds and classes of aviation uses at the Airport. To prohibit these types of activities would violate federal law and the airport's federal grant assurances.

Although the City cannot legally prohibit air cargo service at the Airport, as a practical matter, the possibility of an air cargo service relocating to the Livermore Airport is extremely remote. There is slack capacity for this type of service at other international airports in the Bay Area that serve much more effectively as air cargo hubs.

17. When is the rezoning and Environmental Impact Report (EIR) process anticipated to be completed?

The Draft EIR is expected to be available for public comment in the fall. A public hearing on the Draft EIR will be held during the 45-day review period. Following preparation of the Response to Comments document, hearings before the Planning Commission and City Council on the proposed General Plan Amendment, Rezoning and EIR are expected to occur in late fall, or early 2010.

18. How is the Airport funding the rezoning and Environmental Impact Report (EIR)?

The Airport contracted with LSA Associates for $323,280 to prepare the EIR. Staff time has not been calculated. It is important to note that these costs are being paid out of the Airport Enterprise funds, not the City's General Funds. The Airport Enterprise has sufficient budgeted funds for the preparation of the rezoning and the EIR.

Comments and questions may be submitted to the City at:

Susan Frost, Principal Planner
Community Development Department
1052 S. Livermore Avenue
Livermore, CA 94550

Airport-Rezoning@ci.livermore.ca.us

APPENDIX D

AIR QUALITY, GLOBAL CLIMATE CHANGE, AND NOISE DATA

Source	Pollutant Emissions, lbs/day						
	CO	ROC	NO_X	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Existing Land Uses-Summer							
Stationary Sources	1.55	0.12	0.02	0.0	0.01	0.01	3
Mobile Sources	175.58	16.68	19.67	0.1	24.52	4.76	13,935
Total Existing Emissions	177.13	16.8	19.69	0.14	24.53	4.77	13,938
Existing Land Uses-Winter							
Stationary Sources	0	0	0	0.0	0	0	0
Mobile Sources	192.72	16.73	28.77	0.1	24.52	4.76	12,114
Total Existing Emissions	192.72	16.73	28.77	0.12	24.52	4.76	12,114
Project Land Uses-Summer							
Stationary Sources	1.55	0.12	0.02	0.0	0.01	0.01	3
Mobile Sources	94.86	9.06	7.68	0.3	47.28	8.94	26,812
Total Project Emissions	96.41	9.18	7.7	0.27	47.29	8.95	26,814
Project Land Uses-Winter							
Stationary Sources	0	0	0	0.0	0	0	0
Mobile Sources	98.62	9.29	11.41	0.2	47.28	8.94	23,068
Total Project Emissions	98.62	9.29	11.41	0.23	47.28	8.94	23,068

Source	Pollutant Emissions, lbs/day						
	ROC	NO_X	PM_{10}	$PM_{2.5}$	CO	SO_2	CO_2
Existing Emissions for 2009							
Stationary Sources	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
Mobile Sources	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
Aircraft	24	17	0.54				6,900
GSE	1.5	4.3	0.097				
APUs	0.103	1.03	0.15				
Total Existing Emissions	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
BAAQMD Thresholds	**80**	**80**	**80**	**55**	**550**	**150**	**No Threshold**
Significant?	**#NAME?**	**########**	**########**	#####	**#NAME?**	#####	
Project Emissions for 2030							
Stationary Sources	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
Mobile Sources	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
Aircraft	24	17	0.47				6,500
GSE	0.23	0.53	0.04				
APUs	0.11	1.08	0.16				
Total Existing Emissions	#NAME?	#NAME?	#NAME?	#####	#NAME?	#####	#NAME?
BAAQMD Thresholds	**80**	**80**	**80**	**55**	**550**	**150**	**No Threshold**
Significant?	**#NAME?**	**########**	**########**	#####	**#NAME?**	#####	

Airport operates 365 days/year

EDMS 5.1 Emissions Inventory Report
Emissions Inventory Summary
Study: Livermore Airport
Scenario - Airport: Baseline - Livermore Muni
Units: Metric Tons per Year
Generated: 06/16/09 14:06:28

# Year: 2009	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Aircraft	12.377	3.916	2.845	0.47	0.089	0.089	1148.41
GSE	7.097	0.244	0.707	0.02	0.016	0.015	N/A
APUs	0.329	0.017	0.171	0.029	0.025	0.025	N/A
Grand Total	19.804	4.177	3.724	0.519	0.13	0.13	1148.41
# Year: 2030							
Aircraft	11.896	3.91	2.765	0.439	0.078	0.078	1072.151
GSE	1.163	0.038	0.087	0.012	0.006	0.006	N/A
APUs	0.295	0.018	0.178	0.031	0.027	0.027	N/A
Grand Total	13.353	3.965	3.03	0.482	0.111	0.11	1072.151

6/23/2009 04:18:31 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\CLV0802\Existing 09.urb924

Project Name: Livermore Airport - Existing

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	16.68	19.67	175.58	0.14	24.52	4.76	13,935.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	16.80	19.69	177.13	0.14	24.53	4.77	13,937.86

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General Aviation Airport	16.68	19.67	175.58	0.14	24.52	4.76	13,935.05
TOTALS (lbs/day, unmitigated)	16.68	19.67	175.58	0.14	24.52	4.76	13,935.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General Aviation Airport		6.04	acres	318.00	1,920.72	14,199.88
					1,920.72	14,199.88

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.4	1.7	97.9	0.4
Light Truck < 3750 lbs	12.4	2.4	95.2	2.4
Light Truck 3751-5750 lbs	19.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	6.3	0.0	98.4	1.6
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	72.4	27.6	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General Aviation Airport				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\CLV0802\Existing 09.urb924

Project Name: Livermore Airport - Existing

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	16.73	28.77	192.72	0.12	24.52	4.76	12,114.33

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	16.73	28.77	192.72	0.12	24.52	4.76	12,114.33

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6/23/2009 04:18:42 PM

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General Aviation Airport	16.73	28.77	192.72	0.12	24.52	4.76	12,114.33
TOTALS (lbs/day, unmitigated)	16.73	28.77	192.72	0.12	24.52	4.76	12,114.33

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General Aviation Airport		6.04	acres	318.00	1,920.72	14,199.88
					1,920.72	14,199.88

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.4	1.7	97.9	0.4
Light Truck < 3750 lbs	12.4	2.4	95.2	2.4
Light Truck 3751-5750 lbs	19.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	6.3	0.0	98.4	1.6
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	72.4	27.6	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General Aviation Airport				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\CLV0802\Future 30.urb924

Project Name: Livermore Airport - Existing

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	9.06	7.68	94.86	0.27	47.28	8.94	26,811.61

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	9.18	7.70	96.41	0.27	47.29	8.95	26,814.42

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General Aviation Airport	9.06	7.68	94.86	0.27	47.28	8.94	26,811.61
TOTALS (lbs/day, unmitigated)	9.06	7.68	94.86	0.27	47.28	8.94	26,811.61

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General Aviation Airport		11.73	acres	318.00	3,730.14	27,576.92
					3,730.14	27,576.92

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7	0.0	100.0	0.0
Light Truck < 3750 lbs	12.1	0.0	100.0	0.0
Light Truck 3751-5750 lbs	19.8	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	23.1	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	34.5	65.5	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General Aviation Airport				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\CLV0802\Future 30.urb924

Project Name: Livermore Airport - Existing

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	9.29	11.41	98.62	0.23	47.28	8.94	23,067.99

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	9.29	11.41	98.62	0.23	47.28	8.94	23,067.99

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings							
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General Aviation Airport	9.29	11.41	98.62	0.23	47.28	8.94	23,067.99
TOTALS (lbs/day, unmitigated)	9.29	11.41	98.62	0.23	47.28	8.94	23,067.99

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General Aviation Airport		11.73	acres	318.00	3,730.14	27,576.92
					3,730.14	27,576.92

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7	0.0	100.0	0.0
Light Truck < 3750 lbs	12.1	0.0	100.0	0.0
Light Truck 3751-5750 lbs	19.8	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	23.1	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	34.5	65.5	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

General Aviation Airport	2.0	1.0	97.0

2007-2008
AIRCRAFT NOISE SURVEY
LIVERMORE MUNICIPAL AIRPORT
October-November 2007 and April 2008

BBA Project No. 07-236

Prepared For

The Cities of Livermore and Pleasanton
c/o Mr. Leander Hauri
Livermore Municipal Airport
636 Terminal Way
Livermore, CA 94551-4899

September 3, 2008

Prepared By

Brown-Buntin Associates, Inc.
Citrus Heights, California

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ASSOCIATES, INC.

TABLE OF CONTENTS

INTRODUCTION

Brown-Buntin Associates, Inc. (BBA) has performed an aircraft noise survey concerning aircraft operations at the Livermore Municipal Airport (LVK). This survey is intended to provide information to the City of Livermore to describe the noise and operational effects of aircraft operations at the airport upon residents of the cities of Livermore and Pleasanton.

In September 2001, BBA prepared a report on aircraft noise levels and altitudes based upon noise measurements and aircraft observations conducted for the City of Pleasanton in 1999 and 2000. This study was conducted with the full cooperation of the City of Livermore and the FAA. The study included long-term noise measurements at four sites in Pleasanton and Livermore; those data are summarized on pages 17 and 18 of this report.

The current survey was divided into two phases to describe aircraft noise during winter and spring conditions. This approach was selected because the use of the airport runways in the winter may differ from the usual warm weather conditions where aircraft generally takeoff and land to the west. This report summarizes the purposes, methods and results of both phases of the survey.

PURPOSES

The purposes of the aircraft noise measurement program were to:

- Describe single event aircraft noise levels in the residential areas near the airport.
- Measure representative Community Noise Equivalent Level (CNEL) values in the residential areas near the airport under known conditions.
- Describe the number and time of day of aircraft noise events.

Numerous studies conducted over the past forty-plus years have demonstrated a link between cumulative airport noise exposure as described by the CNEL metric and compatible land use. All federal agencies, as well as the State of California, have adopted land use compatibility guidelines based on this or a similar, nearly equivalent, metric. These guidelines have established the threshold for the compatibility of noise sensitive land uses to be a CNEL value of 65 dB, which is adopted as part of the California Airport Noise Regulation (California Code of Regulations, Title 21).

In California, the environmental review process required by the California Environmental Quality Act (CEQA) is one tool which can be used by a local jurisdiction to limit the noise exposures of proposed changes in land use. In addition, the California Government Code requires that each city and county adopt a Noise Element of the General Plan, which is intended to provide objective standards for acceptable noise exposure for proposed land uses. The Noise Element is a powerful tool in ensuring compatible land use in the vicinity of an airport, and applies to all new development proposals.

The City of Pleasanton adopted a Noise Element as part of its General Plan adopted August 6, 1996. Where the noise source affecting a proposed residential development is an airport, the

Noise Element states that residential construction should not be allowed in areas where the DNL (L_{dn}) exceeds 65 dB. In addition, the Noise Element states that residential developments should be "strongly discouraged" where the exterior DNL exceeds 55 dB.

If residential uses are allowed where the exterior DNL exceeds 55 dB, the Noise Element states that interior noise levels should be controlled so that maximum noise levels do not exceed 50 dBA in bedrooms or 55 dBA in other rooms. (Note that the single-family interior noise standards of the Noise Element are expressed as maximum noise levels for single events, while the exterior noise level is cited in terms of the DNL, which is a cumulative metric.)

The Pleasanton Noise Element also applies an interior aircraft noise level standard of 45 dB L_{dn} to all multi-family dwellings; this standard is consistent with the State Airport Noise Regulation.

The Pleasanton Noise Element includes a general provision which indicates that a noise environment of 60 dB DNL or less is "Normally Acceptable" for residential and other noise sensitive land uses, including schools. A noise environment of 60 dB to 75 dB DNL is considered to be "Conditionally Acceptable" for such uses, which means that the "specified land use may be permitted only after detailed analysis of the noise reduction requirements, and needed noise insulations features included in the design".

In the vicinity of the Livermore Airport, the City of Pleasanton has implemented specific provisions relating to airport noise for projects located within the Stoneridge Drive Specific Plan, which was adopted in October 1989. The Specific Plan required that a noise monitoring study be performed prior to development of new homes east of the then-proposed school site (near Mohr School). The purpose of that study was to plot the location of the 55 dB DNL contour for Livermore Airport. The Specific Plan further required that future residential uses within the 55 dB DNL would be required to be designed to meet single event interior noise levels of 50 dBA in bedrooms and 55 dBA in other rooms. These noise standards were derived from the Noise Element of the General Plan.

The City of Livermore has also adopted a Noise Element. Chapter 4 of the Livermore Noise Element contains Noise Level Guidelines for different land uses. A noise exposure up to 60 dB DNL is considered "normally acceptable" for residential construction. A noise exposure up to 70 dB L_{dn} is considered to be "conditionally acceptable" for residential construction, which requires that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made, and needed noise insulation features included in the design. The Noise Element does not differentiate between airports and other noise sources.

To control land use in the vicinity of the Livermore Municipal Airport, the City of Livermore developed, and currently implements, the Airport Protection Area (APA) described in the discussion of the Airport Land Use Commission.

METHODS

The methods used for the noise survey included single event and cumulative noise measurements at a total of twelve locations in the vicinity of the airport. The noise measurement equipment consisted of Larson Davis Model 820 precision integrating sound level meters fitted with Bruel & Kjaer and Larson Davis microphones. This equipment meets all of the standards of the American National Standards Institute (ANSI) for Type 1 sound level measurement systems. The measurement systems were calibrated before use with a Bruel & Kjaer Type 4230 acoustical calibrator recently certified by an accredited laboratory to be consistent with acoustical reference values maintained by the National Bureau of Standards.

All noise measurements were conducted in terms of A-weighted sound pressure levels, in decibels[1] (dB). Each sound level meter continuously samples noise levels at a rate of 32 samples per second. These data are summarized statistically in the system on an hourly basis, and individual noise events exceeding preset thresholds are stored in system memory. Event threshold values were established by BBA staff based upon the need to discriminate aircraft events from background noise levels while ensuring that the maximum number of aircraft noise events could be captured. These units are capable of operating continuously for a measurement period of up to two weeks without attention.

Statistical data presented on an hourly basis include the minimum, maximum and average noise levels, as well as other percentile values. Noise events are stored in memory with the time of day, the Sound Exposure Level (SEL), the maximum level, event duration, the entire event time history, and other parameters. These data are recovered using Larson Davis software that allows further data processing. Specifically, the software allows event discrimination based upon the maximum noise level, the event duration, the difference between A-weighted and linear peak levels, and the relative symmetry of the event time history. The software then provides a listing of noise events which are presumed to be created by aircraft operations.

The long-term noise monitoring was performed from October 29 to November 7, 2007, and April 15 to April 23, 2008. The noise monitoring units for long-term measurements in each phase were placed in four locations in the communities adjacent to the airport, and in one location near the west end of Runway 25R. The sites were selected on the basis of proximity to the airport and the willingness of individuals to allow placement of the units on their property. For the second phase, three of the sites were relocated by up to about 200 feet from the sites used in Phase 1 of noise measurements, since the previous homeowners were not available. The new Phase 2 sites were numbered sites 9, 10 and 11, and the locations are near to Sites 3, 1 and 2 in the Phase 1 measurement period, respectively.

In addition, BBA staff operated a sound level meter at or near all four of the long-term measurement locations for about 4 hours each on October 30-31, 2007 and April 22-23, 2008, to obtain additional data describing aircraft noise levels and the locations of aircraft overflights. Site 12 was added to sites 6, 7 and 8 that were employed for the winter measurement period.

[1] Refer to Appendix A for definitions of acoustical terms used in this report.

Weather conditions during Phase 1 included mild days (60 to 70 degrees Fahrenheit) with occasional fog. Weather conditions during Phase 2 included mild, clear days (60 to 70 degrees Fahrenheit).

The noise monitoring units were programmed on site to ensure that aircraft noise events would be captured in system memory to the maximum practical extent, without interference from extraneous noise sources, such as traffic. The noise monitoring sites used for both monitoring periods are shown by Figures 1, 2 and 3, and are described below.

Site 1: 1386 Arlington Road, Livermore. This home is located between the approach flight paths to Runways 25L and 25R, about 0.7 nautical miles from the east end of Runway 25R. Aircraft approaching Runways 25L and 25R pass nearly overhead. The long-term monitoring unit was placed in the back yard. The event threshold was set to 65 dBA.

Site 2: 1322 Le Havre Circle, Livermore. This home is located between the approach flight paths to Runways 25L and 25R, about 1.2 nautical miles from the east end of Runway 25R. Many aircraft approaching Runways 25L and 25R pass nearly overhead, though some arrivals turn to runway heading between this site and the airport. The long-term monitoring unit was placed in the back yard. The event threshold was set to 60 dBA.

Site 3: 3318 Vermont Street, Pleasanton. This home is located about 1.25 nautical miles from the start of takeoff roll on Runway 7L. Aircraft departing on Runways 25L and 25R may pass over this site, and aircraft turning to either the north or south may be audible. The approach flight paths to Runway 7L may be directly overhead. The long-term monitoring unit was placed in the back yard. The event threshold was set to 65 dBA.

Site 4: 2849 Chocolate Street, Pleasanton. This home is located between the approach flight paths to Runways 7L and 7R, about 1.2 nautical miles from the west end of Runway 7L. Aircraft approaching Runways 7L and 7R may pass nearly overhead. The long-term monitoring unit was placed in the front yard. The event threshold was set to 60 dBA.

Site 5: Livermore Municipal Airport. The long-term noise monitoring unit was placed at the north edge of the taxiway about 1200 feet east of the west end of Runway 7L/25R. Aircraft departing on Runway 25R created noise events at this location. It was intended that the records of noise events would be used to count departures and to match noise events at Sites 9 and 4 to departures on Runway 25R. The event threshold was set to 65 dBA.

Site 6: York Street and Arlington Road, Livermore. This short-term measurement site is near Sites 2 and 10, and is located between the approach flight paths to Runways 25L and 25R, about 0.7 nautical miles from the east end of Runway 25R. Aircraft approaching Runway 25L pass nearly overhead. The sound level meter was placed along the sidewalk. The event threshold was established manually.

Site 7: East End of Staples Ranch Drive. This short-term measurement site is about 2 nautical miles west of the start of takeoff roll on Runways 25R, near Sites 3 and 9. Aircraft departing on Runways 25L and 25R may pass over this site, and aircraft turning to either the north or south may be audible. The event threshold was established manually.

Site 8: Al Coffodio Park, Livermore. This short-term measurement site is located near Sites 1 and 11, and lies between the approach flight paths to Runways 25L and 25R, about 1.2 nautical miles from the east end of Runway 25R. Many aircraft approaching Runways 25L and 25R pass nearly overhead, though some arrivals turn to runway heading between this site and the airport. The sound level meter was placed at the west sidewalk of the park. The event threshold was established manually.

Site 9: 3310 Vermont Street, Pleasanton. This home is located about 1.25 nautical miles from the start of takeoff roll on Runway 7L. Aircraft departing on Runways 25L and 25R may pass over this site, and aircraft turning to either the north or south may be audible. The approach flight paths to Runway 7L may be directly overhead. The long-term monitoring unit was placed in the back yard. The event threshold was set to 60 dBA.

Site 10: 1397 Arlington Road, Livermore. This home is located between the approach flight paths to Runways 25L and 25R, about 0.7 nautical miles from the east end of Runway 25R. Aircraft approaching Runways 25L and 25R pass directly overhead. The long-term monitoring unit was placed in the back yard. The event threshold was set to 60 dBA.

Site 11: 1380 Le Havre Circle, Livermore. This home is located between the approach flight paths to Runways 25L and 25R, about 1.2 nautical miles from the east end of Runway 25R. Many aircraft approaching Runways 25L and 25R pass nearly overhead, though some arrivals turn to runway heading between this site and the airport. The long-term monitoring unit was placed in the back yard. The event threshold was set to 60 dBA.

Site 12: East End of Stoneridge Drive, Pleasanton. This short-term measurement site is about 2 nautical miles west of the start of takeoff roll on Runways 25R, near Site 4. Aircraft departing on Runways 25L and 25R may pass over this site, and aircraft turning to either the north or south may be audible. The event threshold was established manually.

Cumulative aircraft noise levels and identification of presumed aircraft noise events were calculated using the Larson Davis Airport Noise Monitoring software package. This software allows the user to establish weighting factors for the maximum noise level, event duration, event time history, and frequency content. BBA's experience using this software at several other airports has provided some basic assumptions which reasonably separate aircraft and community noise events.

BBA has prepared software to correlate noise events at Site 5 (at the airport) with noise events at Sites 3 and 4. The relationships between the times of noise event onset at each site may be

established from aircraft observations at Site 5 and noise events at Sites 3, 4 and 9. However, during the winter measurement session, the sound level meter at Site 5 malfunctioned, and no matching data were available for Phase 1. The BBA noise event matching software was used in Phase 2 as a check on the reasonableness of the aircraft noise event discrimination of the Larson Davis software at those two sites, and was also used to estimate the percentage of aircraft departure that turned to the north or south before reaching the residential areas west of the Airport.

This and other aircraft noise analyses prepared for the City of Pleasanton in 1999 using the BBA event matching software indicated that the Larson Davis software aircraft noise determinations probably included some non-aircraft noise events. For this survey, BBA assumed that the numbers of aircraft noise events presumed by the Larson Davis software would provide a worst-case measure of aircraft noise levels. These numbers are described below as the "presumed" numbers of operations, and the associated noise levels are described as "presumed" aircraft noise levels.

The numbers of presumed aircraft noise events per day were compared to the reported daily operations at Livermore Municipal Airport, and to historical airport operations data, to assess the relative traffic volume during the sample period.

Figure 1
Aircraft Noise Measurement Sites
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Figure 2
Aircraft Noise Measurement Sites
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Figure 3
Aircraft Noise Measurement Sites
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

RESULTS

Cumulative Noise Levels

The measured daily aircraft and overall CNEL values at each long-term monitoring site are listed in Tables I and II. The "presumed" aircraft noise level values in Table I were calculated by the Larson Davis software by separating likely aircraft noise events from other noise. The values in Table II were calculated from the total exposure (all noise events plus all background noise) at each site.

TABLE I
PRESUMED AIRCRAFT NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Date	Aircraft CNEL, dB						
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Site 9**	**Site 10**	**Site 11**
Tuesday October 30	53.7	55.5	48.4	48.8	--	--	--
Wednesday October 31	53.4	51.2	44.9	46.3	--	--	--
Thursday November 1	53.1	51.2	49.3	49.1	--	--	--
Friday November 2	53.5	50.3	51.5	52.8	--	--	--
Saturday November 3	53.9	58.0	49.5	49.9	--	--	--
Sunday November 4	54.2	52.0	47.0	47.9	--	--	--
Monday November 5	54.9	52.6	49.7	55.0	--	--	--
Tuesday November 6	53.7	47.7	51.9	52.8	--	--	--
Wednesday April 16	--	--	--	49.8	51.9	61.1	54.8
Thursday April 17	--	--	--	51.7	51.6	53.6	54.5
Friday April 18	--	--	--	49.0	57.8	58.4	54.8
Saturday April 19	--	--	--	47.3	48.4	62.4	54.7
Sunday April 20	--	--	--	51.8	53.5	54.5	57.4
Monday April 21	--	--	--	54.2	50.8	57.1	56.6
Tuesday April 22	--	--	--	49.8	50.2	53.8	52.7
Energy Average:	**53.8**	**53.4**	**49.5**	**51.1**	**53.1**	**58.5**	**55.3**

TABLE II
OVERALL NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Date	Total CNEL, dB						
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Site 9**	**Site 10**	**Site 11**
Tuesday October 30	59.4	59.1	53.1	53.4	--	--	--
Wednesday October 31	58.2	57.8	53.2	51.8	--	--	--
Thursday November 1	59.1	57.6	56.4	53.3	--	--	--
Friday November 2	62.8	61.7	60.6	57.4	--	--	--
Saturday November 3	61.5	62.2	61.3	57.0	--	--	--
Sunday November 4	61.2	60.4	58.1	55.1	--	--	--
Monday November 5	62.9	61.9	58.1	58.3	--	--	--
Tuesday November 6	60.1	57.4	58.0	55.4	--	--	--
Wednesday April 16	--	--	--	57.8	59.9	64.0	60.0
Thursday April 17	--	--	--	58.6	59.5	62.2	60.5
Friday April 18	--	--	--	58.0	60.4	62.1	58.7
Saturday April 19	--	--	--	54.8	54.2	65.3	58.7
Sunday April 20	--	--	--	55.9	56.5	58.5	59.9
Monday April 21	--	--	--	57.8	54.0	60.1	58.6
Tuesday April 22	--	--	--	54.8	54.4	57.1	56.1
Energy Average:	**60.9**	**60.2**	**58.2**	**56.4**	**57.8**	**62.1**	**59.1**

The presumed daily aircraft-caused CNEL values measured at the long-term sites were less than 65 dB CNEL. The overall daily CNEL values presented in Table II are higher than the aircraft-only CNEL values shown in Table I, and the overall level exceeded 65 dB CNEL on only one occasion. This means that the measured aircraft noise levels, as well as the overall noise levels, were well within the annual average standard of 65 dB CNEL that is applied by the California Airport Noise Regulation.

Hourly noise level statistical data for each of the long-term noise measurement sites are graphically presented in Appendix B. These data represent the total noise exposure, and include the average (L_{eq}) and maximum hourly noise levels, as well as the levels exceeded 50% (L_{50}) and 90% (L_{90}) of the time. The L_{50} value represents the median noise level, and the L_{90} value is representative of the background noise level (See Appendix A).

Single Event Noise Levels

Single event noise measurements were conducted in terms of the instantaneous maximum noise level (Lmax) and the Sound Exposure Level (SEL), which represents the sum of all of the noise energy that occurred during the noise event. There are no state or federal standards for acceptable Lmax or SEL values. In general, there is a potential for speech interference when maximum noise levels exceed 60 dB, and there is a potential for awakenings when outdoor SEL values reach about 80 dB.

The measurement results and the numbers of observed events are summarized in Table III. (See Figures 1 and 2 for the site locations.) These data show the relative noise levels of the different categories of aircraft types observed in the field. Many flights during the measurement periods consisted of touch-and-go operations by small single-engine aircraft. These aircraft operations are typically very quiet, especially for arrivals. During operations from east to west, touch-and-go aircraft typically do not fly over residential areas in Pleasanton, and turn to runway heading between Sites 1 and 2. As a result, these operations usually do not produce noise levels exceeding the fixed event thresholds at Sites 2, 3, 4, 9 or 11.

The single event noise measurement and observation information collected on the field data sheets is presented as Appendix C.

TABLE III
MEAN MEASURED SINGLE EVENT NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Aircraft Type	Site 6			Site 7			Site 8			Site 12*		
	SEL, dB	Lmax, dB	No. of Events	SEL, dB	Lmax, dB	No. of Events	SEL, dB	Lmax, dB	No. of Events	SEL, dB	Lmax, dB	No. of Events
Single Prop	79.2	66.8	64	75.3	63.5	21	78.4	61.2	27	77.6	68.0	3
Single Turboprop	--	--	0	--	--	0	87.7	79.8	2	--	--	0
Twin Prop	84.9	77.4	10	84.4	69.6	4	78.1	67.2	2	77.4	70.1	1
Twin Turboprop	91.5	85.7	1	77.2	68.7	2	83.5	75.0	2	74.1	63.2	1
Jet	86.4	78.8	2	88.9	73.2	5	83.5	75.4	2	87.6	78.3	2
Helicopter	--	--	0	76.8	67.0	1	--	--	0	--	--	0

Note: Not all observed events produced noise levels exceeding the event thresholds.
* - Includes two events logged at Site 4 in October 2007

To the extent that they were observed (at Sites 7 and 12), jet aircraft departures occurring near Pleasanton produced noticeably higher noise levels than other aircraft types. Although jet aircraft comprise a relatively small percentage of overall operations at LVK, their contribution to the total noise exposure as described by CNEL is relatively large.

Aircraft Operations

The numbers of daily operations during the measurement periods were obtained from the FAA Tower, and are listed in Table IV. Note that operations include both takeoffs and landings. The total numbers of takeoffs or landings are provided in this table to allow comparison to the numbers of presumed aircraft noise events per day in Table V. On a typical day, a given noise monitoring site would be exposed to either takeoffs or landings, not both.

TABLE IV
DAILY AIRCRAFT OPERATIONS REPORTED BY THE FAA TOWER
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Date	Airport Operations	Takeoffs or Landings
Tuesday October 30	535	268
Wednesday October 31	395	198
Thursday Nov. 1	428	214
Friday Nov. 2	639	320
Saturday Nov. 3	634	317
Sunday Nov. 4	522	261
Monday Nov. 5	565	283
Tuesday Nov. 6	511	256
Wednesday April 16	502	251
Thursday April 17	519	260
Friday April 18	469	235
Saturday April 19	207	104
Sunday April 20	497	249
Monday April 21	425	213
Tuesday April 22	349	175
Average:	**480**	**240**

The daily numbers of presumed aircraft noise events at each of the long-term noise measurement sites are presented in Table V. These values may be compared to the total numbers of takeoffs or landings presented in Table IV. On a typical day, a given noise monitoring site would be exposed to either takeoffs or landings, not both.

TABLE V
DAILY NUMBERS OF PRESUMED AIRCRAFT NOISE EVENTS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Date	Presumed Aircraft Noise Events							
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Site 5**	**Site 9**	**Site 10**	**Site 11**
Tuesday October 30	80	108	48	44	No data	--	--	--
Wednesday October 31	75	50	43	47	No data	--	--	--
Thursday Nov. 1	88	73	58	50	No data	--	--	--
Friday Nov. 2	137	104	86	78	No data	--	--	--
Saturday Nov. 3	130	98	118	78	No data	--	--	--
Sunday Nov. 4	106	100	55	51	No data	--	--	--
Monday Nov. 5	125	102	65	74	No data	--	--	--
Tuesday Nov. 6	83	43	74	61	No data	--	--	--
Wednesday April 16	--	--	--	92	260	140	182	163
Thursday April 17	--	--	--	127	236	124	163	149
Friday April 18	--	--	--	113	241	173	175	153
Saturday April 19	--	--	--	62	249	48	303	112
Sunday April 20	--	--	--	76	254	97	206	120
Monday April 21	--	--	--	82	215	120	179	127
Tuesday April 22	--	--	--	44	202	60	122	69
Average:	**103**	**85**	**68**	**72**	**167**	**109**	**190**	**128**

Not every aircraft passing over a site will trigger a noise event at each measurement site. In most cases, the reason is that the aircraft noise level is very low, so that it cannot be isolated from background noise sources, such as traffic. As a result, fewer aircraft noise events were recorded at any site than the total number of takeoffs or landings that may have passed over the sites.

The numbers of daily operations reported by the FAA during the survey period were also compared to annual average daily operations at the airport. According to the FAA, the average number of daily operations at the Livermore Municipal Airport in the 12-month period from May 1, 2007 to April 30, 2008 was 484. Thus the average number of daily aircraft operations during the two survey periods was approximately equal to the average day in the prior 12 months.

Runway Use

During the measurement periods, Runways 25L and 25R were used most of the time. This means that most arrivals came to the airport from the east, and most departures were to the west. Table VI lists the hours of runway use as recorded by the FAA Tower at LVK. Note that the FAA Tower is open for 14 hours of the day, from 0700 (7 a.m.) to 2100 (9 p.m.) daily.

TABLE VI
PERIODS OF RUNWAY USE REPORTED BY FAA TOWER
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Date	Runways 25L/25R*		Total Time	Runways 7L/7R**		Total Time
	From	To		From	To	
Monday October 29	0700	2100	14 hrs	NOT USED		
Tuesday October 30	0700	2100	14 hrs	NOT USED		
Wednesday October 31	0700	2100	14 hrs	NOT USED		
Thursday November 1	0700	2100	14 hrs	NOT USED		
Friday November 2	0700	1233	5 hrs, 33 mins	1233	1708	4 hrs, 35 mins
	1708	2100	3 hrs, 52 mins			
Saturday November 3	0700	1220	5 hrs, 20 mins	1220	1755	5 hrs, 35 mins
	1755	2100	3 hrs, 5 mins			
Sunday November 4	0700	1053	3 hrs, 53 mins	1053	1653	6 hrs
	1653	2100	4 hrs, 7 mins			
Monday November 5	0700	1316	6 hrs, 16 mins	1316	1539	1 hr, 33 mins
	1539	2100	5 hrs, 11 mins			
Tuesday November 6	0700	2100	14 hrs	NOT USED		
Wednesday November 7	0700	2100	14 hrs	NOT USED		
Wednesday April 16	0700	2100	14 hrs	NOT USED		
Thursday April 17	0700	2100	14 hrs	NOT USED		
Friday April 18	0700	2100	14 hrs	NOT USED		
Saturday April 19	0700	2100	14 hrs	NOT USED		
Sunday April 20	0700	2100	14 hrs	NOT USED		
Monday April 21	0700	2100	14 hrs	NOT USED		
Tuesday April 22	0700	2100	14 hrs	NOT USED		

*- operations from east to west
**- operations from west to east

COMPARISON TO PREVIOUS NOISE STUDIES

In September 2001, BBA prepared an aircraft noise and altitude study based upon noise measurements and aircraft observations conducted for the City of Pleasanton in 1999 and 2000. This study was conducted with the full cooperation of the City of Livermore and the FAA. The study included long-term noise measurements at four sites in Pleasanton and Livermore, as shown by Figure 4, based upon Figure IV-1 of the BBA study. Note that the 1999-2000 measurement Site 4 (1380 LeHavre Circle, Livermore) is identical to Site 11 that was used in April 2008.

Figure 4 also shows the predicted locations of the CNEL contours due to Livermore Municipal Airport operations in 2011, as described by the Airport Protection Area (APA) that was adopted by the Alameda County Airport Land Use Commission in January 1993.

Table VII lists the aircraft-caused CNEL values measured at Sites 1-4 in 1999-2000.

TABLE VII
PRESUMED AIRCRAFT NOISE LEVELS
City of Pleasanton Airport Aircraft Noise Survey
July 1999 and January 2000

Date	Aircraft CNEL, dB			
	Site 1	Site 2	Site 3	Site 4
July 13, 1999	36.2	52.0	48.3	54.1
July 14, 1999	47.5	53.5	52.9	55.2
July 15, 1999	44.1	53.8	50.8	55.7
July 16, 1999	41.4	51.4	50.9	56.3
July 17, 1999	44.3	49.0	49.5	51.1
July 18, 1999	43.3	50.3	47.8	54.6
July 19, 1999	42.8	49.9	50.6	53.0
January 13, 2000	41.2	46.9	49.5	54.5
January 14, 2000	42.8	49.6	50.4	49.7
January 15, 2000	37.4	46.6	44.7	51.4
January 16, 2000	52.3	44.4	40.5	47.7
January 17, 2000	0	39.1	39.5	44.7
January 18, 2000	32.2	52.8	50.7	52.2
January 19, 2000	33.1	46.4	46.9	46.7
January 20, 2000	37.3	48.2	48.7	51.9
January 21, 2000	42.5	49.2	50.5	55.2
January 22, 2000	40.8	44.4	44.3	50.0

TABLE VII PRESUMED AIRCRAFT NOISE LEVELS City of Pleasanton Airport Aircraft Noise Survey July 1999 and January 2000				
Date	**Aircraft CNEL, dB**			
	Site 1	**Site 2**	**Site 3**	**Site 4**
January 23, 2000	34.4	43.9	43.5	44.6
January 24, 2000	23.3	46.5	47.1	48.3
January 25, 2000	36.5	49.3	49.8	51.3
January 26, 2000	37.4	52.0	51.2	51.3
Average:	43.1	49.8	49.1	52.5

The noise measurement data collected at Site 4 in 1999-2000 can be compared directly to the data collected at Site 11 in the 2007-2008 noise survey. Table VIII lists the average measured aircraft-caused daily CNEL values at that location in each noise measurement period. The average measured aircraft CNEL in April 2008 was 2.8 dB higher than the average value in 1999-2000, but was only 0.7 dB higher than the average value measured in July 1999. The variation in measured levels may be within the normal range that is influenced by factors such as flight school activity and weather.

TABLE VIII MEASURED AIRCRAFT NOISE LEVELS 1380 Le Havre Circle, Livermore				
Period	July 1999	January 2000	April 2008	Average
CNEL, dB	54.6	51.0	55.3	53.4

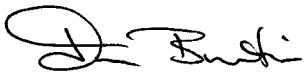
The data presented above and in Table I indicate that the measured aircraft-caused CNEL values in Livermore and Pleasanton in 2007-2008 remain below those projected by the APA for the Year 2011 as shown by Figure 4. Specifically, the current measurement sites 1, 2, 10 and 11 in Livermore are located between the Year 2011 60 dB and 65 dB CNEL contours, which means that one would expect to measure aircraft CNEL values at these sites that are higher than 60 dB. However, the average measured aircraft CNEL values at each of these sites were lower than 60 dB.

In Pleasanton, current measurement sites 3, 4 and 9 are located slightly outside the predicted location of the Year 2011 60 dB CNEL contour shown by Figure 4, which means that one would expect to measure aircraft CNEL values there that are slightly less than 60 dB. In contrast, the average measured aircraft CNEL values at each of these sites were less than 55 dB.

CONCLUSIONS

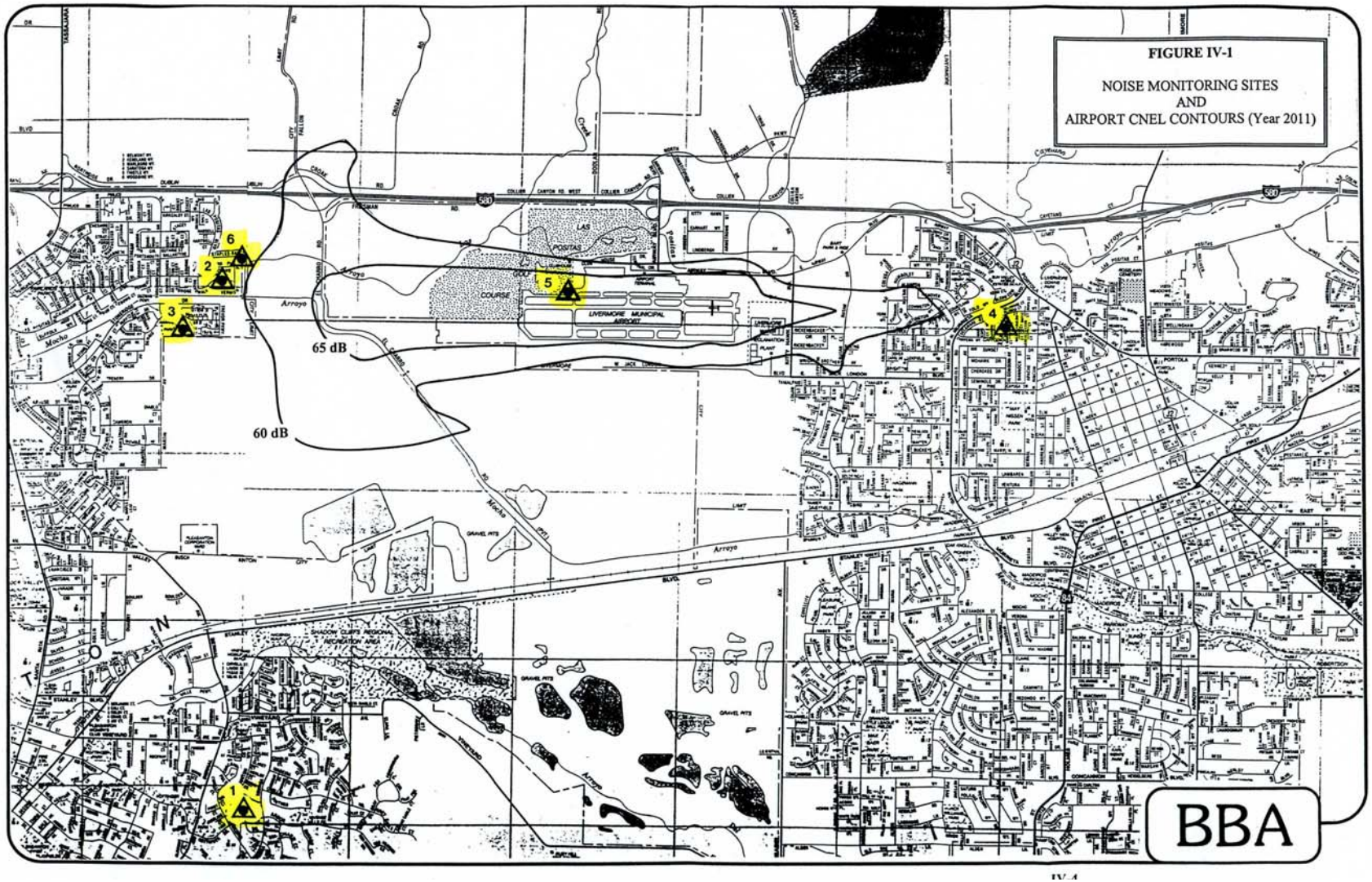
In summary, this aircraft noise survey confirms that the average aircraft noise levels associated with operations at the Livermore Municipal Airport are lower than anticipated in past projections. Those projections predicted that the 60 dB CNEL contour would reach into the West Livermore residential area. However, since sites 1 and 10 are located at the eastern boundary of the Airport, the study data confirmed that the 60 dB CNEL contour has not reached the residential area. In Pleasanton, the predictions were that the 60 dB CNEL contour would approach the westernmost residential area, but measurement sites 3, 4, and 9 at this location captured aircraft-caused CNEL values that were less than 55 dB. Further, the actual aircraft-caused CNEL levels are far below the 65 dB CNEL level of concern as presented in state and federal regulations.

Respectfully submitted,
Brown-Buntin Associates, Inc.



Jim Buntin
Vice President

Figure 4
Noise Monitoring Sites Employed in 1999-2000
And Predicted Airport CNEL Contours for Year 2011



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APPENDIX A

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of "noise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

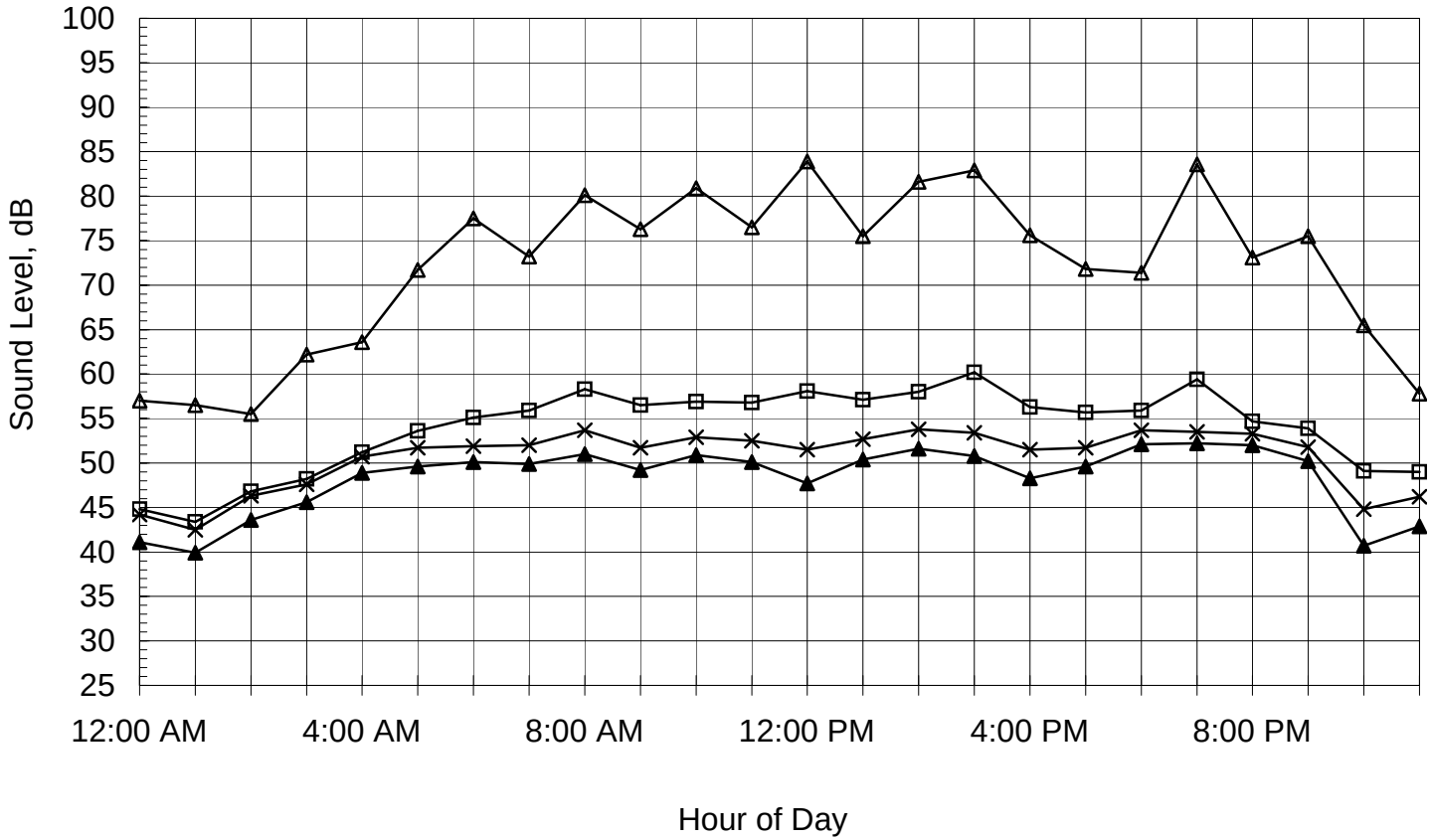
SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

Figure B-1: Measured Hourly Noise Levels

LVK Site 1

October 30, 2007

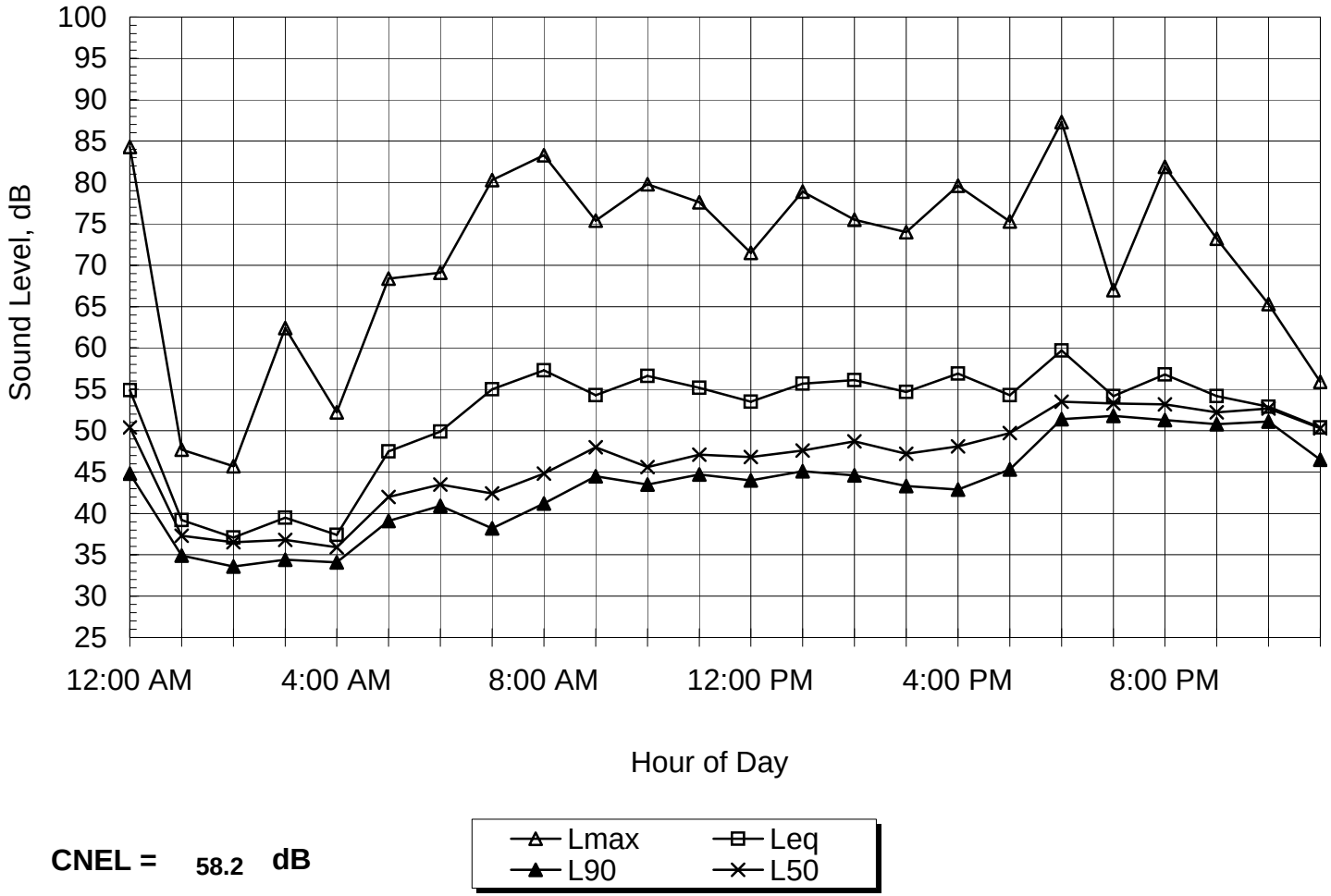


CNEL = 59.4 dB

Figure B-2: Measured Hourly Noise Levels

LVK Site 1

October 31, 2007

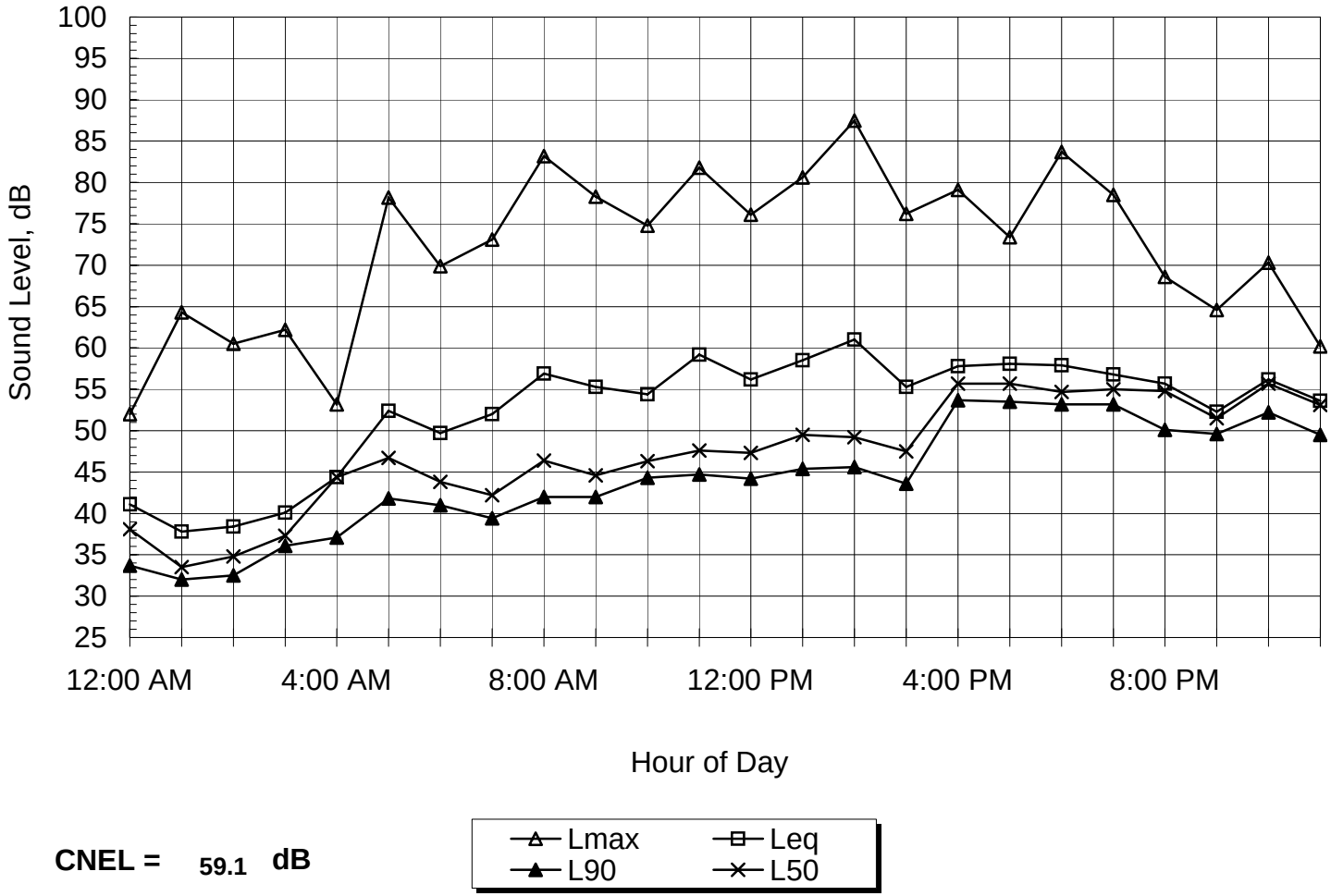


CNEL = 58.2 dB

Figure B-3: Measured Hourly Noise Levels

LVK Site 1

November 1, 2007

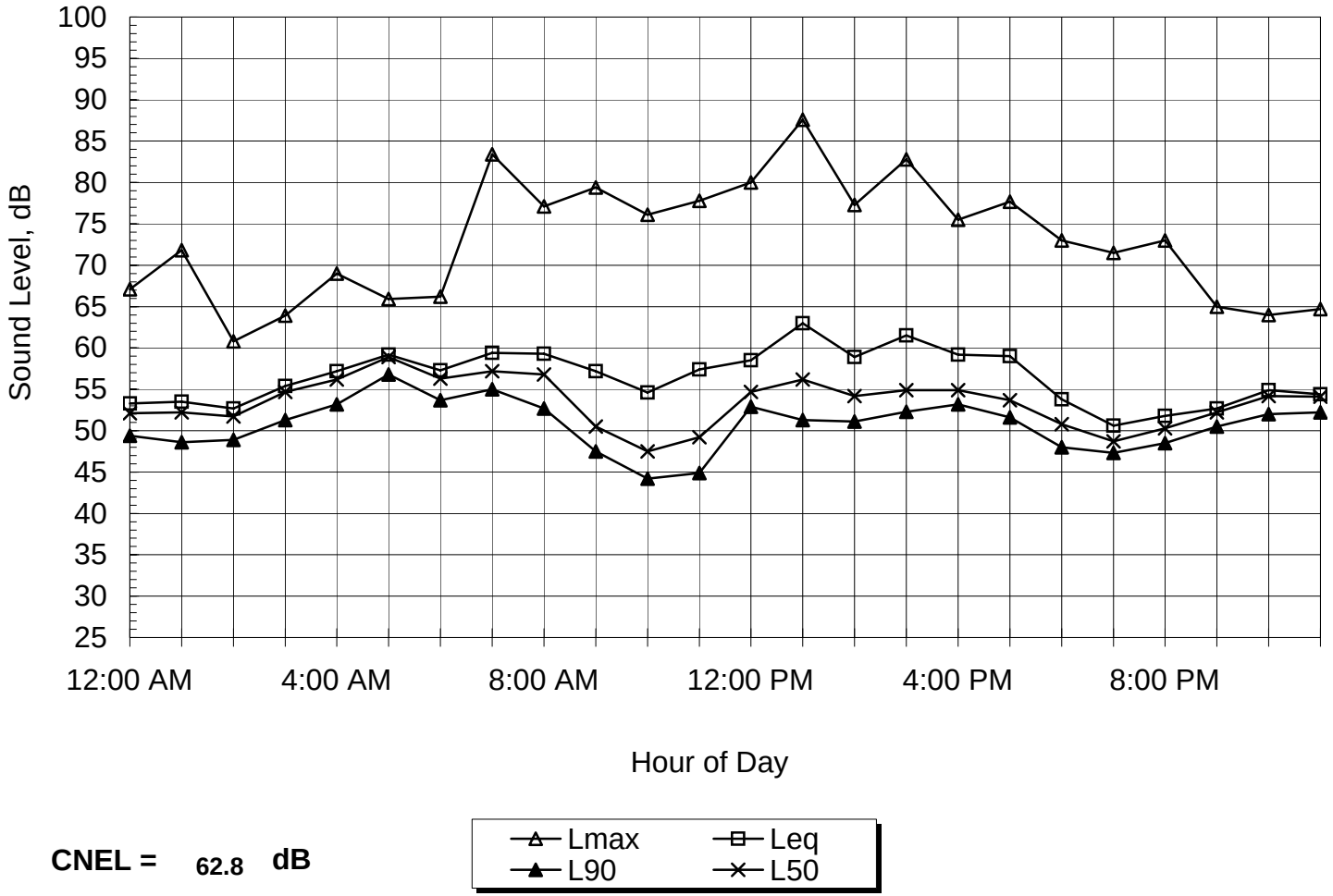


CNEL = 59.1 dB

Figure B-4: Measured Hourly Noise Levels

LVK Site 1

November 2, 2007

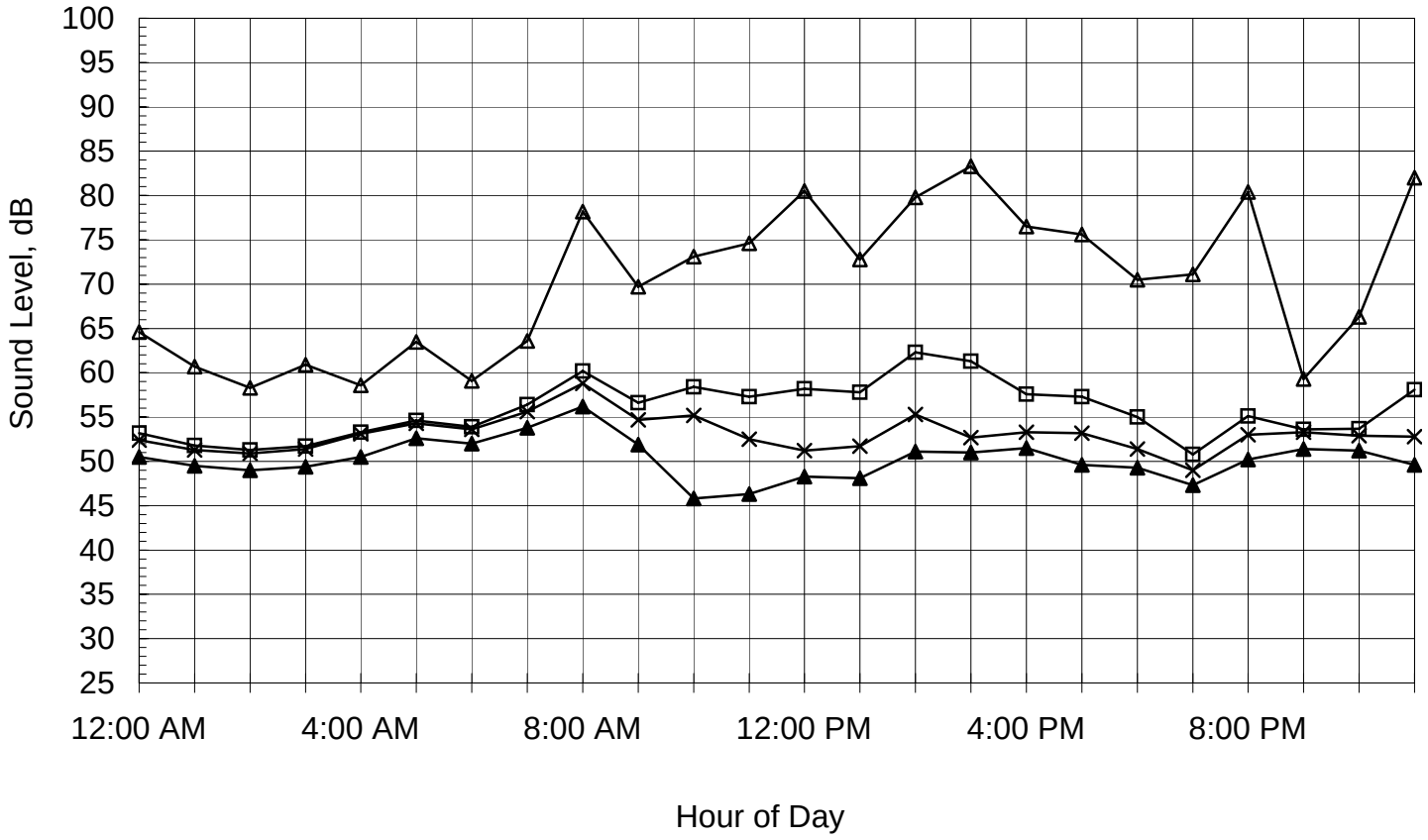


CNEL = 62.8 dB

Figure B-5: Measured Hourly Noise Levels

LVK Site 1

November 3, 2007

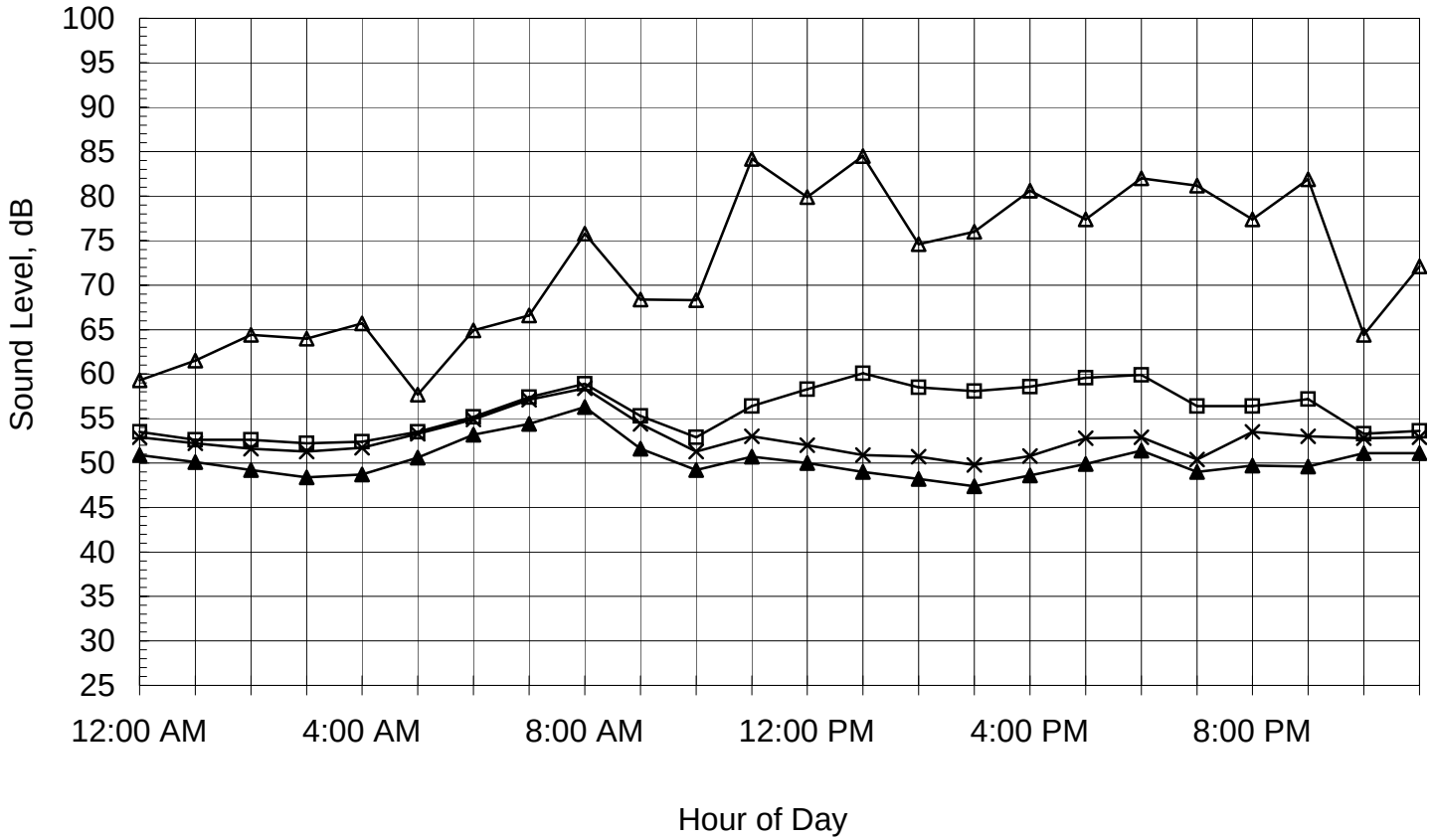


CNEL = 61.5 dB

Figure B-6: Measured Hourly Noise Levels

LVK Site 1

November 4, 2007

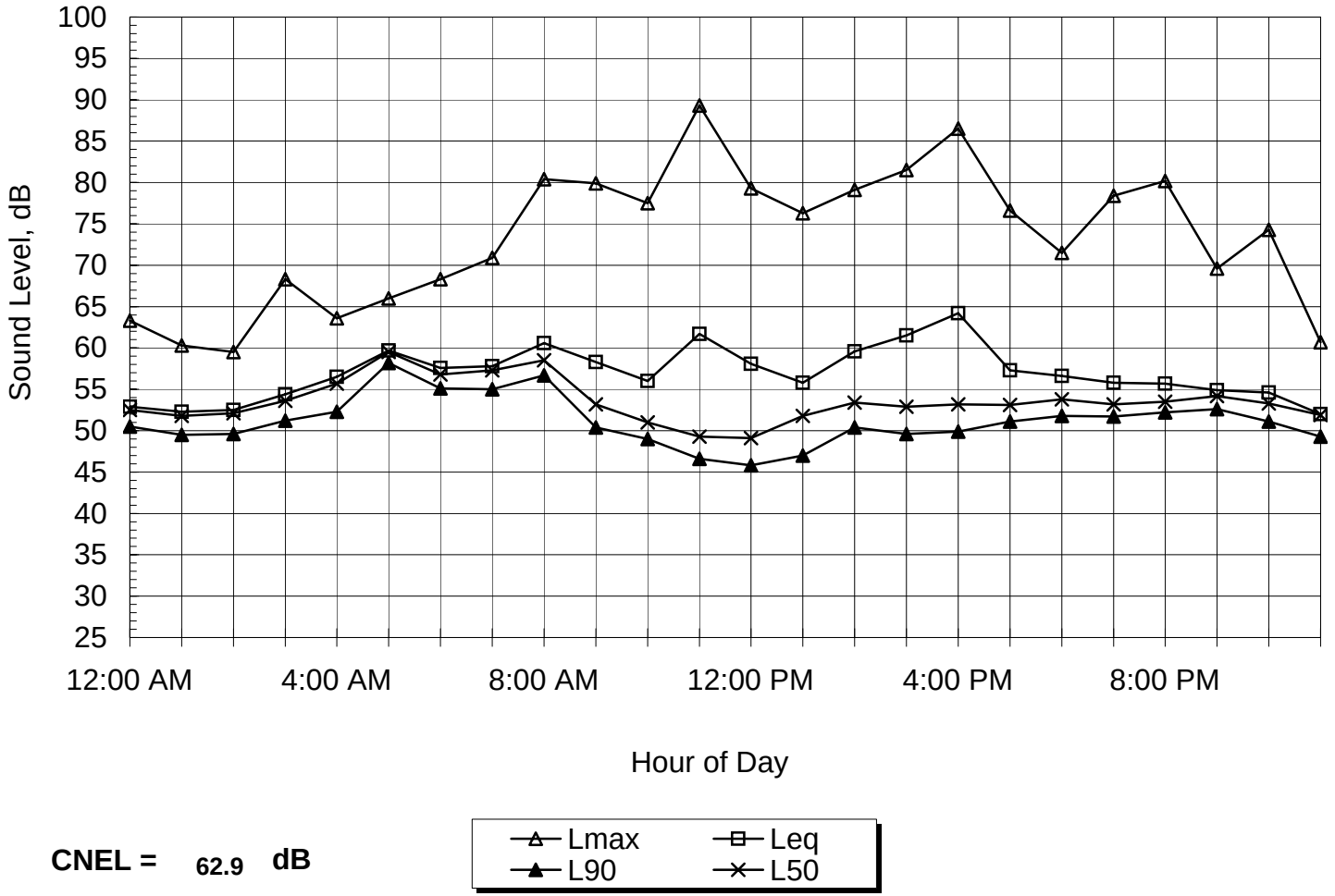


CNEL = 61.2 dB

Figure B-7: Measured Hourly Noise Levels

LVK Site 1

November 5, 2007

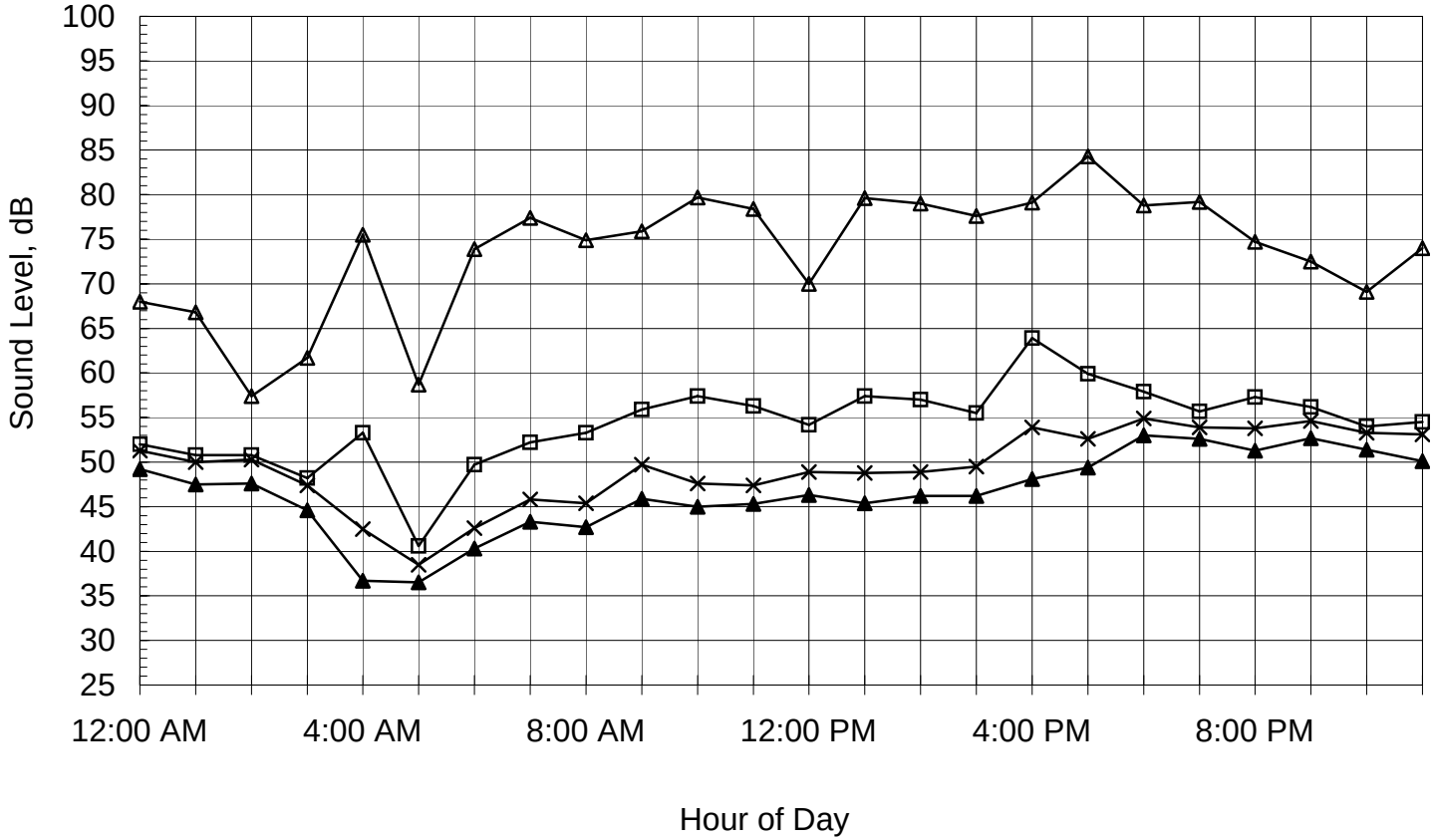


CNEL = 62.9 dB

Figure B-8: Measured Hourly Noise Levels

LVK Site 1

November 6, 2007

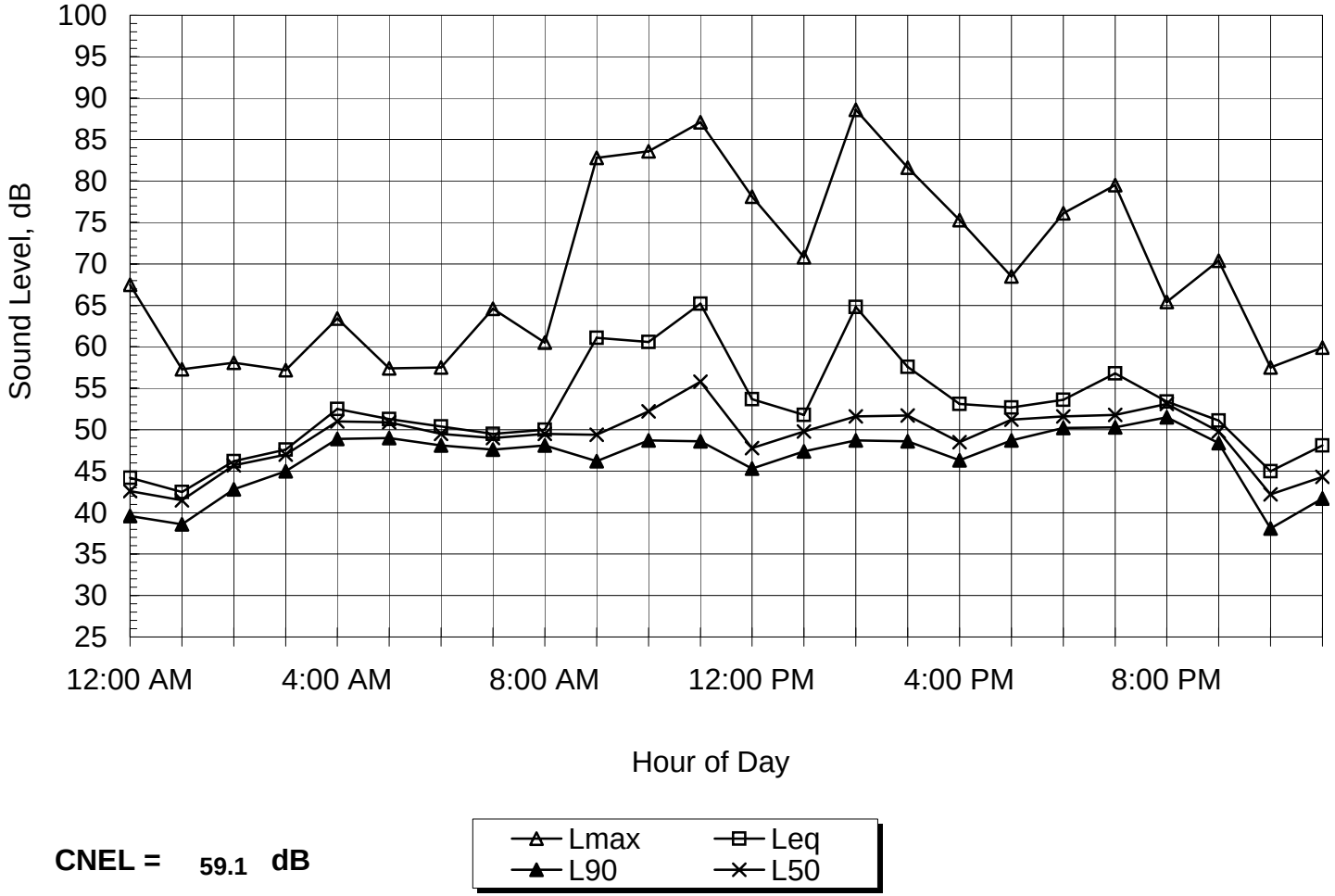


CNEL = 60.1 dB

Figure B-9: Measured Hourly Noise Levels

LVK Site 2

October 30, 2007

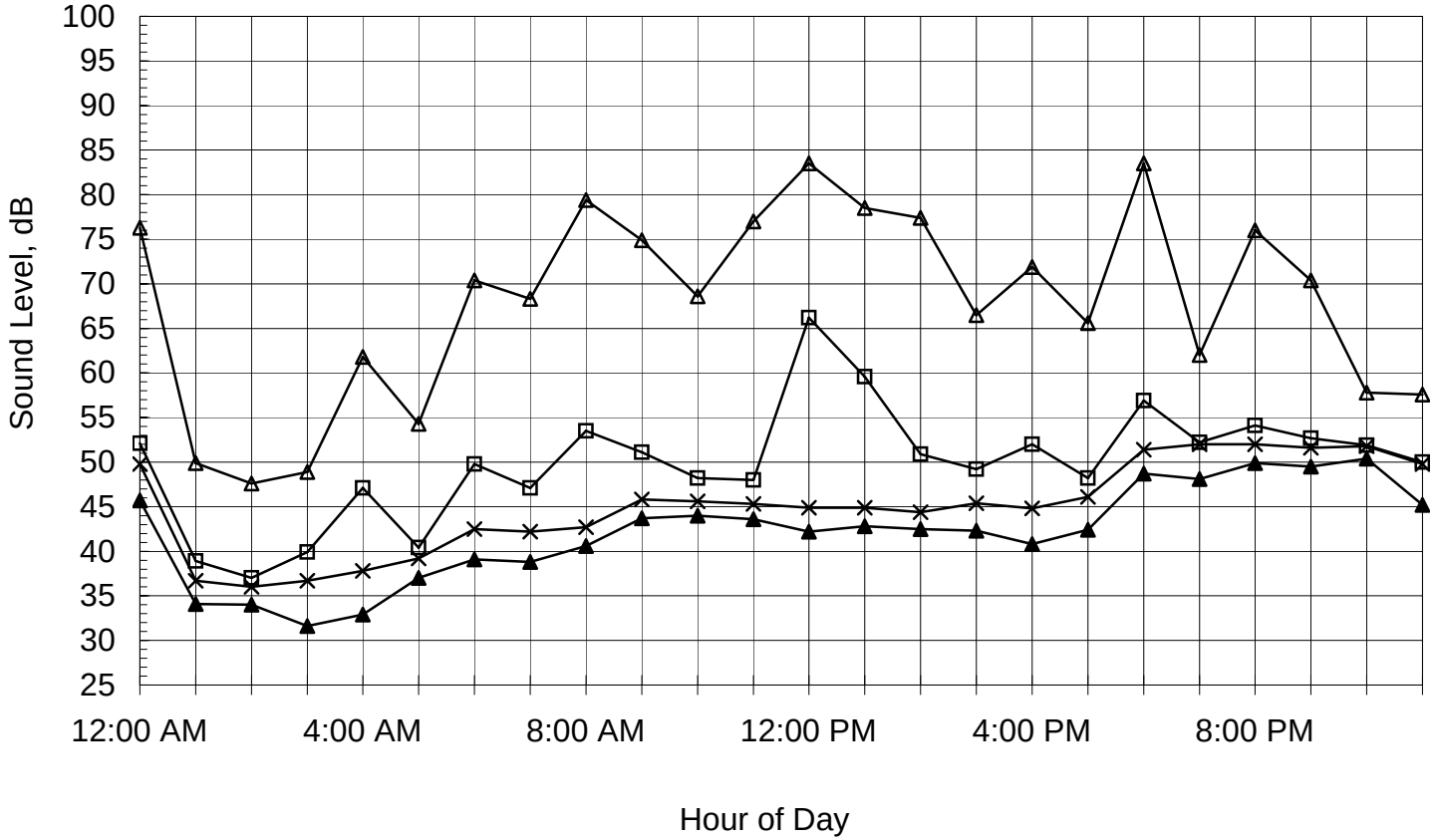


CNEL = 59.1 dB

Figure B-10: Measured Hourly Noise Levels

LVK Site 2

October 31, 2007

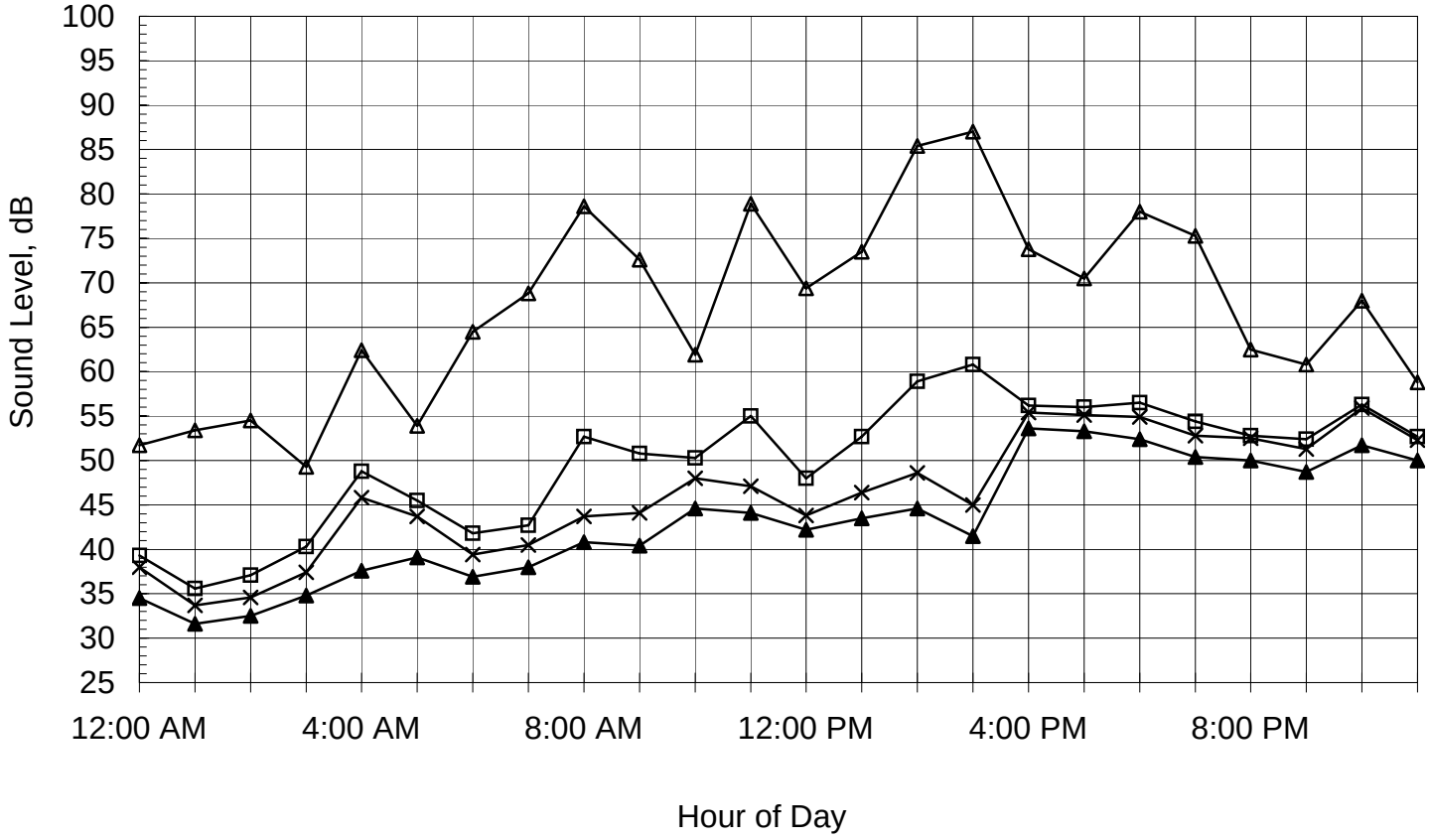


CNEL = 57.8 dB

Figure B-11: Measured Hourly Noise Levels

LVK Site 2

November 1, 2007

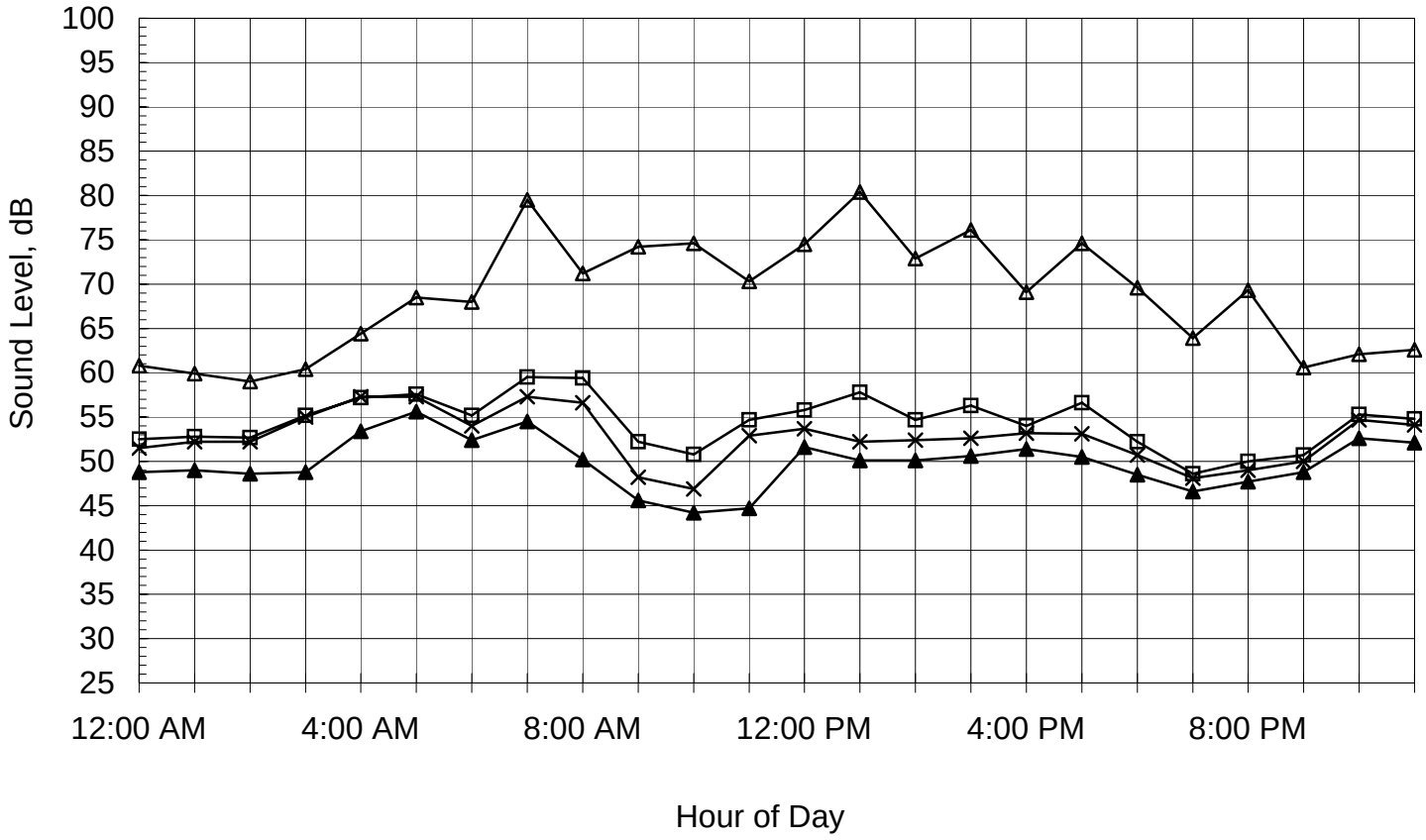


CNEL = 57.6 dB

Figure B-12: Measured Hourly Noise Levels

LVK Site 2

November 2, 2007

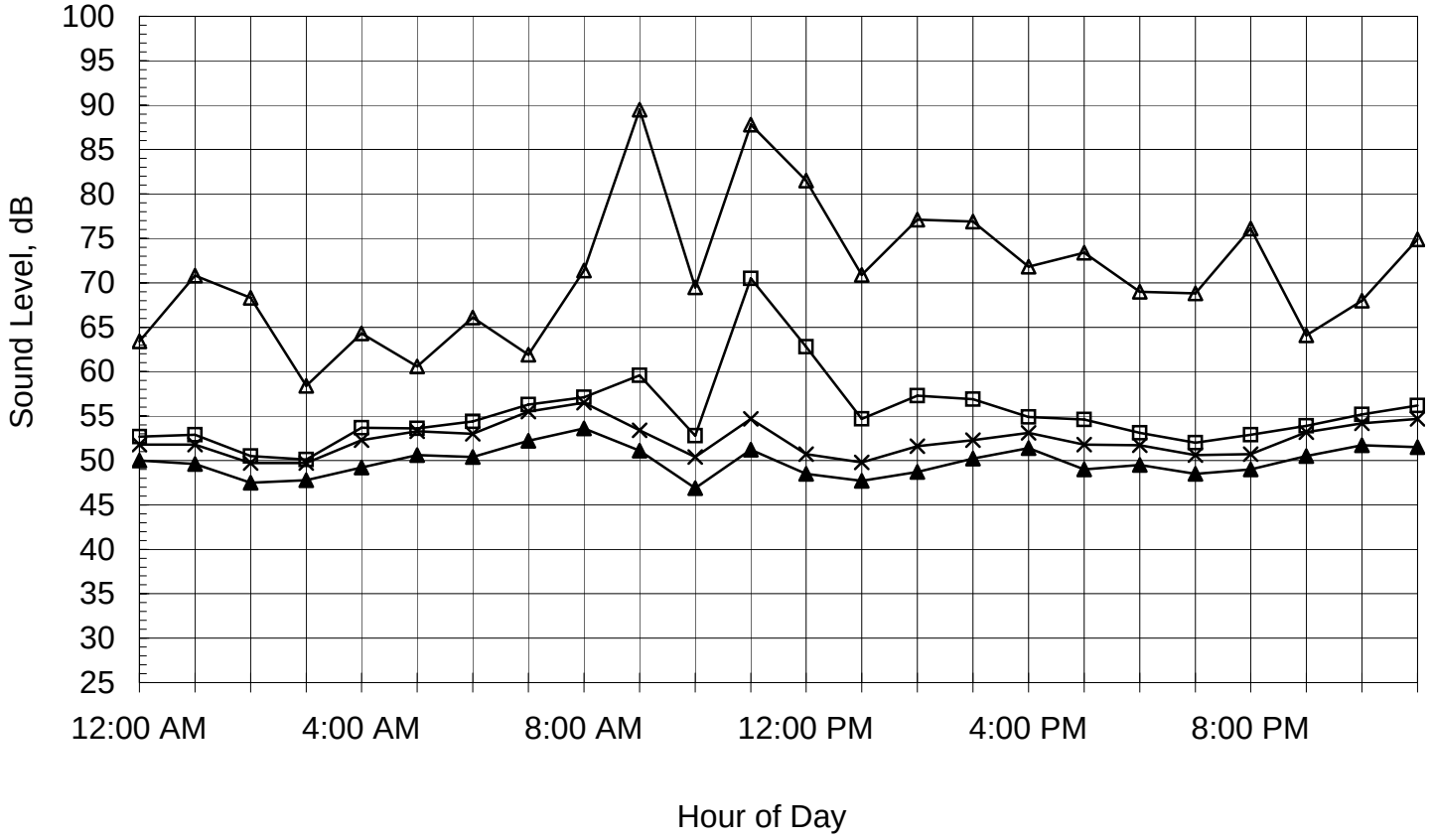


CNEL = 61.7 dB

Figure B-13: Measured Hourly Noise Levels

LVK Site 2

November 3, 2007

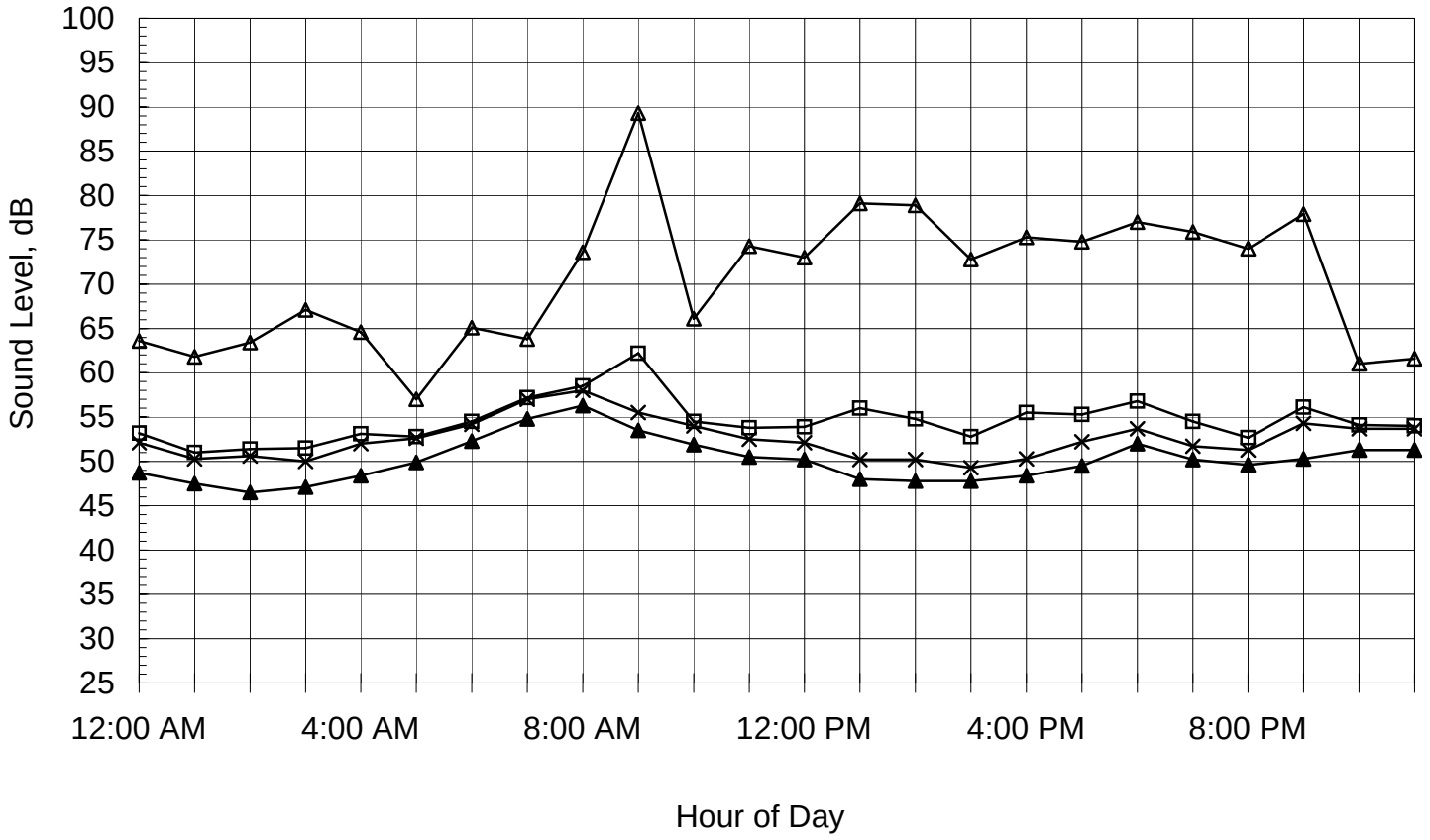


CNEL = 62.2 dB

Figure B-14: Measured Hourly Noise Levels

LVK Site 2

November 4, 2007

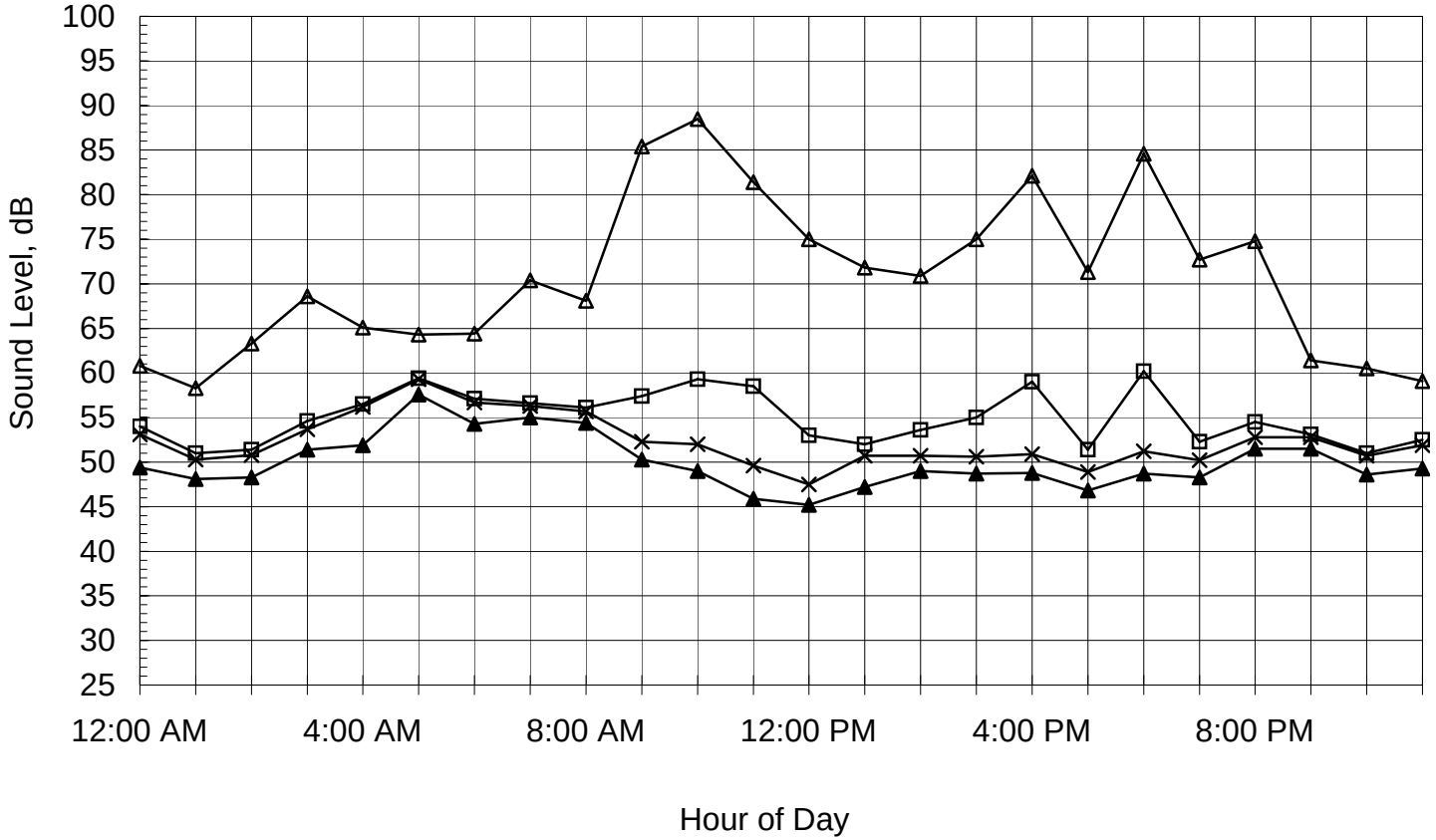


CNEL = 60.4 dB

Figure B-15: Measured Hourly Noise Levels

LVK Site 2

November 5, 2007

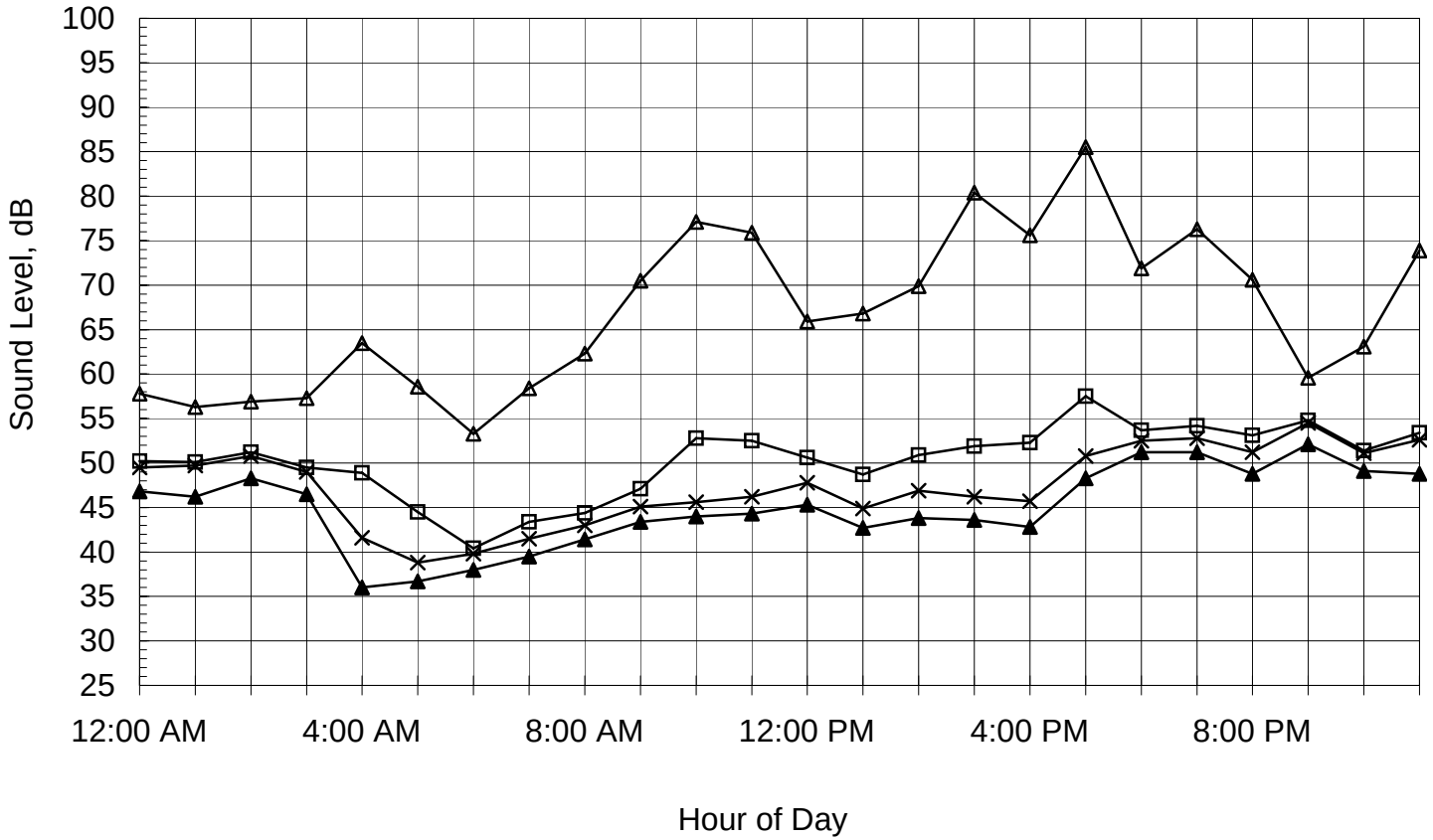


CNEL = 61.9 dB

Figure B-16: Measured Hourly Noise Levels

LVK Site 2

November 6, 2007

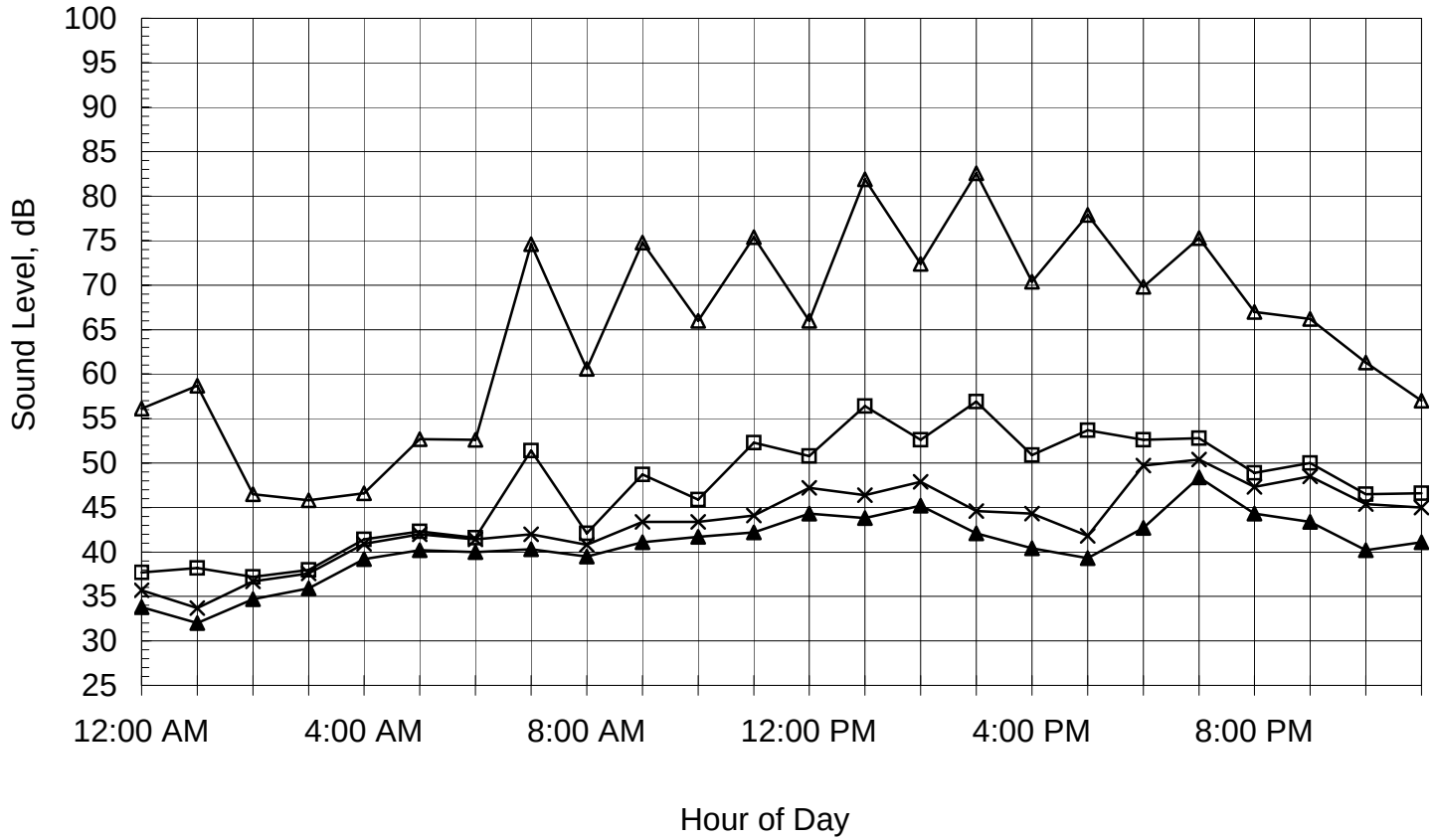


CNEL = 57.4 dB

Figure B-17: Measured Hourly Noise Levels

LVK Site 3

October 30, 2007

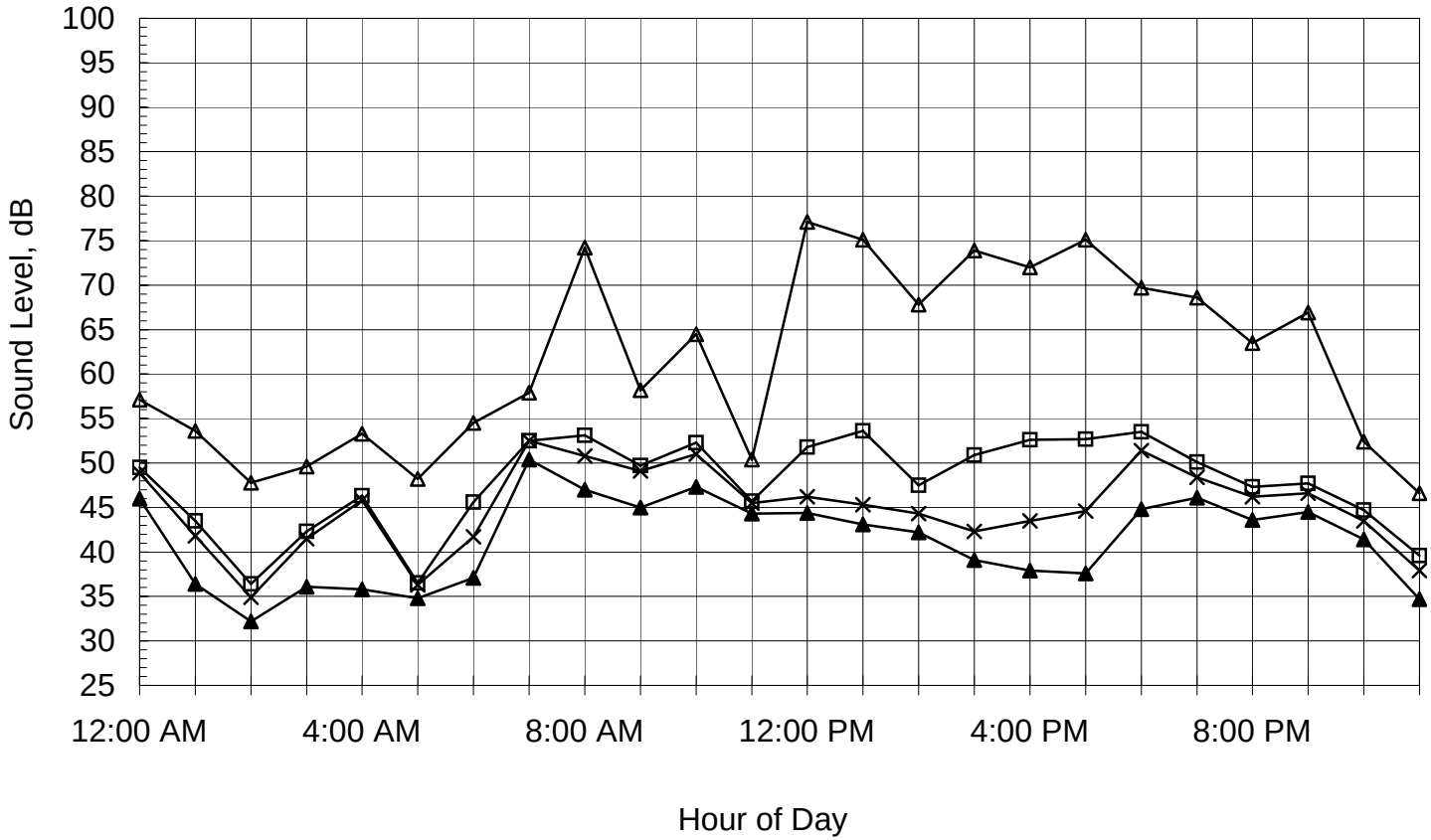


CNEL = 53.1 dB

Figure B-18: Measured Hourly Noise Levels

LVK Site 3

October 31, 2007

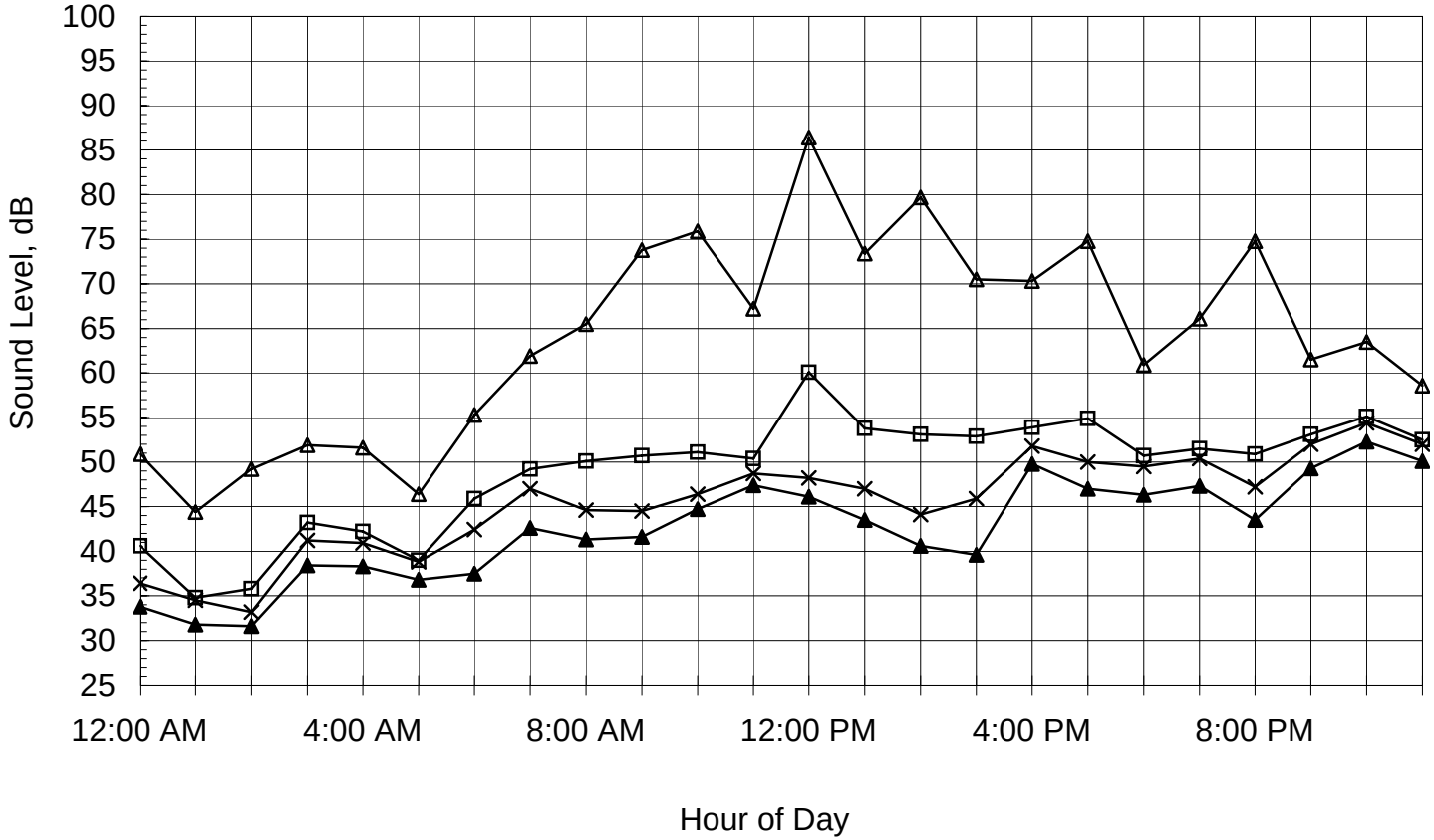


CNEL = 53.2 dB

Figure B-19: Measured Hourly Noise Levels

LVK Site 3

November 1, 2007

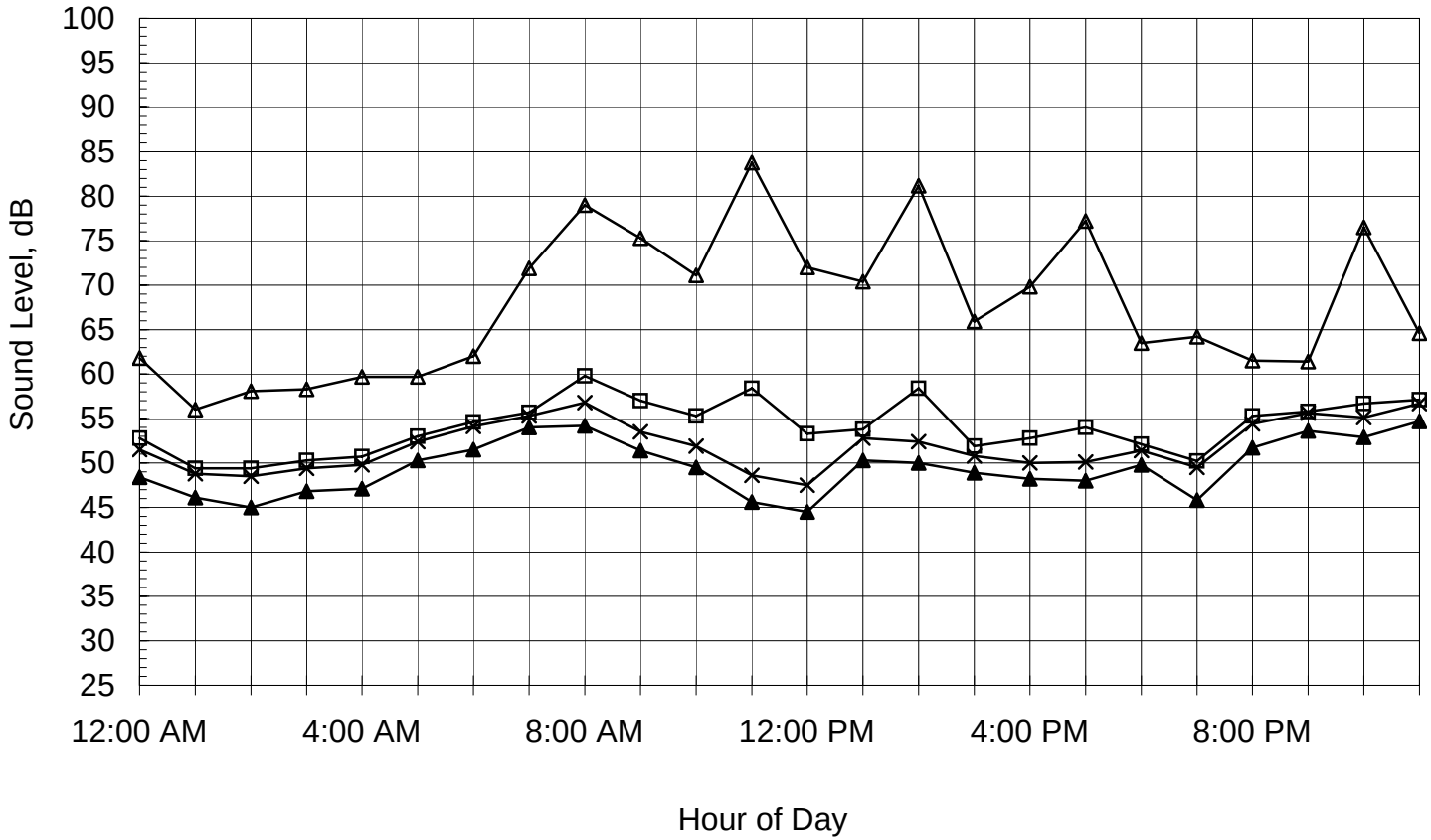


CNEL = 56.3 dB

Figure B-20: Measured Hourly Noise Levels

LVK Site 3

November 2, 2007

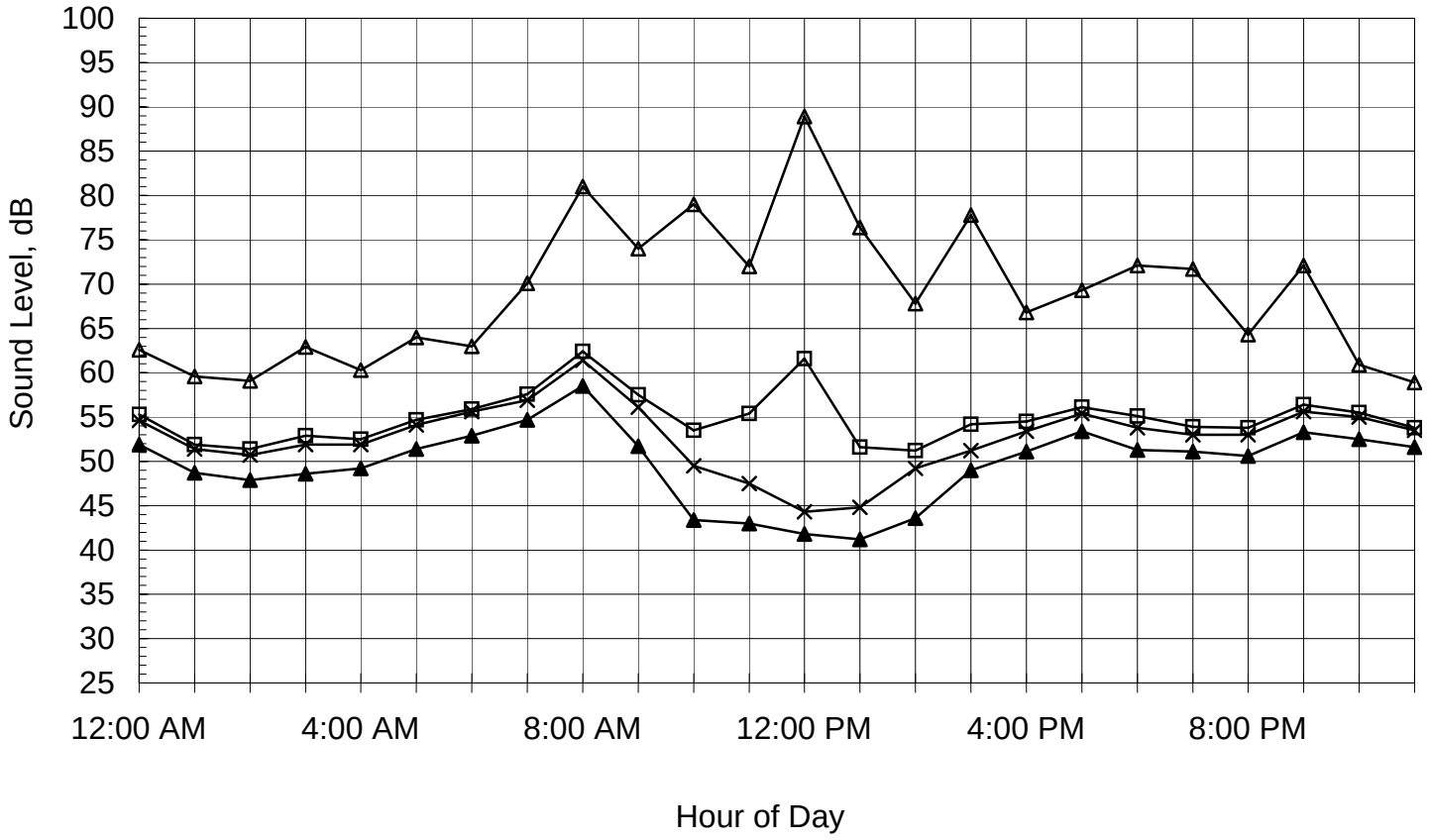


CNEL = 60.6 dB

Figure B-21: Measured Hourly Noise Levels

LVK Site 3

November 3, 2007

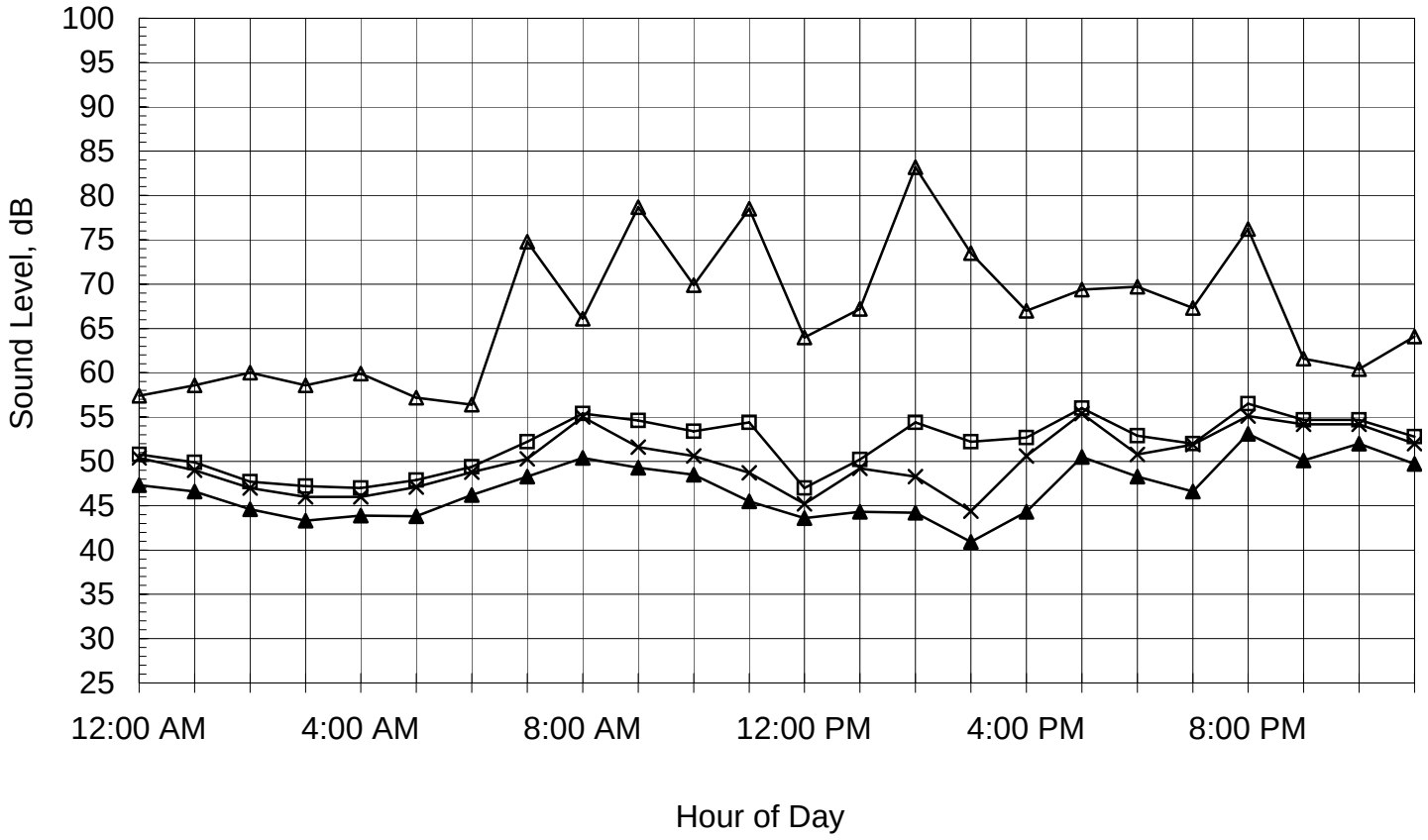


CNEL = 61.3 dB

Figure B-22: Measured Hourly Noise Levels

LVK Site 3

November 4, 2007

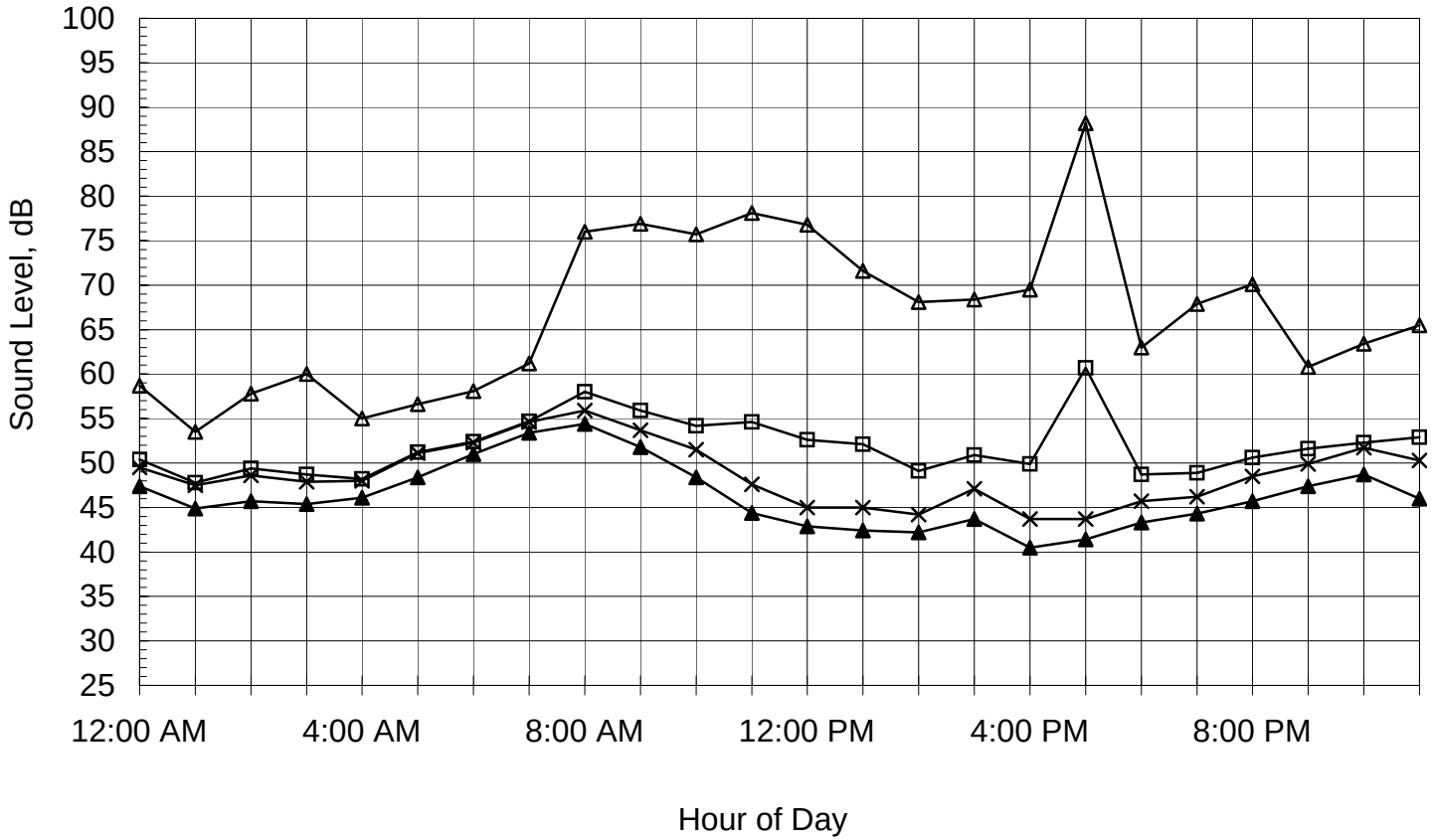


CNEL = 58.1 dB

Figure B-23: Measured Hourly Noise Levels

LVK Site 3

November 5, 2007

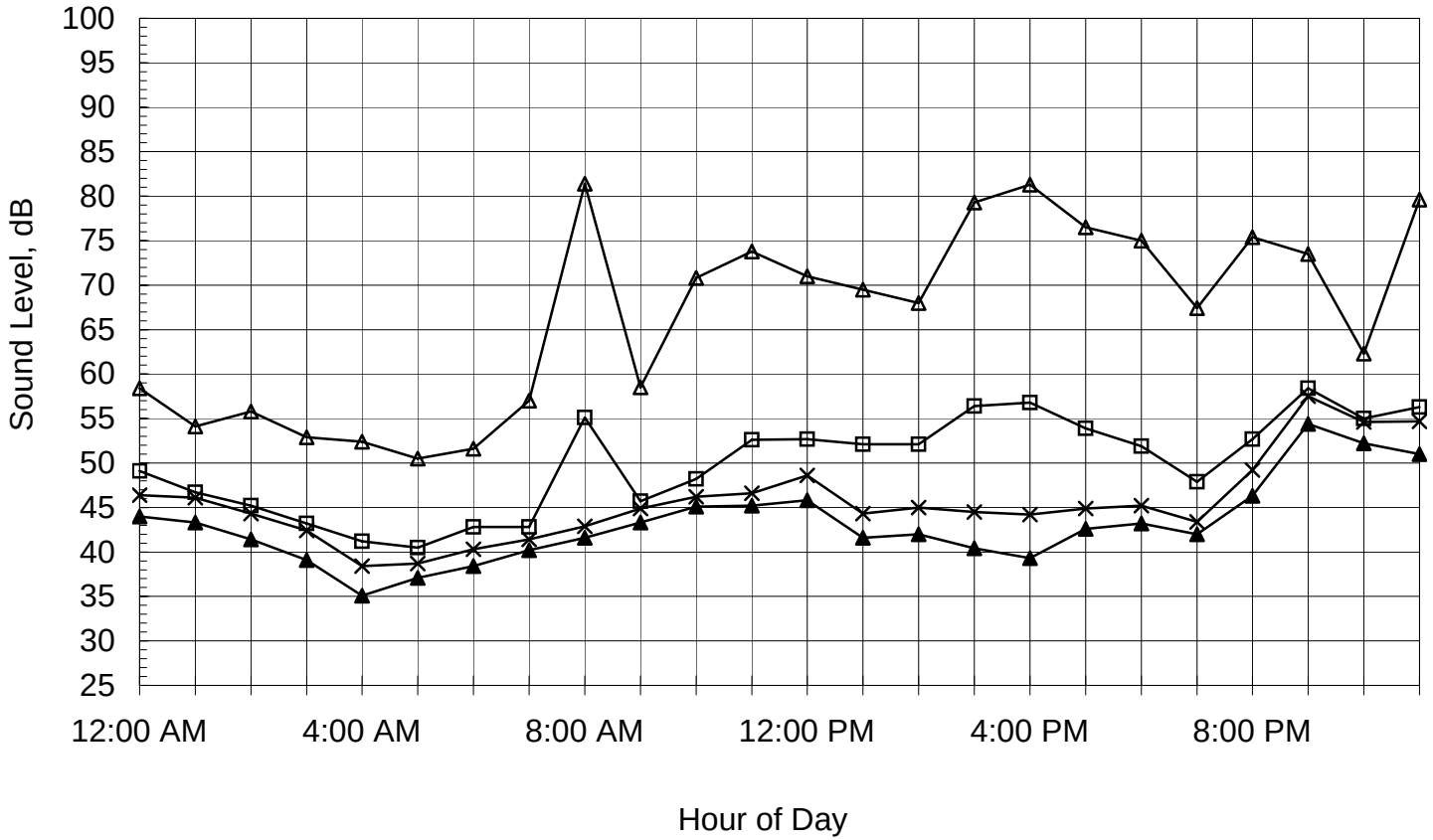


CNEL = 58.1 dB

Figure B-24: Measured Hourly Noise Levels

LVK Site 3

November 6, 2007

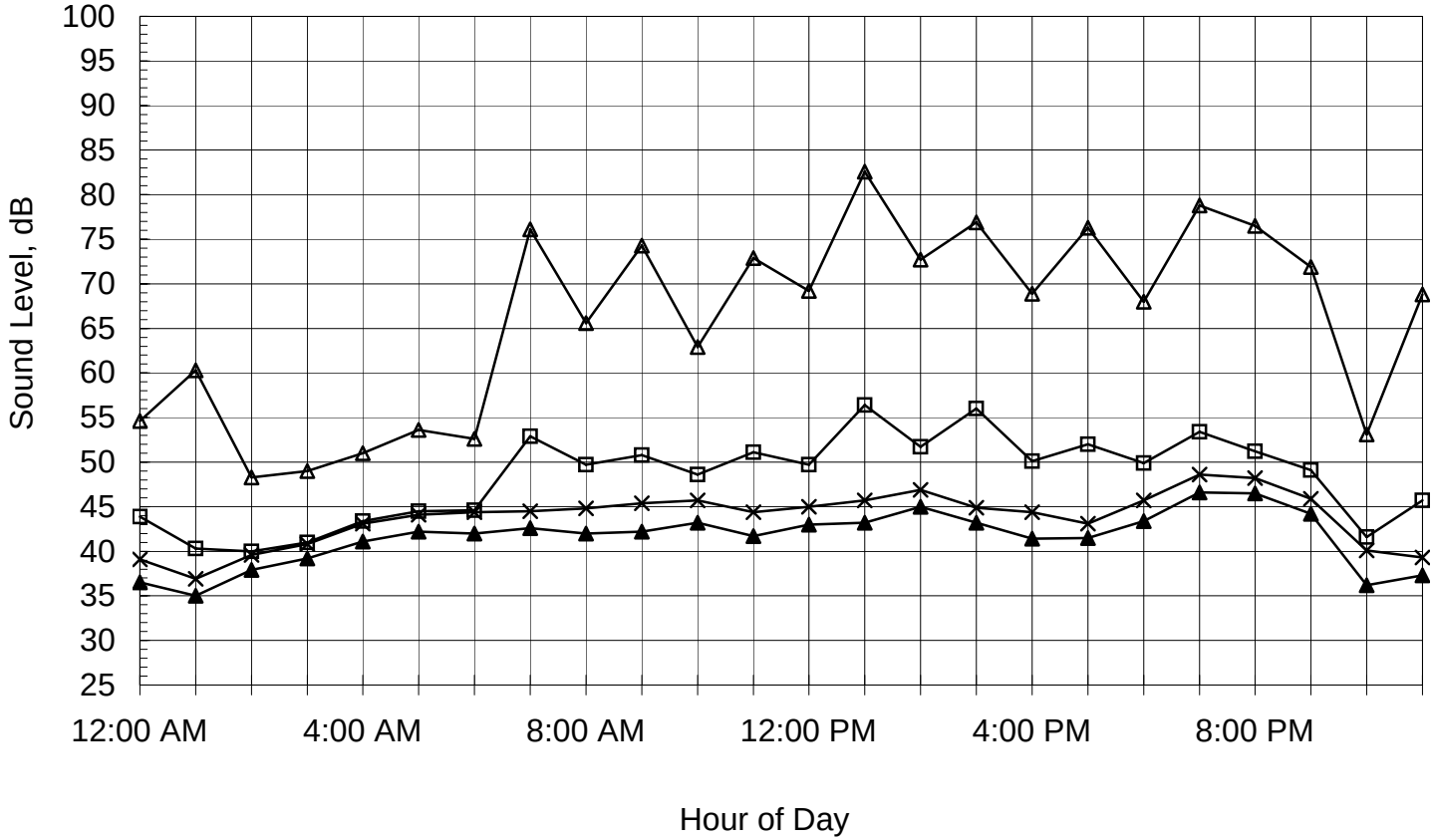


CNEL = 57.9 dB

Figure B-25: Measured Hourly Noise Levels

LVK Site 4

October 30, 2007

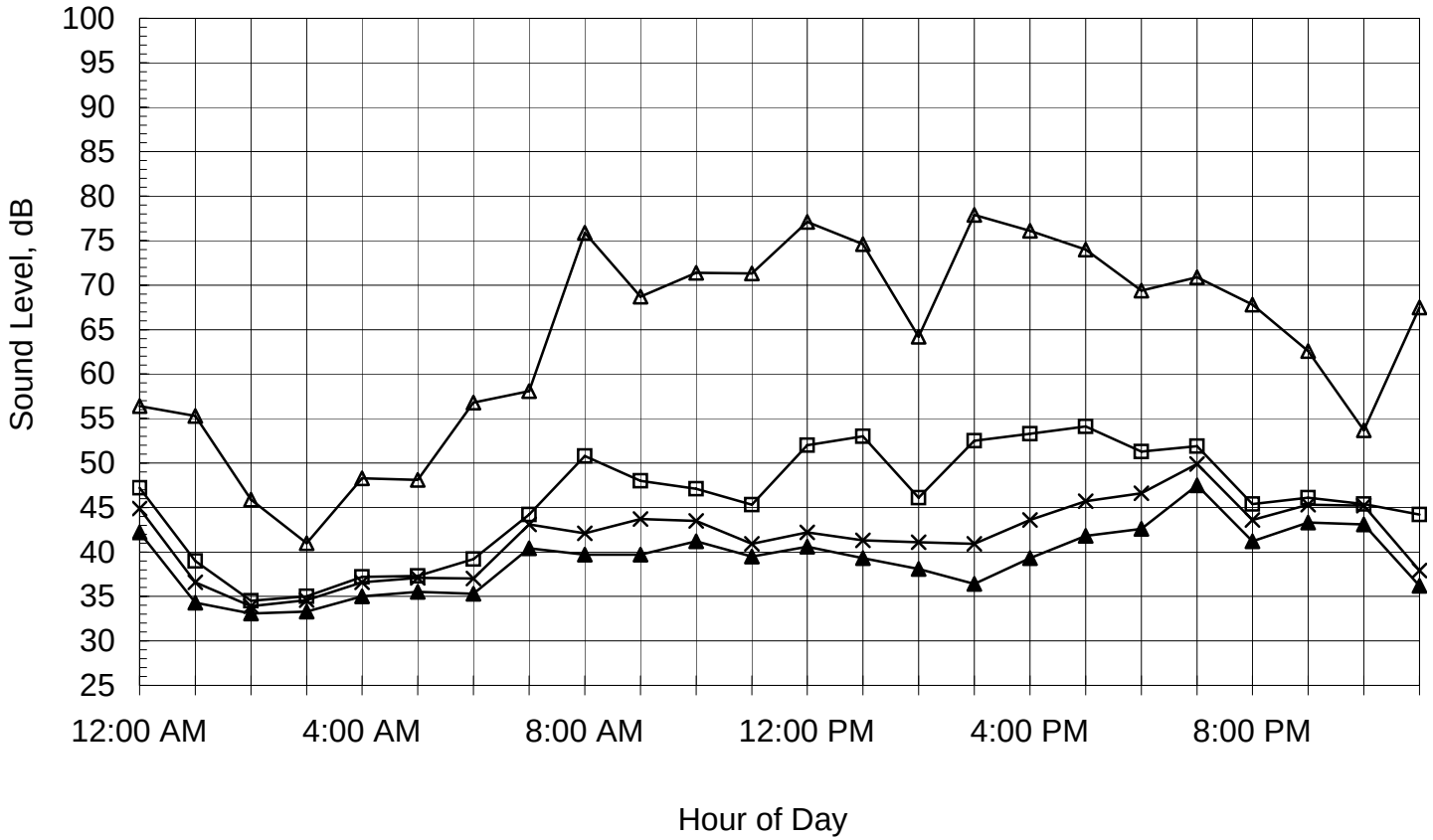


CNEL = 53.4 dB

Figure B-26: Measured Hourly Noise Levels

LVK Site 4

October 31, 2007

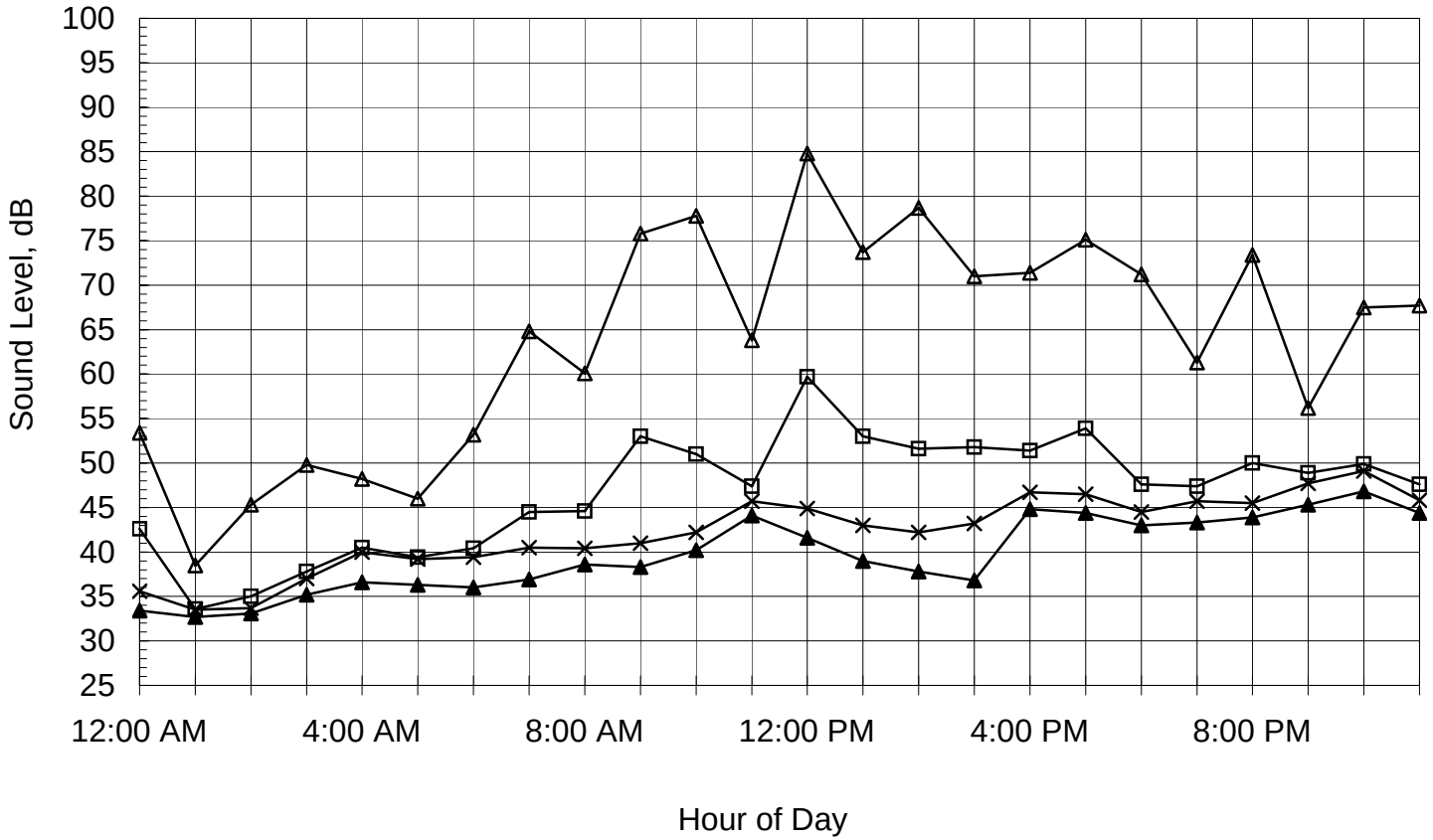


CNEL = 51.8 dB

Figure B-27: Measured Hourly Noise Levels

LVK Site 4

November 1, 2007

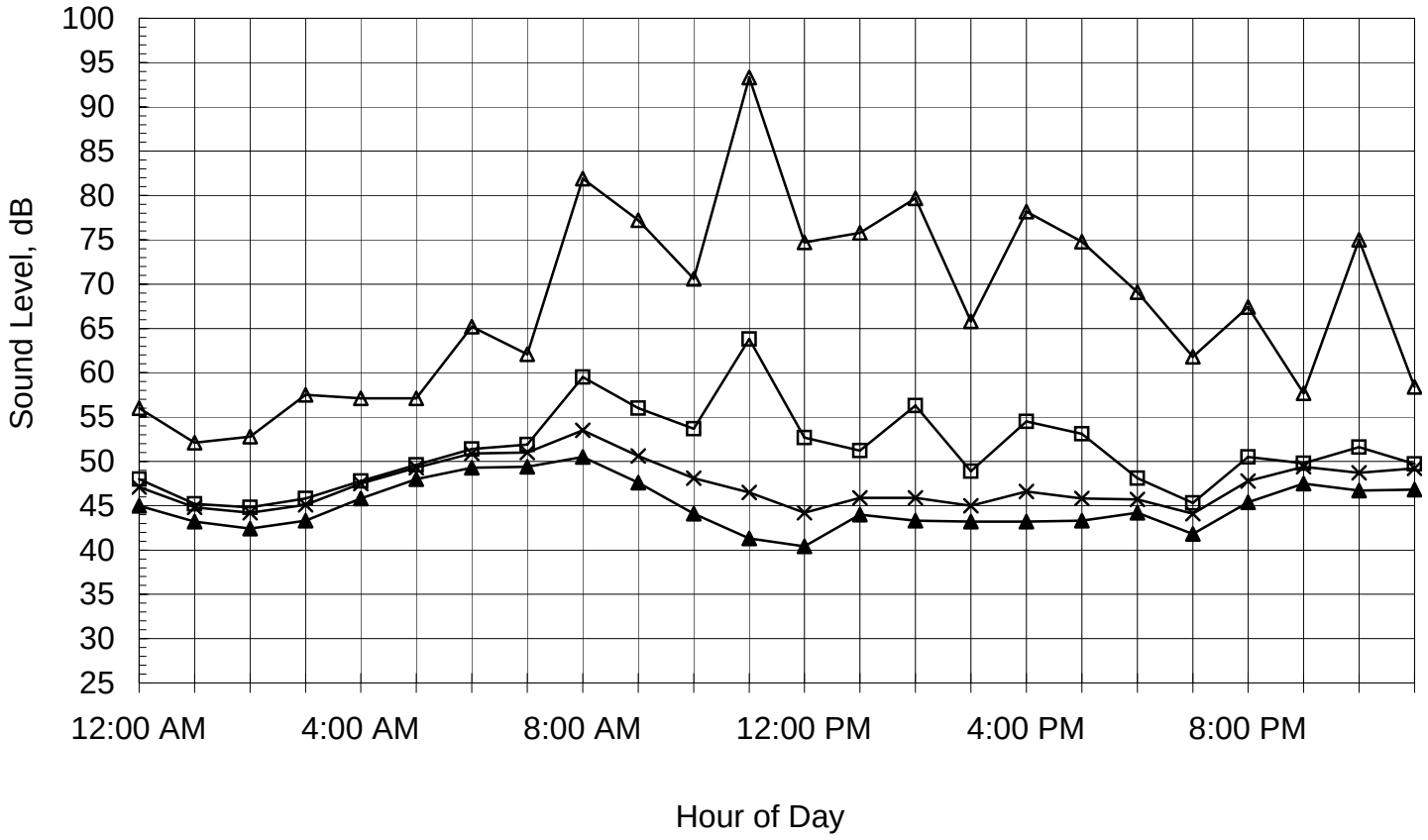


CNEL = 53.3 dB

Figure B-28: Measured Hourly Noise Levels

LVK Site 4

November 2, 2007

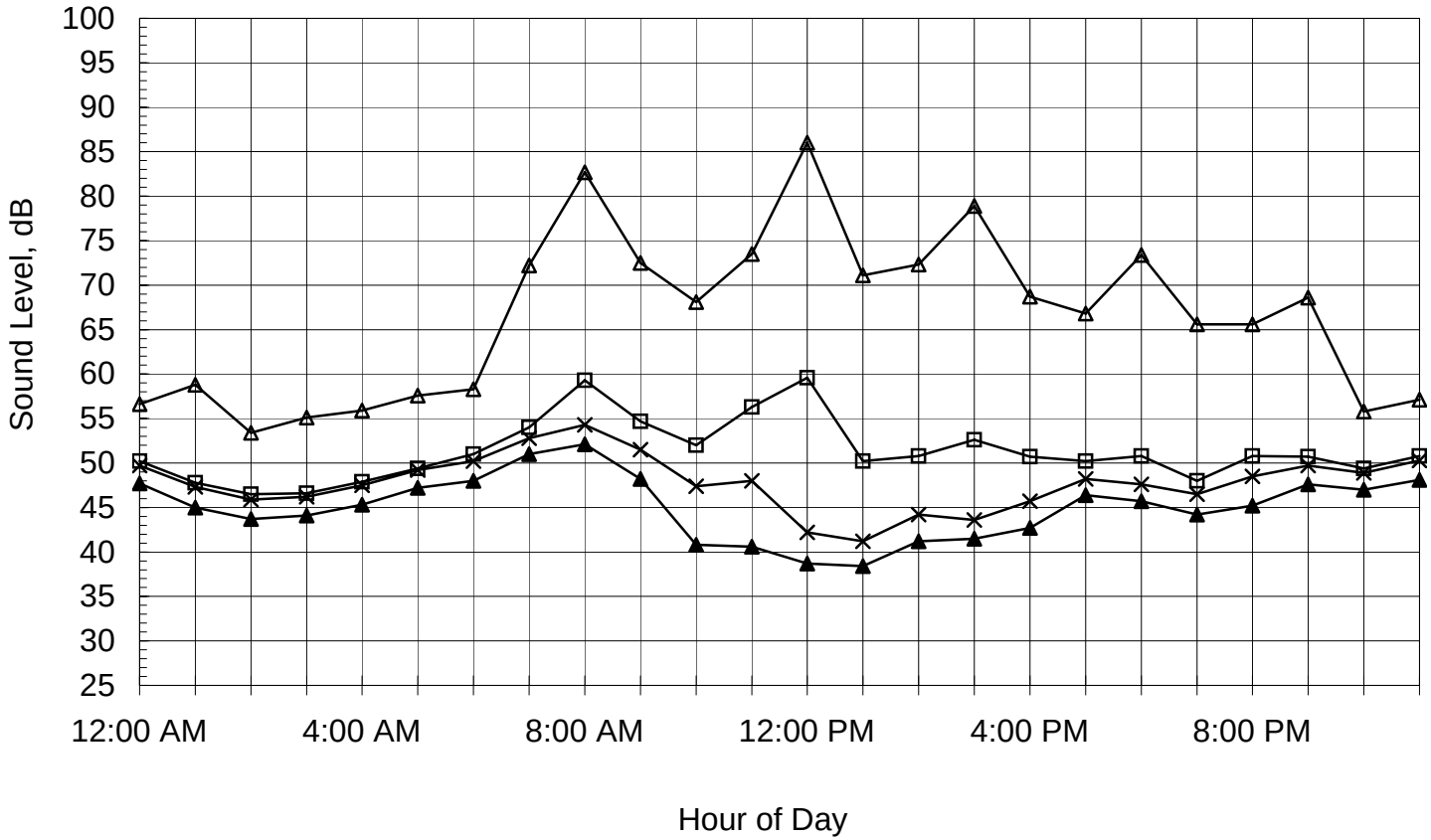


CNEL = 57.4 dB

Figure B-29: Measured Hourly Noise Levels

LVK Site 4

November 3, 2007

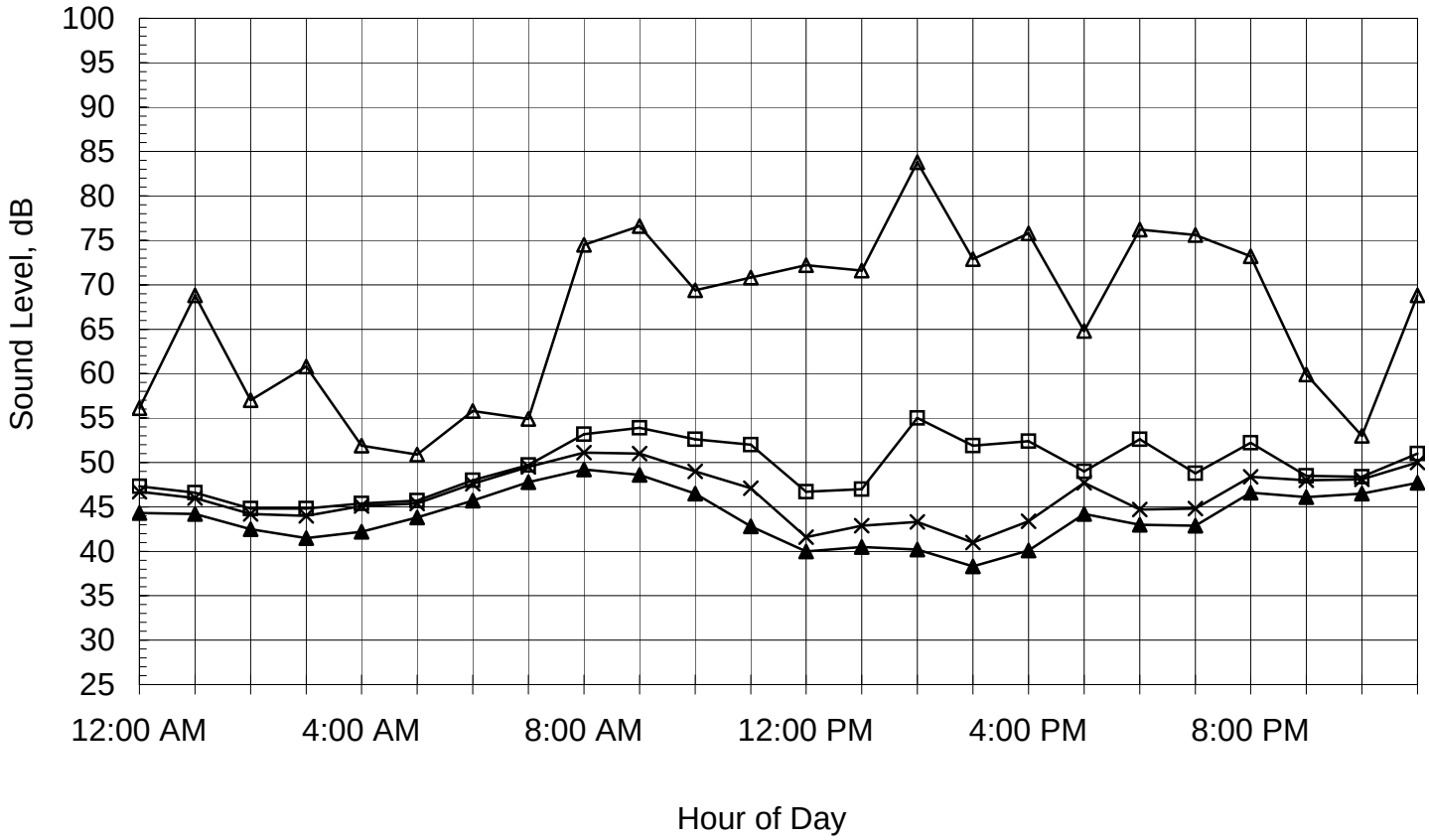


CNEL = 57.0 dB

Figure B-30: Measured Hourly Noise Levels

LVK Site 4

November 4, 2007

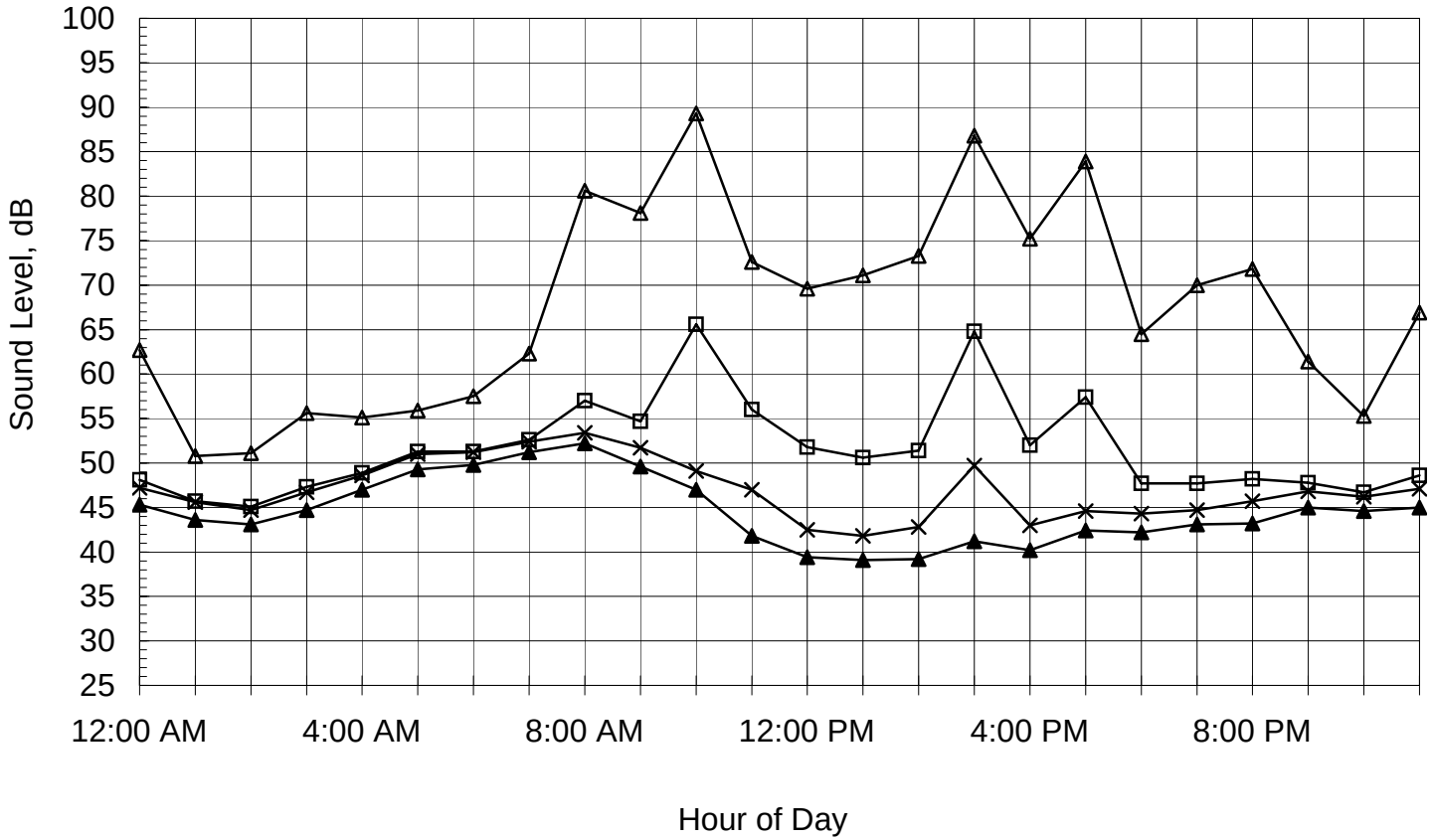


CNEL = 55.1 dB

Figure B-31: Measured Hourly Noise Levels

LVK Site 4

November 5, 2007

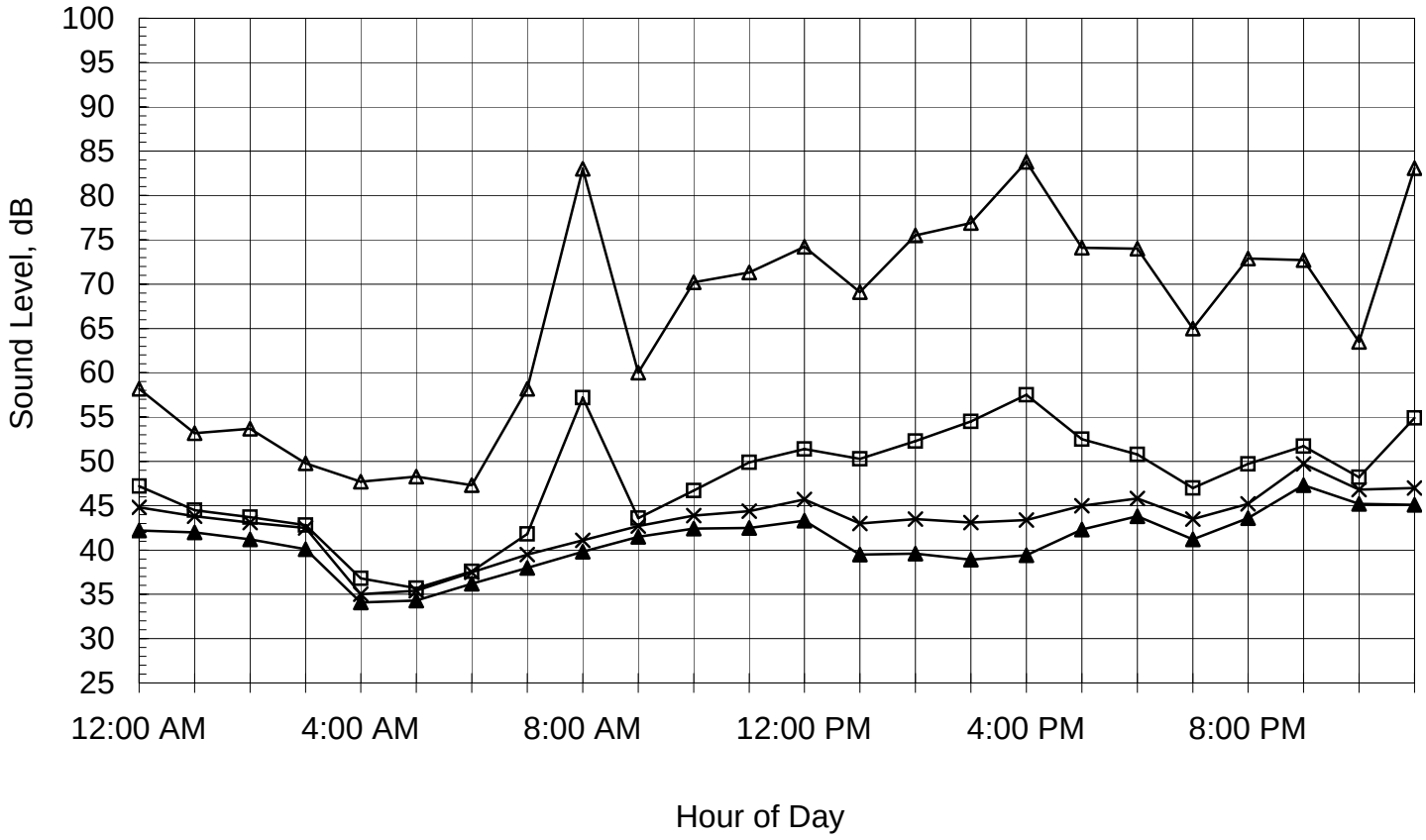


CNEL = 58.3 dB

Figure B-32: Measured Hourly Noise Levels

LVK Site 4

November 6, 2007

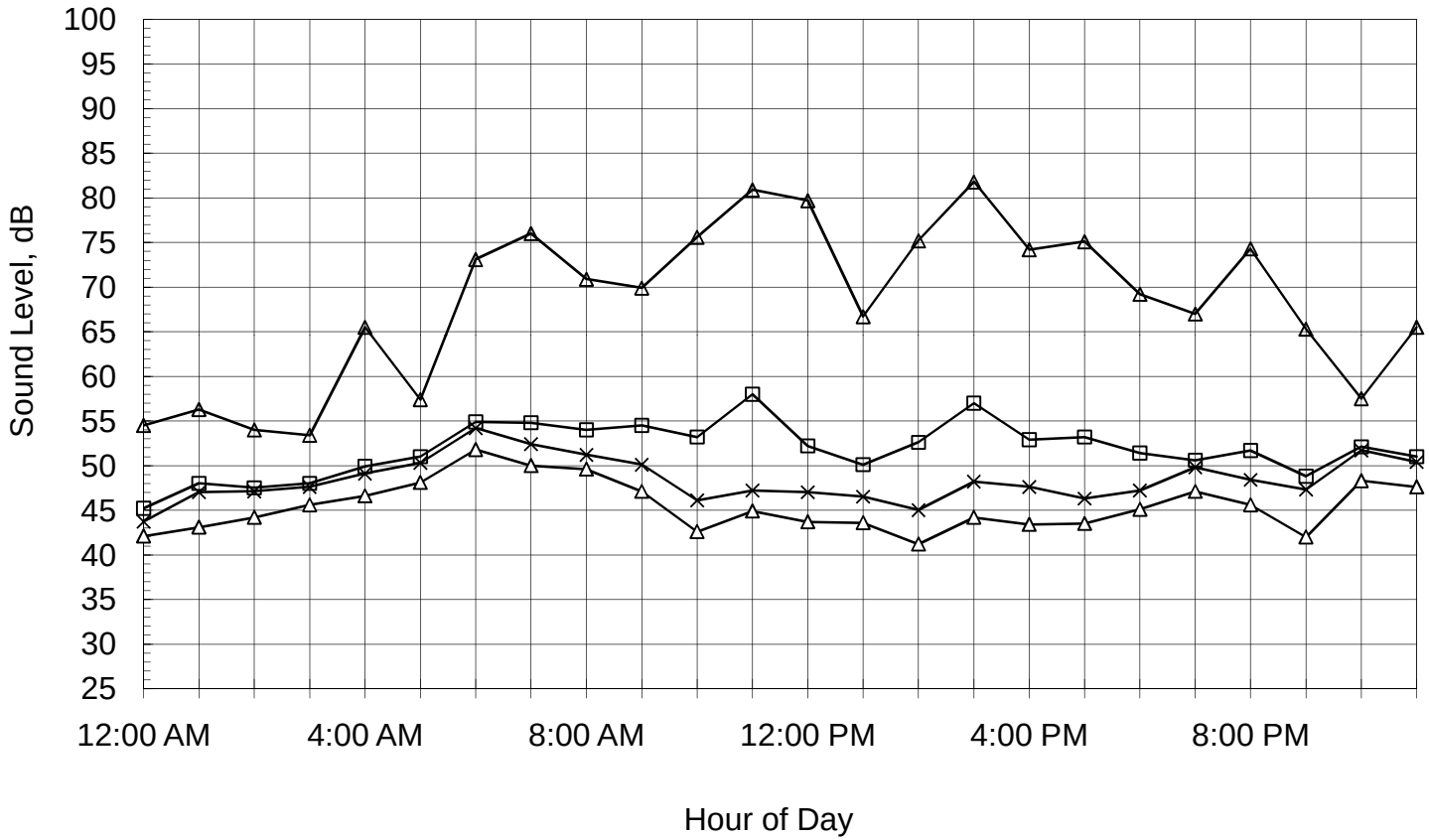


CNEL = 55.4 dB

Figure B-33: Measured Hourly Noise Levels

LVK Site 4

April 16, 2008

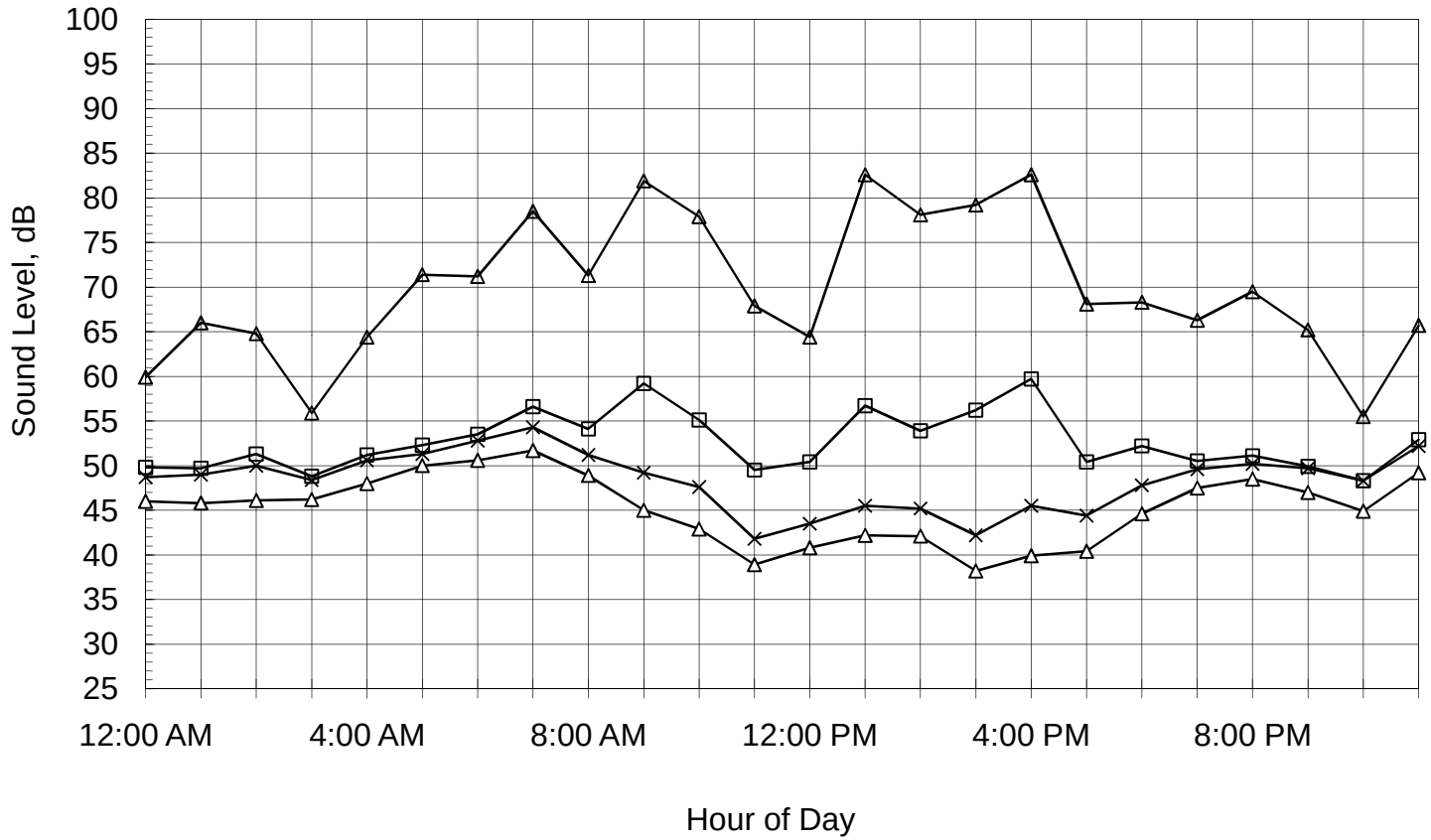


CNEL = 57.8 dB

Figure B-34: Measured Hourly Noise Levels

LVK Site 4

April 17, 2008

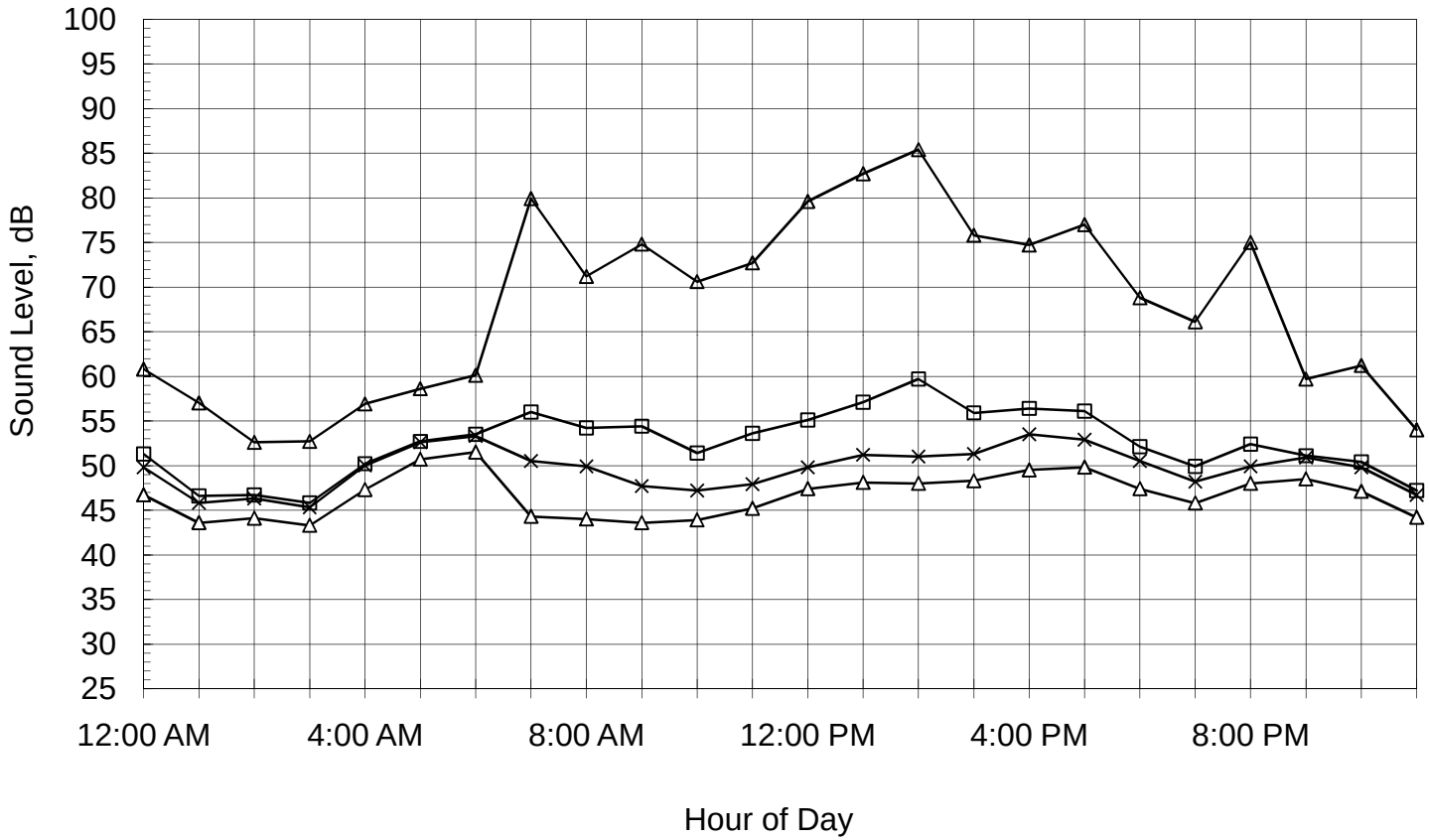


CNEL = 58.6 dB

Figure B-35: Measured Hourly Noise Levels

LVK Site 4

April 18, 2008

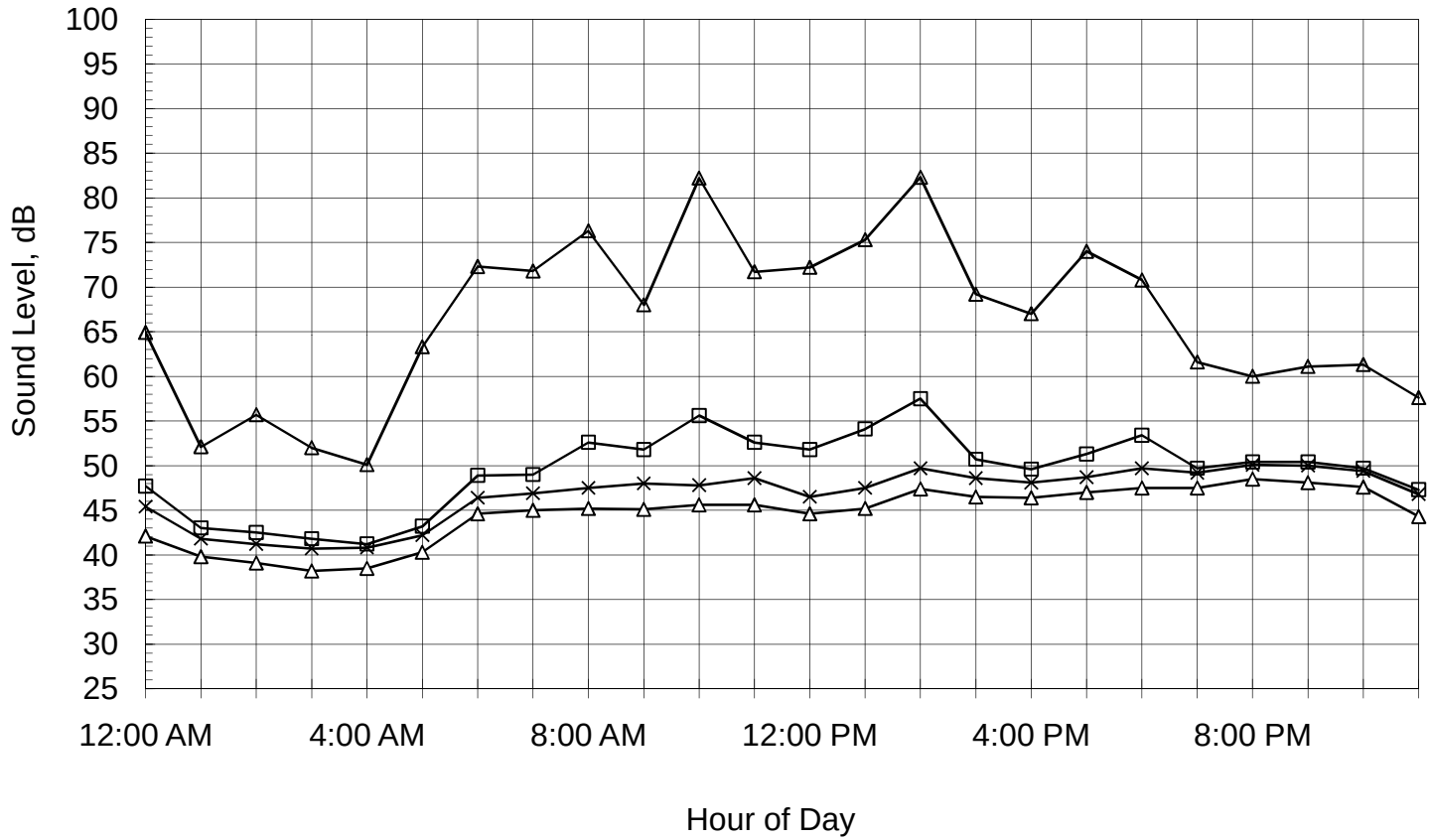


CNEL = 58.0 dB

Figure B-36: Measured Hourly Noise Levels

LVK Site 4

April 19, 2008

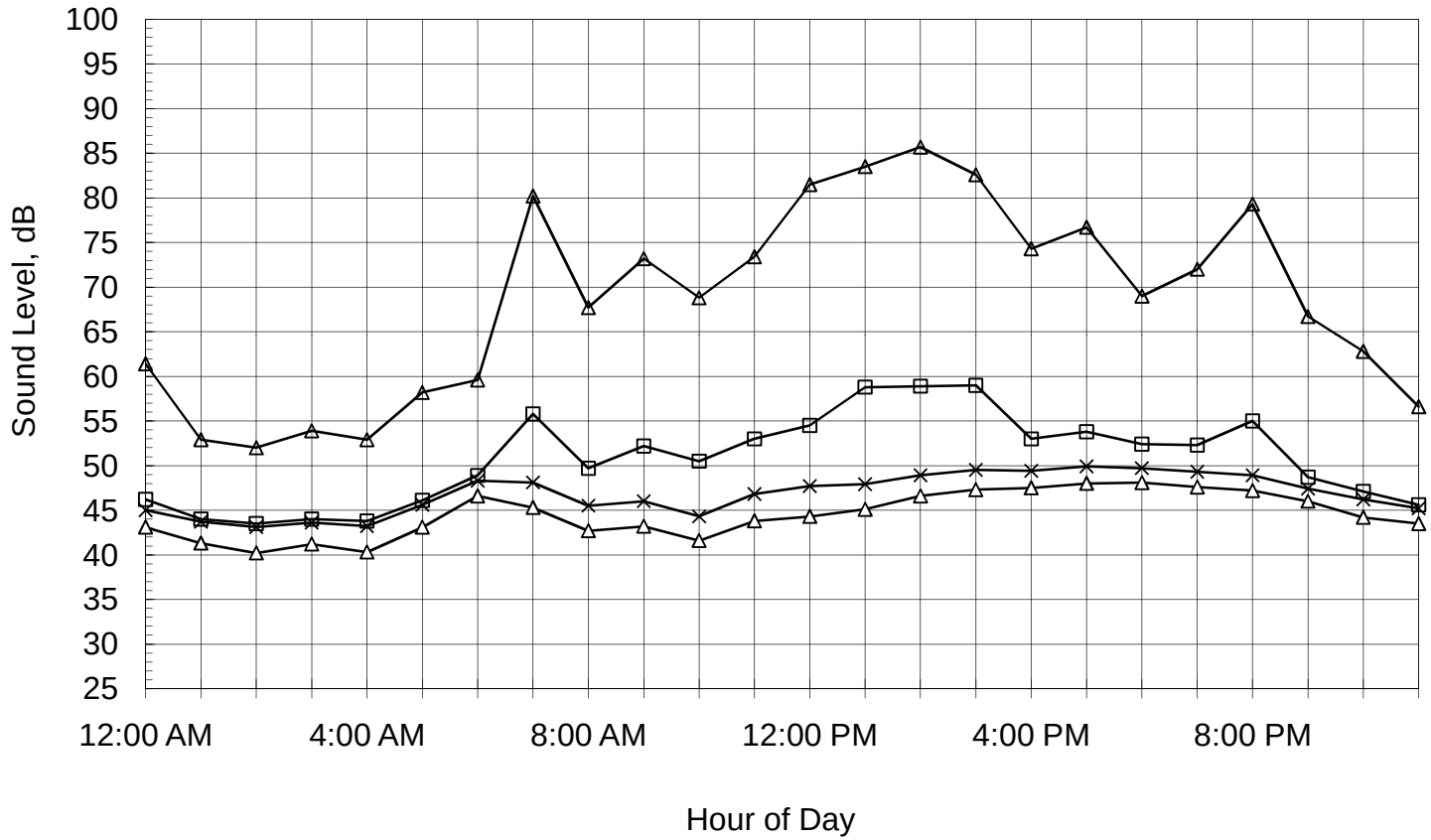


CNEL = 54.7 dB

Figure B-37: Measured Hourly Noise Levels

LVK Site 4

April 20, 2008

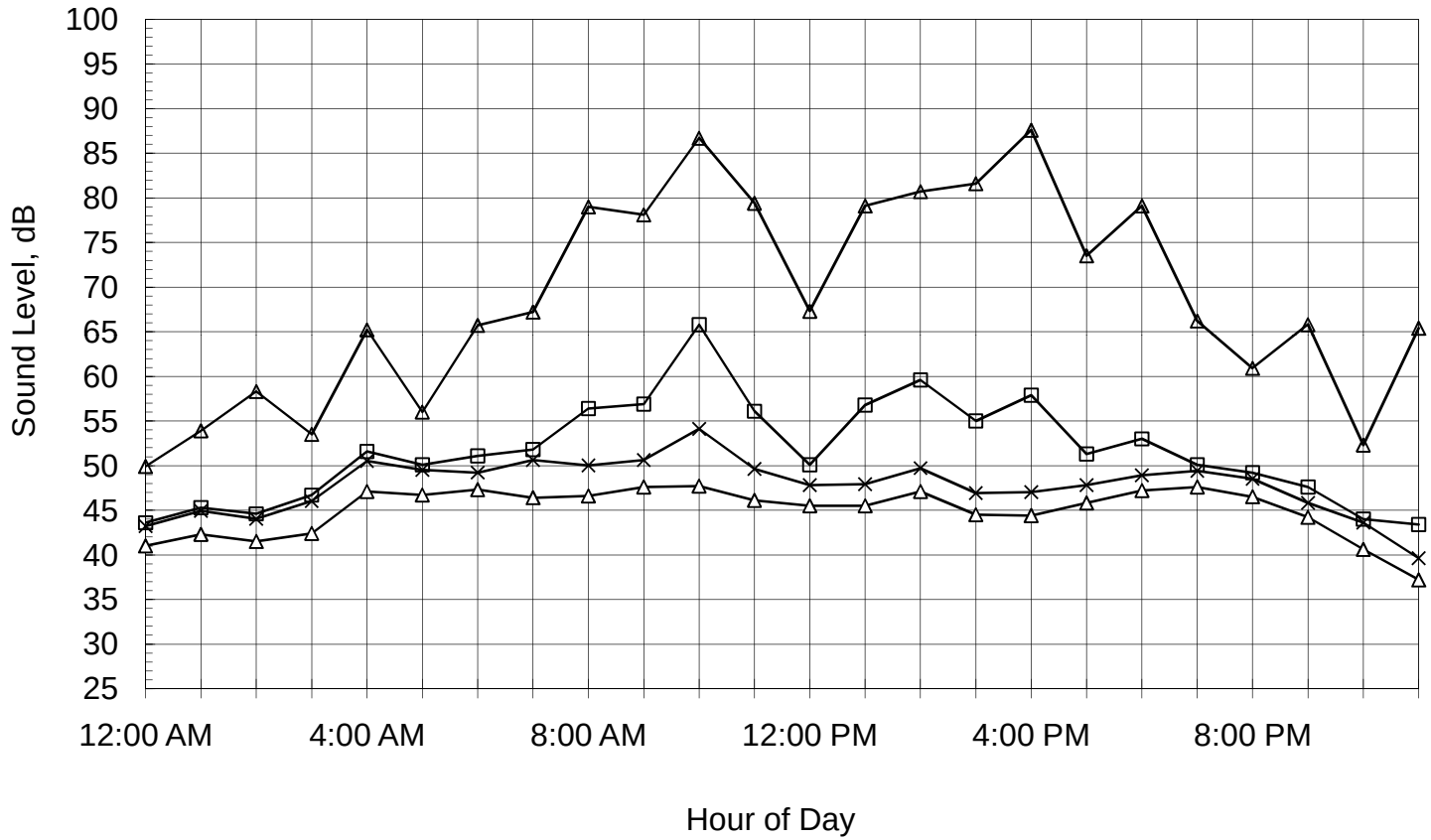


CNEL = 55.9 dB

Figure B-38: Measured Hourly Noise Levels

LVK Site 4

April 21, 2008

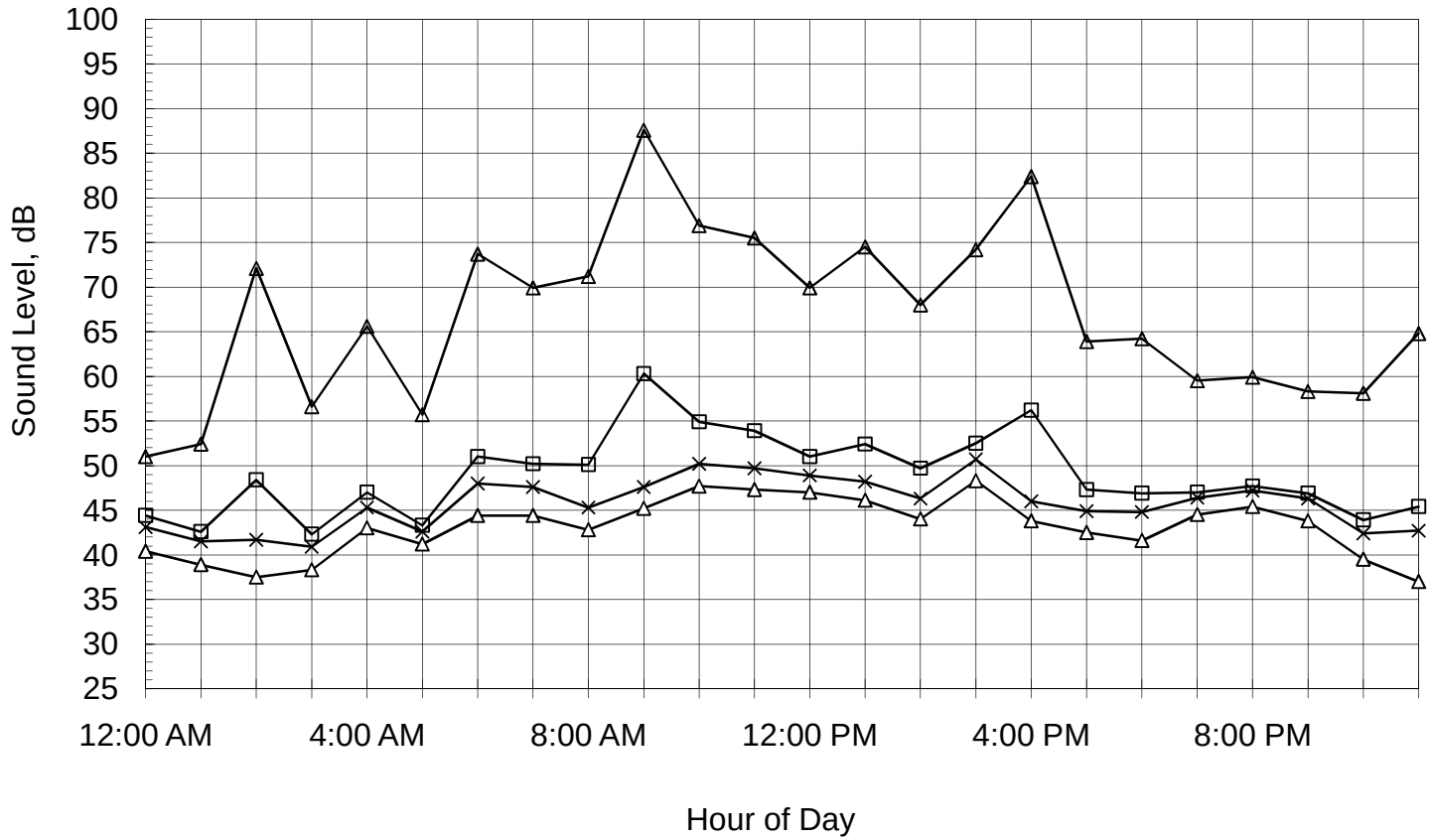


CNEL = 57.8 dB

Figure B-39: Measured Hourly Noise Levels

LVK Site 4

April 22, 2008

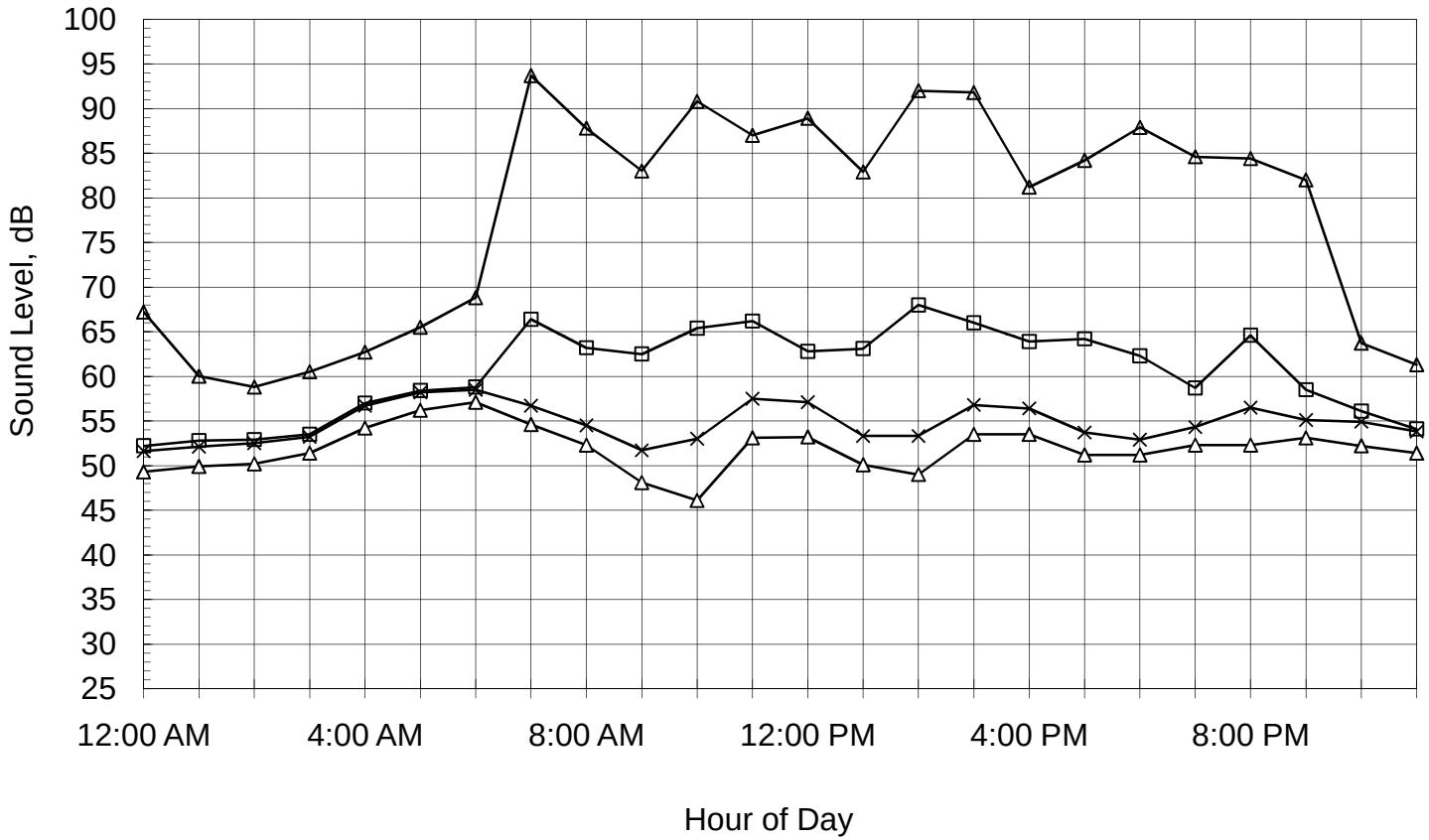


CNEL = 54.8 dB

Figure B-40: Measured Hourly Noise Levels

LVK Site 5

April 16, 2008

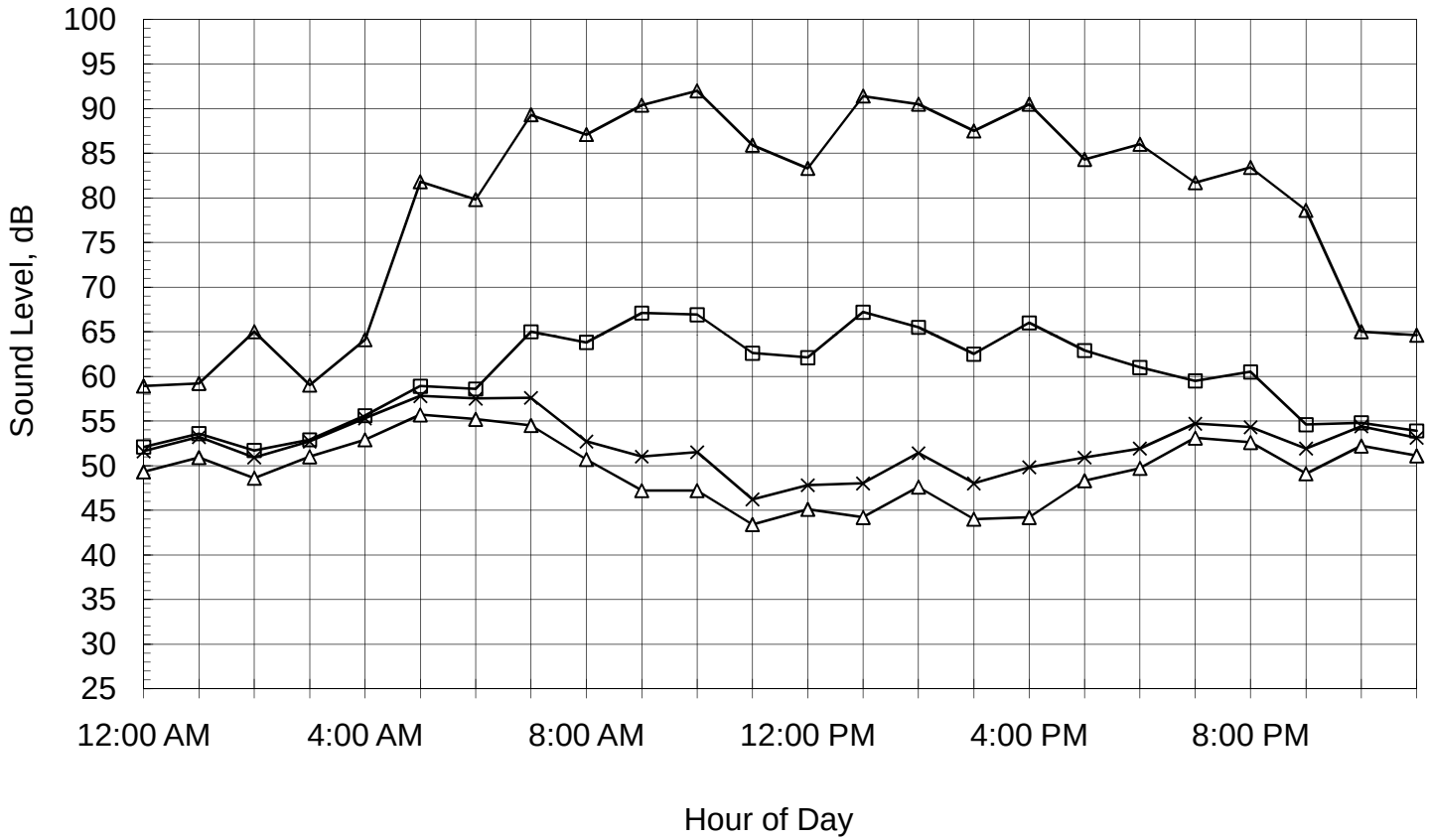


CNEL = 65.4 dB

Figure B-41: Measured Hourly Noise Levels

LVK Site 5

April 17, 2008

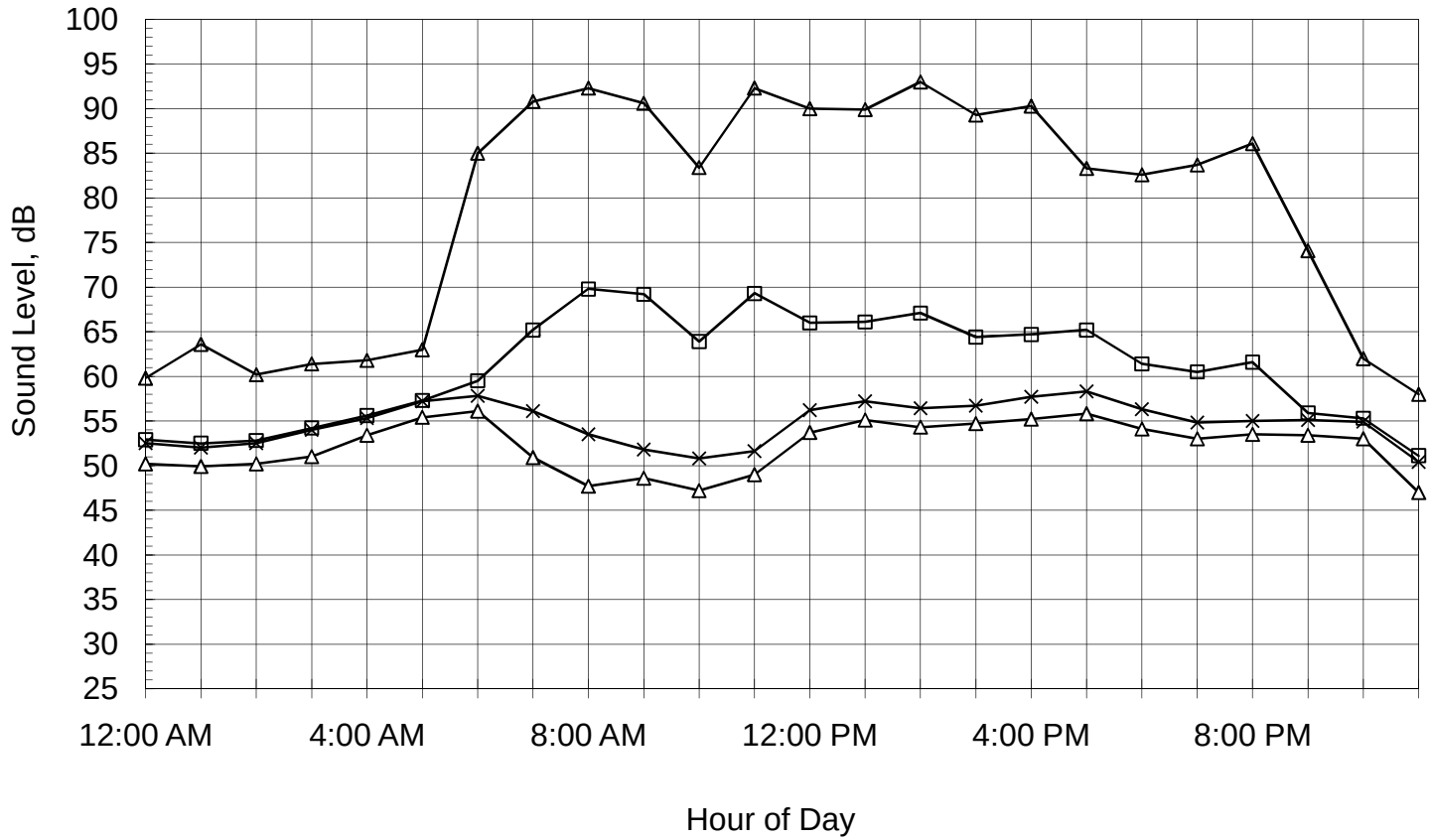


CNEL = 65.0 dB

Figure B-42: Measured Hourly Noise Levels

LVK Site 5

April 18, 2008

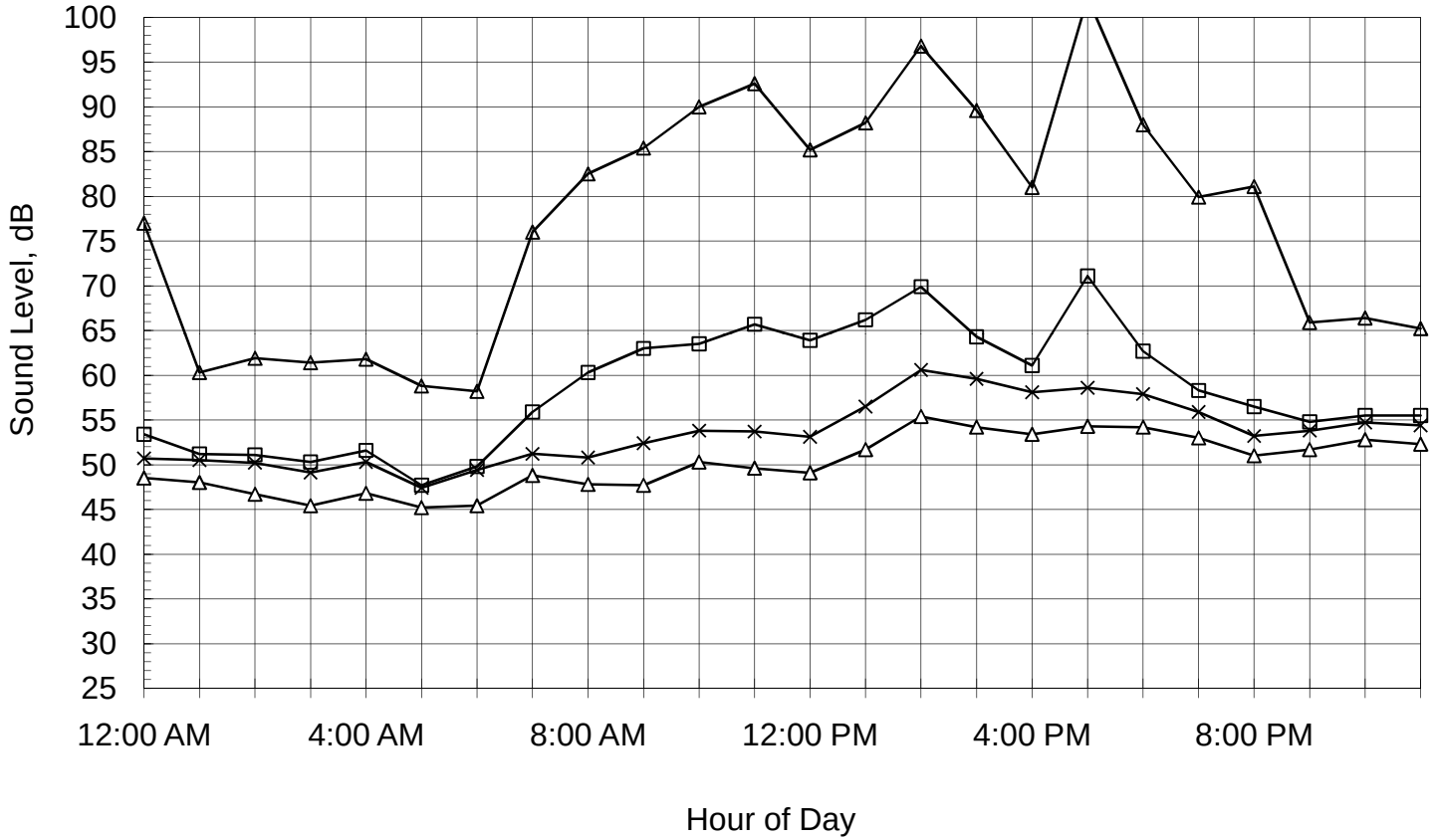


CNEL = 66.0 dB

Figure B-43: Measured Hourly Noise Levels

LVK Site 5

April 19, 2008

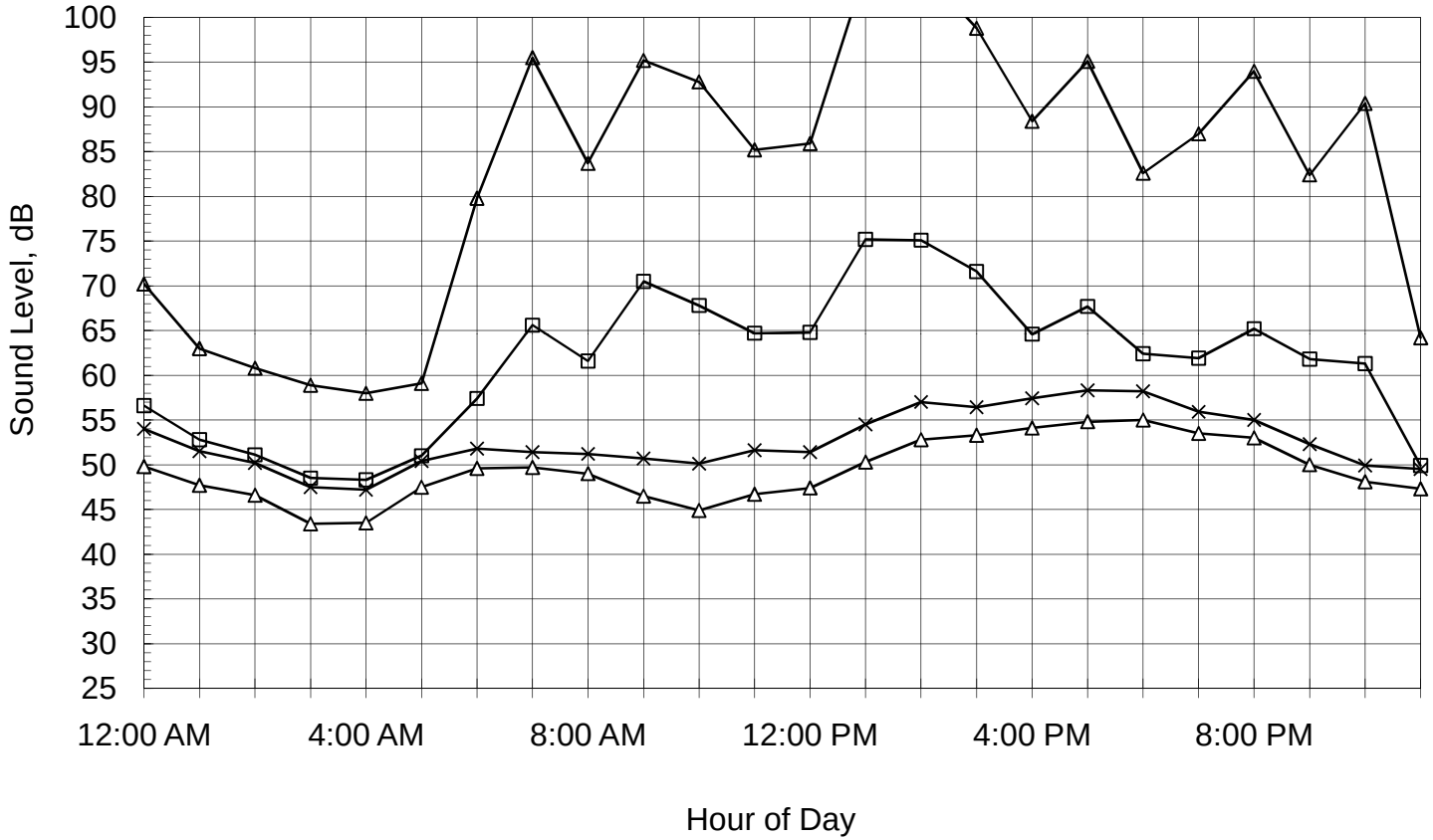


CNEL = 64.3 dB

Figure B-44: Measured Hourly Noise Levels

LVK Site 5

April 20, 2008

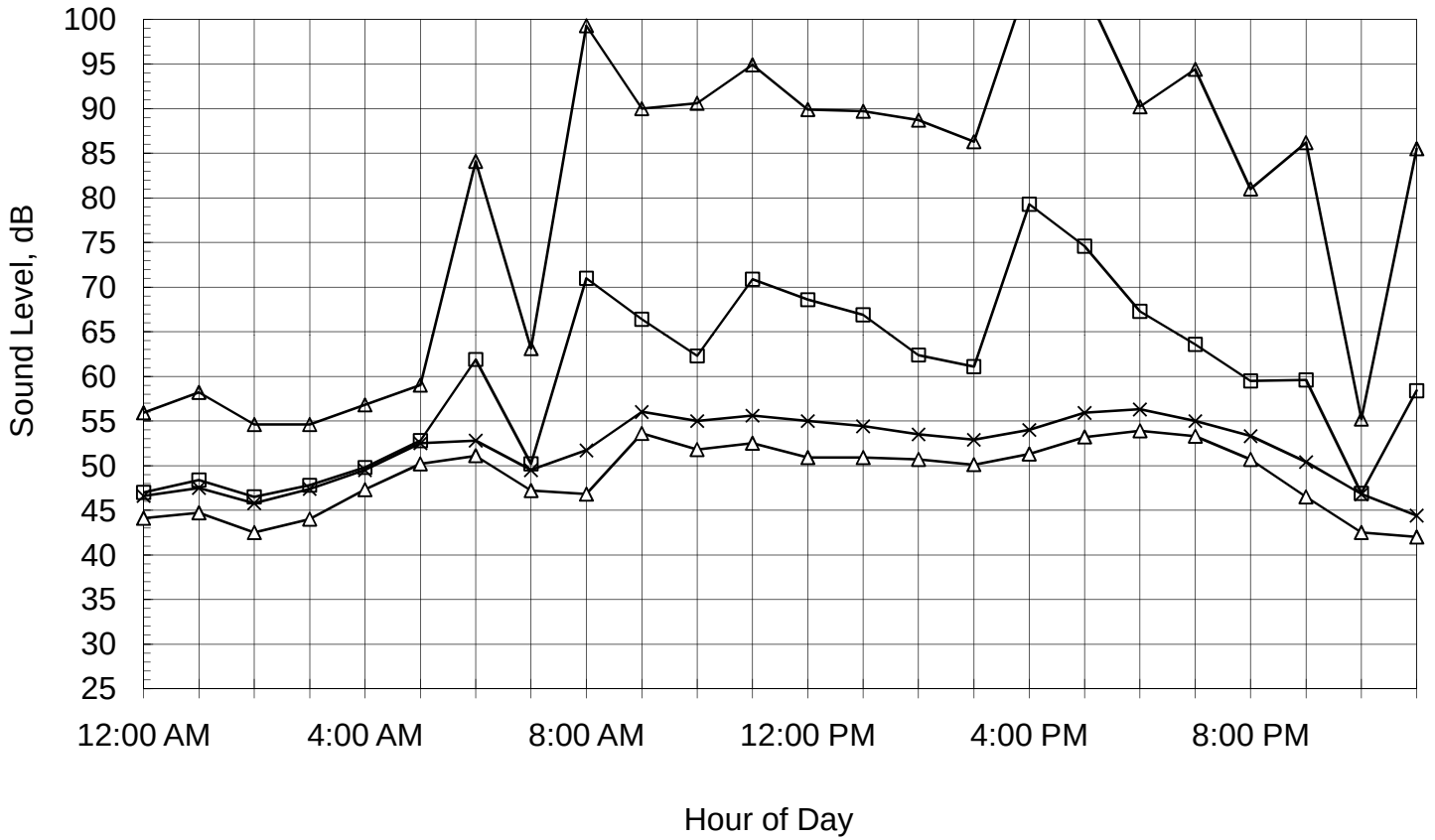


CNEL = 68.5 dB

Figure B-45: Measured Hourly Noise Levels

LVK Site 5

April 21, 2008

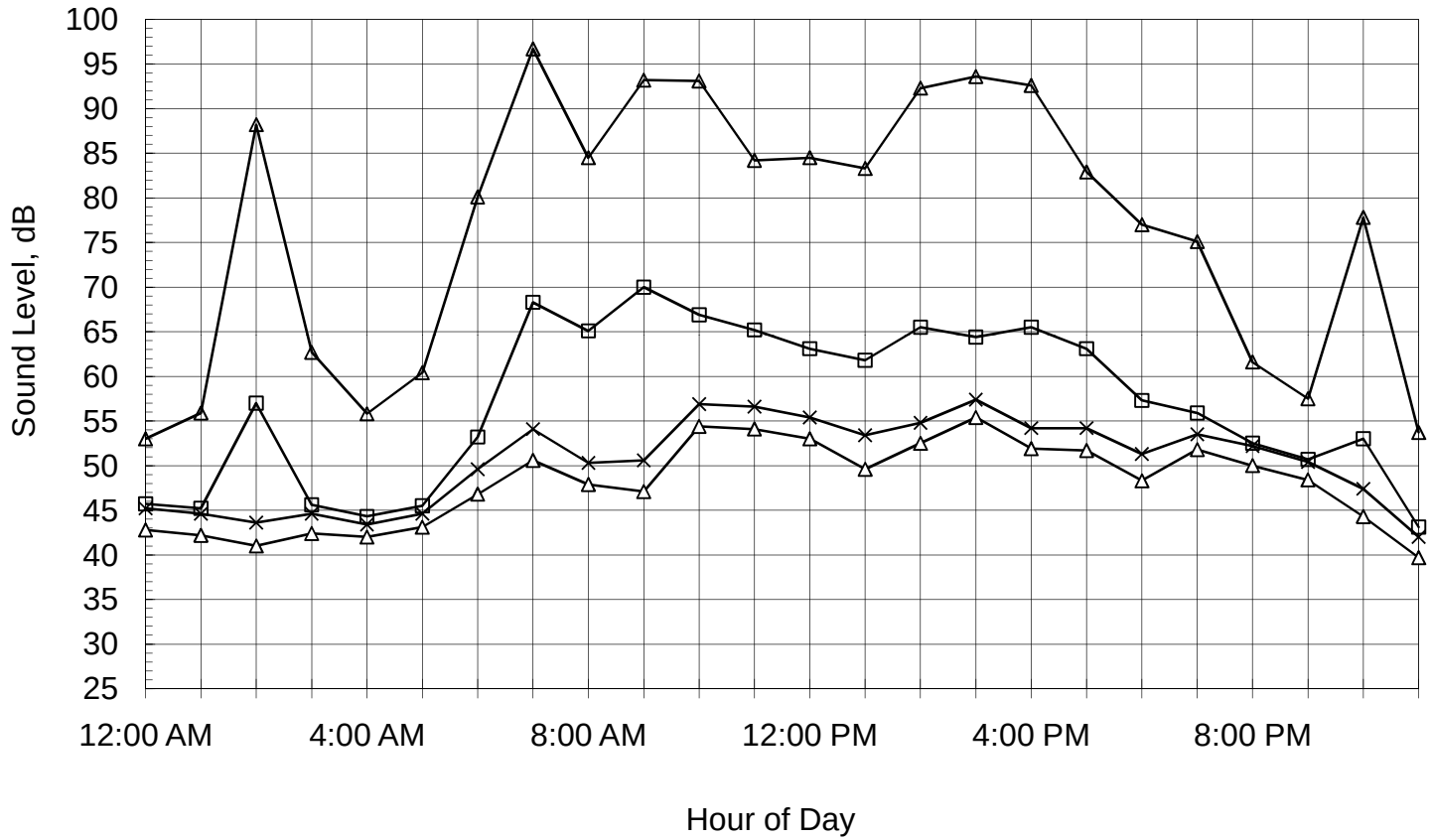


CNEL = 69.3 dB

Figure B-46: Measured Hourly Noise Levels

LVK Site 5

April 22, 2008

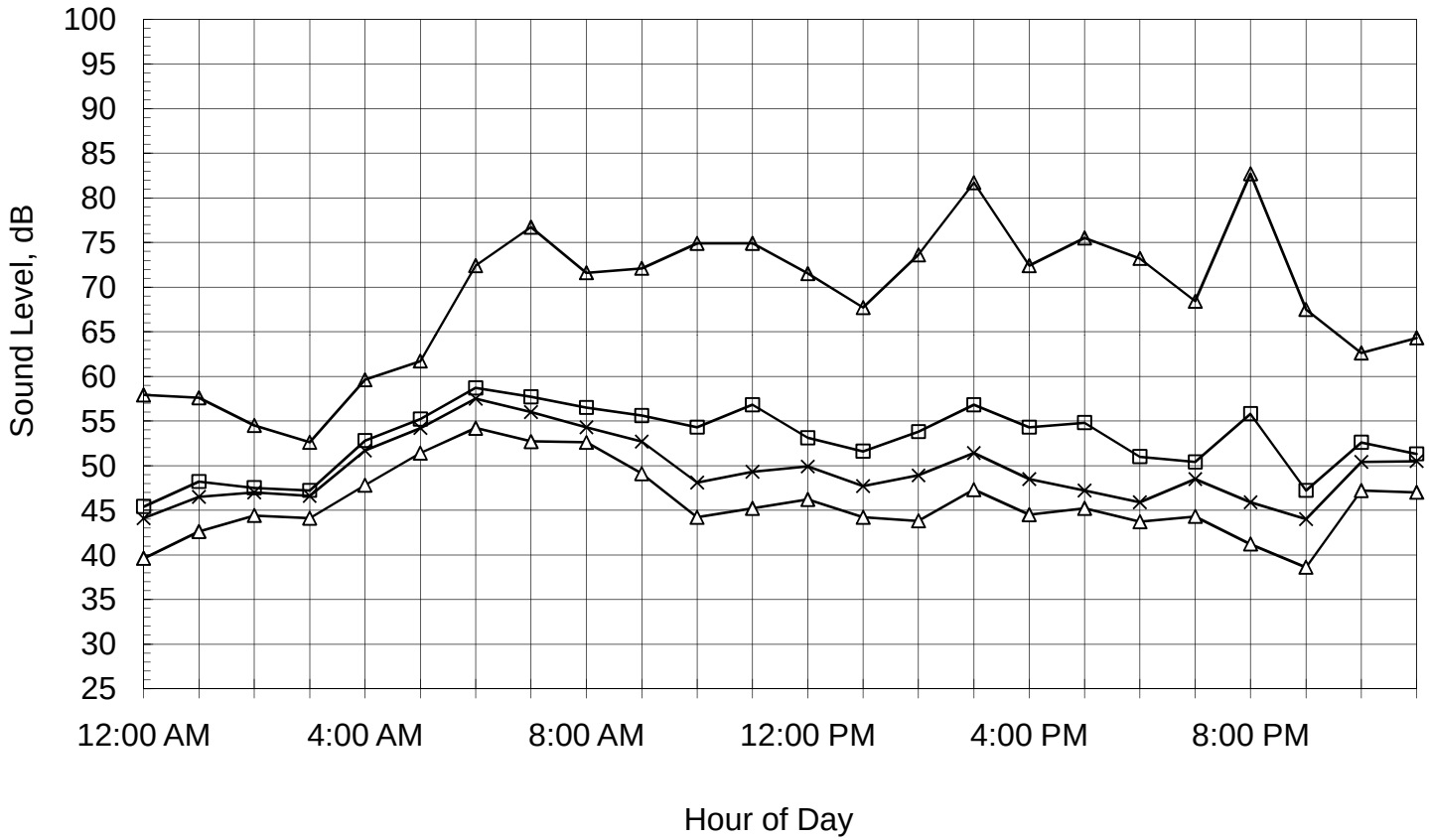


CNEL = 63.8 dB

Figure B-47: Measured Hourly Noise Levels

LVK Site 9

April 16, 2008

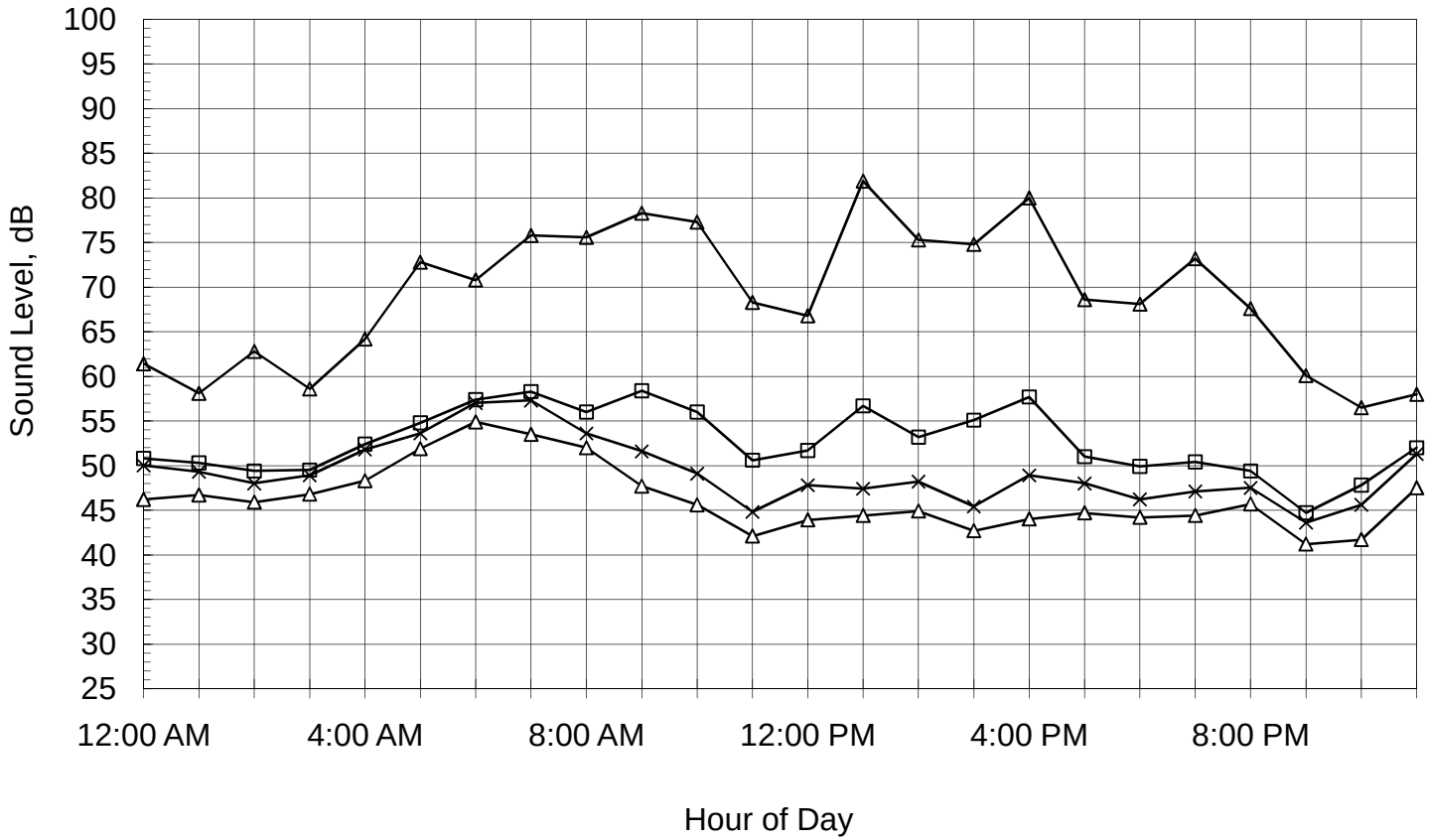


CNEL = 59.9 dB

Figure B-48: Measured Hourly Noise Levels

LVK Site 9

April 17, 2008

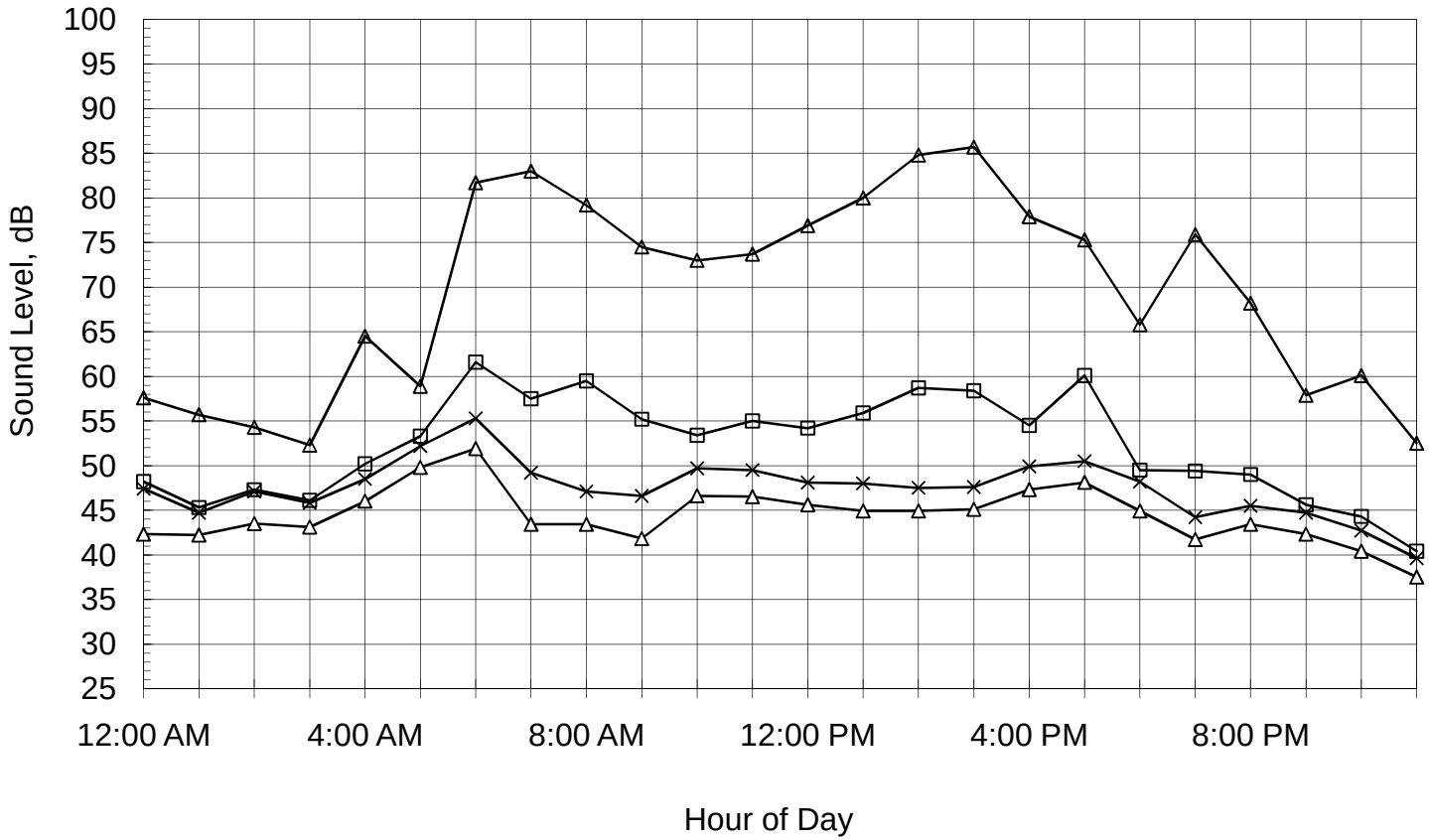


CNEL = 59.5 dB

Figure B-49: Measured Hourly Noise Levels

LVK Site 9

April 18, 2008

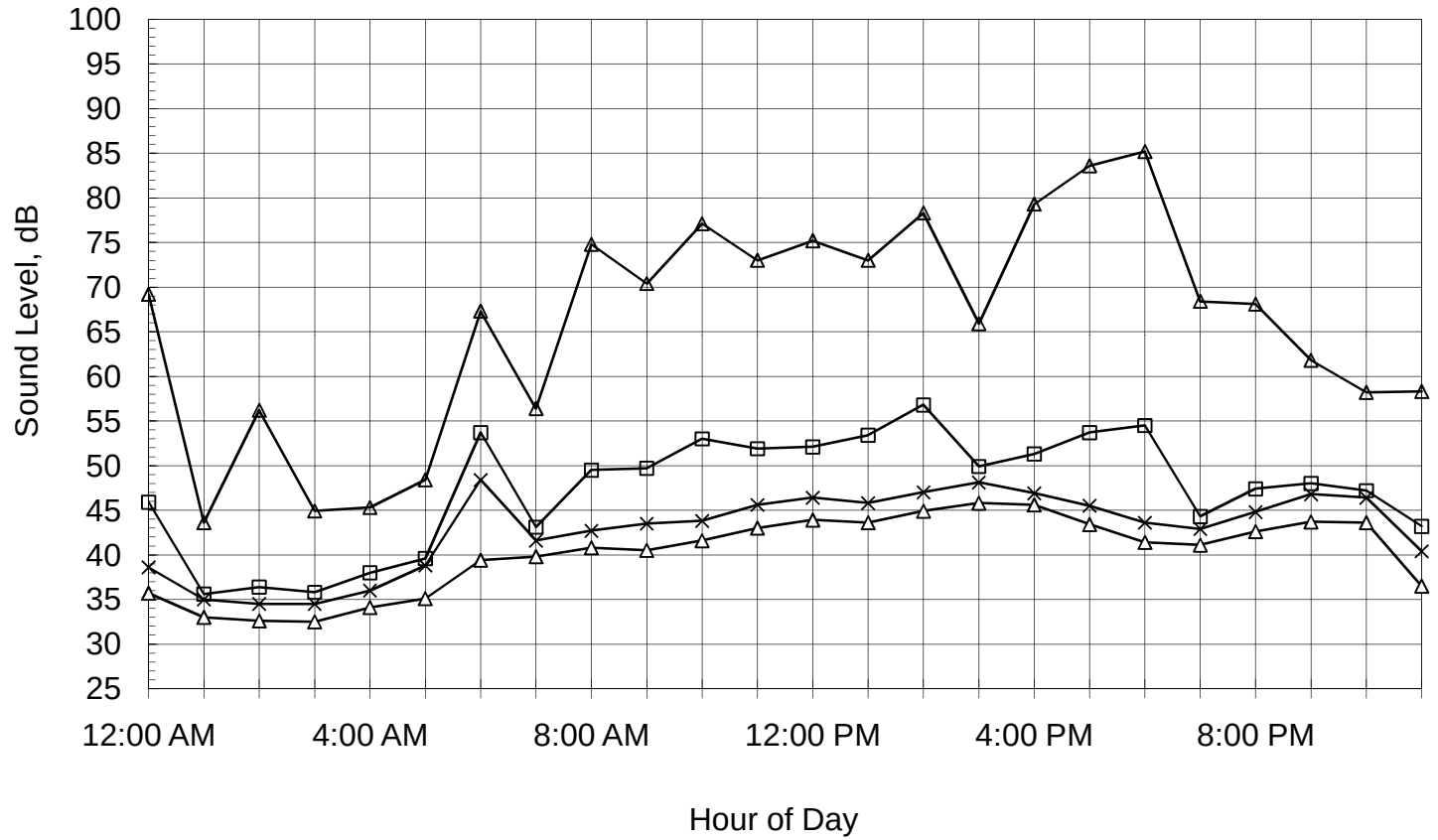


CNEL = 60.4 dB

Figure B-50: Measured Hourly Noise Levels

LVK Site 9

April 19, 2008

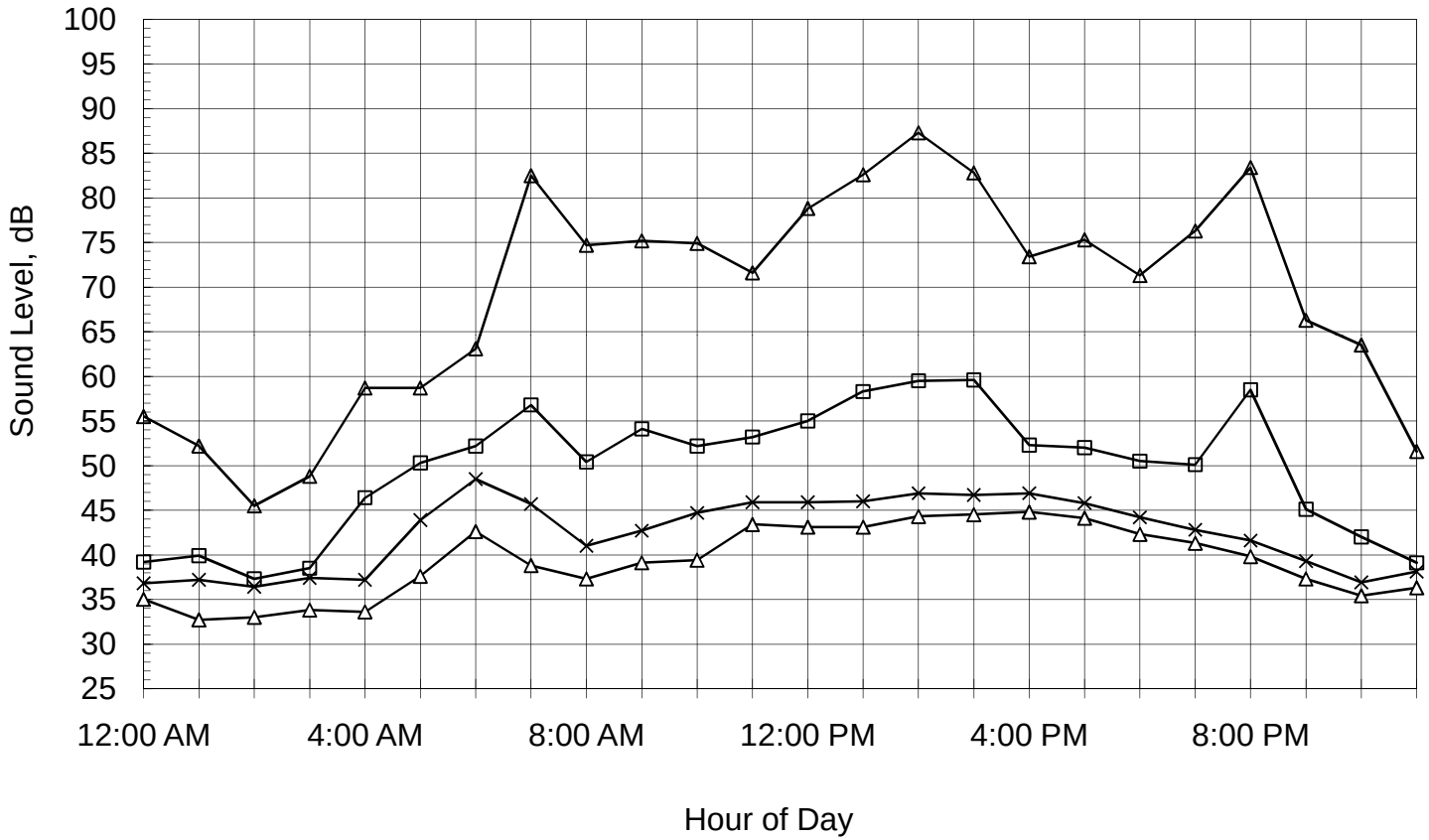


CNEL = 54.2 dB

Figure B-51: Measured Hourly Noise Levels

LVK Site 9

April 20, 2008

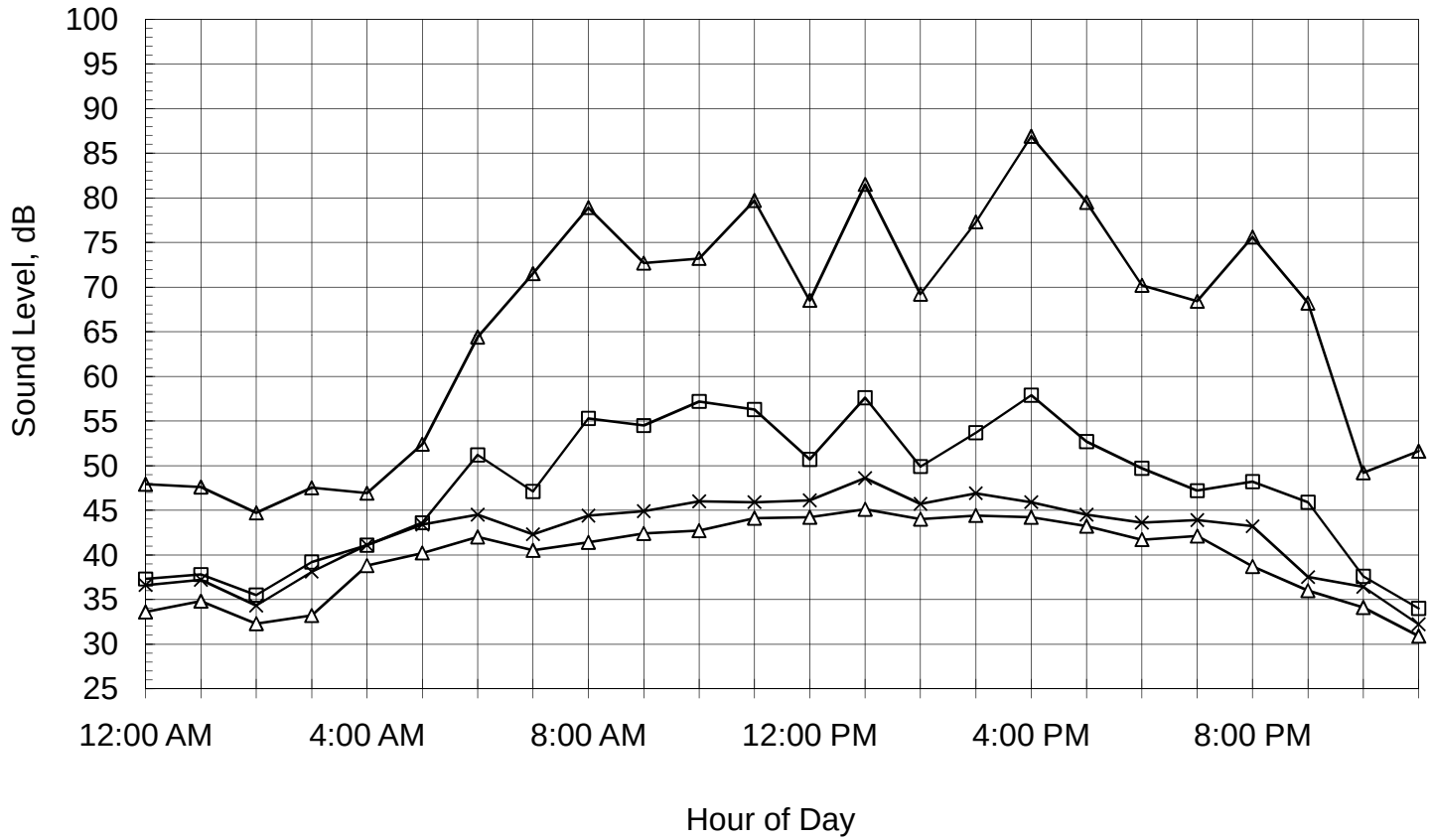


CNEL = 56.5 dB

Figure B-52: Measured Hourly Noise Levels

LVK Site 9

April 21, 2008

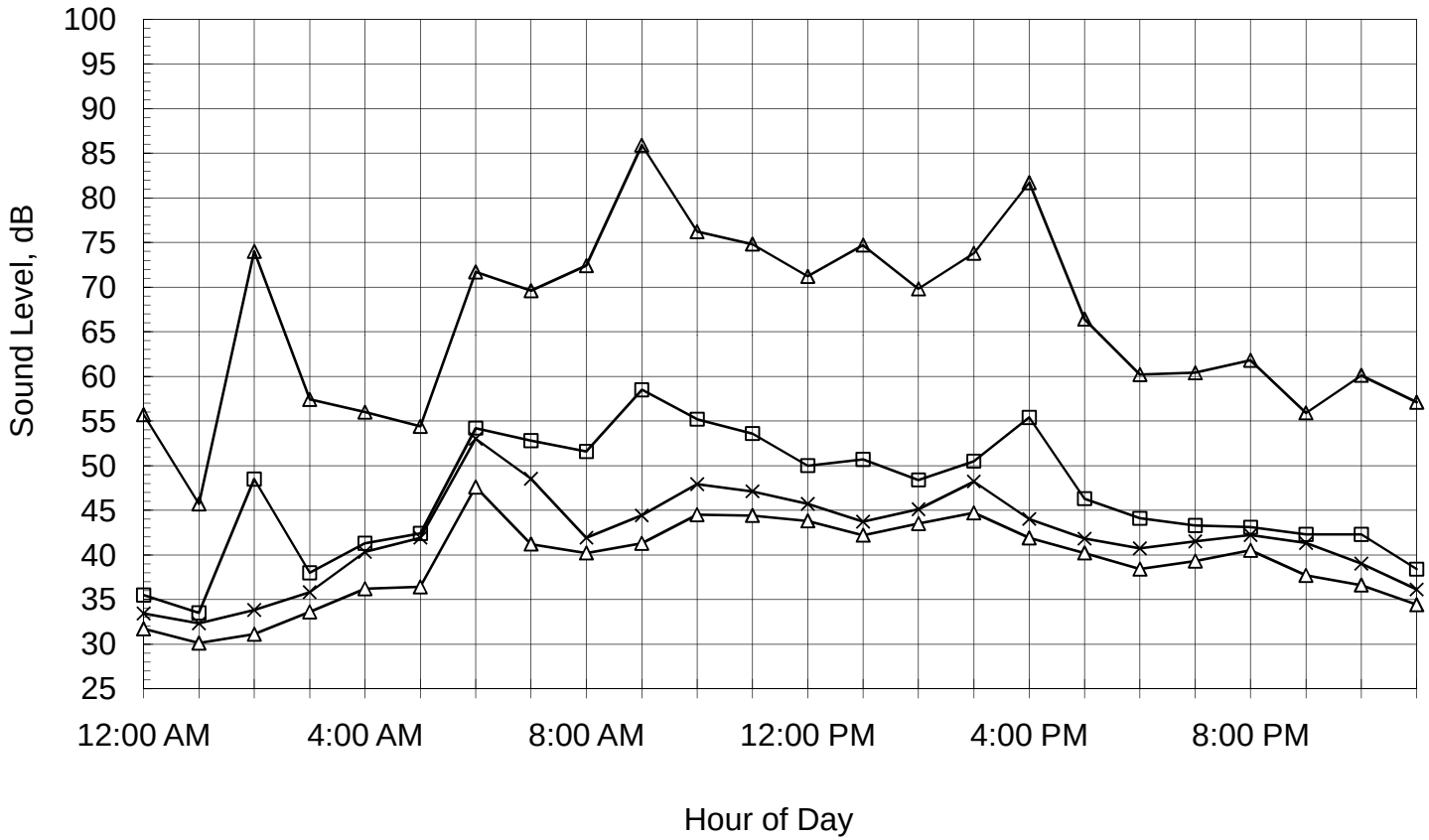


CNEL = 54.0 dB

Figure B-53: Measured Hourly Noise Levels

LVK Site 9

April 22, 2008

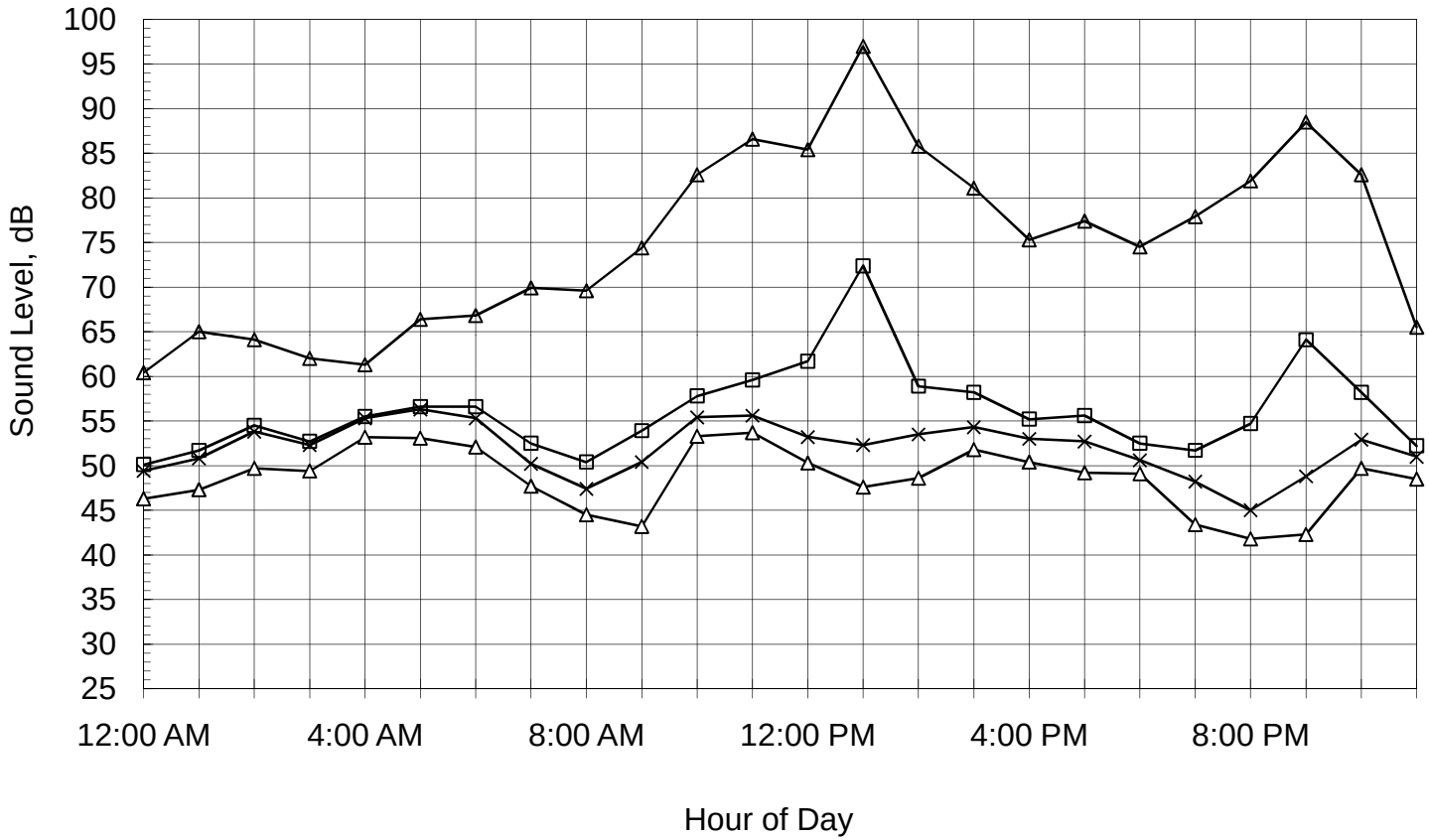


CNEL = 54.4 dB

Figure B-54: Measured Hourly Noise Levels

LVK Site 10

April 16, 2008

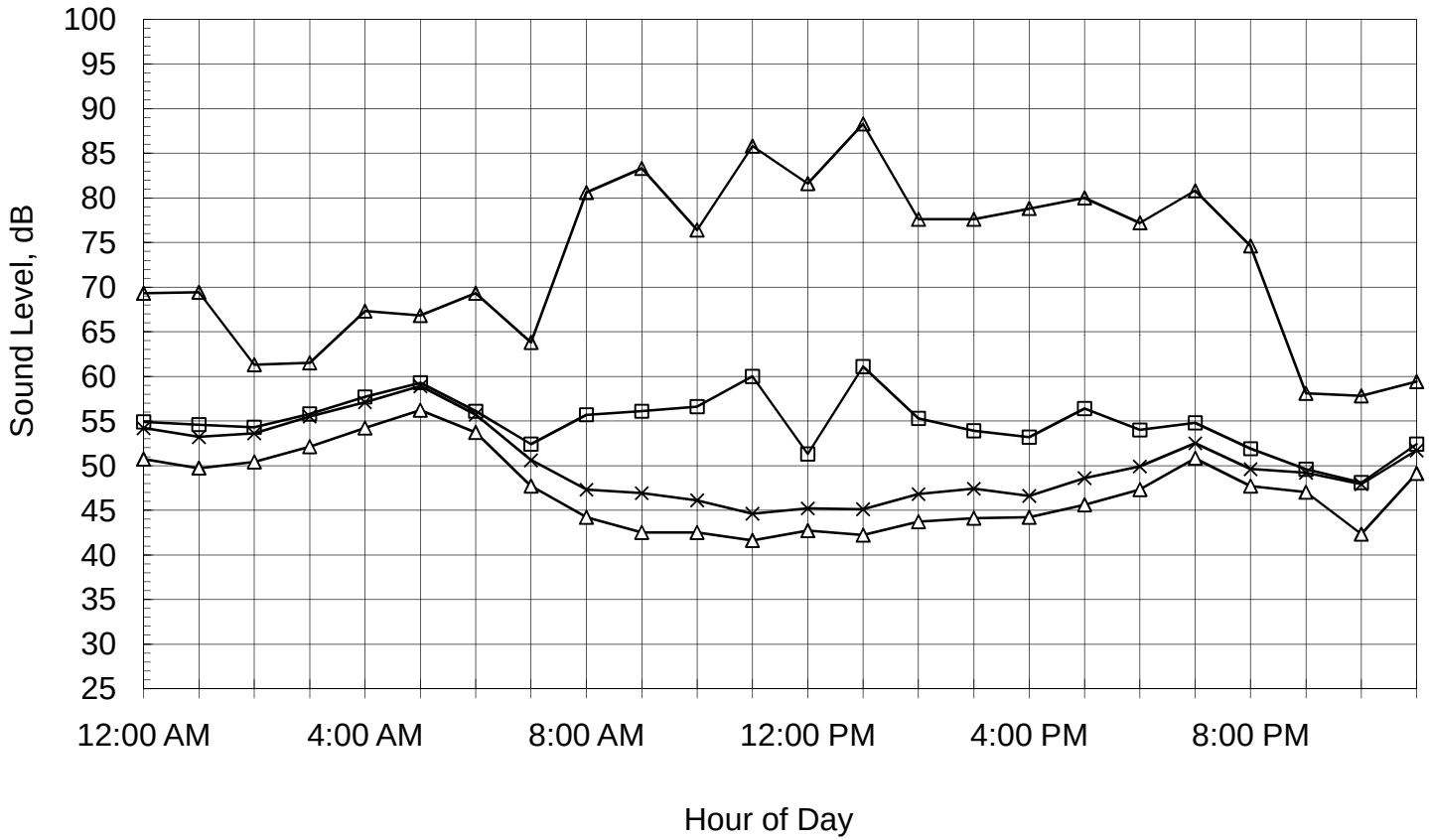


CNEL = 64.0 dB

Figure B-55: Measured Hourly Noise Levels

LVK Site 10

April 17, 2008

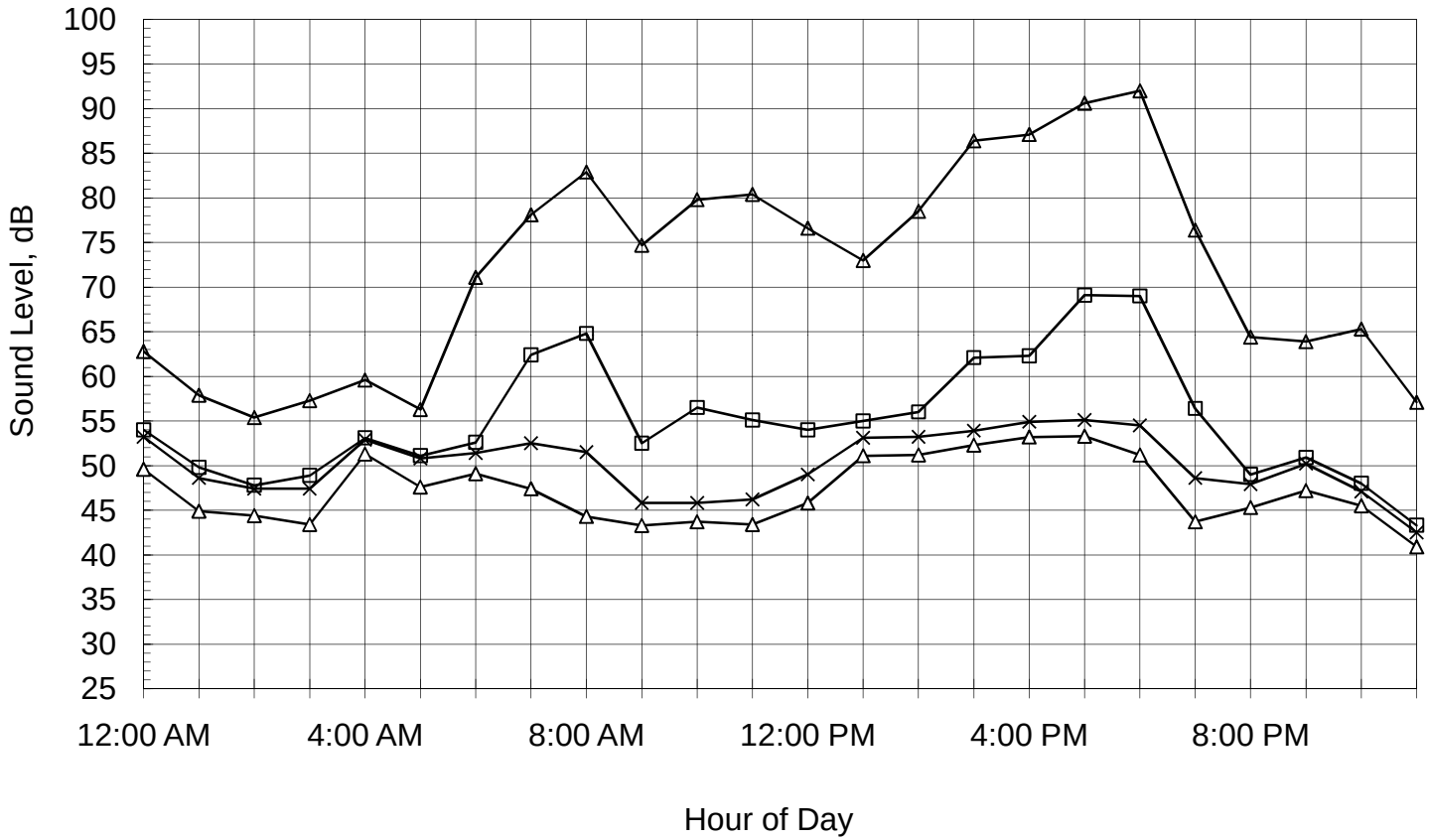


CNEL = 62.2 dB

Figure B-56: Measured Hourly Noise Levels

LVK Site 10

April 18, 2008

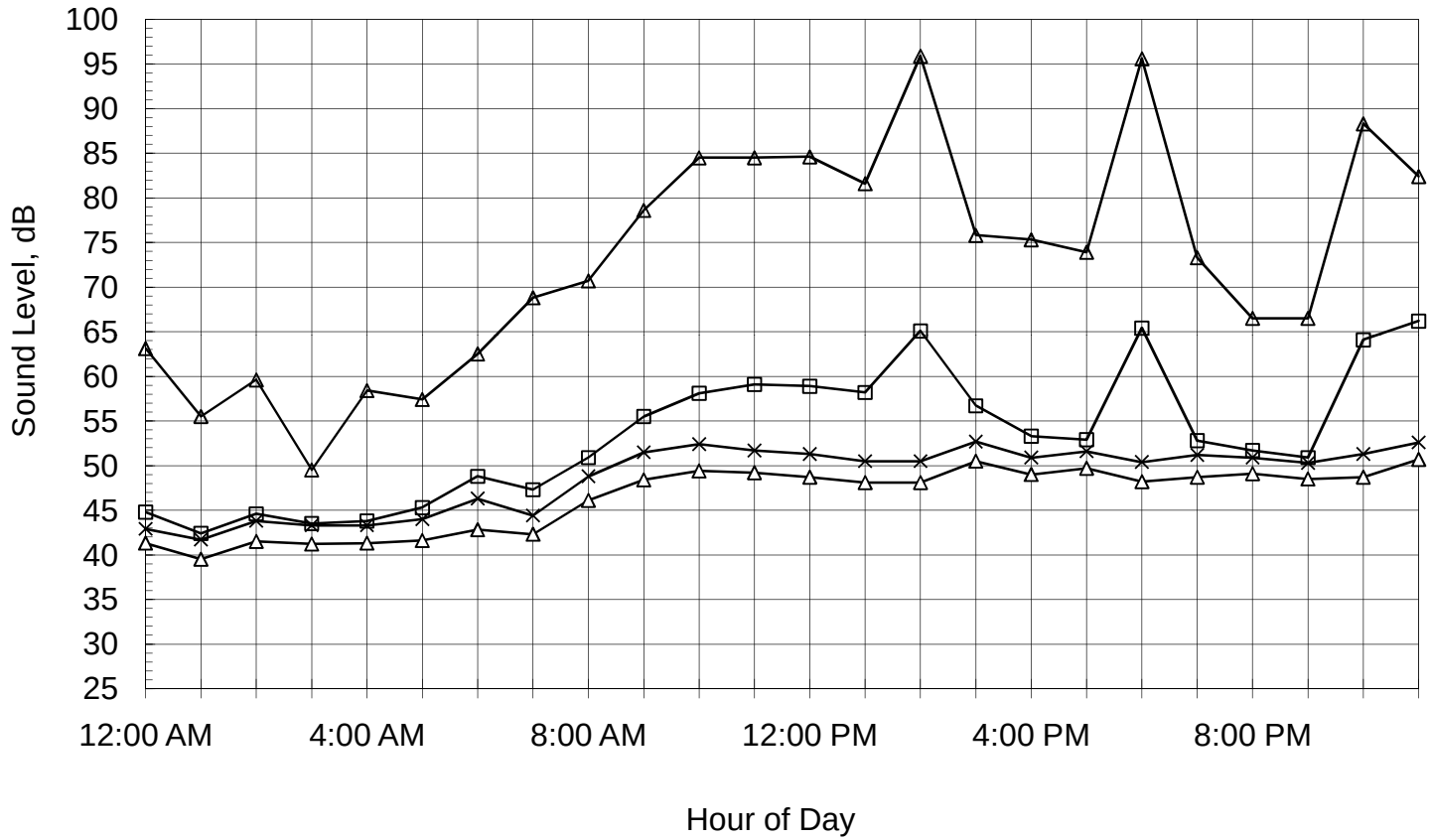


CNEL = 62.1 dB

Figure B-57: Measured Hourly Noise Levels

LVK Site 10

April 19, 2008

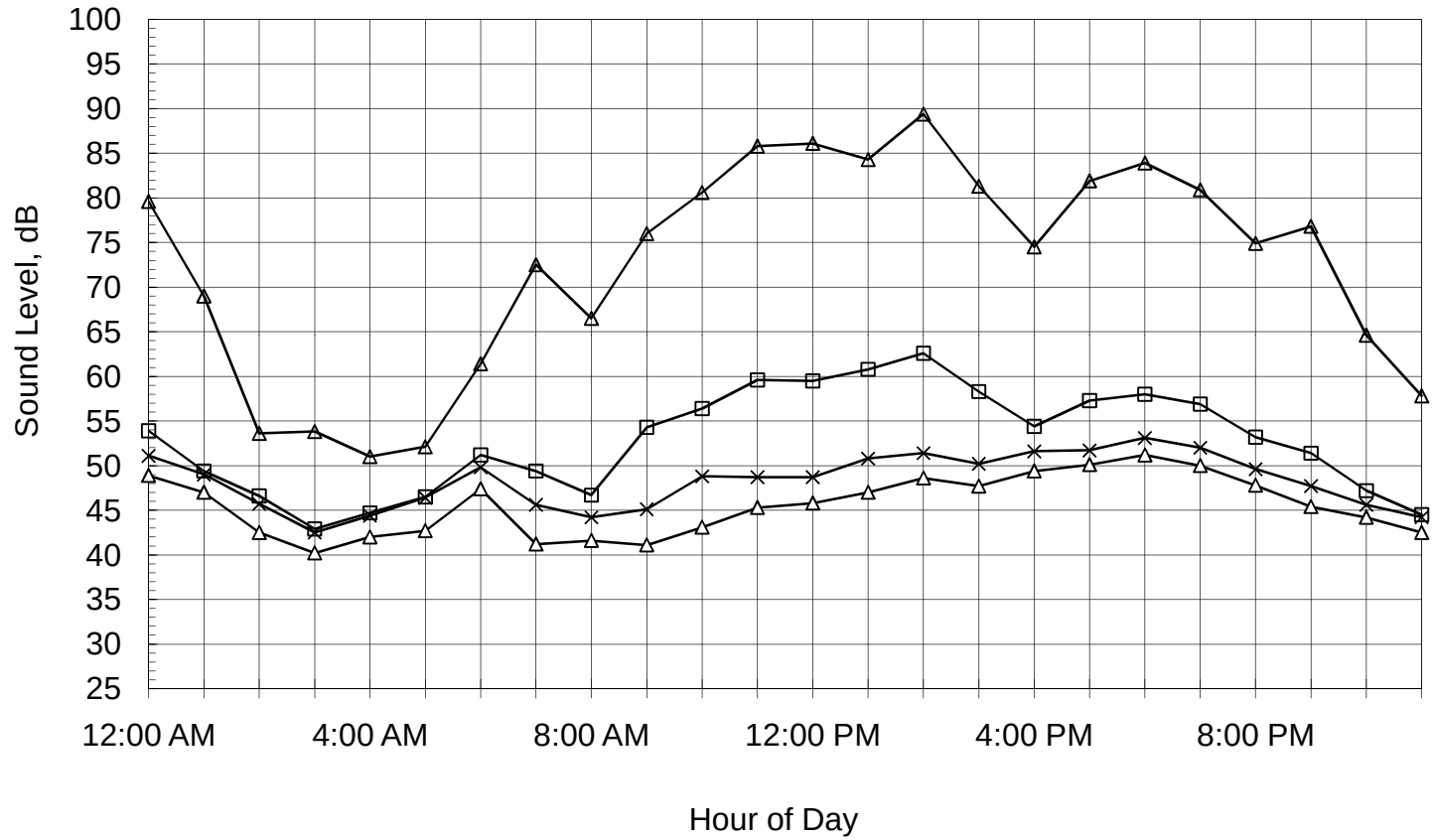


CNEL = 65.3 dB

Figure B-58: Measured Hourly Noise Levels

LVK Site 10

April 20, 2008

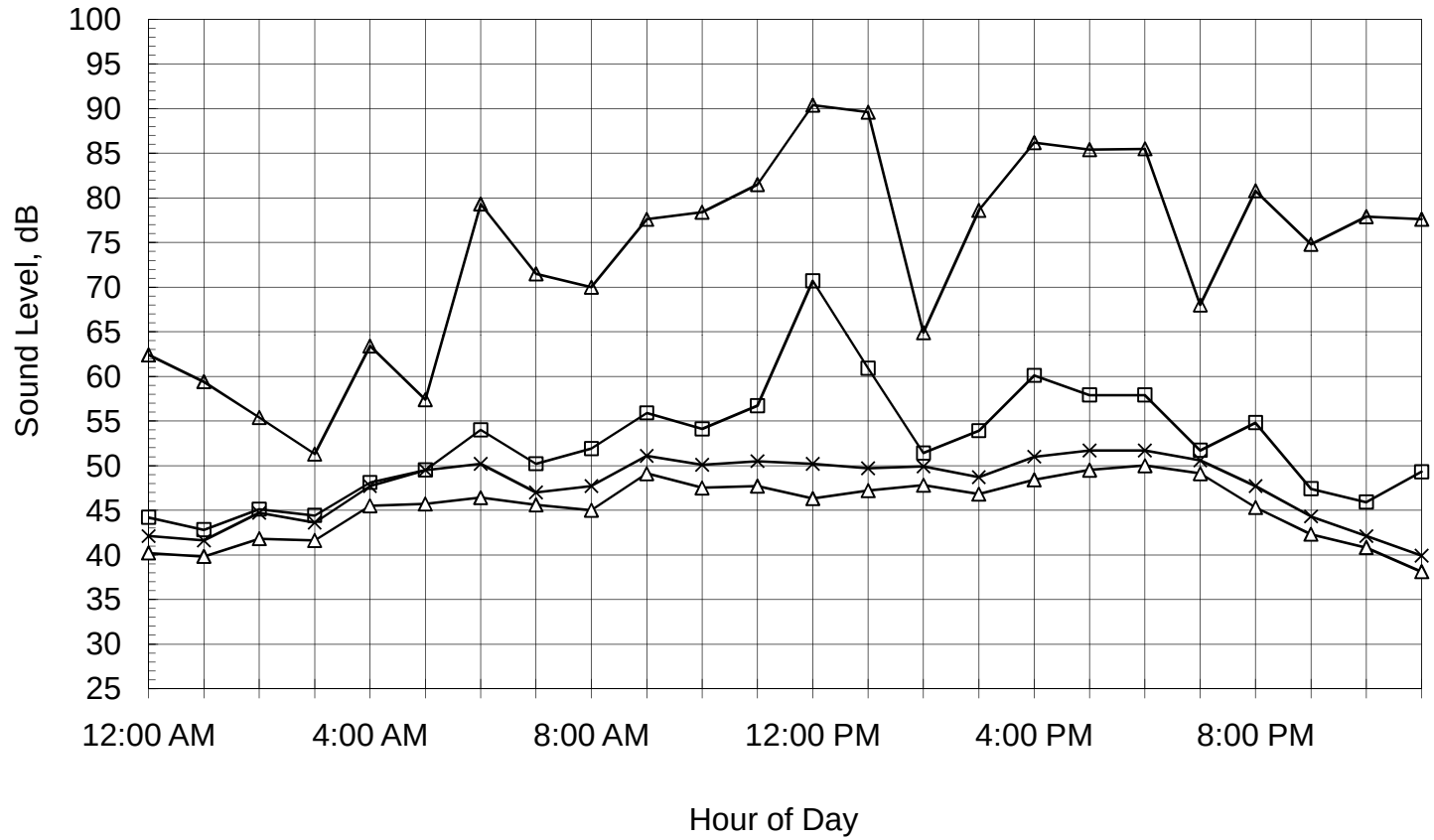


CNEL = 58.5 dB

Figure B-59: Measured Hourly Noise Levels

LVK Site 10

April 21, 2008

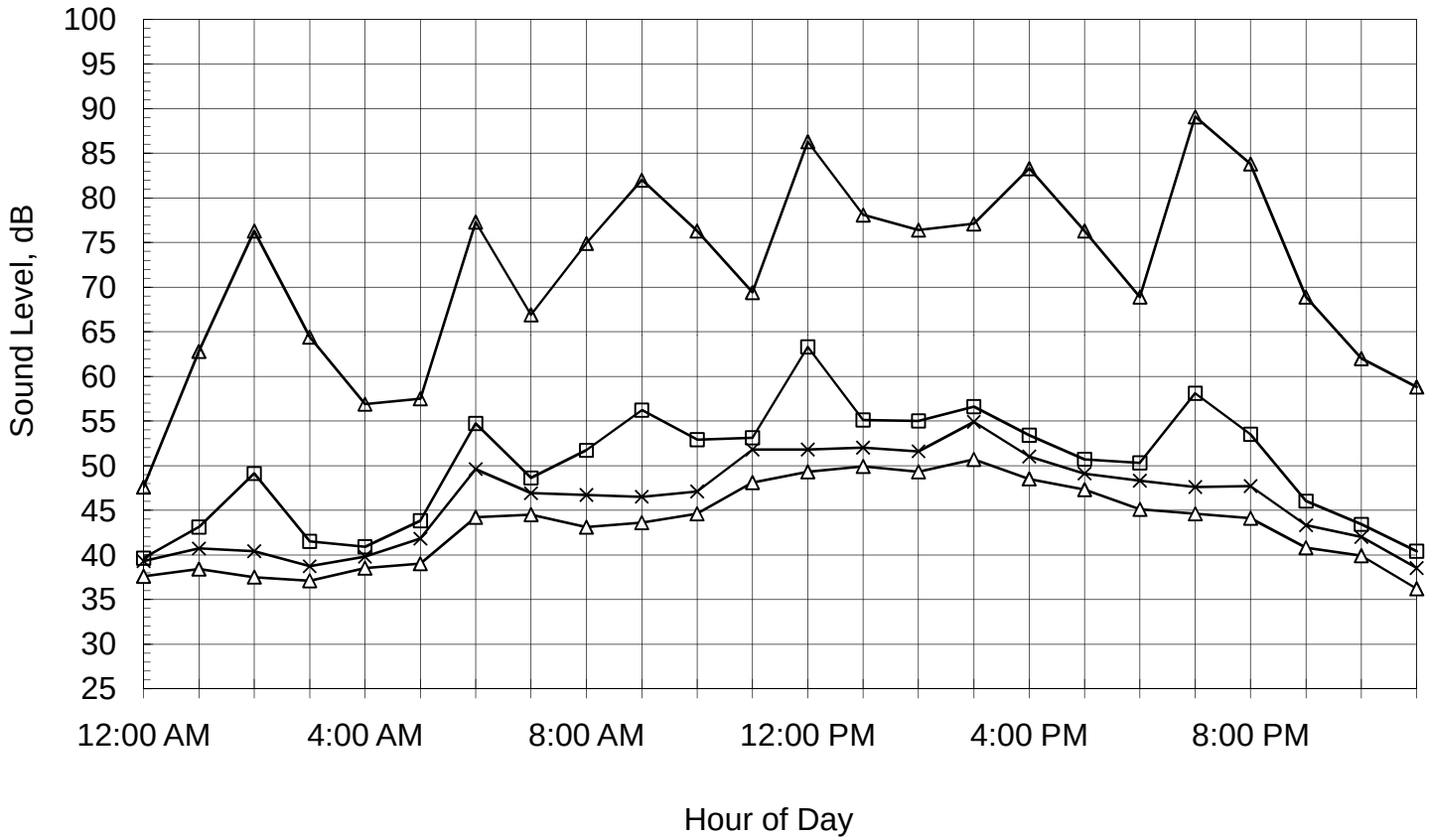


CNEL = 60.2 dB

Figure B-60: Measured Hourly Noise Levels

LVK Site 10

April 22, 2008

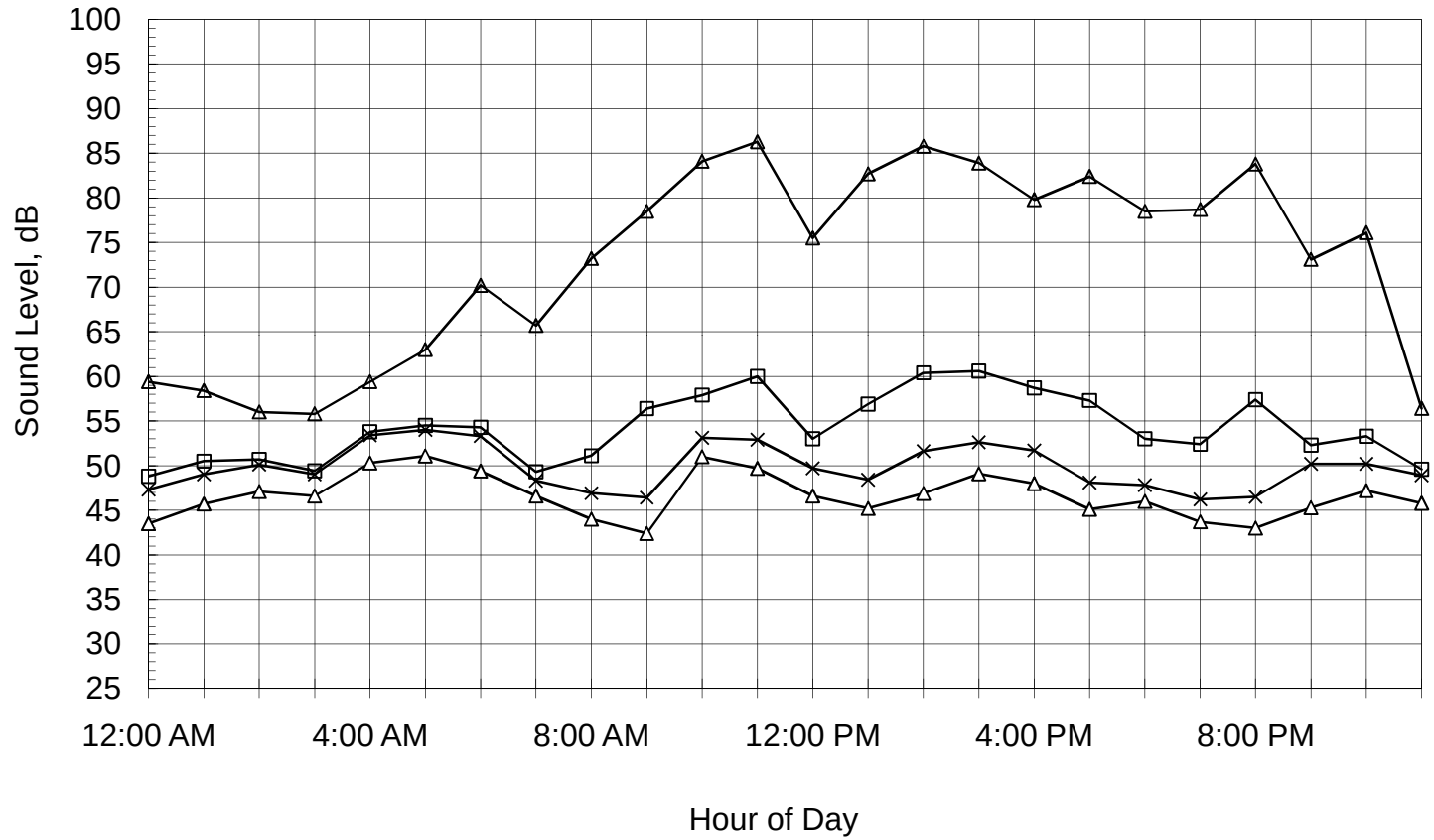


CNEL = 57.1 dB

Figure B-61: Measured Hourly Noise Levels

LVK Site 11

April 16, 2008

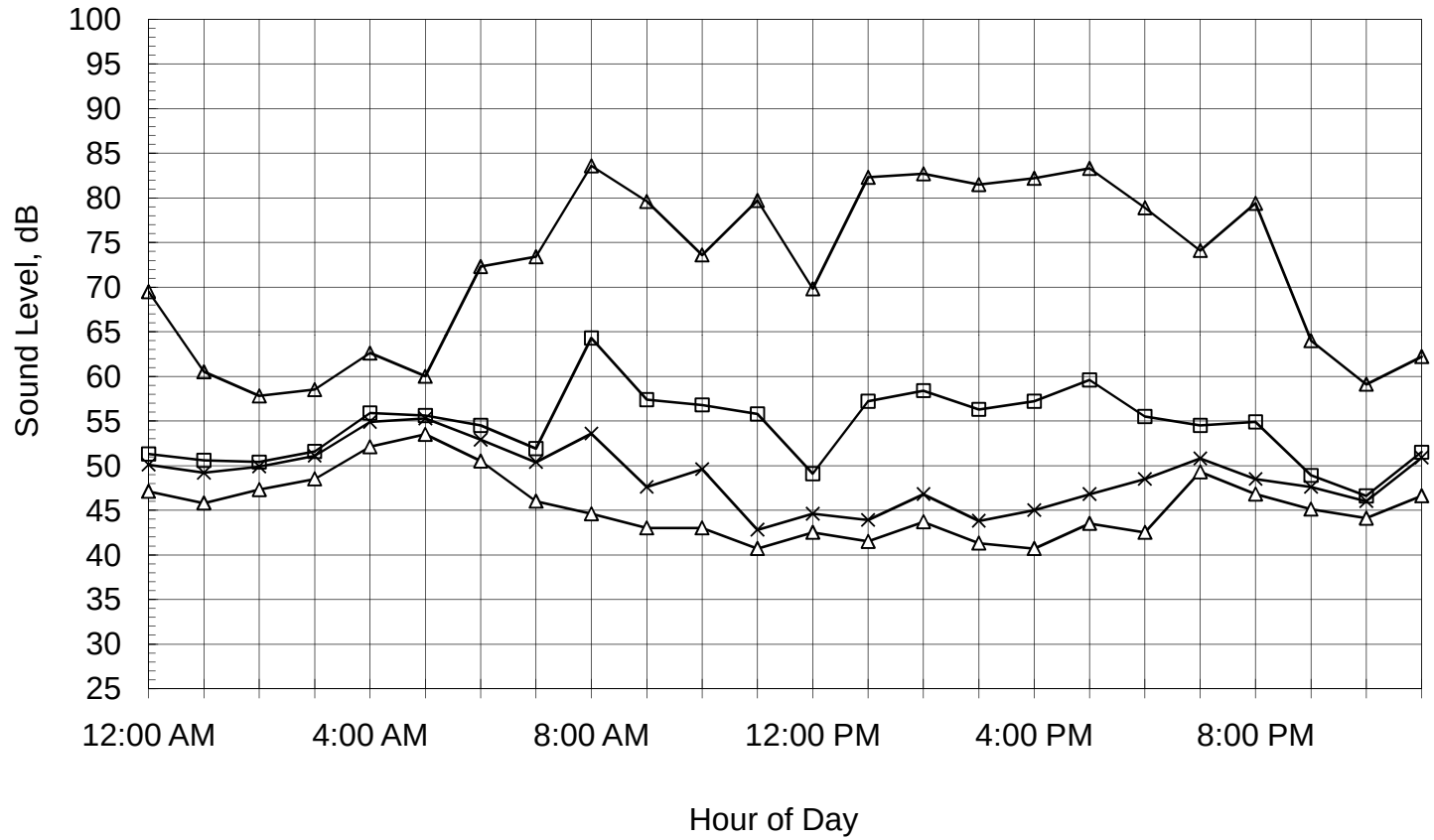


CNEL = 60.0 dB

Figure B-62: Measured Hourly Noise Levels

LVK Site 11

April 17, 2008

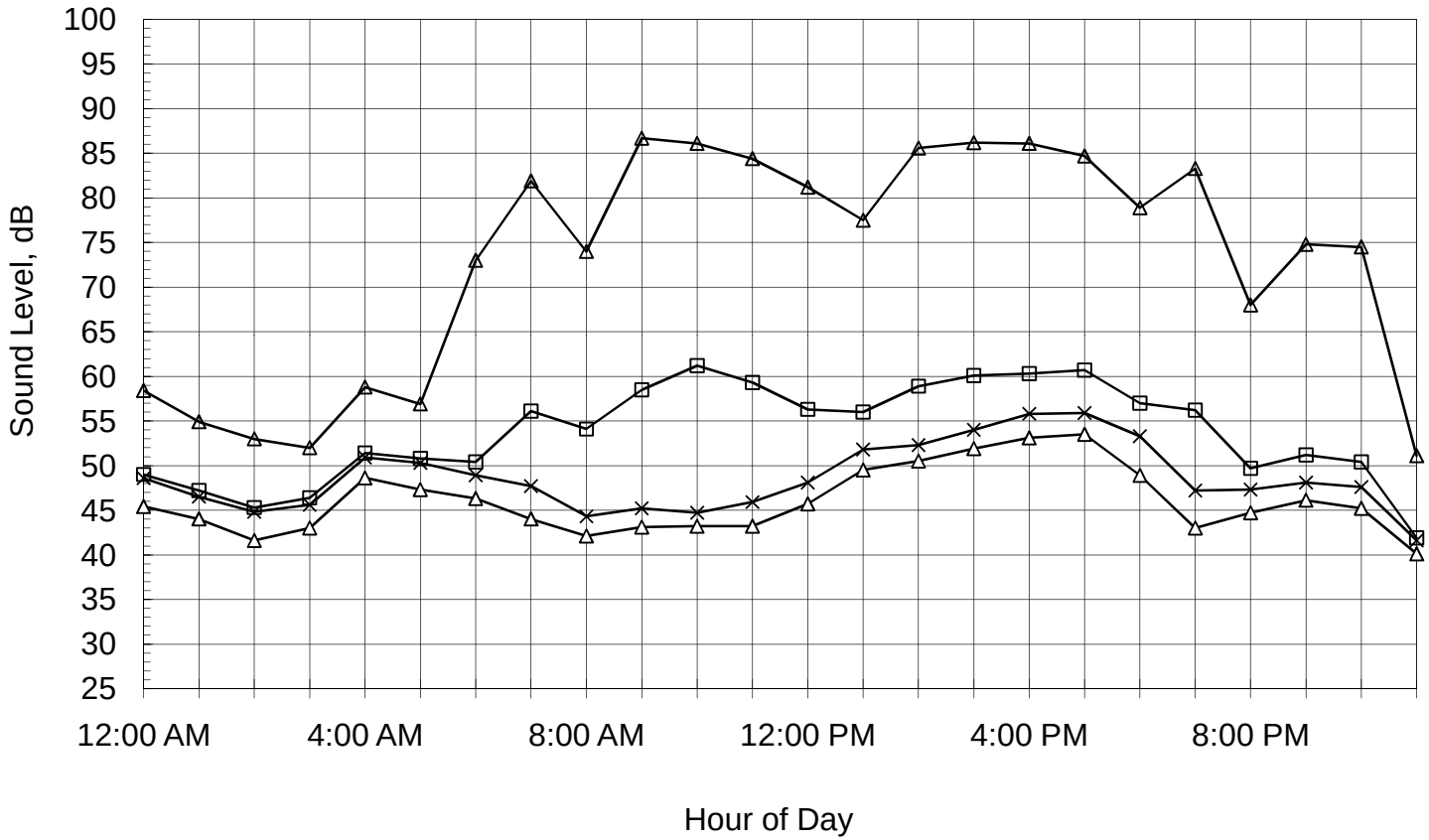


CNEL = 60.5 dB

Figure B-63: Measured Hourly Noise Levels

LVK Site 11

April 18, 2008

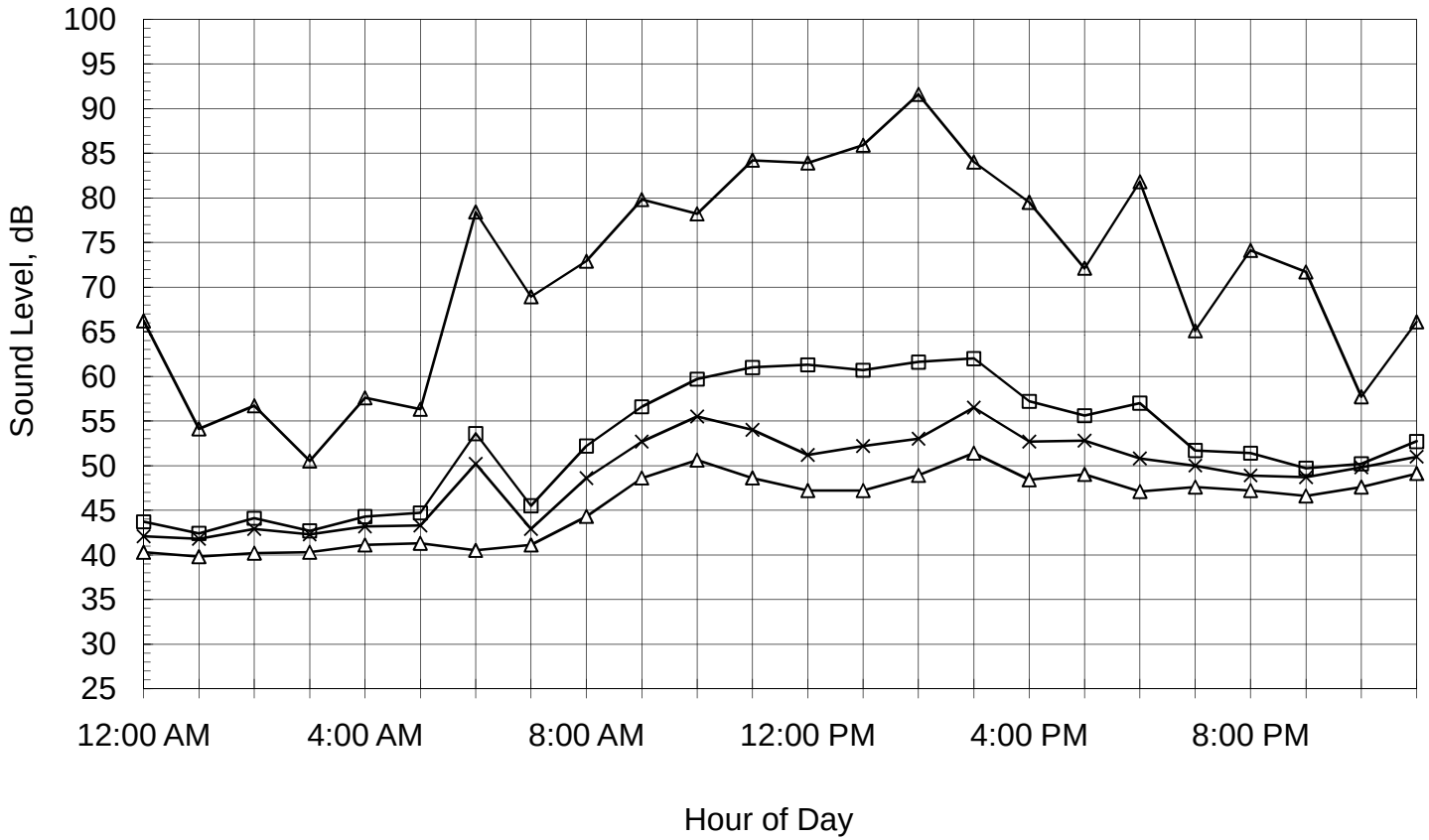


CNEL = 58.7 dB

Figure B-64: Measured Hourly Noise Levels

LVK Site 11

April 19, 2008

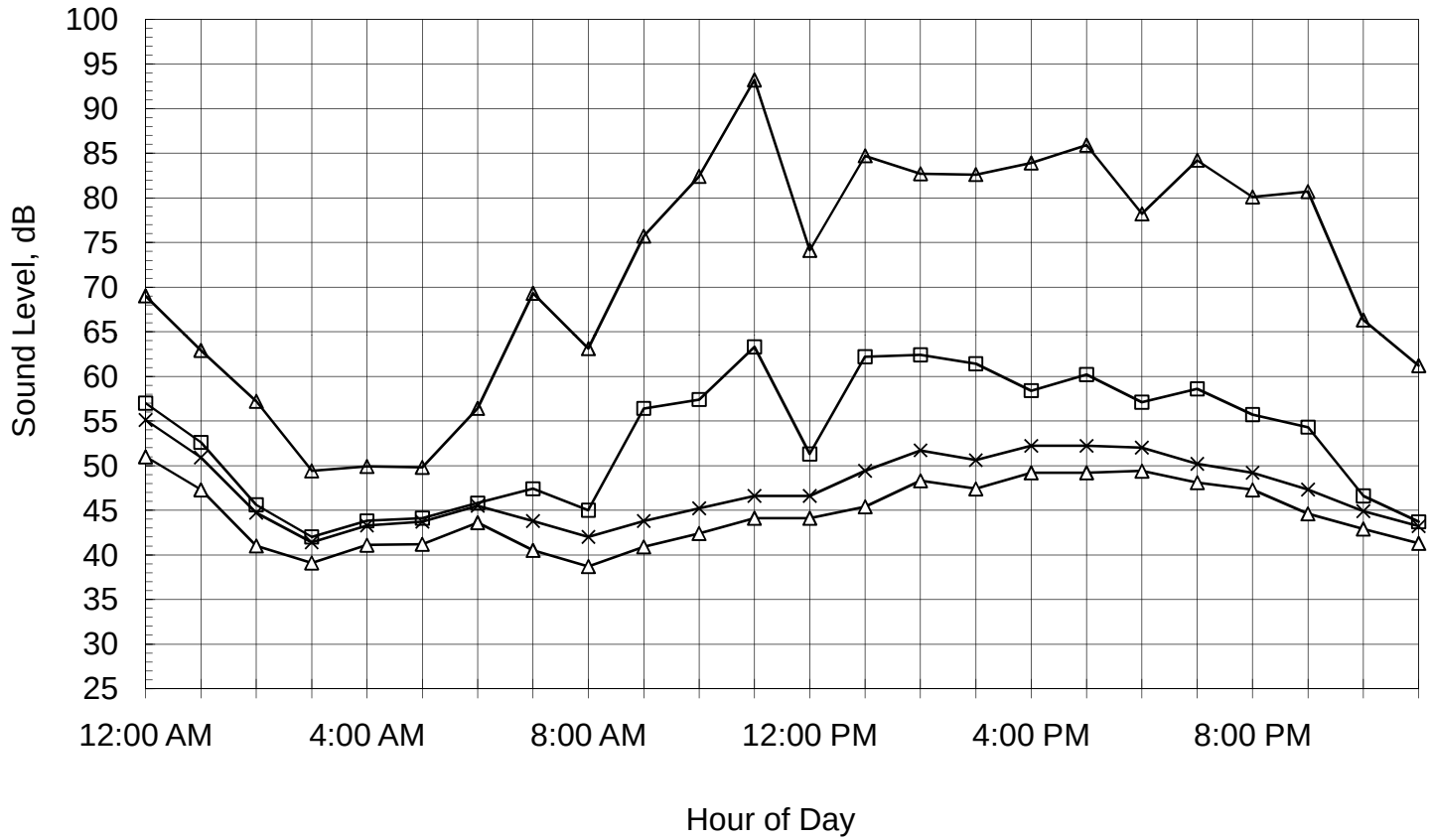


CNEL = 58.6 dB

Figure B-65: Measured Hourly Noise Levels

LVK Site 11

April 20, 2008

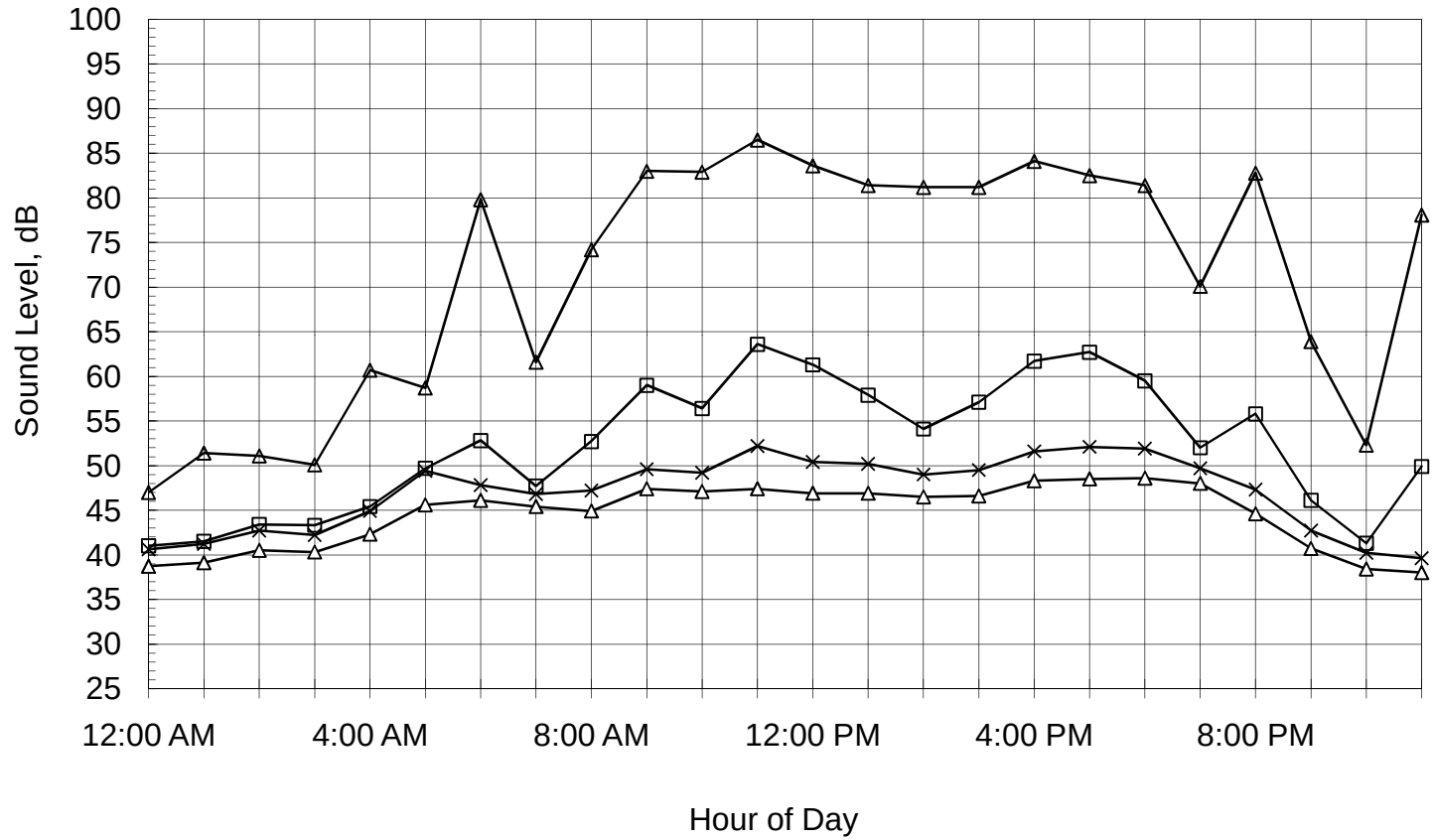


CNEL = 59.9 dB

Figure B-66: Measured Hourly Noise Levels

LVK Site 11

April 21, 2008

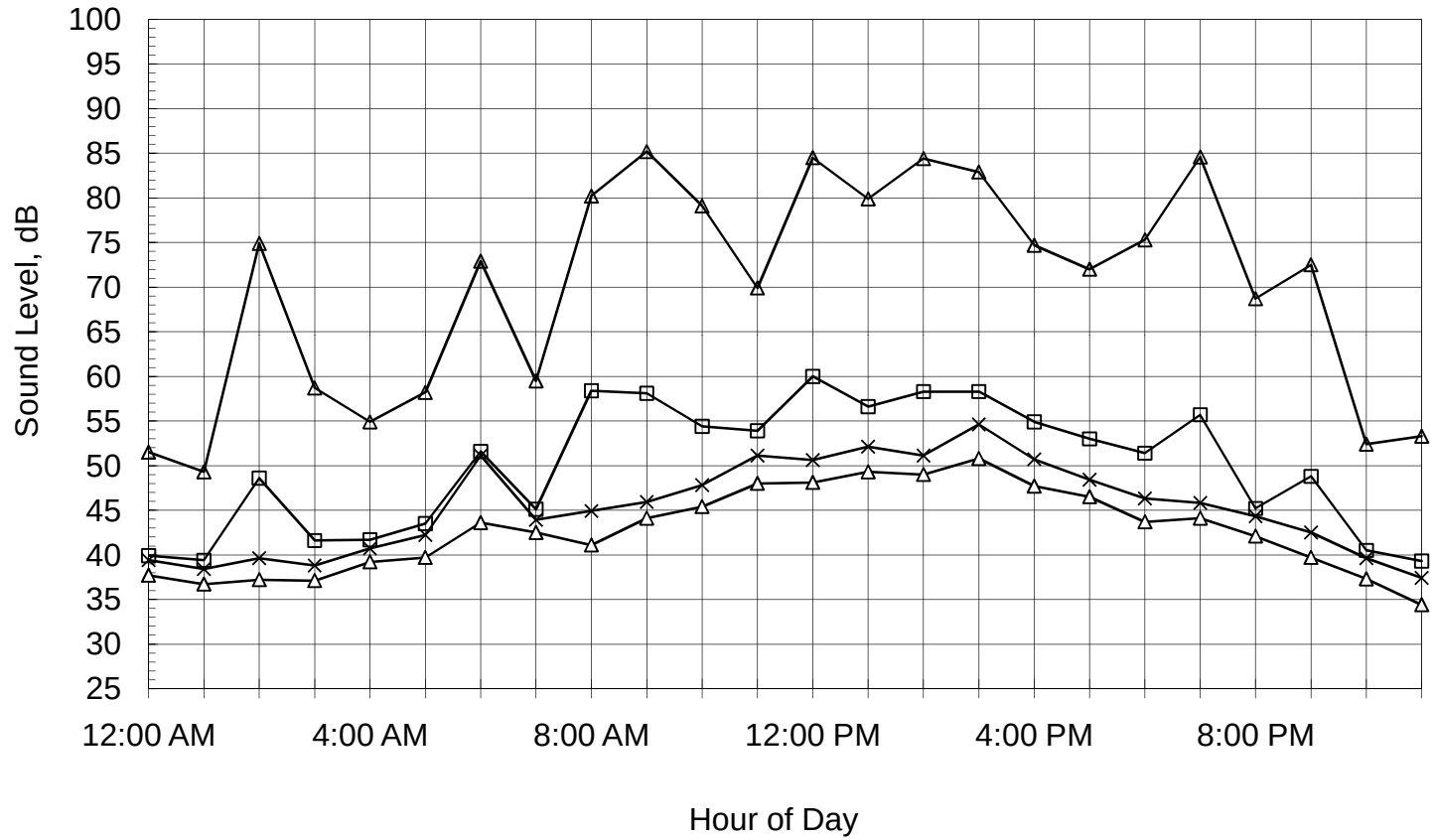


CNEL = 58.6 dB

Figure B-67: Measured Hourly Noise Levels

LVK Site 11

April 22, 2008



CNEL = 56.1 dB

APPENDIX C
MEASURED SINGLE EVENT NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Site	Date	Time	Runway	Operation A/D/OVF	Aircraft Type	Duration Sec.	SEL dB	Lmax dB	Azimuth Degrees
4	10/29/2007	13:08:00	25R	D	SEP	20.7	81.1	72.9	75N
4	10/29/2007	17:02:00	25R	D	JET	17.8	83	75.1	75N
6	10/30/2007	9:04:00	25R	A	SEP	6.9	78.5	70.1	75N
6	10/30/2007	9:31:00	25R	A	SEP	8.15	78	68.9	75N
6	10/30/2007	9:59:00	25R	A	SEP	--	--	<65	75N
6	10/30/2007	11:38:00	25L	A	SEP	--	--	<65	75S
6	10/30/2007	11:43:00	25L	A	SEP	--	--	<65	75S
6	10/30/2007	11:44:00	25L	A	SEP	--	--	<65	75S
6	10/30/2007	11:46:00	25L	A	SEP	--	--	63	75S
6	10/30/2007	11:48:00	25L	A	SEP	--	--	55	75S
6	10/30/2007	11:50:00	25L	A	SEP	--	--	61	75S
6	10/30/2007	11:53:00	25L	A	SEP	--	--	56	75S
6	10/30/2007	11:54:00	25L	A	SEP	--	--	61	75S
6	10/30/2007	11:56:00	25L	A	SEP	--	--	61	75S
6	10/30/2007	11:58:00	25L	A	SEP	--	--	58	75S
6	10/30/2007	11:59:00	25R	A	SEP	--	--	<65	75N
6	10/30/2007	12:00:00	25R	A	SEP	--	--	<65	75N
6	10/30/2007	12:01:00	25R	A	SEP	--	--	63	75N
6	10/30/2007	12:02:00	25R	A	SEP	--	--	62	75N
6	10/30/2007	12:06:00	25R	A	SEP	--	--	64	75N
6	10/30/2007	12:07:00	25R	A	SEP	--	--	59	75N
6	4/23/2008	8:48:30	25R	A	SEP	7	62.3	56.1	30W
6	4/23/2008	8:49:44	25R	A	SEP	18	81.2	73.5	90
6	4/23/2008	8:52:24	25R	A	SEP	8	68.5	61.9	75N
6	4/23/2008	8:54:07	25R	A	SEP	26	82.0	74.2	90
6	4/23/2008	8:56:53	25R	A	SEP	7	59.2	52.6	75N
6	4/23/2008	8:58:50	25R	A	SEP	17	81.9	74.3	90
6	4/23/2008	9:00:15	25R	A	SEP	11	71.7	64.5	90
6	4/23/2008	9:01:41	25R	A	SEP	8	65.3	57.4	90
6	4/23/2008	9:03:33	25R	A	SEP	15	79.3	71.8	90
6	4/23/2008	9:04:51	25R	A	SEP	16	70.9	62.9	90
6	4/23/2008	9:07:56	25R	A	SEP	14	79.6	71.5	90
6	4/23/2008	9:09:32	25R	A	SEP	15	73.0	65.6	90
6	4/23/2008	9:12:02	25R	A	SEP	22	79.3	69.8	75
6	4/23/2008	9:13:15	25R	A	TETP	22	91.5	85.7	90
6	4/23/2008	9:14:24	25R	A	SEP	14	73.1	65.0	75N
6	4/23/2008	9:15:34	25R	A	TEP	17	85.9	79.8	90
6	4/23/2008	9:16:55	25R	A	SEP	17	84.8	78.0	90
6	4/23/2008	9:19:06	25R	A	SEP	15	68.6	59.7	90
6	4/23/2008	9:20:15	25R	A	TEP	17	85.8	78.7	90
6	4/23/2008	9:21:06	25L	A	SEP	14	73.2	65.8	45S
6	4/23/2008	9:23:51	25R	A	SEP	16	71.9	62.6	90
6	4/23/2008	9:24:52	25R	A	TEP	23	85.9	79.3	90
6	4/23/2008	9:25:15	25L	A	SEP	15	79.9	71.2	60S
6	4/23/2008	9:29:40	25R	A	SEP	18	69.1	59.5	75N
6	4/23/2008	9:30:24	25R	A	TEP	22	83.3	76.7	90
6	4/23/2008	9:33:26	25R	A	SEP	16	69.3	59.8	90
6	4/23/2008	9:34:47	25R	A	TEP	18	81.5	74.6	90

APPENDIX C
MEASURED SINGLE EVENT NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Site	Date	Time	Runway	Operation A/D/OVF	Aircraft Type	Duration Sec.	SEL dB	Lmax dB	Azimuth Degrees
6	4/23/2008	9:37:08	25R	A	SEP	16	78.2	70.9	90
6	4/23/2008	9:38:25	25R	A	SEP	15	72.2	64.5	90
6	4/23/2008	9:39:44	25R	A	TEP	17	84.3	77.4	90
6	4/23/2008	9:43:11	25R	A	SEP	12	70.5	61.8	75N
6	4/23/2008	9:44:37	25R	A	TEP	15	85.6	78.6	90
6	4/23/2008	9:47:59	25R	A	SEP	13	71.0	61.9	75N
6	4/23/2008	9:49:00	25L	A	SEP	11	69.2	60.0	60S
6	4/23/2008	9:49:24	25R	A	TEP	11	83.5	76.1	90
6	4/23/2008	9:53:42	25R	A	TEP	19	84.2	77.5	90
6	4/23/2008	9:56:34	25L	A	SEP	13	65.5	56.0	45S
6	4/23/2008	9:59:50	25R	A	SEP	20	74.4	66.7	90
6	4/23/2008	10:02:21	25R	A	SEP	10	74.1	68.0	45N
6	4/23/2008	10:08:26	25R	A	SEP	7	64.3	59.2	45N
6	4/23/2008	10:21:31	25L	A	SEP	5	59.8	55.3	45S
6	4/23/2008	10:22:02	25R	A	SEP	19	80.0	71.3	90
6	4/23/2008	10:30:17	25R	A	SEP	15	86.2	80.8	90
6	4/23/2008	10:34:30	25R	A	SEP	18	81.6	73.3	75N
6	4/23/2008	10:39:32	25R	A	SEP	17	84.9	79.2	90
6	4/23/2008	10:43:39	25R	A	SEP	13	68.3	59.3	90
6	4/23/2008	10:44:30	25R	A	SEP	17	86.3	80.3	90
6	4/23/2008	10:46:55	25L	A	SEP	11	63.1	54.1	45S
6	4/23/2008	10:48:55	25R	A	SEP	13	69.2	60.9	90
6	4/23/2008	10:49:51	25R	A	SEP	23	82.9	75.3	90
6	4/23/2008	10:54:21	25R	A	SEP	16	87.7	82.7	90
6	4/23/2008	10:56:22	25L	A	SEP	11	64.2	56.1	45S
6	4/23/2008	10:58:20	25L	A	SEP	14	63.3	54.1	45S
6	4/23/2008	10:59:37	25L	A	SEP	17	75.8	67.1	45S
6	4/23/2008	11:00:32	25R	A	SEP	17	73.4	65.2	90
6	4/23/2008	11:03:31	25L	A	SEP	12	68.6	60.5	45S
6	4/23/2008	11:04:24	25L	A	SEP	16	81.0	73.2	45S
6	4/23/2008	11:07:03	25R	A	SEP	17	82.3	75.0	90
6	4/23/2008	11:09:14	25L	A	SEP	17	80.6	72.5	45S
6	4/23/2008	11:10:18	25R	A	SEP	21	70.0	59.6	90
6	4/23/2008	11:11:23	25R	A	SEP	16	70.1	60.6	90
6	4/23/2008	11:12:46	25R	A	SEP	17	82.4	75.3	90
6	4/23/2008	11:13:28	25R	A	SEP	15	82.8	76.8	90
6	4/23/2008	11:14:54	25R	A	SEP	15	71.1	62.3	90
6	4/23/2008	11:17:03	25R	A	SEP	19	81.2	73.1	90
6	4/23/2008	11:24:14	25R	A	SEP	16	72.9	64.6	90
6	4/23/2008	11:25:35	25R	A	SEP	16	82.1	74.3	90
6	4/23/2008	11:30:00	25R	A	SEP	11	73.3	66.1	90
6	4/23/2008	11:31:22	25R	A	SEP	16	80.4	72.4	90
6	4/23/2008	11:41:45	25R	A	SEP	13	75.3	68.2	90
6	4/23/2008	11:42:51	25R	A	SEP	15	83.1	76.5	90
6	4/23/2008	11:48:43	25R	A	SEP	17	72.6	63.7	90
7	10/30/2007	13:37:00	25R	D	SEP	13.75	71.7	62.7	75S
7	10/30/2007	13:40:00	25R	D	SEP	9.5	72.9	66.5	45S
7	10/30/2007	13:58:00	25R	D	JET	26.96	92.9	85.1	90

APPENDIX C
MEASURED SINGLE EVENT NOISE LEVELS
Livermore Municipal Airport Aircraft Noise Survey
October-November 2007 and April 2008

Site	Date	Time	Runway	Operation A/D/OVF	Aircraft Type	Duration Sec.	SEL dB	Lmax dB	Azimuth Degrees
7	10/30/2007	14:29:00	25R	D	SEP	26	79.3	70	90
7	10/30/2007	14:50:00	25R	D	SEP	16.75	75.2	67.4	45S
7	10/30/2007	14:52:00	25R	D	SEP	21.87	77.5	68.4	75S
7	10/30/2007	14:57:00	25R	D	SEP	17.53	77.4	68.3	75S
7	10/30/2007	15:12:00	25R	D	TEP	26.2	90	82.6	75S
7	10/30/2007	15:56:00	--	OVF	SEP	9.21	69.9	61.2	90
7	10/30/2007	16:09:00	--	OVF	SEP	12.25	71.5	62.3	90
7	10/30/2007	16:18:00	--	OVF	HELO	19.46	76.8	67	75N
7	10/30/2007	16:47:00	25R	D	TEP	18.8	78.7	70.4	90
7	10/30/2007	17:11:00	25R	D	JET	22.9	76.2	64.8	UNK
7	10/31/2007	8:31:00	25R	D	TEP	8.05	71.3	64.1	75S
7	10/31/2007	8:59:00	25R	D	SEP	27.71	83.8	77.6	75N
7	10/31/2007	12:43:00	25R	D	JET	22.5	84.9	77.1	UNK
7	4/22/2008	13:53:19	25R	D	TETP	23	79.1	71.4	75S
7	4/22/2008	13:55:01	25R	D	SEP	18	72.8	65.8	30E
7	4/22/2008	14:14:45	25L	D	SEP	18	63.1	54.1	15E
7	4/22/2008	14:31:09	25L	D	TETP	20	73.6	65.9	30E
7	4/22/2008	14:38:19	UNK	D	SEP	25	74.1	65.1	30E
7	4/22/2008	15:07:40	25R	D	SEP	17	66.0	57.8	30E
7	4/22/2008	15:14:43	25R	D	SEP	18	78.9	71.9	30E
7	4/22/2008	15:25:07	25L	D	SEP	34	70.9	60.1	60S
7	4/22/2008	16:11:00	25R	D	TEP	34	71.3	61.4	90
7	4/22/2008	16:13:00	25R	D	JET	39	92.1	83.8	90
7	4/22/2008	16:28:13	UNK	D	SEP	25	67.3	57.2	30E
7	4/22/2008	16:37:01	25R	D	SEP	27	68.0	58.3	30E
7	4/22/2008	16:40:33	25R	D	JET	26	65.4	55.1	90
7	4/22/2008	16:41:22	25R	D	SEP	23	68.3	60.3	30E
7	4/22/2008	16:45:36	25R	D	SEP	17	63.4	55.2	30E
7	4/22/2008	16:49:35	25R	D	SEP	29	70.3	60.9	45E
7	4/22/2008	16:53:29	25R	D	SEP	24	70.3	62.7	30E
8	10/31/2007	13:15:00	25R	A	JET	18.09	80.2	72.1	75N
8	10/31/2007	13:26:00	25R	A	SEP	--	--	<60	90
8	10/31/2007	13:29:00	25R	A	SEP	9.62	78.6	73.8	75S
8	10/31/2007	13:51:00	25R	A	SEP	--	--	<60	60N
8	10/31/2007	13:59:00	25R	A	SEP	6.84	68.9	61.8	75N
8	10/31/2007	14:21:00	25R	A	SEP	--	--	<60	75N
8	10/31/2007	14:26:00	25R	A	SEP	--	--	56	75N
8	10/31/2007	14:27:00	25R	A	SEP	--	--	56	75N
8	10/31/2007	14:28:00	25R	A	SEP	--	--	55	75N
8	10/31/2007	14:30:00	25R	A	SEP	--	--	<60	75N
8	10/31/2007	15:04:00	25R	A	SEP	10.18	73.9	66.5	90
8	10/31/2007	15:12:00	25R	A	SEP	13.71	75.4	67.3	90
8	4/23/2008	12:21:54	25R	A	SEP	12	62.4	53.4	30NW
8	4/23/2008	12:27:49	25L	A	SEP	16	67.3	57.6	90
8	4/23/2008	13:31:35	25R	A	SEP	16	69.7	60.3	60N
8	4/23/2008	13:38:47	25R	A	SEP	12	64.0	55.6	75N
8	4/23/2008	13:40:39	25R	A	SEP	23	70.6	60.4	45N
8	4/23/2008	13:43:03	25R	A	SEP	9	58.0	50.0	45NW

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October-November 2007 and April 2008

Site	Date	Time	Runway	Operation A/D/OVF	Aircraft Type	Duration Sec.	SEL dB	Lmax dB	Azimuth Degrees
8	4/23/2008	13:48:12	25R	A	SEP	17	62.8	52.3	60N
8	4/23/2008	13:53:33	25R	A	SEP	20	64.9	52.7	75N
8	4/23/2008	13:58:08	25R	A	TETP	22	85.4	78.0	60N
8	4/23/2008	13:59:53	25R	A	TEP	24	80.6	71.8	60N
8	4/23/2008	14:09:54	25R	A	SEP	8	65.4	57.6	45NW
8	4/23/2008	14:17:28	25R	A	JET	18	85.3	78.7	60N
8	4/23/2008	14:19:43	25R	A	SEP	14	67.3	57.2	75N
8	4/23/2008	14:25:46	25R	A	SEP	14	68.3	59.4	60N
8	4/23/2008	14:32:46	25R	A	SEP	16	71.8	61.7	45N
8	4/23/2008	14:39:14	25R	A	SETP	25	88.5	80.5	60N
8	4/23/2008	14:46:13	25R	A	TETP	18	80.1	71.9	30N
8	4/23/2008	15:16:31	25R	A	TEP	20	71.3	62.6	30NW
8	4/23/2008	15:20:12	25R	A	SEP	14	72.9	65.2	45N
8	4/23/2008	15:26:06	25R	A	SEP	10	67.6	59.8	45N
8	4/23/2008	15:29:49	25R	A	SETP	20	86.6	79.0	60N
8	4/23/2008	15:51:19	25R	A	SEP	14	70.4	61.5	60N
8	4/23/2008	15:52:57	25R	A	SEP	22	73.8	64.8	45NW
8	4/23/2008	16:08:05	25R	A	SEP	17	68.3	58.3	60N
12	4/22/2008	13:53:22	25R	D	TEP	18.06	77.4	70.1	75N
12	4/22/2008	13:55:12	25R	D	SEP	9.78	71.0	65.1	75S
12	4/22/2008	14:31:13	25R	D	TETP	12.46	74.1	63.2	75S
12	4/22/2008	14:38:31	25R	D	SEP	16.40	75.0	65.9	60S
12	4/22/2008	16:13:10	25R	D	JET	32.96	89.8	81.5	75N

Azimuth is the angle of the aircraft relative to the ground; e.g., 90 means the aircraft was directly overhead, 75N means the aircraft was an angle of about 75 degrees, north of the observer.

AIRCRAFT NOISE ASSESSMENT

AIRPORT REZONE PROJECT
LIVERMORE MUNICIPAL AIRPORT
LIVERMORE, CALIFORNIA

PREPARED FOR

LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94710

PREPARED BY

Brown-Buntin Associates, Inc.
Citrus Heights, California

November 14, 2008

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BBA
BROWN • BUNTIN
ASSOCIATES, INC.

INTRODUCTION

Brown-Buntin Associates, Inc. (BBA) has completed an analysis of aircraft/airport operations and related noise levels for the Livermore Municipal Airport (LVK) to prepare Community Noise Equivalent Level (CNEL)[1] noise exposure maps for existing (2007-2008) and projected future (Years 2013, 2018 and 2030) airport traffic volumes with the existing runway configuration.

The Federal Aviation Administration's (FAA) Integrated Noise Model (INM) Version 7.0a was used to prepare CNEL noise exposure maps for the Livermore Municipal Airport, based upon the FAA aircraft noise level data base and airport operational factors as described below. The INM was developed for the FAA, and represents the federally-sanctioned and preferred method for analyzing aircraft/airport noise exposure. Version 7.0a is the currently-available version of the INM.

Projected data for aircraft activity and aircraft fleet mix used in the noise modeling process were obtained from the approved airport activity forecasts prepared by Coffman Associates in 2008. Details of aircraft type mix were developed by Coffman Associates and the Airport Manager. Airfield configuration was determined from the current Airport Layout Plan, in conjunction with input from FAA Tower staff and the Airport Manager. Flight track and runway use assumptions were derived from data provided by the FAA Tower staff, by the Airport Manager, and from the Public Review Draft of the Airport Master Plan Update prepared by Mead & Hunt in March 2004. Mead & Hunt also provided flight track data files which that company developed for use with the INM. The following report summarizes the data, methods and assumptions used in preparing the CNEL noise exposure maps.

The CNEL descriptor is a method of combining single event noise levels over an annual average 24-hour day, applying a 4.77 decibel (dB) penalty to noise events occurring during evening (7 p.m. to 10 p.m.) hours, and a 10 dB penalty to noise events occurring during the nighttime (10 p.m. to 7 a.m.) hours. CNEL is defined in terms of average annual conditions, so that the CNEL measured on a given day may be either less than or greater than the annual average. The State of California uses the CNEL descriptor to describe land use compatibility with respect to aircraft noise exposures. The California airport noise compatibility criterion for residential land uses is 65 dB CNEL.

AIRPORT OPERATIONS

Airport operational factors which significantly affect overall noise levels as described by CNEL include the aircraft fleet mix, the number of daily operations and the time of day when aircraft operations occur. Runway use factors also significantly influence CNEL values. Trip length can affect aircraft single event noise levels, as an aircraft which is prepared for a long flight may carry more fuel and passengers than for a short flight, and will require higher power settings or a lower flight profile. The INM applies corrections

[1] For explanation of these terms, refer to Appendix A: “Acoustical Terminology”.

to air carrier aircraft takeoff profiles to account for these differences, but makes no corrections to general aviation aircraft takeoff profiles.

The aircraft operational assumptions for Livermore Municipal Airport are summarized in Table I, which was prepared by Coffman Associates.

Table I
Operations By Aircraft Type
Livermore Municipal Airport

Aircraft Type	INM Designator	2007/2008	2013	2018	2030
Itinerant General Aviation Operations					
Cessna 500, MU-300, 390 Premiere	CNA500	228	229	230	232
Cessna 550, 560 & Beechjet 400	MU3001	288	289	291	293
Lear 20 Series, IAI 1124, Hawker 125-700	LEAR25	38	19	0	0
Gulfstream II & III	GIIB	66	33	0	0
Lear 31, 35, 45 & Hawker 800	LEAR35	562	617	673	678
Challenger 600, Falcon 2000	CL600	170	171	172	173
Gulfstream V & Global Express	GV	136	137	137	138
Medium Twin Turboprop	DHC6	479	513	636	885
Small Twin Turboprop	CNA441	1,438	1,539	1,909	2,656
Multi-Engine Piston	BEC58P	2,875	3,078	3,819	5,311
Single Engine Piston Var. Pitch	GASEPV	40,699	40,378	41,719	45,111
Single Engine Piston Fix Pitch	GASEPF	27,132	26,919	27,813	30,074
Helicopter	B206L	369	477	600	849
Subtotal		*74,480*	*74,400*	*78,000*	*86,400*
Air Taxi Operations					
King Air 200	DHC6	900	1,260	1,560	2,280
Cessna 560	MU3001	600	840	1,040	1,520
Subtotal		*1,500*	*2,100*	*2,600*	*3,800*
Military Operations					
Helicopter	B212	230	230	230	230
Subtotal		*230*	*230*	*230*	*230*
TOTAL ITINERANT OPERATIONS		***76,210***	***76,730***	***80,830***	***90,430***
Local General Aviation Operations					
Multi-Engine Piston	BEC58P	6,892	7,854	9,735	13,515
Single Engine Piston Var. Pitch	GASEPV	58,533	61,809	63,808	68,873
Single Engine Piston Fix Pitch	GASEPF	39,022	41,206	42,539	45,915
Helicopter	R22	530	731	918	1,296
Subtotal		*104,977*	*111,600*	*117,000*	*129,600*
Military Operations					
Helicopter	R22	70	70	70	70
Subtotal		*70*	*70*	*70*	*70*
TOTAL LOCAL OPERATIONS		***105,047***	***111,670***	***117,070***	***129,670***
TOTAL OPERATIONS		***181,257***	***188,400***	***197,900***	***220,100***

The distribution of aircraft operations to the runways and flight tracks was also based upon information presented in the Public Review Draft of the Airport Master Plan Update. In addition, helicopter operations were assigned to two helipads located north and south of the runways. The assumptions are shown in Table II.

Table II Runway Use Assumptions Livermore Municipal Airport									
Aircraft Type	**Period**	**Percentage of Landings by Runway**				**Percentage of Takeoffs by Runway**			
		07L	**25R**	**07R**	**25L**	**07L**	**25R**	**07R**	**25L**
Single-engine	Day	6	34	9	51	9	51	6	34
	Evening	6	34	9	51	9	51	6	34
	Night	6	34	9	51	9	51	6	34
Twin-Engine	Day	13.5	76.5	1.5	8.5	13.5	76.5	1.5	8.5
	Evening	13.5	76.5	1.5	8.5	13.5	76.5	1.5	8.5
	Night	13.5	76.5	1.5	8.5	13.5	76.5	1.5	8.5
Other Fixed Wing	Day	15	85	0	0	15	85	0	0
	Evening	15	85	0	0	15	85	0	0
	Night	15	85	0	0	15	85	0	0
Itinerant Helicopters	Day	15	85	0	0	15	85	0	0
	Evening	15	85	0	0	15	85	0	0
	Night	15	85	0	0	15	85	0	0
Local Helicopters	Day	0	0	15	85	0	0	15	85
	Evening	0	0	15	85	0	0	15	85
	Night	0	0	15	85	0	0	15	85

The distribution of aircraft operations by time of day was also based upon information presented in the Public Review Draft of the Airport Master Plan Update, and is shown by Table III.

Table III Time of Day Assumptions: Takeoffs and Landings Livermore Municipal Airport			
Aircraft Type	**Time of Day**		
	Day	**Evening**	**Night**
Single- and Twin-Engine Piston	87%	10%	3%
Twin-Engine Turboprop	81%	10%	9%
Jets	80%	15%	5%
Touch-and-go	87%	10%	3%
Helicopter	87%	10%	3%

Descriptions of aircraft flight tracks were based upon information presented in the Public Review Draft of the Airport Master Plan Update, with additional data provided by FAA Tower staff and the Airport Manager. Based upon these data, generalized flight tracks were prepared for use in the noise modeling process to describe areas with a concentration of aircraft overflights. The assumed distributions of aircraft to these tracks are shown in Tables IV through VIII.

The attached Figures 1, 2, and 3 show the flight tracks used for the noise modeling process. It is recognized that variations in flight paths occur at the Livermore Municipal Airport; the tracks shown are general representations of those flight patterns.

Table IV Flight Track Allocation Assumptions: Takeoffs Livermore Municipal Airport Runway 07L					
Aircraft Type	**Percentage of Track Usage**				
	T20	**T21**	**T23**	**T25**	**T26**
Single-Engine Propeller, Fixed Pitch	15	40	35	5	5
Single-Engine Propeller, Variable Pitch	15	40	35	5	5
Twin-Engine Piston	15	40	35	5	5
Twin-Engine Turboprop	40	20	30	5	5
Jets	37	33	0	0	0

Table V Flight Track Allocation Assumptions: Takeoffs Livermore Municipal Airport Runway 25R									
Aircraft Type	**Percentage of Track Usage**								
	T1	**T2**	**T9**	**T10**	**T11**	**T12**	**T13**	**T14**	**T15**
Single-Engine Propeller, Fixed Pitch	6	14	14	13	13	0	0	12	28
Single-Engine Propeller, Variable Pitch	6	14	14	13	13	0	0	12	28
Twin-Engine Piston	6	14	14	13	13	0	0	12	28
Twin-Engine Turboprop	20	20	0	0	0	0	20	0	40
Jets	0	0	25	25	0	25	25	0	0

Table VI Flight Track Allocation Assumptions: Landings Livermore Municipal Airport								
Aircraft Type	**Percentage of Track Usage**							
	Runway 07L					**Runway 25R**		
	L10	**L11**	**L15**	**L16**	**L17**	**L1**	**L2**	**L6**
Single-Engine Propeller, Fixed Pitch	5	85	0	10	0	15	42	43
Single-Engine Propeller, Variable Pitch	5	85	0	10	0	15	42	43
Twin-Engine Piston	5	85	0	10	0	15	42	43
Twin-Engine Turboprop	100	0	0	0	0	100	0	0
Jets	100	0	0	0	0	100	0	0

Table VII Flight Track Allocation Assumptions: Takeoffs Livermore Municipal Airport								
Aircraft Type	**Percentage of Track Usage**							
	Runway 07R				**Runway 25L**			
	T30	**T32**	**T41**	**T42**	**T4**	**T5**	**T7**	**T8**
Single-Engine Propeller, Fixed Pitch	41	33	13	13	1	33	33	33
Single-Engine Propeller, Variable Pitch	41	33	13	13	1	33	33	33
Twin-Engine Piston	41	33	13	13	1	33	33	33

Table VIII Flight Track Allocation Assumptions: Landings Livermore Municipal Airport						
Aircraft Type	**Percentage of Track Usage**					
	Runway 07R			**Runway 25L**		
	L12	**L13**	**L14**	**L3**	**L4**	**L5**
Single-Engine Propeller, Fixed Pitch	15	35	50	50	40	10
Single-Engine Propeller, Variable Pitch	15	35	50	50	40	10
Twin-Engine Piston	15	35	50	50	40	10

PREPARATION OF CNEL NOISE EXPOSURE MAPS

The Integrated Noise Model (INM) Version 7.0a was used to prepare CNEL noise exposure maps for the airport based upon the aircraft noise level and airport operational factors described in the previous sections. The INM was developed for the FAA, and represents the federally-sanctioned and preferred method for analyzing aircraft/airport noise exposure. Version 7.0a is the most recent version of the INM, incorporating an updated database of aircraft performance parameters and noise levels, as well as the pertinent elements of the FAA Helicopter Noise Model (HNM).

The INM calculates aircraft noise exposure by mathematically combining aircraft noise levels and airport operational factors at a series of points within a Cartesian coordinate system which defines the location of airport runways and aircraft flight tracks. User inputs to the INM include the following:

a. Airport altitude and mean temperature
b. Runway configuration
c. Aircraft flight track definition
d. Aircraft stage length (not pertinent for this airport)
e. Aircraft departure and approach profiles
f. Aircraft traffic volume and fleet mix
g. Flight track utilization by aircraft types

The INM data base includes aircraft performance parameters and noise level data for numerous commercial, military and general aviation aircraft classes. When the user specifies a particular aircraft class from the INM data base, the model automatically provides the necessary inputs concerning aircraft power settings, speed, departure profile and noise levels. INM default values were used for general aviation aircraft types.

After the model had been prepared for the aircraft classes described above, BBA created INM input files containing the number of operations by aircraft type, time of day and flight track for annual average day aircraft operations for existing and future conditions.

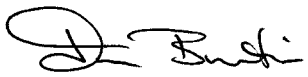
The airport configurations for existing and future conditions are the same.

The INM was used with the above operational assumptions and airfield configurations to prepare 55, 60, and 65 dB CNEL contours, which have been plotted on Figures 4, 5, 6 and 7. These plots were also provided as AutoCAD files to LSA Associates, Inc.

CONCLUSIONS

Brown-Buntin Associates, Inc. (BBA) has prepared noise exposure contours in terms of the Community Noise Equivalent Level (CNEL) for different levels of existing and future aircraft activity at the Livermore Municipal Airport, using the FAA's Integrated Noise Model, Version 7.0a. The noise predictions were based upon operational data provided by Coffman Associates, FAA Tower staff, the Airport Manager, and the Public Review Draft of the Airport Master Plan Update prepared by Mead & Hunt in March 2004. The noise contour maps prepared for this study may be used to describe the potential effects of changes in noise exposures, and to plan for compatible land uses in the potentially affected areas.

Respectfully Submitted,
Brown-Buntin Associates, Inc.



Jim Buntin
Vice President

REFERENCES

1. U.S. Department of Transportation, Federal Aviation Administration; Integrated Noise Model, Version 7.0a, September 17, 2008.

Figure 1
Arrival Flight Tracks

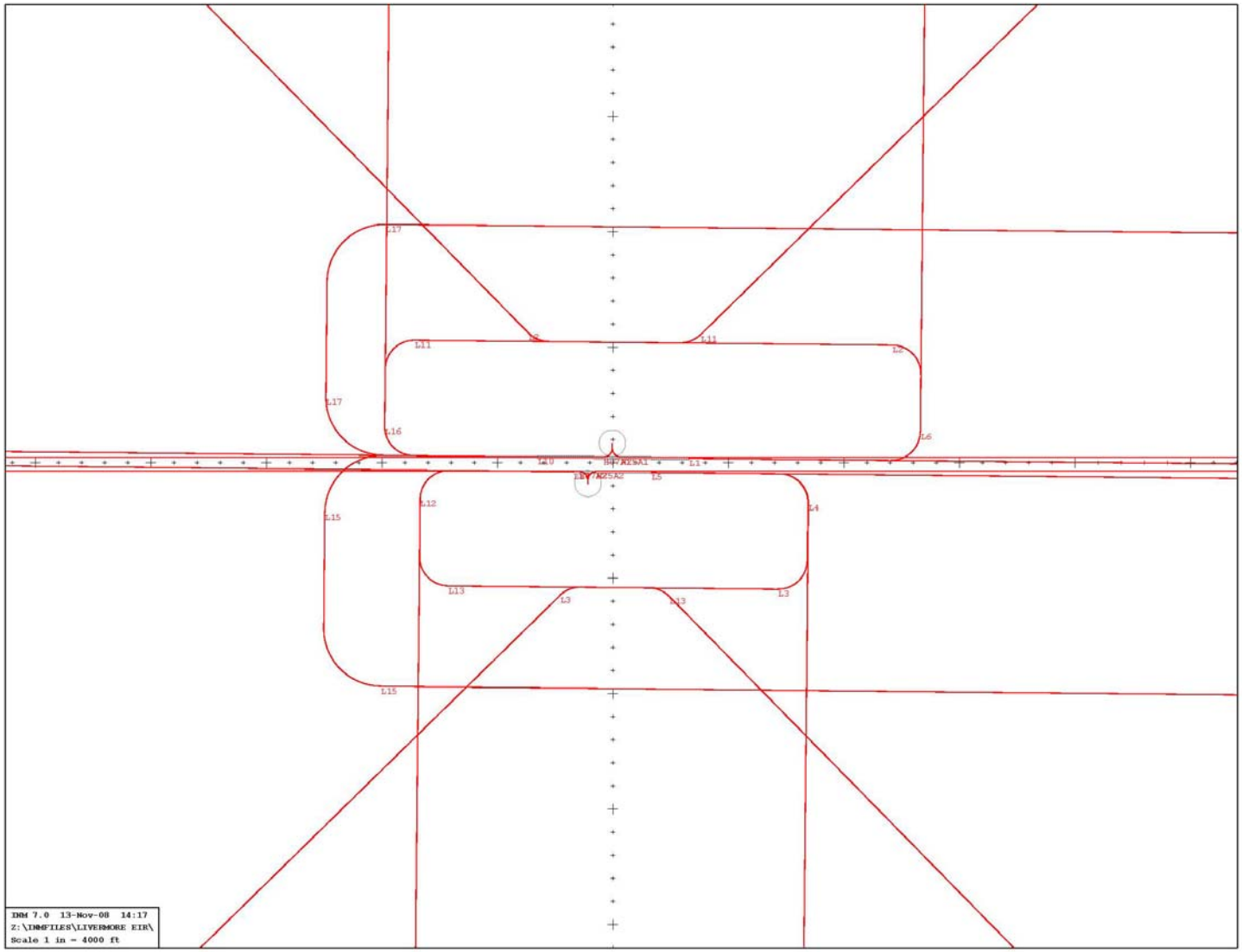


Figure 2
Takeoff Flight Tracks

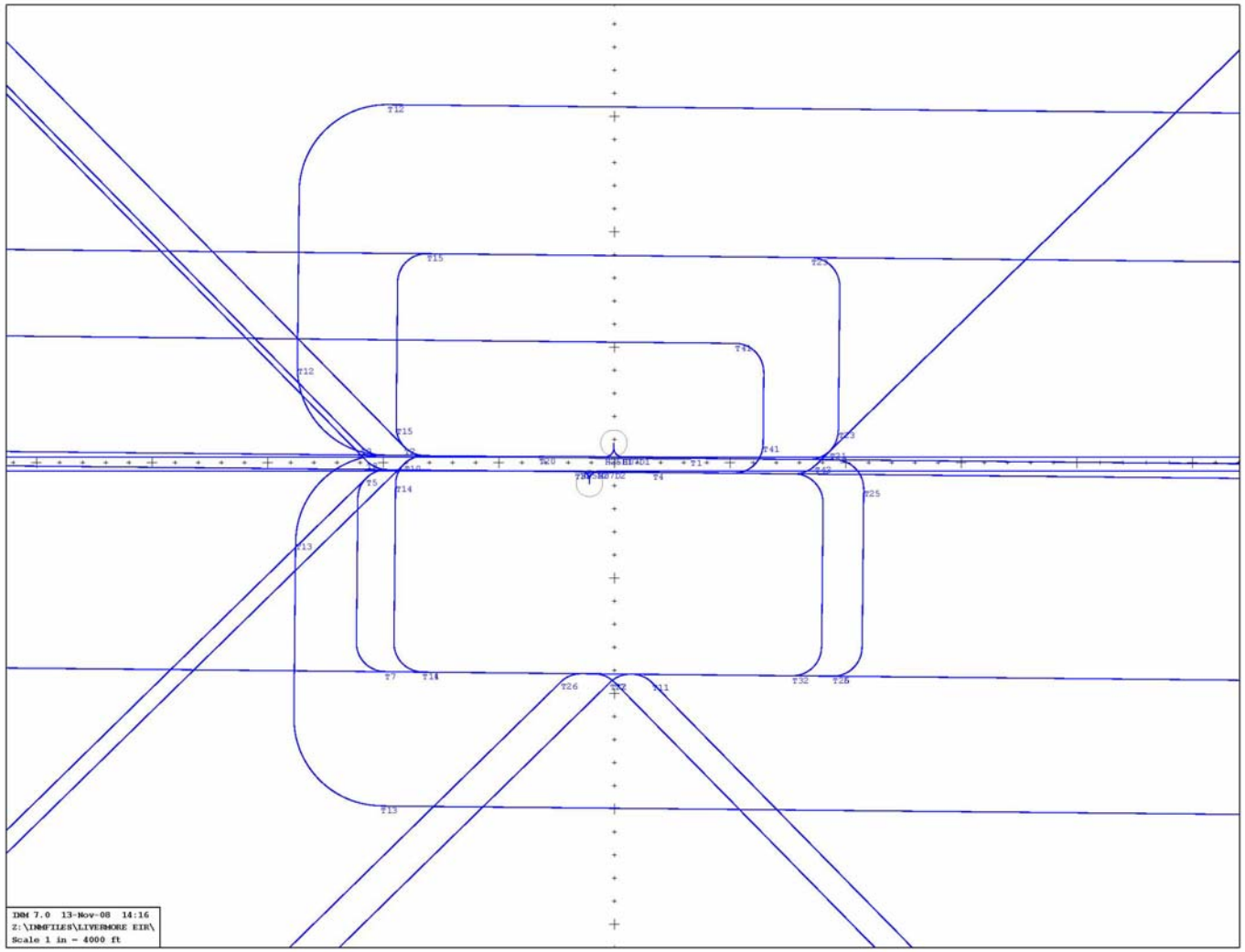


Figure 3
Touch-and-Go Flight Tracks

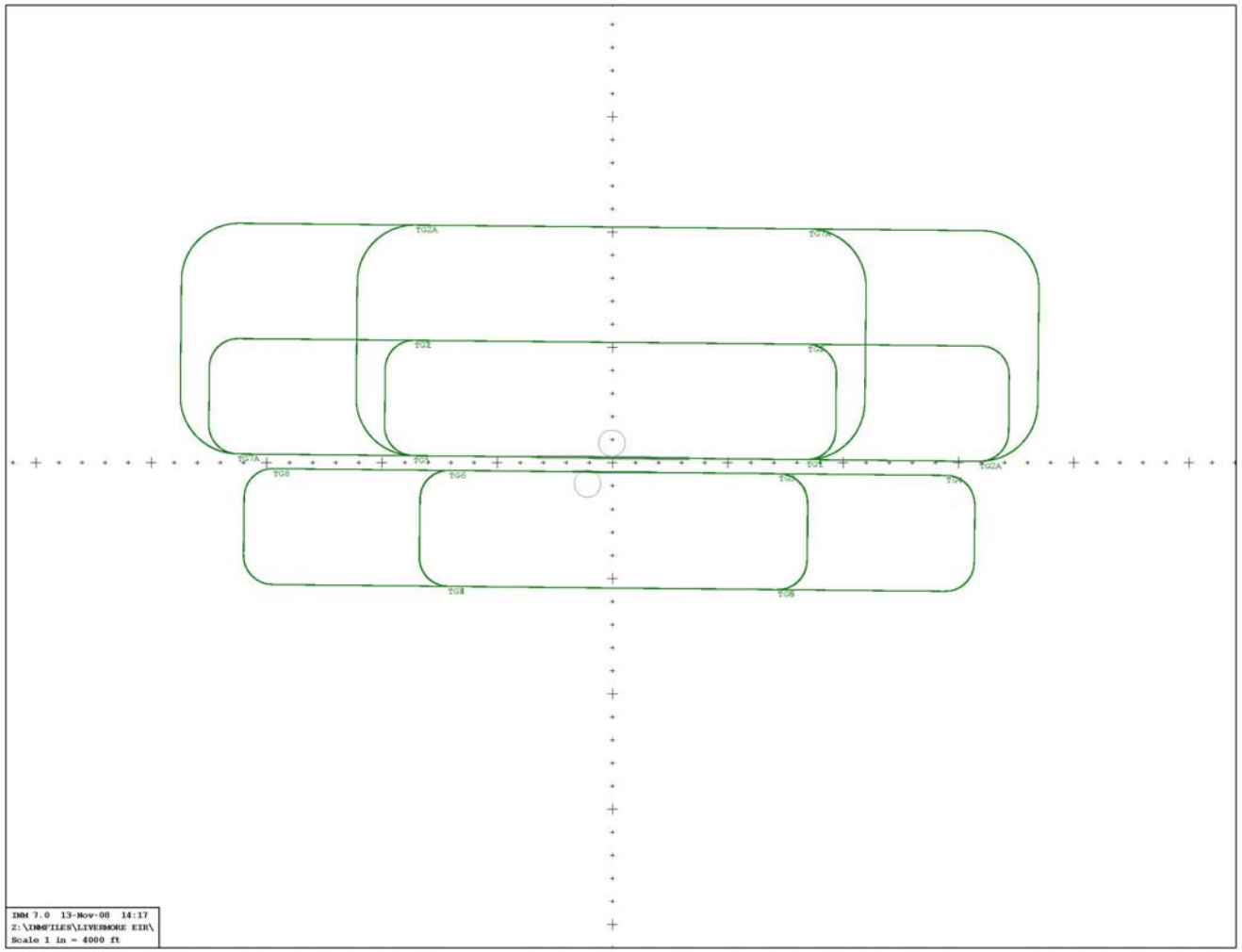


Figure 4
2007-2008 CNEL Contours

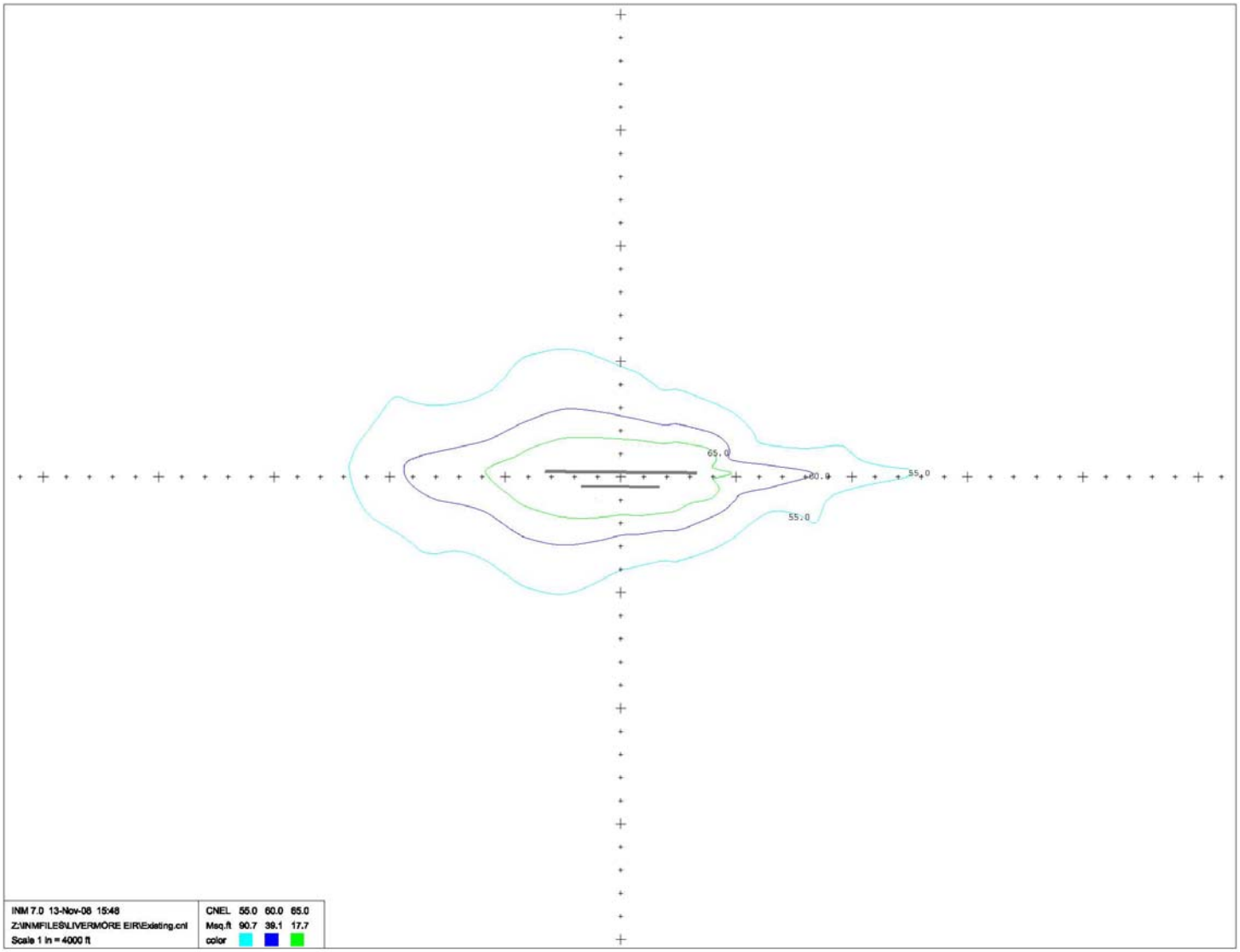


Figure 5
2013 CNEL Contours

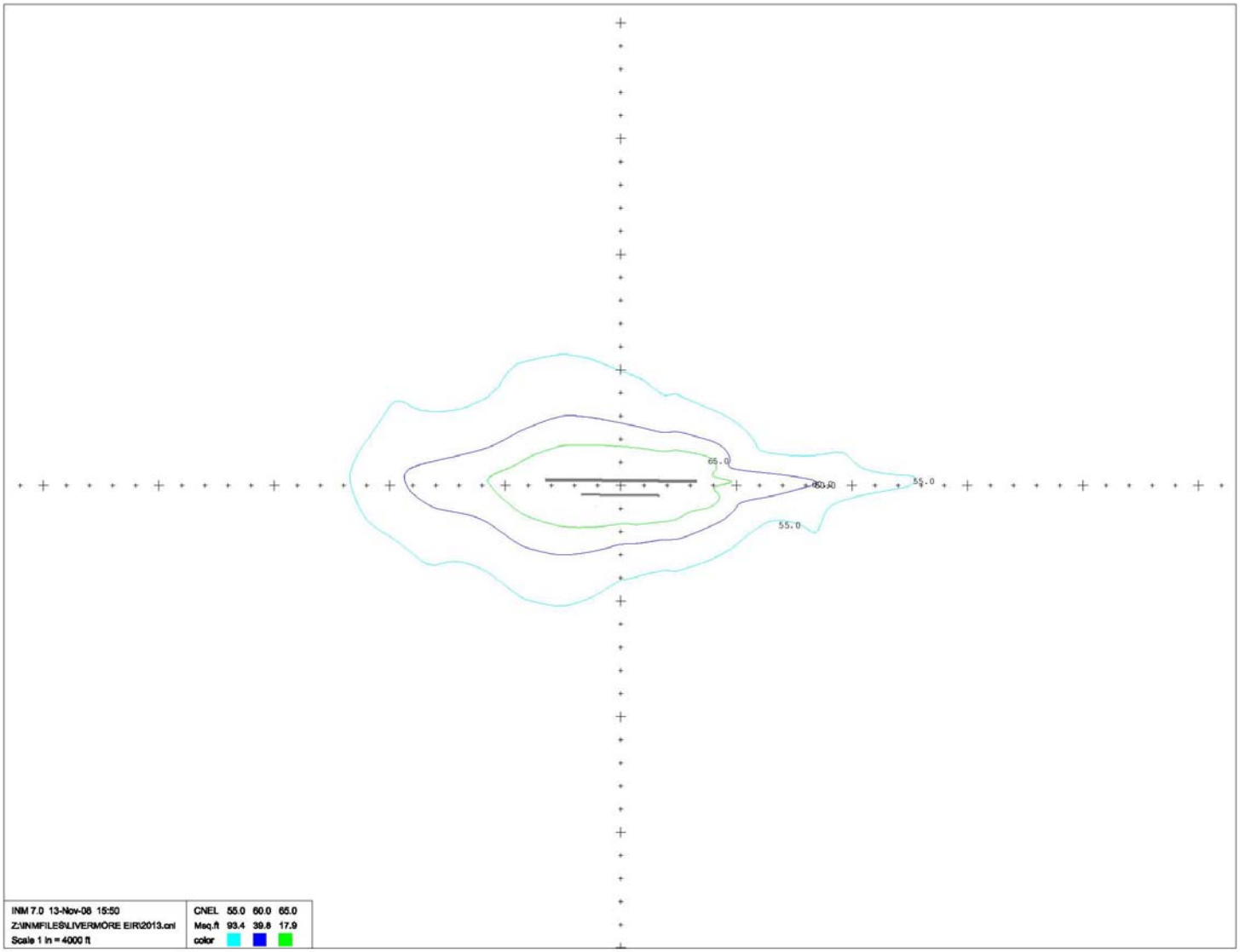


Figure 6
2018 CNEL Contours

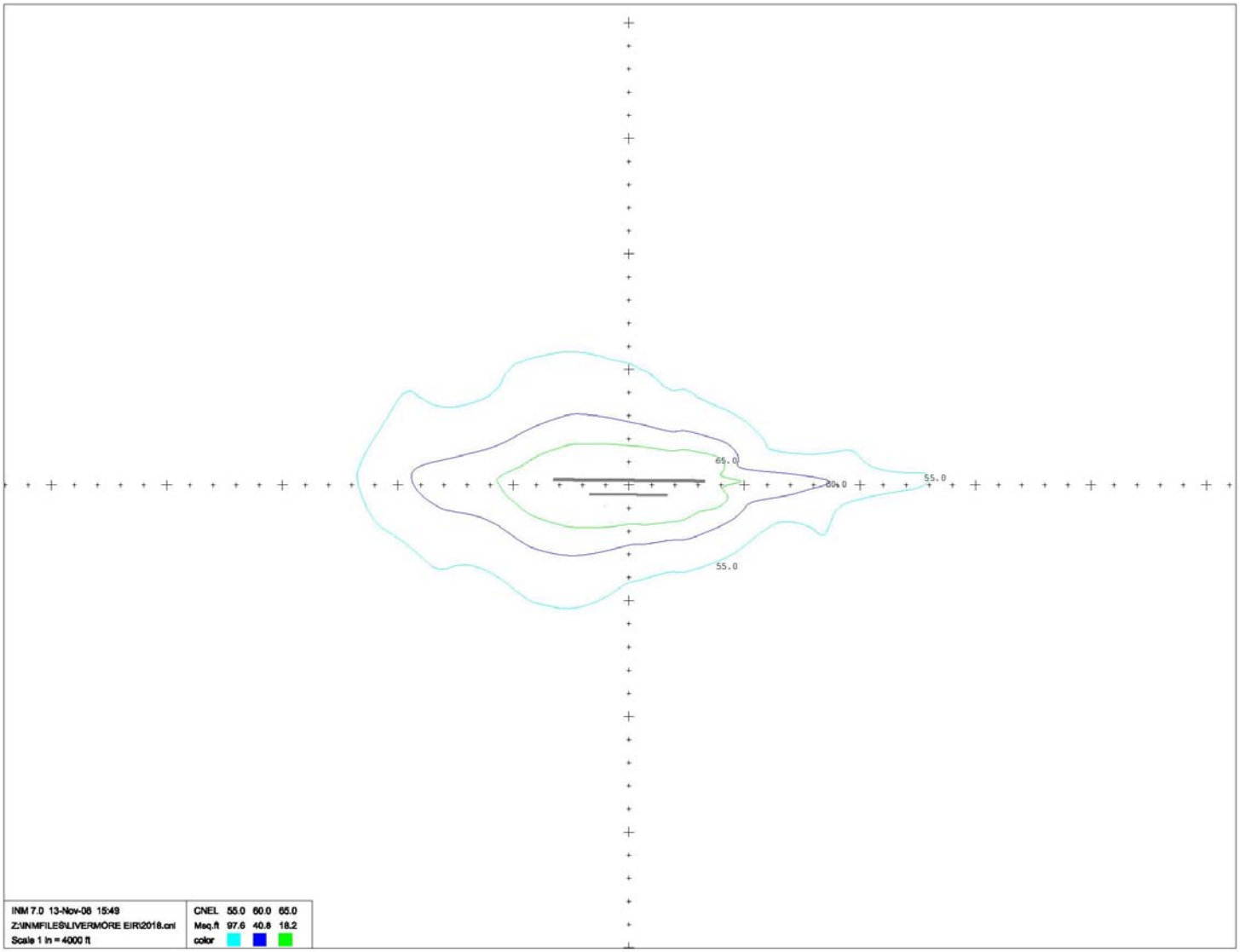
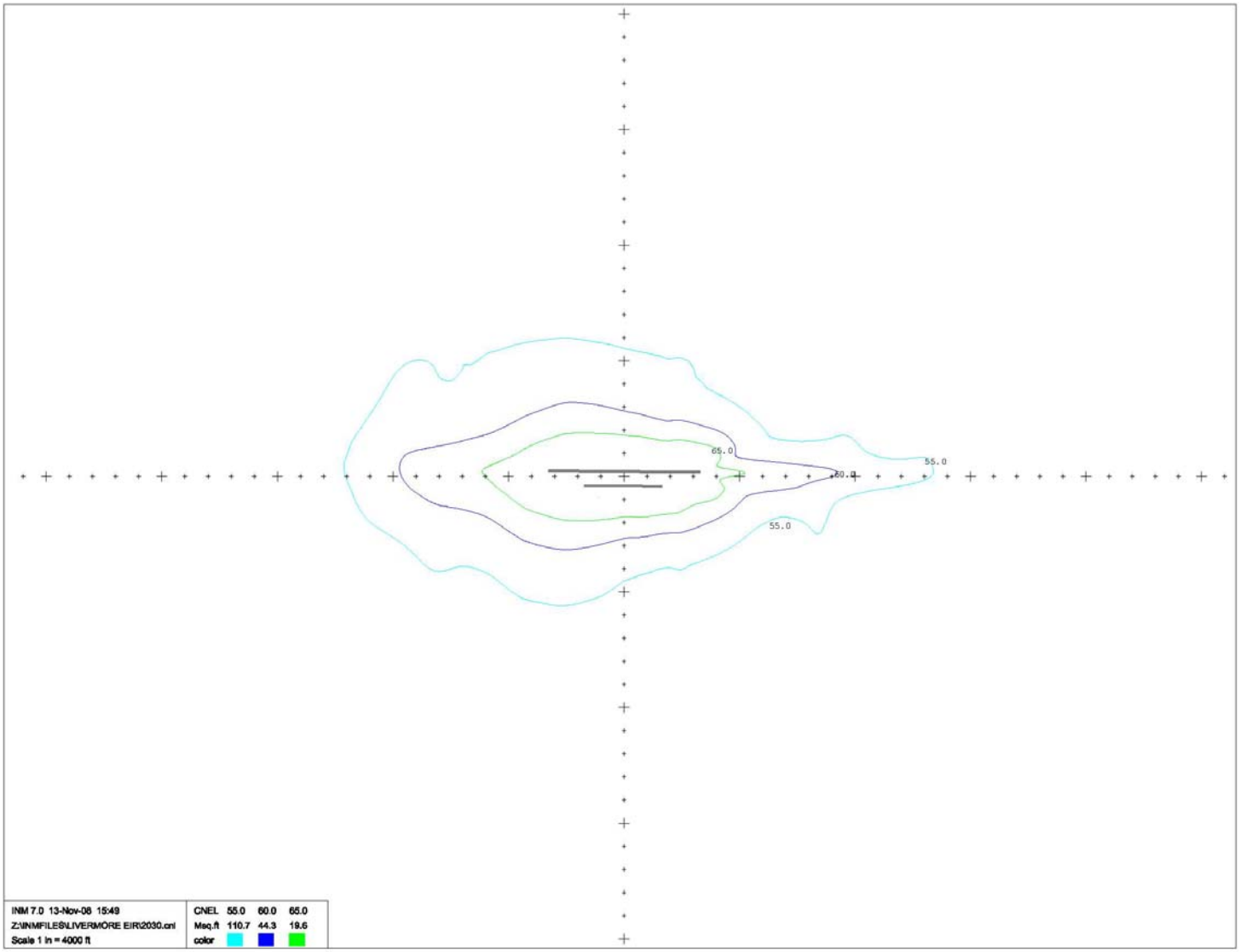


Figure 7
2030 CNEL Contours



APPENDIX A
AIRCRAFT NOISE EXPOSURE METRICS

The Community Noise Equivalent Level (CNEL) is used by the State of California to evaluate land use compatibility around airports. The CNEL descriptor is similar to the Day Night Level (DNL) descriptor used by the FAA for noise compatibility planning around airports in states other than California.

The only difference between the CNEL and DNL is that the CNEL incorporates an evening penalty of 4.77 dB for noise levels occurring between 7:00 p.m. and 10:00 p.m., whereas the DNL does not. Both the CNEL and DNL apply a 10 dB penalty to noise levels occurring between 10:00 p.m. and 7:00 a.m. The evening and nighttime penalties (weighting factors) are mathematically equivalent to multiplying the number of events by three and ten, respectively. The CNEL and DNL are generally considered to be equivalent descriptors of the community noise environment within $\pm$ 1.0 dB.

One of the more controversial aspects of quantifying aircraft noise exposure in terms of the CNEL is that persons react to *individual* aircraft noise events rather than to the annual average CNEL. For that reason, it is important to understand the relationship between single events and the CNEL. For the determination of the CNEL for a noise source characterized as series of discrete single events, such as aircraft operations, the following formula is often used.

$$CNEL = \overline{SEL} + 10 \text{ Log } N_{eq} - 49.4,$$

where:

> *$\overline{SEL}$ is the energy average SEL for all noise events, N_{eq} is the equivalent number of events that occur during an annual average day (determined by adding the actual number of events occurring between 7:00 a.m. and 7:00 p.m. to 3 times the number of events occurring between 7:00 p.m. and 10:00 p.m. and to 10 times the number of events occurring between 10:00 p.m. and 7:00 a.m.), and 49.4 is a time constant equal to 10 times the logarithm of the number of seconds in a 24-hour day.*

The above-described formula illustrates that the CNEL is calculated by mathematically combining the number of single events which occur during a 24-hour day with how loud the events are and what time of day they occur. The same formula is used to calculate the DNL, except that the evening penalty is not applied. Because of the interrelationship between the weighted number of daily noise events and the SEL values generated by the events, it is possible to have the same CNEL value for an area exposed to a few loud events as for an area exposed to many quieter events. This concept is illustrated by Figure A-1.

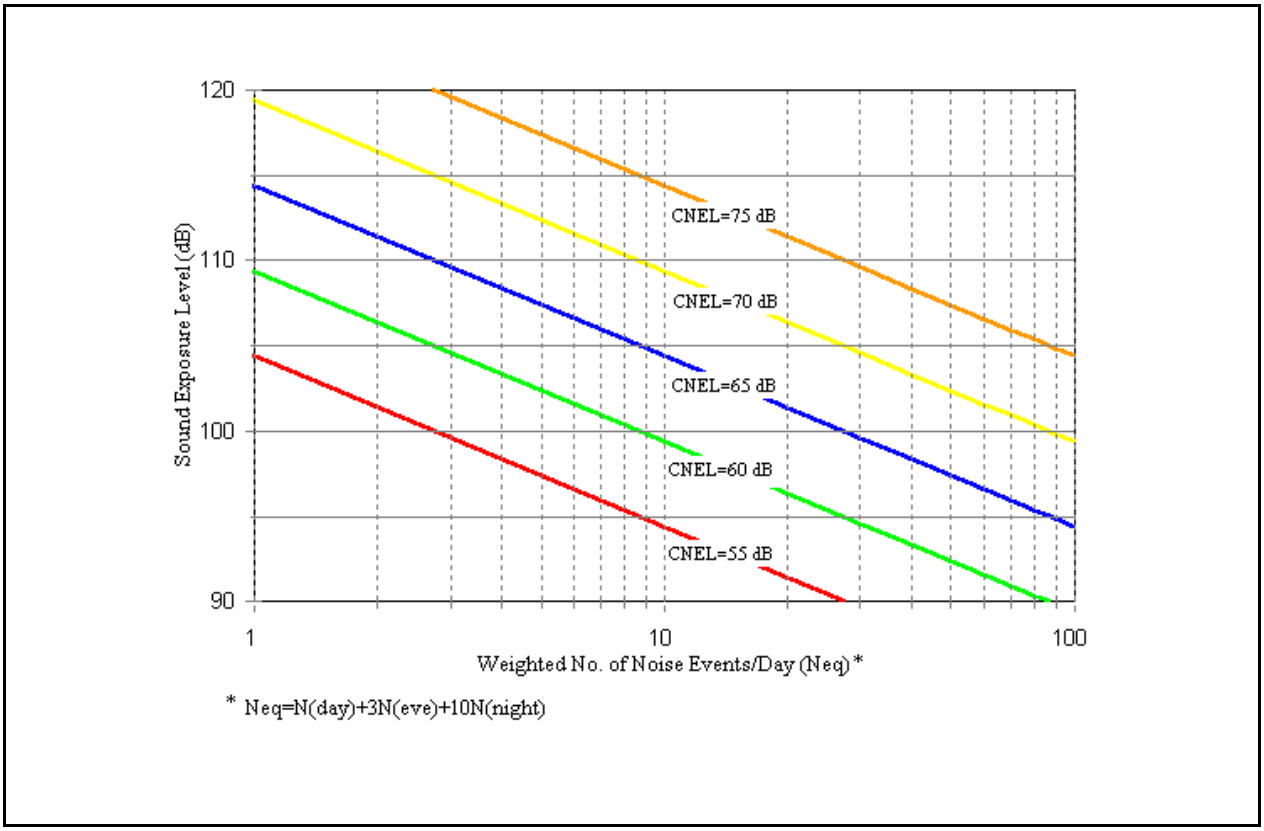


Figure A-1
Relationship of CNEL to Event SEL

Definitions of some of the more important terms used to define aircraft noise exposure summarized below.

A-weighted Sound Level:

The sound pressure level in decibels as measured on a sound level meter using an A-weighting filter. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear, and provides good correlation with subjective reactions to noise. CNEL and DNL values are expressed in terms of A-weighted sound levels.

CNEL:

Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of 4.77 dB to sound levels during the evening hours (7:00 p.m. - 10:00 p.m.) and 10 dB to sound levels during the nighttime hours (10:00 p.m. - 7:00 a.m.).

Decibel, dB:

A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter). The threshold of human hearing (young healthy ear) is 0 dB.

DNL (or L_{dn}):

Day-Night Level. The average equivalent sound level during a 24-hour day, obtained after addition of 10 dB to sound levels during the nighttime hours (10:00 p.m. - 7:00 a.m.). The DNL and CNEL are generally considered to be equivalent descriptors of the community noise environment within $\pm$ 1.0 dB.

L_{eq}:

Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. The L_{eq} is typically computed over 1, 8 or 24-hour sample periods.

L_{max}:

The maximum sound level recorded during a single noise event.

Noise Exposure Contours:

Lines drawn about a noise source indicating constant levels of noise exposure. CNEL or DNL contours are frequently utilized to describe community exposure to noise.

SEL:

The Sound Exposure Level is the level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 14300 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	95.0	203.4	437.6

TABLE Existing-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16400 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	104.0	222.8	479.4

TABLE Existing-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16300 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	103.6	221.9	477.5

TABLE Existing-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1200 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	56.8

TABLE Existing-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 43.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20100 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	100.1	210.8	451.7

TABLE Existing-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20100 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	100.1	210.8	451.7

TABLE Existing-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9900 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	107.8	227.5

TABLE Existing Plus No Project Alternative-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15800 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.5	217.4	467.7

TABLE Existing Plus No Project Alternative-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17600 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
51.7	108.9	233.5	502.4

TABLE Existing Plus No Project Alternative-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17700 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
51.9	109.3	234.4	504.3

TABLE Existing Plus No Project Alternative-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	65.5

TABLE Existing Plus No Project Alternative-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 48.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing Plus No Project Alternative-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21300 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	103.9	219.0	469.5

TABLE Existing Plus No Project Alternative-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20500 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.4	213.5	457.7

TABLE Existing Plus No Project Alternative-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Existing Plus No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10400 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	55.8	111.2	235.0

TABLE Existing Plus Alternative A-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15400 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	99.8	213.7	459.8

TABLE Existing Plus Alternative A-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17500 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
51.5	108.5	232.6	500.5

TABLE Existing Plus Alternative A-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17400 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	108.1	231.8	498.7

TABLE Existing Plus Alternative A-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1200 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	56.8

TABLE Existing Plus Alternative A-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 43.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing Plus Alternative A-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21200 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	103.6	218.3	468.0

TABLE Existing Plus Alternative A-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20400 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.21

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	101.1	212.8	456.2

TABLE Existing Plus Alternative A-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Existing Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10400 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	55.8	111.2	235.0

TABLE Cumulative (2030) Baseline-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16900 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	106.1	227.3	489.1

TABLE Cumulative (2030) Baseline-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16800 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.7	226.4	487.2

TABLE Cumulative (2030) Baseline-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Cumulative (2030) Baseline

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16700 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.2	225.5	485.3

TABLE Cumulative (2030) Baseline-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Cumulative (2030) Baseline

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	59.8

TABLE Cumulative (2030) Baseline-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 400 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 46.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Cumulative (2030) Baseline-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52000 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.4	184.7	395.3	850.2

TABLE Cumulative (2030) Baseline-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 56400 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.62

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.9	194.9	417.2	897.5

TABLE Cumulative (2030) Baseline-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Cumulative (2030) Baseline

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.83

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	83.0	172.9	369.5

TABLE Cumulative No Project Alternative-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17400 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.71

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	108.1	231.8	498.7

TABLE Cumulative No Project Alternative-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17000 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.61

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	106.5	228.2	491.1

TABLE Cumulative No Project Alternative-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17200 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	107.3	230.0	494.9

TABLE Cumulative No Project Alternative-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	68.3

TABLE Cumulative No Project Alternative-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 700 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Cumulative No Project Alternative-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52700 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.1	186.4	398.8	857.8

TABLE Cumulative No Project Alternative-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 56800 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.3	195.8	419.2	901.7

TABLE Cumulative No Project Alternative-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Cumulative No Project Alternative

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21000 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.0	175.0	374.2

TABLE Cumulative Plus Alternative A-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Kitty Hawk Road to Club House Drive
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17000 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.61

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	106.5	228.2	491.1

TABLE Cumulative Plus Alternative A-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Club House Drive to Terminal Circle
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16900 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	106.1	227.3	489.1

TABLE Cumulative Plus Alternative A-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Airway Boulevard - Terminal Circle to Kitty Hawk Road
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16800 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.7	226.4	487.2

TABLE Cumulative Plus Alternative A-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Club House Drive - Terminal Circle to Airway Boulevard
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	59.8

TABLE Cumulative Plus Alternative A-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Terminal Circle - Club House Drive to Airway Boulevard
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 400 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 46.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Cumulative Plus Alternative A-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - Airway Boulevard to Jack London Boulevard
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52500 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.9	185.9	397.8	855.7

TABLE Cumulative Plus Alternative A-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Kitty Hawk Road - south of Jack London Boulevard
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 56700 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.2	195.5	418.7	900.7

TABLE Cumulative Plus Alternative A-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: Jack London Boulevard - east of Kitty Hawk Road
NOTES: Livermore Airport - Cumulative Plus Alternative A

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21000 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	84.0	175.0	374.2

TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 06/17/2009
ROADWAY SEGMENT: I-580 - north of Mission Boulevard junction
NOTES: Livermore Airport - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 184000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 80.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
450.6	963.8	2072.9	4463.5

APPENDIX C

TRAFFIC DATA

2015 AM Peak Hour MTS Roadway Segment Analysis

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%?	Significant Impact?
Freeway Segments										
I-580 Westbound										
West of El Charro Rd.	4	8,365	8,398	0.4%	1.05	1.05	**F**	**F**	No	No
El Charro Rd. to Airway Blvd.	5	5,625	5,636	0.2%	0.63	0.63	C	C	No	No
Airway Blvd. to Isabel Ave.	4	7,999	7,999	0.0%	1.00	1.00	E	E	No	No
West of Isabel Ave.	4	8,362	8,384	0.3%	1.05	1.05	**F**	**F**	No	No
I-580 Eastbound										
West of El Charro Rd.	5	5,146	5,179	0.6%	0.57	0.58	B	B	No	No
El Charro Rd. to Airway Blvd.	5	8,643	8,654	0.1%	0.96	0.96	E	E	No	No
Airway Blvd. to Isabel Ave.	4	5,011	5,011	0.0%	0.63	0.63	C	C	No	No
West of Isabel Ave.	4	5,435	5,457	0.4%	0.68	0.68	C	C	No	No
Arterials										
Airway Blvd. - Northbound/Westbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	1,379	1,398	1.4%	0.73	0.74	C	C	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	403	422	4.7%	0.42	0.44	B	B	No	No
Club House Dr. to Isabel Ave.	1	459	480	4.6%	0.48	0.51	B	B	No	No
Airway Blvd. - Southbound/Eastbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	171	179	4.7%	0.09	0.09	A	A	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	152	171	12.5%	0.16	0.18	A	A	No	No
Club House Dr. to Isabel Ave.	1	47	68	44.7%	0.05	0.07	A	A	No	No
Isabel Ave. (SR 84) - Northbound										
North of Airway Blvd.	2	1,410	1,434	1.7%	0.47	0.48	B	B	No	No
Airway Blvd. to West Jack London Blvd.	2	2,047	2,076	1.4%	0.68	0.69	C	C	No	No
West Jack London Blvd. to Discovery Dr.	1	1,468	1,482	1.0%	0.98	0.99	E	E	No	No
Discovery Dr. to Stanley Blvd.	1	1,482	1,496	0.9%	0.99	1.00	E	E	No	No
South of Stanley Blvd.	1	1,513	1,527	0.9%	1.01	1.02	**F**	**F**	No	No
Isabel Ave. (SR 84) - Southbound										
North of Airway Blvd.	2	1,265	1,289	1.9%	0.42	0.43	B	B	No	No
Airway Blvd. to West Jack London Blvd.	2	1,174	1,203	2.5%	0.39	0.40	B	B	No	No
West Jack London Blvd. to	1	1,003	1,017	1.4%	0.67	0.68	C	C	No	No

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
Discovery Dr.										
Discovery Dr. to Stanley Blvd.	1	960	974	1.5%	0.64	0.65	C	C	No	No
South of Stanley Blvd.	1	765	779	1.8%	0.51	0.52	B	B	No	No
Stanley Blvd. - Westbound										
West of Isabel Ave.	2	2,035	2,038	0.1%	1.07	1.07	**F**	**F**	No	No
East of Isabel Ave.	2	1,940	1,944	0.2%	1.02	1.02	**F**	**F**	No	No
Stanley Blvd. - Eastbound										
West of Isabel Ave.	2	703	706	0.4%	0.37	0.37	B	B	No	No
East of Isabel Ave.	2	833	837	0.5%	0.44	0.44	B	B	No	No
Fehr & Peers, 2009.										

Table V.D-11 2015 PM Peak Hour MTS Rd.way Segment Analysis

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
Freeway Segments										
I-580 Westbound										
West of El Charro Rd.	4	5,225	5,263	0.7%	0.65	0.66	C	C	No	No
El Charro Rd. to Airway Blvd.	5	5,241	5,254	0.2%	0.58	0.58	B	B	No	No
Airway Blvd. to Isabel Ave.	4	4,832	4,832	0.0%	0.60	0.60	C	C	No	No
West of Isabel Ave.	4	4,929	4,953	0.5%	0.62	0.62	C	C	No	No
I-580 Eastbound										
West of El Charro Rd.	5	7,726	7,762	0.5%	0.86	0.86	D	D	No	No
El Charro Rd. to Airway Blvd.	5	7,763	7,775	0.2%	0.86	0.86	D	D	No	No
Airway Blvd. to Isabel Ave.	4	7,467	7,467	0.0%	0.93	0.93	E	E	No	No
West of Isabel Ave.	4	7,403	7,429	0.4%	0.93	0.93	E	E	No	No
Arterials										
Airway Blvd. - Northbound/Westbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	454	476	4.8%	0.24	0.25	A	A	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	109	131	20.2%	0.11	0.14	A	A	No	No
Club House Dr. to Isabel Ave.	1	30	54	80.0%	0.03	0.06	A	A	No	No
Airway Blvd. - Southbound/Eastbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	123	132	7.3%	0.06	0.07	A	A	No	No
I-580 EB Ramps-Kitty Hawk Rd.	1	314	334	6.4%	0.33	0.35	A	B	No	No

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
to Club House Dr.										
Club House Dr. to Isabel Ave.	1	339	363	7.1%	0.36	0.38	B	B	No	No
Isabel Ave. (SR 84) - Northbound										
North of Airway Blvd.	2	1,769	1,797	1.6%	0.59	0.60	C	C	No	No
Airway Blvd. to West Jack London Blvd.	2	1,657	1,690	2.0%	0.55	0.56	B	B	No	No
West Jack London Blvd. to Discovery Dr.	1	1,356	1,371	1.1%	0.90	0.91	D	E	No	No
Discovery Dr. to Stanley Blvd.	1	1,326	1,341	1.1%	0.88	0.89	D	D	No	No
South of Stanley Blvd.	1	1,228	1,243	1.2%	0.82	0.83	D	D	No	No
Isabel Ave. (SR 84) - Southbound										
North of Airway Blvd.	2	2,437	2,464	1.1%	0.81	0.82	D	D	No	No
Airway Blvd. to West Jack London Blvd.	2	2,270	2,303	1.5%	0.76	0.77	D	D	No	No
West Jack London Blvd. to Discovery Dr.	1	1,501	1,519	1.2%	1.00	1.01	**F**	**F**	No	No
Discovery Dr. to Stanley Blvd.	1	1,503	1,521	1.2%	1.00	1.01	**F**	**F**	No	No
South of Stanley Blvd.	1	1,501	1,519	1.2%	1.00	1.01	**F**	**F**	No	No
Stanley Blvd. - Westbound										
West of Isabel Ave.	2	549	553	0.7%	0.29	0.29	A	A	No	No
East of Isabel Ave.	2	584	588	0.7%	0.31	0.31	A	A	No	No
Stanley Blvd. - Eastbound										
West of Isabel Ave.	2	1,958	1,962	0.2%	1.03	1.03	**F**	**F**	No	No
East of Isabel Ave.	2	1,912	1,917	0.3%	1.01	1.01	**F**	**F**	No	No
Fehr & Peers, 2009.										

Table V.D-12 2035 AM Peak Hour MTS Rd.way Segment Analysis

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
Freeway Segments										
I-580 Westbound										
West of El Charro Rd.	5	11,603	11,636	0.3%	1.16	1.16	**F**	**F**	No	No
El Charro Rd. to Airway Blvd.	5	12,547	12,558	0.1%	1.39	1.40	**F**	**F**	No	No
Airway Blvd. to Isabel Ave.	5	11,845	11,845	0.0%	1.32	1.32	**F**	**F**	No	No
West of Isabel Ave.	4	11,814	11,836	0.2%	1.48	1.48	**F**	**F**	No	No

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
I-580 Eastbound										
West of El Charro Rd.	5	6,344	6,377	0.5%	0.70	0.71	C	C	No	No
El Charro Rd. to Airway Blvd.	5	6,190	6,201	0.2%	0.69	0.69	C	C	No	No
Airway Blvd. to Isabel Ave.	5	5,612	5,612	0.0%	0.62	0.62	C	C	No	No
West of Isabel Ave.	4	5,792	5,814	0.4%	0.72	0.73	C	C	No	No
Arterials										
Airway Blvd. - Northbound/Westbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	3	2,196	2,215	0.9%	0.77	0.78	D	D	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	461	480	4.1%	0.49	0.51	B	B	No	No
Club House Dr. to Isabel Ave.	1	476	497	4.4%	0.50	0.52	B	B	No	No
Airway Blvd. - Southbound/Eastbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	1,043	1,051	0.8%	0.55	0.55	B	B	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	264	283	7.2%	0.28	0.30	A	A	No	No
Club House Dr. to Isabel Ave.	1	133	154	15.8%	0.14	0.16	A	A	No	No
Isabel Ave. (SR 84) - Northbound										
North of Airway Blvd.	3	3,522	3,546	0.7%	0.78	0.79	D	D	No	No
Airway Blvd. to West Jack London Blvd.	3	3,859	3,888	0.8%	0.86	0.86	D	D	No	No
West Jack London Blvd. to Discovery Dr.	2	2,887	2,901	0.5%	0.96	0.97	E	E	No	No
Discovery Dr. to Stanley Blvd.	2	2,938	2,952	0.5%	0.98	0.98	E	E	No	No
South of Stanley Blvd.	2	2,849	2,863	0.5%	0.95	0.95	E	E	No	No
Isabel Ave. (SR 84) - Southbound										
North of Airway Blvd.	3	2,888	2,912	0.8%	0.64	0.65	C	C	No	No
Airway Blvd. to West Jack London Blvd.	3	2,943	2,972	1.0%	0.65	0.66	C	C	No	No
West Jack London Blvd. to Discovery Dr.	2	2,049	2,063	0.7%	0.68	0.69	C	C	No	No
Discovery Dr. to Stanley Blvd.	2	1,950	1,964	0.7%	0.65	0.65	C	C	No	No
South of Stanley Blvd.	2	2,113	2,127	0.7%	0.70	0.71	C	C	No	No
Stanley Blvd. - Westbound										
West of Isabel Ave.	2	3,439	3,442	0.1%	1.15	1.15	**F**	**F**	No	No
East of Isabel Ave.	3	3,875	3,879	0.1%	1.36	1.36	**F**	**F**	No	No
Stanley Blvd. - Eastbound										
West of Isabel Ave.	2	590	593	0.5%	0.20	0.20	A	A	No	No

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
East of Isabel Ave.	3	769	773	0.5%	0.27	0.27	A	A	No	No
Fehr & Peers, 2009.										

Table V.D-13 2035 PM Peak Hour MTS Rd.way Segment Analysis

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
Freeway Segments										
I-580 Westbound										
West of El Charro Rd.	5	7,004	7,037	0.5%	0.70	0.70	C	C	No	No
El Charro Rd. to Airway Blvd.	5	6,848	6,859	0.2%	0.76	0.76	D	D	No	No
Airway Blvd. to Isabel Ave.	5	5,858	5,858	0.0%	0.65	0.65	C	C	No	No
West of Isabel Ave.	4	6,087	6,109	0.4%	0.76	0.76	D	D	No	No
I-580 Eastbound										
West of El Charro Rd.	5	9,372	9,405	0.4%	1.04	1.05	**F**	**F**	No	No
El Charro Rd. to Airway Blvd.	5	10,202	10,213	0.1%	1.13	1.13	**F**	**F**	No	No
Airway Blvd. to Isabel Ave.	5	9,285	9,285	0.0%	1.03	1.03	**F**	**F**	No	No
West of Isabel Ave.	4	9,892	9,914	0.2%	1.24	1.24	**F**	**F**	No	No
Arterials										
Airway Blvd. - Northbound/Westbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	3	1,107	1,126	1.7%	0.39	0.40	B	B	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	118	137	16.1%	0.12	0.14	A	A	No	No
Club House Dr. to Isabel Ave.	1	29	50	72.4%	0.03	0.05	A	A	No	No
Airway Blvd. - Southbound/Eastbound										
I-580 WB Ramps to I-580 EB Ramps-Kitty Hawk Rd.	2	805	813	1.0%	0.42	0.43	B	B	No	No
I-580 EB Ramps-Kitty Hawk Rd. to Club House Dr.	1	525	544	3.6%	0.55	0.57	B	B	No	No
Club House Dr. to Isabel Ave.	1	531	552	4.0%	0.56	0.58	B	B	No	No
Isabel Ave. (SR 84) - Northbound										
North of Airway Blvd.	3	2,453	2,477	1.0%	0.55	0.55	B	B	No	No
Airway Blvd. to West Jack London Blvd.	3	2,656	2,685	1.1%	0.59	0.60	C	C	No	No
West Jack London Blvd. to Discovery Dr.	2	2,190	2,204	0.6%	0.73	0.73	C	C	No	No

Segment Limits	# Lanes	Model Volume	With Project Volume	% Increase	V/C Ratio - No Development	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Significant Impact?
Discovery Dr. to Stanley Blvd.	2	2,127	2,141	0.7%	0.71	0.71	C	C	No	No
South of Stanley Blvd.	2	2,240	2,254	0.6%	0.75	0.75	C	C	No	No
Isabel Ave. (SR 84) - Southbound										
North of Airway Blvd.	3	2,645	2,669	0.9%	0.59	0.59	C	C	No	No
Airway Blvd. to West Jack London Blvd.	3	3,005	3,034	1.0%	0.67	0.67	C	C	No	No
West Jack London Blvd. to Discovery Dr.	2	2,758	2,772	0.5%	0.92	0.92	E	E	No	No
Discovery Dr. to Stanley Blvd.	2	2,783	2,797	0.5%	0.93	0.93	E	E	No	No
South of Stanley Blvd.	2	2,714	2,728	0.5%	0.90	0.91	D	E	No	No
Stanley Blvd. - Westbound										
West of Isabel Ave.	2	703	706	0.4%	0.23	0.24	A	A	No	No
East of Isabel Ave.	3	743	747	0.5%	0.26	0.26	A	A	No	No
Stanley Blvd. - Eastbound										
West of Isabel Ave.	2	3,070	3,073	0.1%	1.02	1.02	**F**	**F**	No	No
East of Isabel Ave.	3	3,292	3,296	0.1%	1.16	1.16	**F**	**F**	No	No
Fehr & Peers, 2009.										

APPENDIX B

UNCONSTRAINED FORECASTS

"UNCONSTRAINED" FORECASTS

Facility planning must begin with a definition of the demand that may reasonably be expected to occur at the facility over a specific period of time. For Livermore Municipal Airport, this involves forecasts of unconstrained aviation activity indicators through the year 2030. In this report, the unconstrained forecasts of based aircraft, based aircraft fleet mix, and annual aircraft operations will serve as the basis for facility planning.

Because aviation activity can be affected by many influences at the local, regional, and national levels, it is important to understand that forecasts are to serve only as reasonable planning guidelines, and planning must remain flexible enough to respond to unforeseen facility needs.

For facility planning purposes, it will be necessary to select a planning forecast for each of the aviation demand indicators at the airport. While this unconstrained planning forecast will provide an indication of the long term growth potential at the airport, actual growth potential may fluctuate above and below the selected planning forecast levels.

The resulting unconstrained forecast may be used for several purposes, including facility needs assessments, airfield capacity evaluation, and environmental evaluations. The forecasts will be reviewed and approved by the Federal Aviation Administration (FAA) to ensure that they are reasonable projections of unconstrained aviation activity. The intent is to permit the City of Livermore to make the necessary planning adjustments to ensure the facility meets projected demands in an efficient and cost-effective manner.

NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for the large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public.

The current edition when this chapter was prepared was FAA *Aerospace Forecasts - Fiscal Years 2008-2025*, published in March 2008. The forecasts use the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets.

The market for general aviation products and services showed mixed results in 2007. Although total shipments and billings were up 4.2 percent and 15.2 percent respectively compared to 2006, piston aircraft shipments by U.S. manufacturers were down 4.9 percent. The increase in shipments and billings seen in the jet fleet was stimulated by growth in the U.S. and world economy.

The Office of Management and Budget (OMB) forecasts a slowdown in U.S. economic growth in FY 2008 followed by a rebound to more historic rates for the balance of the forecast. This slowdown in 2008 could result in some difficulties for the U.S. commercial aviation industry, but the return to historic rates after that should allow the industry to continue its growth.

GENERAL AVIATION

Following more than a decade of decline, the general aviation industry was revitalized with the passage of the *General Aviation Revitalization Act* in 1994, which limits the liability on general aviation aircraft to 18 years from the date of manufacture. This legislation sparked an interest to renew the manufacturing of general aviation aircraft due to the reduction in product liability, as well as renewed optimism for the industry.

As the demand for business jets has grown over the past several years, the current forecast assumes that business use of general aviation aircraft will expand at a more rapid pace than that for personal/sport use. The business/corporate side of general aviation should also continue to benefit from a growing market for new very light jets (VLJs).

In 2007, there were an estimated 225,007 active general aviation aircraft in the United States. **Exhibit A** depicts the FAA forecast for active general aviation aircraft. The FAA projects an average annual increase of 1.3 percent through 2025, resulting in 286,500 active aircraft. The more expensive and sophisticated turbine-powered fleet (including rotorcraft) is projected to grow at an average of 3.7 percent a year over the forecast period, with the turbine jet fleet increasing at 5.6 percent a year.

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U.S. ACTIVE GENERAL AVIATION AIRCRAFT

U.S. ACTIVE GENERAL AVIATION AIRCRAFT (in thousands)

Year	FIXED WING				ROTORCRAFT		Experimental	Sport Aircraft	Other	Total
	PISTON		TURBINE							
	Single Engine	Multi-Engine	Turboprop	Turbojet	Piston	Turbine				
2007 (Est.)	144.6	18.5	8.2	11.0	3.6	6.0	23.9	2.7	6.4	225.0
2015	145.6	17.2	9.3	19.8	6.2	7.3	29.7	10.5	6.5	252.3
2020	150.0	16.5	10.1	24.9	7.3	7.9	32.6	13.2	6.4	268.9
2025	157.4	15.6	10.8	29.5	8.3	8.6	35.2	14.7	6.4	286.5

Source: FAA Aerospace Forecasts, Fiscal Years 2008-2025.

Notes: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

Exhibit A
U.S. ACTIVE GENERAL AVIATION
AIRCRAFT FORECASTS

The number of active piston-powered aircraft (including rotorcraft) is projected to decrease from the 2006 total of 167,008 through 2008, and then increase gradually to 181,345 by 2025, which is an average annual growth rate of 0.5 percent. In addition, it is expected that the new, light sport aircraft and the relatively inexpensive microjets could erode the replacement market for traditional piston aircraft at the high and low ends of the market respectively.

Beginning in 2005, a new category of aircraft that was previously not included in the FAA's aircraft registry counts was created: light sport aircraft. At the end of 2006, a total of 1,273 aircraft were estimated to be in this category. The forecast assumes registration of 5,600 aircraft over a five-year period beginning in 2005. By 2025, a total of 14,700 light sport aircraft are projected to be in the fleet.

The number of general aviation hours flown is projected to increase by 3.0 percent yearly over the forecast period. Much of this reflects increased flying by business and corporate aircraft as well as a relatively small annual percentage increase in utilization rates for piston aircraft. Hours flown by turbine aircraft are forecast to increase 5.3 percent yearly over the forecast period, compared with 1.1 percent for piston-powered aircraft. Jet aircraft are forecast to account for most of the increase, with hours flown expanding at an average annual rate of 7.7 percent over the forecast period. The large increases in jet hours result mainly from the introduction of VLJs, as well as increases in the fractional ownership fleet and its activity levels.

SOCIOECONOMIC CHARACTERISTICS

For airport demand forecasting, socioeconomic characteristics are collected and examined to derive an understanding of the dynamics of growth within the study area. This information is essential in determining aviation service level requirements, as well as forecasting the number of based aircraft and aircraft activity at the airport. Aviation forecasts are typically related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time.

POPULATION

The size and structure of the local communities and the service area that the airport supports are important factors to consider when planning airport facilities. These factors provide an understanding of the economic base that is needed to determine future airport requirements. Historical population totals, which were obtained from the U.S. Census Bureau, are presented in **Table A**.

TABLE A
Historical Population

Area	1998	2000	2008*	Average Annual Growth Rate (1998-2008)
City of Livermore	69,700	73,300	83,600	1.8%
Alameda County	1,409,200	1,443,700	1,543,000	0.9%
State of California	33,006,000	33,872,000	38,049,000	1.4%

Source: U.S. Census Bureau.
*Estimated on 1/1/2008 by the California Department of Finance.

According to the California Department of Finance, the state's current population for 2008 is estimated at 38 million. This is an increase of more than 5 million residents since 1998, which represents an average annual increase of 1.4 percent.

During this same time, Alameda County experienced a 0.9 percent annual increase in population, gaining nearly 134,000 residents. Alameda County's 825 square miles are located within one of the state's busiest urban centers, the San Francisco Bay Area. According to the California Department of Finance, the current estimated population of more than 1.5 million ranks Alameda as the seventh most populous county in California.

The City of Livermore's current population is estimated at 83,600, which is nearly 14,000 more residents than ten years ago. This represents an average annual growth rate of 1.8 percent, which is higher than both the county and the state over this same time.

Forecast population projections are presented in **Table B**. These projections were prepared by the California Department of Finance in July 2007. As shown in the table, the department projects the state's population to reach more than 49.2 million by 2030, which is an annual growth rate of 1.2 percent. Population in Alameda County is expected to grow at nearly half that rate (0.7 percent) during the same time, totaling more than 1.7 million residents by 2030.

TABLE B
Forecast Population

Area	2013	2018	2030	Average Annual Growth Rate (2008-2030)
Alameda County	1,583,000	1,640,200	1,791,700	0.7%
State of California	40,574,000	43,087,000	49,241,000	1.2%

Source: California Department of Finance (July 2007).

EMPLOYMENT

Analysis of a community's employment base can provide valuable insight to the overall well-being of the community. In most cases, the community make-up and health is significantly impacted by the availability of jobs, variety of employment opportunities, and types of wages provided by local employers. Civilian labor force data, which was obtained from the California Employment Development Department (EDD), is presented in **Table C**.

TABLE C
Civilian Labor Force Data

	1990	2000	2008*
Alameda County			
Civilian Labor Force	677,600	768,700	765,100
Employment	650,100	741,000	713,800
Unemployment	27,500	27,700	51,300
Unemployment Rate	4.1%	3.6%	6.7%
State of California			
Civilian Labor Force	15,168,500	16,857,500	18,555,800
Employment	14,294,100	16,024,300	17,146,800
Unemployment	874,400	833,200	1,409,000
Unemployment Rate	5.8%	4.9%	7.6%
United States			
Civilian Labor Force	125,840,000	142,583,000	156,300,000
Employment	118,793,000	136,891,000	146,867,000
Unemployment	7,047,000	5,692,000	9,433,000
Unemployment Rate	5.6%	4.0%	6.0%

Source: California Employment Development Department (EDD), data is not seasonally adjusted).
*As of July 31, 2008.

As shown in the table, Alameda County has a current unemployment rate of 6.7 percent, which is nearly double the unemployment rate in 2000. The State of California has an even higher unemployment rate of 7.6 percent, which is an increase from the 4.9 percent rate the state experienced in 2000. Meanwhile, the United States' current unemployment rate (6.0 percent) has also risen since 2000, but remains lower than that of both the state and the county.

Table D presents the major employers in Alameda County, several of which utilize Livermore Municipal Airport. The principal sectors that are producing jobs in the county are the healthcare industry (hospitals, physicians/surgeons, and pharmaceutical companies), education/universities, and law enforcement.

According to the *Association of Bay Area Governments*, the momentum for employment growth in Alameda County is expected to increase over the next few years in the services sector, namely healthcare services, which support the aging population. Most of the job growth in Livermore will be in the healthcare, education, and financial/professional services sectors.

TABLE D
Major Employers
Alameda County

Employer Name	City	Industry
Alameda County Law Enforcement	Oakland	Law Enforcement
Alameda County Sheriff Department	Pleasanton	Law Enforcement
Alta Bates Medical Center	Berkeley	Hospitals
Alta Bates Summit Medical Center	Oakland	Hospitals
Bay Area Rapid Transit	Oakland	Transportation
Bayer Corp.	Berkeley	Drug Manufacturers
Brita Water Co.	Oakland	Bottled Water
California State University	Hayward	Universities/Education
Clorox Technical Center	Pleasanton	Commercial Physical Research
East Bay Water	Oakland	Utilities - Water & Sewage
Kaiser Foundation Hospital	Oakland	Hospitals
Kaiser Permanente Hospital	Hayward	Hospitals
Lawrence Berkeley National Lab	Berkeley	Physicians/Surgeons
Lawrence Livermore National Lab	Livermore	Laboratories – Testing
New United Motor Manufacturing	Fremont	Automobile Parts & Supplies
Novartis	Emeryville	Pharmaceutical Preparation
Novartis Vaccines & Diagnostics	Emeryville	Biological Products
Permanente Medical Group	Hayward	Physicians/Surgeons
Residential & Student Services Program	Berkeley	Universities/Education
Sandia National Laboratories	Livermore	Laboratories – Research & Dev.
Sheriff's Office Law Enforcement	Oakland	Law Enforcement
Transportation Department – California	Oakland	State Government
UC Berkeley Extension	Berkeley	Universities/Education
Washington Hospital Healthcare	Fremont	Hospitals
Western Digital	Fremont	Telecommunications Services

Source: California Employment Development Department (EDD).

FORECASTING APPROACH

The development of aviation forecasts proceeds through both analytical and judgmental processes. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth. However, the judgment of the forecast analyst, based upon professional experience, knowledge of the aviation industry, and assessment of the local situation, is important in the final determination of the preferred forecast. The most reliable approach to estimating aviation demand is through the utilization of more than one analytical technique. Methodologies frequently considered include trend line/time-series projections, correlation/regression analysis, and market share analysis.

Trend line/time-series projections are probably the simplest and most familiar of the forecasting techniques. By fitting growth curves to historical data and then extending them into the future, a basic trend line projection is produced. A general assumption of this technique is that outside factors will continue to affect aviation demand in much the same manner as in the past. As broad as this assumption may be, the trend line projection does serve as a reliable benchmark for comparing other projections.

Correlation analysis provides a measure of direct relationship between two separate sets of historic data. Should there be a reasonable correlation between the data sets, further evaluation using regression analysis may be employed.

Regression analysis measures statistical relationships between dependent and independent variables, yielding a "correlation coefficient." The correlation coefficient (Pearson's "r") measures association between the changes in the dependent variable and the independent variable(s). If the "r^2" value (coefficient determination) is greater than 0.95, it indicates good predictive reliability. A value less than 0.95 may be used, but with the understanding that the predictive reliability is lower.

Market share analysis involves a historical review of the airport activity as a percentage, or share, of a larger regional, state, or national aviation market. A historical market share trend is determined, providing an expected market share for the future. These shares are then multiplied by the forecasts of the larger geographical area to produce a market share projection. This method has the same limitations as trend line projections, but can provide a useful check on the validity of other forecasting techniques.

It is important to note that one should not assume a high level of confidence in forecasts that extend beyond five years. Facility and financial planning usually require at least a 10-year preview since it often takes more than five years to complete a major facility development program. However, it is important to use forecasts which do not overestimate revenue-generating capabilities or understate demand for facilities needed to meet public (user) needs.

AIRPORT ROLE

Livermore Municipal Airport is classified in the National Plan of Integrated Airport Systems (NPIAS), as well as by the California Department of Transportation (Caltrans), as a reliever airport. Livermore Municipal Airport is one of three public-use airports in Alameda County and is the principal airport serving the Tri-Valley Region.

The Tri-Valley Region is comprised of three adjacent valleys – Amador, Livermore, and San Ramon. The valleys are located on the eastern side of the San Francisco Bay Hills and are home to the cities of Pleasanton, Livermore, Dublin, San Ramon, and the town of Danville.

Eleven public-use airports are located within a 30 nautical mile (nm) radius of Livermore Municipal Airport. Of the 11 airports within the 30 nm radius of Livermore Municipal Airport, four have longer runways. The closest public-use airport is Byron Airport, which is located approximately 12 nm northeast of Livermore Municipal Airport.

Several factors affect the decision to base at a given airport, including availability of hangars (and rates), services offered (including fuel), access to major highways, and instrument capabilities. Services provided at

many of the nearby airports include aircraft maintenance, aircraft rental/sales, flight training, aerial tours, fuel, pilot supplies, aircraft hangars, tie downs, courtesy transportation, and catering.

AVIATION ACTIVITY FORECASTS

The following forecast analysis examines each of the aviation demand categories expected at Livermore Municipal Airport. Each segment will be examined individually, and then collectively, to provide an understanding of the overall aviation activity at the airport through 2030.

The need for airport facilities at Livermore can best be determined by accounting for forecasts of future aviation demand. Therefore, the remainder of this chapter presents the forecasts for airport users and includes the following:

- GENERAL AVIATION
  - Based Aircraft
  - Based Aircraft Fleet Mix
  - Local and Itinerant Operations*
  - Peak Activity

* Includes air taxi and military categories

GENERAL AVIATION

General aviation encompasses all portions of civil aviation except commercial operations. To determine the types and sizes of facilities that should be planned to accommodate general aviation activity, certain elements of this activity must be forecast. These indicators of general aviation demand include based aircraft, aircraft fleet mix, and annual operations.

The number of based aircraft is the most basic indicator of general aviation demand. By first developing a forecast of based aircraft, the growth of other general aviation activities and demands can be projected. Aircraft basing at an airport are somewhat dependent upon the nature and magnitude of aircraft ownership in the local service area. As a result, aircraft registrations in the area were reviewed and forecast first.

Registered Aircraft Forecasts

Table E presents historical registered aircraft data for Alameda County since 1998. Historical data was obtained from *Aviation Goldmine CD* (1998-2000) and *Avantex Aircraft & Airmen CD* (2001-2007). The current number of registered aircraft for 2008 was obtained from the FAA.

Over the past ten years, the county's registered aircraft experienced an average annual growth rate of 1.1 percent, adding 151 additional aircraft. This is slightly lower than the national average of 1.6 percent annual growth rate for U.S. active general aviation aircraft during the same time. National growth coincides not only with the improved general economic conditions of the period, but also the *General Aviation Revitalization Act*, which was approved by Congress in 1994 and sparked new aircraft manufacturing.

TABLE E
Historical Registered Aircraft
Alameda County

Year	Alameda Co. Registered Aircraft	Annual Growth Rate
1998	1,249	-
1999	1,229	-1.6%
2000	1,315	7.0%
2001	1,375	4.6%
2002	1,376	0.1%
2003	1,395	1.4%
2004	1,382	-0.9%
2005	1,396	1.0%
2006	1,404	0.6%
2007	1,390	-1.0%
2008	1,400	0.7%

Source: Historical Registered Aircraft – Aviation Goldmine CD (1998-2000), Avantex Aircraft & Airmen CD (2001-2007), FAA (2008).

There are no recently prepared forecasts of registered aircraft to examine and compare. As a result, several projections of county registrations were developed. First, a time-series analysis of registered aircraft in Alameda County was prepared based upon the historic data gathered between 1998 and 2008. A regression analysis, which compared registered aircraft in Alameda County to the population, was also examined. However, because of the fluctuation in registered aircraft during this period, these analyses both yielded an r^2 value of 0.68. As previously mentioned, an r^2 less than 0.95 does not indicate good predictive reliability. Therefore, other methods were used to project registered aircraft.

One of these methods used to project registered aircraft in Alameda County considered the county's market share of U.S. active general aviation aircraft. This market share analysis compared the county's aircraft ownership trends versus national aircraft ownership trends. Over the past ten years, the county's market share fluctuated between a low of 0.56 percent in 1999 to a high of 0.67 percent in 2003. But overall, the market share has remained at 0.61 percent since 1998.

Based on this historical data, two market share forecasts were then developed. First, a projection maintaining the 2008 market share constant through the planning period was developed and results in 1,873 registered aircraft by 2030. Second, a projection continuing with an increasing market share was developed to represent the overall trend since 1999 and yields 1,984 registered aircraft by 2030. These two market share forecasts are presented in **Table F**.

TABLE F
Registered Aircraft Market Share of U.S. Active General Aviation (GA) Aircraft
Alameda County

Year	Alameda County Registered Aircraft	U.S. Active GA Aircraft	Alameda County Market Share
1998	1,249	204,711	0.61%
1999	1,229	219,464	0.56%
2000	1,315	217,533	0.60%
2001	1,375	211,446	0.65%
2002	1,376	211,244	0.65%
2003	1,395	209,606	0.67%
2004	1,382	219,319	0.63%
2005	1,396	224,262	0.62%
2006	1,404	221,942	0.63%
2007	1,390	225,007	0.62%
2008	1,400	228,155	0.61%
Constant Market Share			
2013	1,504	245,090	0.61%
2018	1,611	262,460	0.61%
2030	1,873	305,200[1]	0.61%
Increasing Market Share			
2013	1,520	245,090	0.62%
2018	1,653	262,460	0.63%
2030	1,984	305,200[1]	0.65%

Source: Historical Registered Aircraft – Aviation Goldmine CD (1998-2000), Avantex Aircraft & Airmen CD (2001-2007), FAA (2008); Historical & Forecast U.S. Active GA Aircraft – FAA Aerospace Forecasts, Fiscal Years 2008-2025.
[1]Extrapolated

A forecast comparing the number of registered aircraft in Alameda County to the population was also developed. This forecast examined the historical registered aircraft as a ratio of 1,000 residents in the county. As shown in **Table G**, the California Department of Finance estimated the 2008 population for the county at 1,543,000 on January 1st. This equates to 0.91 registered aircraft per 1,000 residents. Overall, this ratio has risen slightly since 1998. Two projections were developed based on this data.

The first projection maintains a constant ratio projection and yields 1,626 registered aircraft by 2030. Next, an increasing ratio projection was developed to represent the historical trend and yields 1,702 registered aircraft by 2030. These two projections are presented in **Table G**.

TABLE G
Registered Aircraft Per 1,000 Residents
Alameda County

Year	Alameda County Registered Aircraft	Alameda County Population	Registered Aircraft Per 1,000 Residents
1998	1,249	1,409,200	0.89
1999	1,229	1,426,300	0.86
2000	1,315	1,443,700	0.91
2001	1,375	1,445,800	0.95
2002	1,376	1,467,900	0.94
2003	1,395	1,480,200	0.94
2004	1,382	1,492,500	0.93
2005	1,396	1,505,000	0.93
2006	1,404	1,517,600	0.93
2007	1,390	1,530,200	0.91
2008	1,400	1,543,000	0.91
Constant Market Share			
2013	1,437	1,583,300[1]	0.91
2018	1,488	1,640,200[1]	0.91
2030	1,626	1,791,700	0.91
Increasing Market Share			
2013	1,457	1,583,300[1]	0.92
2018	1,525	1,640,200[1]	0.93
2030	1,702	1,791,700	0.95

Source: Historical Registered Aircraft – Aviation Goldmine CD (1998-2000), Avantex Aircraft & Airmen CD (2001-2007), FAA (2008); Historical Population – U.S. Census Bureau; Forecast Population – California Department of Finance (1/1/2008).
[1]Interpolated

Another forecast method examined the historical growth rate of registered aircraft in Alameda County. As previously mentioned, registered aircraft grew at an average annual rate of 1.1 percent between 1998 and 2008. This growth rate was applied to the forecast years and yields 1,781 registered aircraft by the year 2030.

Table H and **Exhibit B** summarize the registered aircraft forecasts for Alameda County. For planning purposes, an average of each of the newly created forecasts has been selected as the planning forecast. This forecast results in 1,480 registered aircraft by 2013, 1,570 registered aircraft by 2018, and 1,790 registered aircraft by 2030. This represents an average annual growth rate of 1.1 percent, which is consistent with the county's historical trend over the past ten years.

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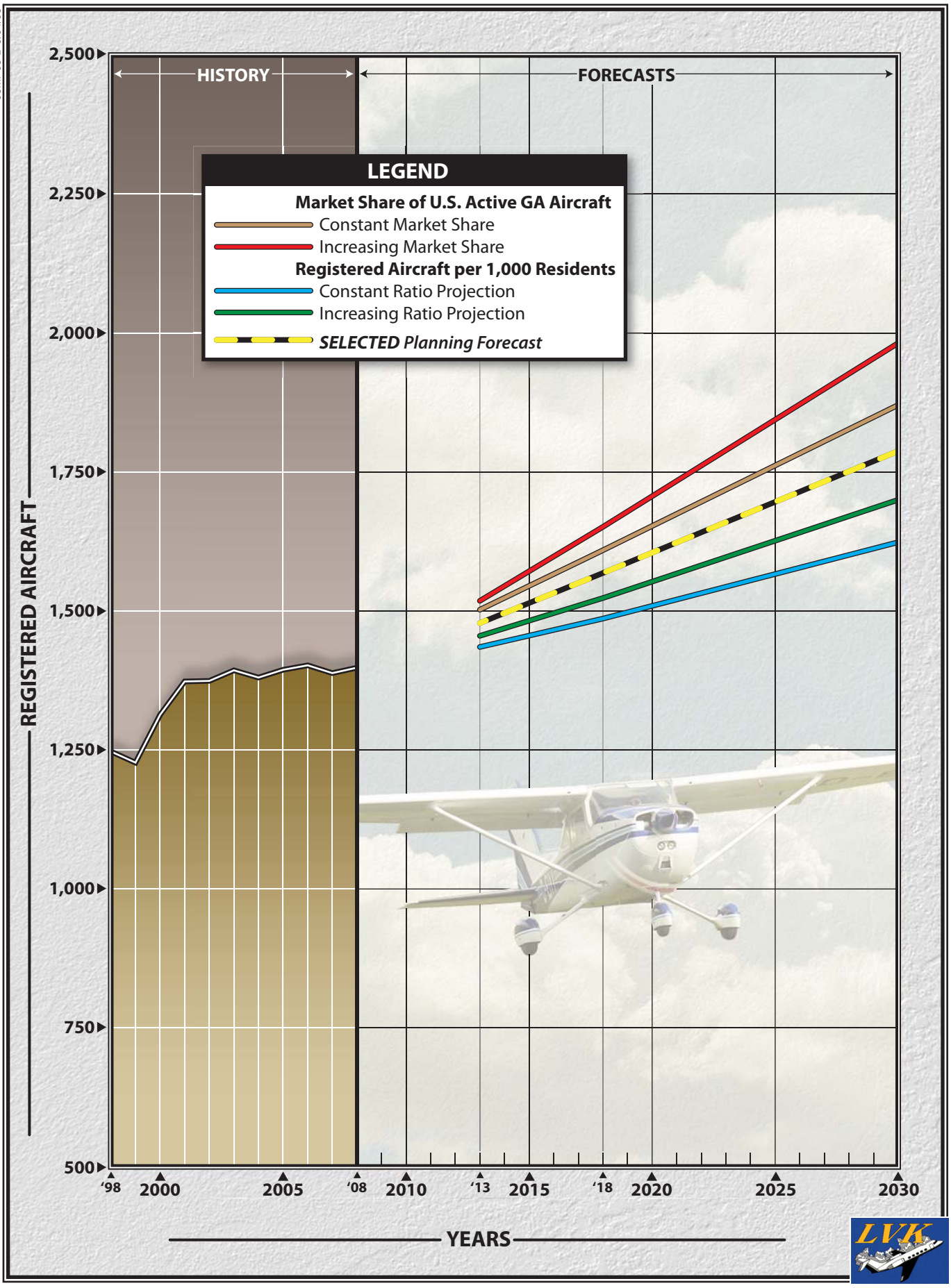

Exhibit B
ALAMEDA COUNTY REGISTERED
AIRCRAFT FORECAST SUMMARY

TABLE H
Registered Aircraft Forecast Summary
Alameda County

	2008	2013	2018	2030
Market Share of U.S. Active GA Aircraft				
Constant Market Share		1,504	1,611	1,873
Increasing Market Share		1,520	1,653	1,984
Registered Aircraft Per 1,000 Residents				
Constant Ratio Projection		1,437	1,488	1,626
Increasing Ratio Projection		1,457	1,525	1,702
1.1% Historical Growth Rate (1998-2008)		1,479	1,562	1,781
Selected Planning Forecast	**1,400**	**1,480**	**1,570**	**1,790**

Based Aircraft Forecasts

Having forecast the registered aircraft in Alameda County, based aircraft at Livermore Municipal Airport was examined. As previously mentioned, the number of based aircraft is the most basic indicator of general aviation demand at an airport. By first developing a forecast of based aircraft, the growth of aviation activities at the airport can be projected.

Table J presents the historical based aircraft at Livermore Municipal Airport over the past ten years, which was obtained from airport records. As shown in the table, there are currently 600 based aircraft at the airport. While the number of based aircraft has fluctuated in the past, this is an overall increase of 33 based aircraft since 1998, which represents an average annual growth rate of 0.6 percent over the ten year period.

TABLE J
Historical Based Aircraft
Livermore Municipal Airport

Year	Based Aircraft	Annual Growth Rate
1998	567	-
1999	560	-1.2%
2000	593	5.9%
2001	610	2.9%
2002	595	-2.5%
2003	599	0.7%
2004	596	-0.5%
2005	649	8.9%
2006	646	-0.5%
2007	642	-0.6%
2008	600	-6.5%

Source: Airport Records

Because of the fluctuations in based aircraft over the past ten years, time-series and regression analyses could not be performed, as they would not provide reliable projections. Instead, other methods have been utilized to project based aircraft.

The first method used to develop forecasts of based aircraft examined the airport's market share of registered aircraft in Alameda County, which is presented in **Table K**. The current 600 based aircraft at Livermore Municipal Airport represents 43 percent of the total aircraft registered in Alameda County. As shown in the table, the airport's market share has remained fairly consistent over the past ten years, fluctuating by only a few percentages. Therefore, a constant market share forecast was prepared and assumes the airport's market share will remain at 43 percent through the planning period, which yields 767 based aircraft by 2030.

TABLE K
Based Aircraft Market Share of Registered Aircraft (Alameda County)
Livermore Municipal Airport

Year	Livermore Based Aircraft	Alameda County Registered Aircraft	Based Aircraft Market Share
1998	567	1,249	45%
1999	560	1,229	46%
2000	593	1,315	45%
2001	610	1,375	44%
2002	595	1,376	43%
2003	599	1,395	43%
2004	596	1,382	43%
2005	649	1,396	46%
2006	646	1,404	46%
2007	642	1,390	46%
2008	600	1,400	43%
Constant Market Share			
2013	634	1,480	43%
2018	673	1,570	43%
2030	767	1,790	43%

Source: Historical Based Aircraft – Airport Records; Historical Registered Aircraft – Aviation Goldmine CD (1998-2000), Avantex Aircraft & Airmen CD (2001-2007), FAA (2008).

The population of Alameda County has also been used as a comparison with based aircraft. This forecast examined the airport's historical based aircraft as a ratio of 1,000 residents in the county and is presented in **Table L**. According to the California Department of Finance, the county's estimated population for 2008 is 1,543,000, which equates to 0.39 based aircraft per 1,000 residents. As shown in the table, this ratio has remained fairly consistent over the past ten years, varying only slightly. Therefore, a constant ratio projection was developed and yields 697 based aircraft by 2030.

TABLE L
Based Aircraft Per 1,000 Residents (Alameda County)
Livermore Municipal Airport

Year	Livermore Based Aircraft	Alameda County Population	Based Aircraft Per 1,000 Residents
1998	567	1,409,200	0.40
1999	560	1,426,300	0.39
2000	593	1,443,700	0.41
2001	610	1,445,800	0.42
2002	595	1,467,900	0.41
2003	599	1,480,200	0.40
2004	596	1,492,500	0.40
2005	649	1,505,500	0.43
2006	646	1,517,600	0.43
2007	642	1,530,200	0.42
2008	600	1,543,000	0.39
Constant Market Share			
2013	616	1,583,300[1]	0.39
2018	638	1,640,200[1]	0.39
2030	697	1,791,700	0.39

Source: Historical Based Aircraft – Airport Records; Historical Population – U.S. Census Bureau; Forecast Population – California Department of Finance (1/1/2008).
[1]Interpolated

Projections included in the FAA *Terminal Area Forecasts* (TAF), which was issued in December 2007, were also examined. The 2007 FAA TAF used a base year of 2006, with an estimated 604 based aircraft at Livermore Municipal Airport. The FAA projects 782 based aircraft at the airport by 2025 (although no justification is provided).

A summary of the based aircraft forecasts is presented in **Table M** and **Exhibit C**. The selected planning forecast is an average of the newly created forecasts developed by Coffman Associates and yields 620 based aircraft by 2013, 650 based aircraft by 2018, and 720 based aircraft by 2030. This represents an average annual growth rate of 0.8 percent, which is fairly consistent with the historical trend at the airport.

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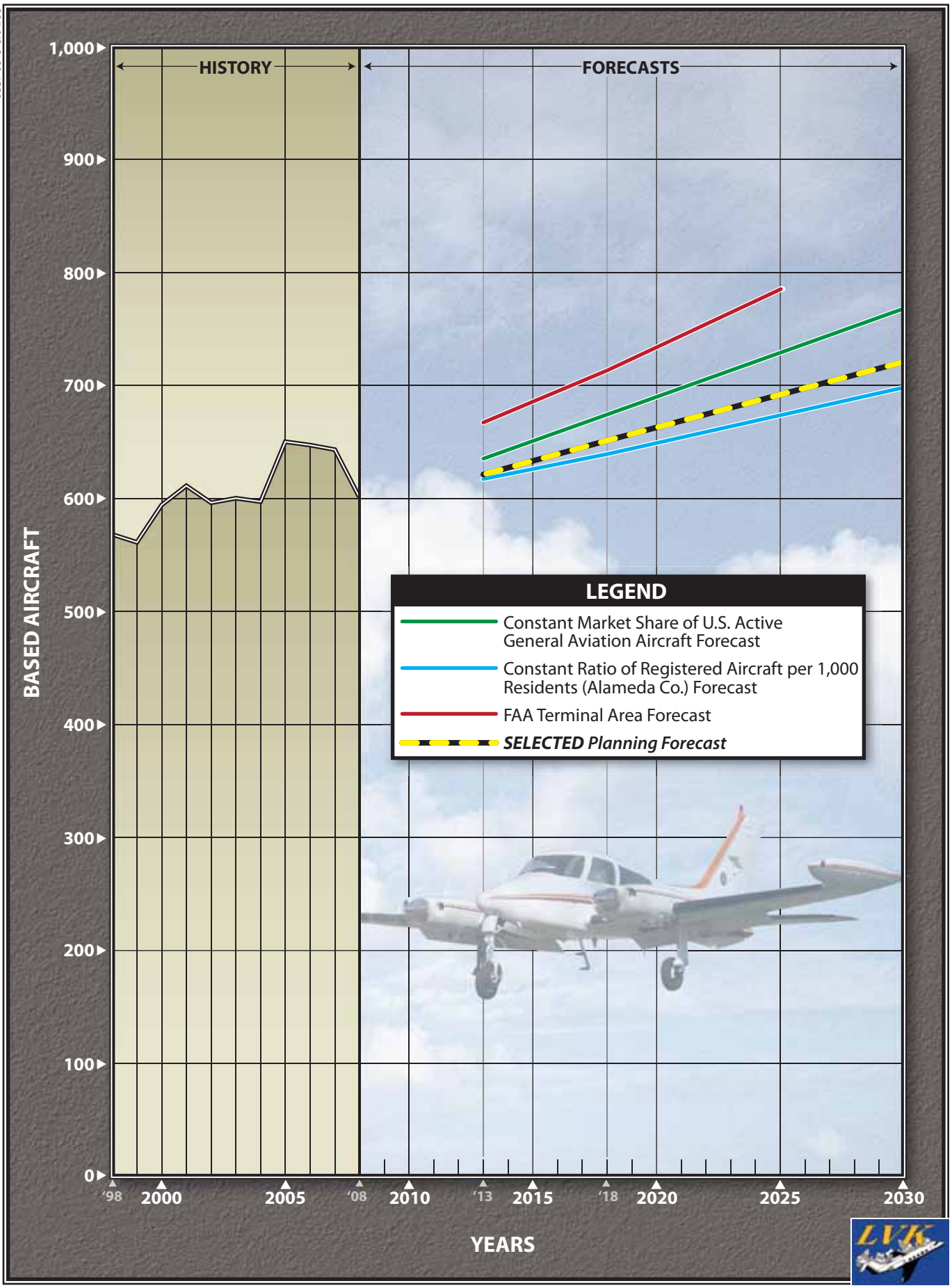


Exhibit C
BASED AIRCRAFT
FORECAST SUMMARY

TABLE M
Based Aircraft Forecast Summary
Livermore Municipal Airport

	2008	2013	2018	2030
Market Share of Registered Aircraft (Alameda Co.)				
Constant Market Share Projection		634	673	767
Based Aircraft Per 1,000 Residents (Alameda Co.)				
Constant Ratio Projection		616	638	697
2007 FAA *Terminal Area Forecast*		666	712	N/A
Selected Planning Forecast	**600**	**620**	**650**	**720**

Based Aircraft Fleet Mix

According to airport records, the fleet mix consists of the following: 552 single engine aircraft, 39 multi-engine aircraft, six jets, and three helicopters. While the number of general aviation aircraft basing at Livermore Municipal Airport is projected to increase, it is important to know the fleet mix of the aircraft expected to use the airport. This will ensure the placement of proper facilities in the future.

The national trend in general aviation is toward a greater percentage of larger, more sophisticated aircraft as part of the national fleet. While an increase in single engine aircraft can be expected, their percentage of the total fleet mix will likely decrease. Meanwhile, the percentage of multi-engine and jet aircraft is projected to increase slightly by the end of the planning period. Only a slight increase in the number of helicopters is projected at Livermore Municipal Airport. The fleet mix projections are shown in **Table N**.

TABLE N
Based Aircraft Fleet Mix
Livermore Municipal Airport

Year	Total	Single Engine	Multi-Engine	Jets	Helicopters
2008	600	552	39	6	3
Percentage Share					
2008	100.0%	92.0%	6.5%	1.0%	0.5%
FORECAST					
2013	620	564	43	9	4
2018	650	579	53	13	5
2030	720	620	73	20	7
Change	+120	+68	+34	+14	+4
Percentage Share					
2013	100.0%	91.0%	7.0%	1.4%	0.6%
2018	100.0%	89.0%	8.2%	2.0%	0.8%
2030	100.0%	86.0%	10.2%	2.8%	1.0%

Source: Historical Based Aircraft – Airport Records.

GENERAL AVIATION OPERATIONS

General aviation operations are classified by the airport traffic control tower (ATCT) as either local or itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. Itinerant operations are those performed by aircraft with a specific origin or destination away from the airport. Generally, local operations are characterized by training operations. Typically, itinerant operations increase with business and commercial use, since business aircraft are not typically used for large scale training activities.

Table P summarizes historical general aviation operations at Livermore Municipal Airport since 1997. This data was obtained from tower records. As shown in the table, general aviation operations at Livermore Municipal Airport have fluctuated from a high of 251,625 in 1999 to a low of 168,719 in 2005. Overall, the airport has experienced a negative growth rate of 2.6 percent over the past ten years. However, a turnaround took place in 2006 and 2007, when general aviation operations increased by 2.7 percent and 3.6 percent respectively.

TABLE P
Historical General Aviation Operations
Livermore Municipal Airport

Year	Itinerant	Local	Total	% Change
1997	87,396	146,422	233,818	N/A
1998	90,251	146,082	236,333	1.1%
1999	92,378	159,247	251,625	6.5%
2000	87,062	147,136	234,198	-6.9%
2001	86,690	129,131	215,821	-7.8%
2002	90,641	131,164	221,805	2.8%
2003	80,070	109,815	189,885	-14.4%
2004	81,380	117,990	199,370	5.0%
2005	74,423	94,296	168,719	-15.4%
2006	72,567	100,695	173,262	2.7%
2007	74,480	104,977	179,457	3.6%

Source: Airport Records.

Forecasts of annual general aviation operations were developed by examining the number of operations per based aircraft. The base number of 179,457 general aviation operations equates to 300 operations per based aircraft, which is consistent with airports of this size. Holding this ratio constant through the planning period yields 216,000 annual general aviation operations by 2030, which equates to an average annual growth rate of 0.8 percent.

Projections included in the *FAA Terminal Area Forecast* (TAF), which was

issued in December 2007, were also examined. The 2007 FAA TAF used a base year of 2006, with an estimated 171,266 annual general aviation operations at Livermore Municipal Airport. The FAA TAF projects 193,500 annual general aviation operations by 2013 and 207,000 annual general aviation operations by 2018. FAA TAF forecasts were not provided past 2025.

A summary of the general aviation operations forecasts is presented in **Table Q** and **Exhibit D**. The operations per based aircraft was chosen as the selected planning forecast and represents a 0.8 percent average annual growth rate throughout the planning period. Historically, itinerant operations were estimated to account for approximately 40 percent of total general aviation operations, while local operations were estimated to account for approximately 60 percent. It is expected these percentages will remain the same throughout the planning period.

TABLE Q
General Aviation Operations Forecast Summary
Livermore Municipal Airport

	2007	2013	2018	2030
2007 FAA *Terminal Area Forecast*		193,500	207,000	N/A
Constant Ratio of Operations Per Based Aircraft Projection[1]	**179,475**	**186,000**	**195,000**	**216,000**

[1]Selected Planning Forecast.

Peaking Characteristics

Many airport facility needs are related to the level of activity during peak periods. The periods used in developing facility requirements for this study are as follows:

- **Peak Month –** The calendar month when peak activity occurs.
- **Design Day –** The average day in the peak month. This indicator is derived by dividing the peak month activity by the number of days in the month.
- **Busy Day –** The busy day of a typical week in the peak month.
- **Design Hour –** The peak hour within the design day.

It is important to realize that only the peak month is an absolute peak within the year. Each of the other periods will be exceeded at various times during the year. However, each provides reasonable planning standards that can be applied without overbuilding or being too restrictive.

Typically, the peak month for general aviation operations represents between 10 and 12 percent of the airport's annual operations. Review of historical data at Livermore Municipal Airport determined the peak months to represent 10 percent of annual op-

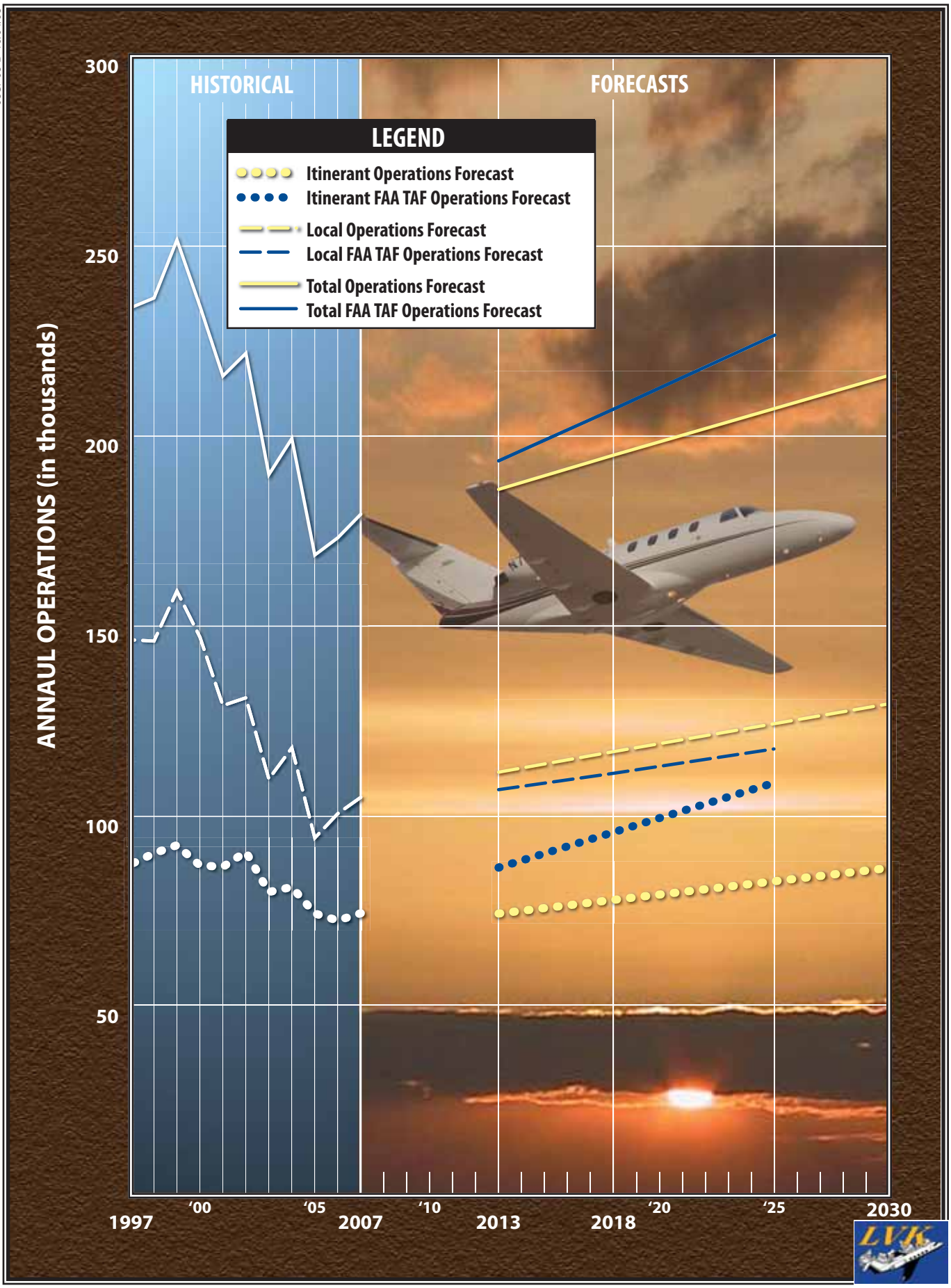


Exhibit D
GENERAL AVIATION
OPERATIONS FORECAST

erations. This equates to 17,946 operations for the peak month of the base year. Forecasts of peak month activity have been developed by applying this percentage to the forecasts of annual operations.

Design day operations were calculated by dividing the total number of operations in the peak month by the number of days in the month. The design hour is projected as 15 percent of the design day operations. Busy day operations were calculated as 1.25 times the design day activity. **Table R** summarizes the general aviation peak activity forecasts for Livermore Municipal Airport.

TABLE R
General Aviation Peak Period Forecasts
Livermore Municipal Airport

	Base Year	FORECASTS		
	2007	**2013**	**2018**	**2030**
Annual	179,457	186,000	195,000	216,000
Peak Month (10.0%)	17,946	18,600	19,500	21,600
Design Day	598	620	650	720
Busy Day	748	775	813	900
Design Hour (15%)	90	93	98	108

AIR TAXI OPERATIONS

Air taxi operations are those conducted by commuter airlines and general aviation aircraft filing flight plans under C.F.R. Part 135. **Table S** presents historical air taxi operations at Livermore Municipal Airport over the past ten years. As shown in the table, air taxi operations at the airport have fluctuated from a high of 2,553 in 1998 to a low of 281 in 2000, averaging 1,500 annual operations during the past ten years. This average was used as a base number for projecting future air taxi operations. Based upon the FAA's projected growth in this category, annual air taxi operations at Livermore Municipal Airport are estimated to grow by 100 operations per year, resulting in 3,800 annual air taxi operations by 2030.

TABLE S
Air Taxi Operations Forecasts
Livermore Municipal Airport

Year	Air Taxi Operations
1997	2,400
1998	2,553
1999	1,200
2000	281
2001	816
2002	1,466
2003	1,618
2004	1,750
2005	1,554
2006	1,584
2007	1,612
Avg.	*1,500*
FORECASTS	
2013	2,100
2018	2,600
2030	3,800

Source: Airport Records.

MILITARY

Military activity accounts for a small portion of the operational traffic at Livermore Municipal Airport. **Table T** presents the history of military operations since 1997. Similar to air taxi operations, military operations at the airport have fluctuated over the past ten years. Because of this, military operations were also forecast as a constant for the planning period. This constant is an average of the activity experienced over the past ten years and yields 300 annual military operations through the planning period.

TABLE T
Military Operations Forecasts
Livermore Municipal Airport

Year	Itinerant	Local	Total
1997	72	52	124
1998	125	6	131
1999	186	36	222
2000	136	6	142
2001	150	50	200
2002	178	4	182
2003	439	10	449
2004	559	206	765
2005	186	24	210
2006	78	2	80
2007	325	330	173
Avg.	*230*	*70*	*300*
FORECASTS			
2008	230	70	300
2013	230	70	300
2030	230	70	300

Source: Airport Records.

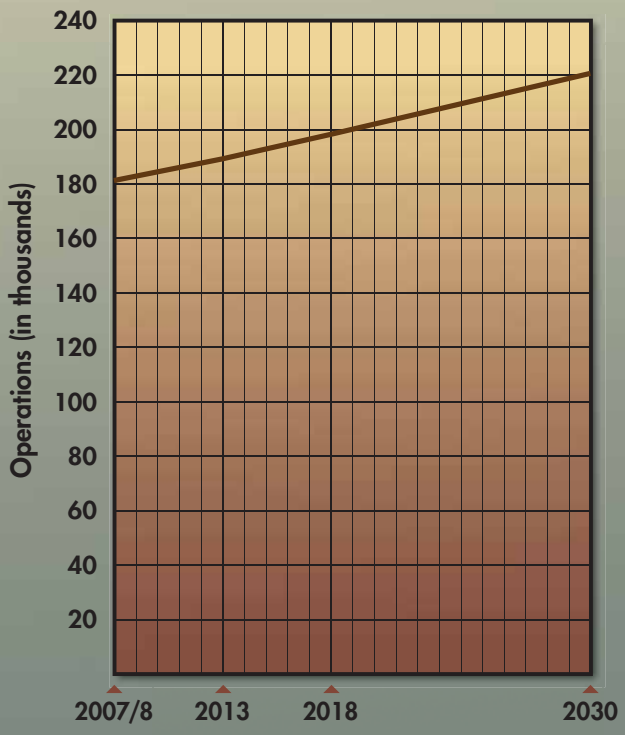
SUMMARY

This chapter has provided forecasts for each sector of aviation demand anticipated over the planning period. **Exhibit E** presents a summary of the unconstrained aviation forecasts developed for Livermore Municipal Airport. The next step in the study assesses the constraints that may impact growth potential. This is considered a preliminary draft until submitted and approved by the FAA. Once approved by the FAA, a detailed operational fleet mix will be developed for subsequent noise analysis.

08SP05-E-9/10/08

	BASE YEAR	FORECASTS		
	2007/2008	2013	2018	2030
OPERATIONS				
Itinerant				
General Aviation	74,480	74,400	78,000	86,400
Air Taxi	1,500	2,100	2,600	3,800
Military	230	230	230	230
Total Itinerant	**76,210**	**76,730**	**80,830**	**90,430**
Local				
General Aviation	104,977	111,600	117,000	129,600
Military	70	70	70	70
Total Local	**105,047**	**111,670**	**117,070**	**129,670**
Total Operations	**181,257**	**188,400**	**197,900**	**220,100**
BASED AIRCRAFT				
Single-Engine	552	564	579	620
Multi-Engine	39	43	53	73
Jets	6	9	13	20
Helicopters	3	4	5	7
Total Based Aircraft	**600**	**620**	**650**	**720**

ANNUAL OPERATIONS



BASED AIRCRAFT

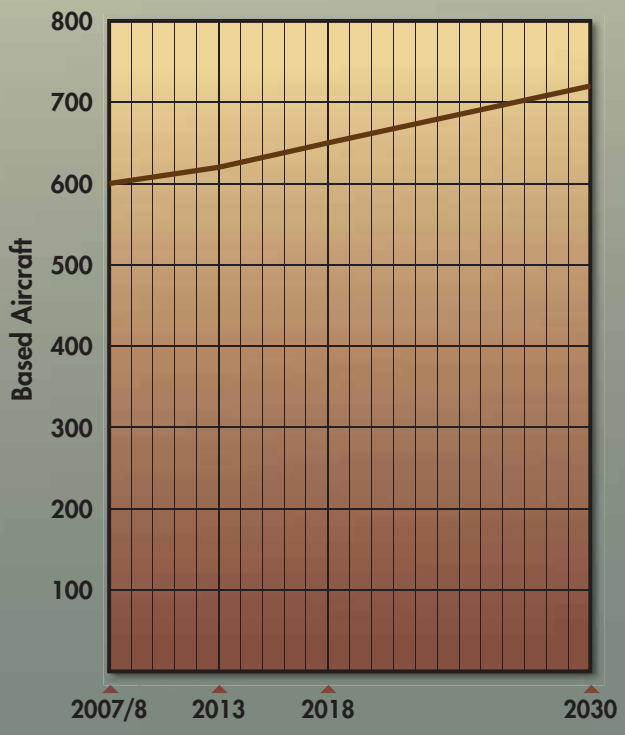


Exhibit E
FORECAST SUMMARY

APPENDIX E

FEDERAL GRANT ASSURANCES
MARCH 2005

ASSURANCES
Airport Sponsors

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.

2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.

3. Upon acceptance of the grant offer by the sponsor, these assurances are incorporated in and become part of the grant agreement.

B. Duration and Applicability.

1. Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor. The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor. The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. Airport Planning Undertaken by a Sponsor. Unless otherwise specified in the grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 30, 32, 33, and 34 in section C apply to planning projects. The terms, conditions, and assurances of the grant agreement shall remain in full force and effect during the life of the project.

C. Sponsor Certification. The sponsor hereby assures and certifies, with respect to this grant that:

1. General Federal Requirements. It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

Federal Legislation

a. Title 49, U.S.C., subtitle VII, as amended.
b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.[1]
c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
d. Hatch Act - 5 U.S.C. 1501, et seq.[2]

e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1] [2]
f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]
g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]
h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended.
j. Coastal Zone Management Act, P.L. 93-205, as amended.
k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]
l. Title 49 ,U.S.C., Section 303, (formerly known as Section 4(f))
m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
n. Civil Rights Act of 1964 - Title VI - 42 U.S.C. 2000d through d-4.
o. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
p. American Indian Religious Freedom Act, P.L. 95-341, as amended.
q Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]
r. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]
s. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]
t. Copeland Anti kickback Act - 18 U.S.C. 874.[1]
u. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]
v. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
w. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]
x. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

Executive Orders

Executive Order 11246 - Equal Employment Opportunity[1]
Executive Order 11990 - Protection of Wetlands
Executive Order 11988 – Flood Plain Management
Executive Order 12372 - Intergovernmental Review of Federal Programs.
Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]
Executive Order 12898 - Environmental Justice

Federal Regulations

a. 14 CFR Part 13 - Investigative and Enforcement Procedures.
b. 14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
c. 14 CFR Part 150 - Airport noise compatibility planning.
d. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]
e. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]
f. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]
g. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]

h. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]
i. 49 CFR Part 20 - New restrictions on lobbying.
j. 49 CFR Part 21 - Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
k. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.
l. 49 CFR Part 24 - Uniform relocation assistance and real property acquisition for Federal and federally assisted programs.[1] [2]
m. 49 CFR Part 26 – Participation By Disadvantaged Business Enterprises in Department of Transportation Programs.
n. 49 CFR Part 27 - Nondiscrimination on the basis of handicap in programs and activities receiving or benefiting from Federal financial assistance.[1]
o. 49 CFR Part 29 – Government wide debarment and suspension (non-procurement) and government wide requirements for drug-free workplace (grants).
p. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
q. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.[1]

Office of Management and Budget Circulars

a. A-87 - Cost Principles Applicable to Grants and Contracts with State and Local Governments.
b A-133 - Audits of States, Local Governments, and Non-Profit Organizations

[1] These laws do not apply to airport planning sponsors.
[2] These laws do not apply to private sponsors.
[3] 49 CFR Part 18 and OMB Circular A-87 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in the grant agreement.

2. Responsibility and Authority of the Sponsor.

a. **Public Agency Sponsor:** It has legal authority to apply for the grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. **Private Sponsor:** It has legal authority to apply for the grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person

to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. Sponsor Fund Availability. It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under the grant agreement which it will own or control.

4. Good Title.

a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. Preserving Rights and Powers.

a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in the grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of the grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that

property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in the grant agreement and shall insure that such arrangement also requires compliance therewith.

6. **Consistency with Local Plans.** The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.** It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.** In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.** In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Air and Water Quality Standards.** In projects involving airport location, a major runway extension, or runway location it will provide for the Governor of the state in which the project is located to certify in writing to the Secretary that the project will be located, designed, constructed, and operated so as to comply with applicable air and water quality standards. In any case where such standards have not been approved and where applicable air and water quality standards have been promulgated by the Administrator of the Environmental Protection Agency, certification shall be obtained from such Administrator. Notice of certification or refusal to certify shall be provided within sixty days after the project application has been received by the Secretary.

11. **Pavement Preventive Maintenance**. With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such

reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. Terminal Development Prerequisites. For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. Accounting System, Audit, and Record Keeping Requirements.

a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to the grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which the grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. Minimum Wage Rates. It shall include, in all contracts in excess of $2,000 for work on any projects funded under the grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. Veteran's Preference. It shall include in all contracts for work on any project funded under the grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Veterans of the Vietnam era and disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. Conformity to Plans and Specifications. It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved

plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into the grant agreement.

17. Construction Inspection and Approval. It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. Planning Projects. In carrying out planning projects:

a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. Operation and Maintenance.

a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably

operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary.
In furtherance of this assurance, the sponsor will have in effect arrangements for-

(1) Operating the airport's aeronautical facilities whenever required;

(2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

(3) Promptly notifying airmen of any condition affecting aeronautical use of the airport.

Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. Hazard Removal and Mitigation. It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use. It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. Economic Nondiscrimination.

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

(1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

(2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non tenants and signatory carriers and non signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. Exclusive Rights. It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and
b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport.

It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations,

aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. Fee and Rental Structure. It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. Airport Revenues.

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. Provided, however, that if covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. Reports and Inspections. It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use

agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of the grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
   (i) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
   (ii) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. Use by Government Aircraft. It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that-

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. Land for Federal Facilities. It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. Airport Layout Plan.

a. It will keep up to date at all times an airport layout plan of the airport showing (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto; (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and (3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon. Such airport layout plans and each amendment, revision, or modification thereof, shall

be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities.

30. Civil Rights. It will comply with such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from funds received from this grant. This assurance obligates the sponsor for the period during which Federal financial assistance is extended to the program, except where Federal financial assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon in which case the assurance obligates the sponsor or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits, or (b) the period during which the sponsor retains ownership or possession of the property.

31. Disposal of Land.

a. For land purchased under a grant for airport noise compatibility purposes, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will, at the discretion of the Secretary, (1) be paid to the Secretary for deposit in the Trust Fund, or (2) be reinvested in an approved noise compatibility project as prescribed by the Secretary, including the purchase of nonresidential buildings or property in the vicinity of residential buildings or property previously purchased by the airport as part of a noise compatibility program.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested in another eligible airport improvement project or projects approved by the Secretary at that airport or within the national airport system, or (2) be paid to the Secretary for deposit in the Trust Fund if no eligible project exists.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. Engineering and Design Services. It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement **prescribed** for or by the sponsor of the airport.

33. Foreign Market Restrictions. It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. Policies, Standards, and Specifications. It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated _____ and included in this grant, and in accordance with applicable state policies, standards, and specifications approved by the Secretary.

35. Relocation and Real Property Acquisition. (1) It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B. (2) It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24. (3) It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. Access By Intercity Buses. The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport, however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. Disadvantaged Business Enterprises. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The Recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure

non discrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26, and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801).

38. Hangar Construction. If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. Competitive Access.

a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

1. Describes the requests;
2. Provides an explanation as to why the requests could not be accommodated; and
3. Provides a time frame within which, if any, the airport will be able to accommodate the requests.

b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date