Amendment to the Draft Recirculated EIR

Lynbrook High School
Sports Fields Improvements and Lighting
SCH# 2009092082

Fremont Union High School District
March 2012
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PREFACE

This document, together with the July 2010 Draft Environmental Impact Report (Draft EIR), December 2010 Amendment to the Draft EIR, and January 2012 Draft Recirculated Environmental Impact Report (Draft REIR) for the Lynbrook High School Sports Fields Improvements and Lighting, constitutes the Final Environmental Impact Report (Final EIR) for the proposed project. Under the California Environmental Quality Act (CEQA), the Final EIR is an informational document prepared by the Lead Agency that must be considered by the decision-makers before approving the proposed project. CEQA Guidelines Section 15132 specifies that a Final EIR shall consist of the following:

- The Draft EIR or a revision of the draft (in this case the Draft REIR);
- Comments and recommendations received on the Draft (R)EIR either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft (R)EIR;
- The responses of the Lead Agency to the significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Final EIR will be used by the Fremont Union High School District (District) and other Responsible Agencies in making decisions regarding the project. The CEQA Guidelines require that, while the information in the Final EIR does not control the District’s ultimate discretion on the project, the District must respond to each significant effect identified in the Final EIR by making written findings for each of those significant effects before it approves a project.

According to Section 21081 of the California Public Resources Code, no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects on the environment would occur if the project is approved or carried out unless both of the following occur:

(A) The public agency makes one or more of the following findings with respect to each significant effect:

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR.

(B) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (A), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

This Final EIR will be made available to the public 10 days prior to the EIR certification hearing.

The Draft REIR and technical appendices referenced in the Draft REIR are available for download from the Fremont Union High School District website: www.fuhsd.org and are also available for review at the Fremont Union High School District (589 West Fremont Avenue, Sunnyvale, CA) during regular business hours.
SECTION 1  LIST OF AGENCIES RECEIVING THE DRAFT REIR

State of California

- Resources Agency
- Department of Fish and Game (Region 3)
- Department of Parks and Recreation
- Department of Water Resources
- California Highway Patrol
- Caltrans (District 4)
- Regional Water Quality Control Board (Region 2)
- Department of Toxic Substances Control
- Native American Heritage Commission

County Agencies

- Santa Clara County Planning Department

Local Governments

- City of San Jose

The Draft REIR was also available for review at the District office, Cupertino Library, Sunnyvale Library, West Valley Branch Library, and on the District web site at www.fuhsd.org.
SECTION 2  LIST OF INDIVIDUALS COMMENTING ON THE DRAFT REIR

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SECTION 3  RESPONSES TO COMMENTS RECEIVED ON THE DRAFT REIR

The following section includes all of the comments requiring responses contained in letters received by the Fremont Union High School District during the noticed 45-day review period for the Draft REIR. The comments are organized under headings containing the source of the letter and its date. The specific comments have been excerpted from the letters and are presented as “comment” with each response directly following. The original comment letters are included as Appendix A to this Amendment to the Draft REIR.

A. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM SHUTE MIHALY & WEINBERGER, LLP, DATED MARCH 2, 2012

COMMENT A-1:

This firm represents Lynbrook-Monta Vista United on matters related to the environmental review for the Lynbrook and Monta Vista High School field lighting and improvement projects (the "Projects"). I have reviewed the draft Recirculated Environmental Impact Reports ("REIR") for each of the Projects and the draft REIRs have been reviewed by a noise expert.

RESPONSE A-1:

It should be noted that the noise expert whose review of the subject Draft REIR is referenced included a curriculum vitae that describes 35 years of acoustic experience designing and operating performance and other building spaces. There is no mention of experience conducting, preparing, or reviewing CEQA noise impact analyses.

COMMENT A-2:

I do not believe that the REIRs comply with the requirements of the California Environmental Quality Act ("CEQA") for a full analysis, disclosure, and identification of alternatives mitigation of the Projects' significant environmental impacts. Moreover, the draft REIRs reveal for the first time that the Projects will have significant environmental impacts. Therefore, the District should have evaluated project alternatives that would avoid these impacts as required by CEQA. Because the draft REIRs do not comply with CEQA, Lynbrook-Monta Vista United requests that the documents be revised to include a complete analysis and disclosure of the Projects' significant noise impacts and a full discussion of mitigation measures and alternatives that would reduce these impacts.

RESPONSE A-2:

The Draft REIRs, together with the previously circulated EIRs comply with the requirements of the CEQA for a full analysis and disclosure of significant effects on the environment of the project, the manner in which those significant effects can be
mitigated or avoided, and identification of alternatives to the project. As described in the Draft Recirculated EIRs (Draft REIRs), Section 1.1, the Draft REIRs recirculate only those sections of the EIR that require reconsideration under the Court’s findings. The previously circulated EIRs, together with the Draft REIRs, constitute the EIRs for consideration of the Reduced Use and Light Levels alternative. This approach is specifically described in Section 15088.5(c) of the CEQA Guidelines.

In conformance with the Court’s ruling of November 30, 2011, Draft REIRs were circulated that conclude that the Reduced Use and Light Levels alternative would result in a significant unavoidable noise impact. The noise impact results primarily from the up to six football games (the same football game noise impact that was identified in the Draft EIRs for the originally proposed projects). The originally circulated Draft and Final EIRs include detailed evaluations of six alternatives to the project (seven for Lynbrook HS project) for their ability to avoid or reduce the identified significant noise impact. The previously circulated EIRs described four additional alternatives that were considered but rejected, because they either did not reduce the impact or resulted in indirect impacts that were not impacts of the project.

- No Project Alternative
- Reduced Use Alternative
- No Sports Light Alternative
- Practice Lights Alternative
- Practice Lights and Homecoming Alternative
- Existing Field Configuration Alternative (Lynbrook HS Project only)
- Reduced Use and Light Levels Alternative (selected as the project in the Draft REIR)

Additional Alternatives Considered but Rejected Include:

- Field Layout Alternative
- Bleacher Location Alternative
- No Synthetic Turf Alternative
- Retractable Portable Lights Alternative

Given the threshold of significance described in the EIRs, there are no alternatives to either the original project or the Reduced Use and Light Levels alternative that meet the objective of holding evening football games at the high school campuses and avoid the significant noise impact. For this reason, additional alternatives were not addressed in the Draft REIRs. The Draft REIRs included detailed discussions of mitigation measures to reduce the identified significant noise impact, including several measures raised in comments received on the Draft EIRs:

- Public Address System Controls
- Noise Barrier Along Property Line
• Noise Barrier Behind Bleachers
• Sound Insulation
• Lowering Field and Track Elevation
• Lowered Elevation Combined with Noise Barrier
• Dome over Track and Field

The Draft REIRs, together with the previously circulated Draft and Final EIRs provides a full disclosure of the significant impact of the project and discussion of mitigation measures and alternatives that have been identified and considered to avoid and reduce the significant impact. Therefore, the Draft REIRs comply with CEQA.

COMMENT A-3:

I. The Draft REIR Improperly Downplays the Project's Significant Noise Impacts and Fails To Identify An Environmentally Superior Alternative.

In the draft REIR the District acknowledges for the first time that the Projects will have significant noise impacts from Friday night football games. However, the REIR continues to downplay the identified significant impacts of the Project. For example, the REIR continues to compare the impacts of the "Reduced Use and Light Levels Alternative" to the original project when discussing the impacts of the Project the District apparently intends to approve. See e.g., Lynbrook REIR at 5-7; MV REIR at 5-7 (relying on 66% reduction in noise as compared to the original proposal and claiming that the RULL is "environmentally superior to the original project evaluated in the Draft EIR.").

RESPONSE A-3:

The purpose of the Draft REIRs are to disclose that the Reduced Use and Light Levels alternative would result in the same significant unavoidable noise impact that was identified in the previously circulated EIRs. The Draft REIRs state that the Reduced Use and Light Levels alternative would result in a significant unavoidable noise impact (page 5). With that said, it is appropriate for the EIRs to compare the Reduced Use and Light Levels alternative with the originally proposed project. The CEQA Guidelines description of Consideration and Discussion of Alternatives to the Proposed Project [§15126.6(d)] states, “Evaluation of Alternatives. The EIR should include sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project.” Compared to the original project evaluated in the Draft EIRs, the Reduced Use and Light Levels alternative would result in a 66% reduction in the hours of potential evening noise-generating activity. While it is acknowledged the Reduced Use and Light Levels alternative would result in a significant unavoidable noise impact, it is accurately described as environmentally superior to the original project, for this reason.
COMMENT A-4:

Conclusions about the significance of a project's impacts should be based on a comparison to the existing physical environment, not a comparison to a hypothetical project that has not even been approved. (Communities For A Better Env’t v. S. Coast Air Quality Mgmt. Dist. ("CBE II") (2010) 48 Cal.4th 310, 320-21; see also Sunnyvale W Neighborhood Assn. v. City of Sunnyvale City Council (2010) 190 Cal.App. 4th 1351, 1373 ["Case law makes clear that '[a]n EIR must focus on impacts to the existing environment, not hypothetical situations."' (internal citations omitted)].)

RESPONSE A-4:

The Draft REIRs conclusions of project impact significance were based on the project’s effects on the existing environment; they were not based on a comparison to a hypothetical project or a situation. The Draft REIR states that evening activity noise under the proposed field lights would result in a significant unavoidable impact, because the increased noise levels would exceed the Cities’ normally acceptable exterior noise level standards (Monta Vista project would exceed Cupertino’s nighttime exterior noise level standard of 50 dBA Leq and Lynbrook project would exceed San Jose’s normally acceptable exterior noise level standard of 55 dBA Leq).

COMMENT A-5:

Moreover, the Draft REIR continues to downplay what are significant noise impacts from the Friday night football games. For example, the Draft REIR continues to take the unsupported position that "the noise impact may be considered less than significant using a qualitative standard based on infrequency, duration, time of day and community expectation ...." Lynbrook REIR at 2; MV REIR at 2. An EIR is a document of public disclosure designed to alert the public to the potentially significant impacts of a project. Laurel Heights Improvement Assn. v. Regents of Univ. of California (1988) 47 Cal.3d 376,392 ("Laurel Heights F") (citations omitted.). Under CEQA, an EIR must reflect a good-faith effort at full disclosure, including "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." Id. at p. 405; CEQA Guidelines, § 15151. 1 To accomplish CEQA's informational purpose, an "EIR must contain facts and analysis, not just the agency's bare conclusions." (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553, 568 ("Goleta IF") (citations omitted).)

RESPONSE A-5:

The Draft REIRs do not downplay the significant noise impact from Friday night football games, or from any of the other events that are expected to be held under the proposed field lights. The Draft REIRs describe the noise levels projected to occur at the nearest residences during capacity football games, how much those project noise levels exceed the existing ambient noise levels, and the sources of the noise. The

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1 The CEQA Guidelines ("Guidelines") are found at California Code of Regulations, title 14, section 15000.
Draft REIRs also describe the noise from practices and non-football games and band practice (Draft REIRs pages 5-6). The discussion of noise impacts is based on the professional analysis and opinion of the project noise consultant; it is not the District’s bare conclusions.

COMMENT A-6:

By playing down the significant noise impacts of the Friday night football games, the REIRs improperly mislead the public as to the true consequences of the District's action. As detailed in the comments of Neil A. Shaw of Menlo Scientific, the noise analysis fails to disclose the full range of significant project impacts and the use of such words as "infrequent" or "non-threatening" are misleading. Exhibit A to this letter.

RESPONSE A-6:

Please refer to the previous response regarding the Draft REIRs disclosure of the full range of significant project noise impacts. The Draft REIRs use of the words “infrequent” and “non-threatening” are part of a discussion of the factors affecting a person’s typical response to noise and are not misleading. The noisiest events proposed to occur under the project field lights are five to six Friday evening football games per year. Five to six non-consecutive evenings over a 365 day year is infrequent. The Draft REIRs describe the noise generated by a high school football game – the sounds of athletes on the field, the band, the public address (PA) system, and the cheers and stomping of spectators as resulting from a “relatively non-threatening event hosted by, played by, and attended by the local neighborhood community… (Draft REIRs page 6).” Responses to specific comments raised by Neil A. Shaw of Menlo Scientific are provided immediately following the responses to this comment letter.

COMMENT A-7:

The REIRs also make the unsupported claim that the Projects are compatible with surrounding land uses because the cities of Cupertino and San Jose allow for the location of schools in residential areas, but they ignore the fact that the Projects will actually exceed noise standards established by the Cities. Thus, the REIRs' attempt to downplay noise from the Projects as the type of noise to be expected in a residential community cannot be reconciled with their clear exceedences of the noise standards established by those same cities.

RESPONSE A-7:

The Draft REIRs do not claim the Projects are compatible with surrounding land uses because the cities of Cupertino and San Jose allow for the location of schools in residential areas. The comment refers to the Draft REIRs discussion of the factors affecting a person’s typical response to noise. In this case, the factor relates to the circumstances creating the noise. The type of noise resulting from the project would
be sounds commonly associated with high school activities. The Draft REIRs state, “City land use policies support the concept that schools are inherently compatible with residential uses and, therefore, locate high schools within residential neighborhoods, as is evidenced by the City of Cupertino (and San Jose) General Plan. This could lead one to presume that school activity noise is also considered compatible with residential neighborhoods.”

As described in previous responses to comments, the Draft REIRs state that evening activity noise under the proposed field lights would result in a significant unavoidable impact, because the increased noise levels would exceed the Cities’ normally acceptable exterior noise level standards (Monta Vista project would exceed Cupertino’s nighttime exterior noise level standard of 50 dBA Leq and Lynbrook project would exceed San Jose’s normally acceptable exterior noise level standard of 55 dBA Leq). The Draft REIRs do not ignore the project’s noise impact.

COMMENT A-8:

A more accurate analysis of the full range of noise impacts would reveal that the Projects will result in the type of noise that people find quite disturbing, including low frequency noises such as bass drums and foot stomping, vibrations, and random, sharp, and non-regular sounds - such as crowd cheers, staccato drumming, and whistles. The draft REIRs fail to disclose any of these significant noise impacts, and therefore fail to disclose how significant the impacts of the Projects will actually be.

RESPONSE A-8:

The Draft REIRs provide a full disclosure of the sources of project noise and resulting noise levels generated by the sources, in conformance with standard CEQA noise impact analysis methodology and procedures. The Draft REIRs and previously circulated EIRs provide detailed information regarding the maximum measured noise levels of various football game noise sources, the worst (noisiest) hour noise levels at nearest residential receptors in three different locations for four different spectator levels, as well as projected hourly average noise levels for non-football game and practices. The threshold of significance of the Projects’ noise impact is based upon the local city’s noise level standards, in conformance with standard CEQA noise impact analysis methodology and practice.

The comment does not provide any evidence that people find high school football game noise “quite disturbing.” As stated in the setting section of the EIRs, the most common method of quantifying and assessing noise in California is the A-weighted sound level or dBA. The A-weighted scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Further, all regulatory criteria applicable to the proposed project establish noise limits that utilize the A-weighted scale.
Lower-frequency noises generated by proposed activities would primarily result from the marching band (e.g., drumming). The spectral content of drumming noise, and overall sound level, results primarily from sounds that are at frequencies of 250 Hz and above. Music played through the public address system may also have some lower-frequency content, but the overall sound level typically results from sounds at 250 Hz or above. Also, most public address systems do not have the power to output high sound pressures in the low-frequency range.

The spectral content of perceived “low-frequency” noises such as drumming and music played through the PA system would be similar to the spectral content of cheering. It is agreed that low-frequency sounds are more difficult to attenuate, may be audible at greater distances, and may be audible at times indoors. However, audibility in itself does not constitute a significant environmental noise impact.

The Draft REIRs correctly use local policies and standards and whether or not the project would cause a substantial increase in noise in the vicinity of the project as the thresholds of significance. The type of noise generated by the project does not warrant the use of a different threshold. The project is located at an existing high school. The noises that would be generated by the proposed project have occurred on the project site. Ongoing activities at the school, including band practice on the playfields, are a part of the existing environment. Audibility is not addressed in local policies or standards, and is not a measure of "substantial increase". Therefore, audibility is not an appropriate significance threshold.

**COMMENT A-9:**

The REIRs also improperly use an average noise analysis to determine significant project impacts. As a result noise levels will be much higher than actually disclosed.

**RESPONSE A-9:**

The Draft REIRs do not improperly use an average noise analysis to determine significant project impacts. The threshold of significance for project noise impacts is based upon the noise standards of the individual jurisdictions in which the high schools are located. In accordance with the CEQA Guidelines Appendix G, *Environmental Checklist Form*, the first question under Noise – would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

For the Monta Vista HS project, located in the City of Cupertino, the EIR criteria for significant noise impacts reflects use of the City’s noise ordinance and Noise Element of the City of Cupertino General Plan. Section 6, Health and Safety, of the City of Cupertino General Plan includes the following policy:
Policy 6-50: Land Use Decision Evaluation - Use the Land Use Compatibility for Community Noise Environments chart and the City Municipal Code to evaluate land use decisions. Figure 6-L: Land Use Compatibility for Community Noise Environments shows Community Noise Exposure levels (described in time-averaged Ldn or CNEEL, dB) of up to 60 dBA CNEEL as acceptable for residential land uses.

For the Lynbrook HS Project, located in the City of San Jose, the San Jose 2020 General Plan noise policies serve as the CEQA noise threshold the City of San Jose has historically used in all of its noise analyses. This is supported in the August 26, 2010 Draft EIR comment letter from the City of San Jose (included in the Amendment to the Draft EIR). Noise Policy 1 states that the City's acceptable noise level objectives are 55 DNL as the long-range exterior noise quality level, 60 DNL as the short-range exterior noise quality level, 4) 45 DNL as the interior noise quality level, and 76 DNL as the maximum exterior noise level necessary to avoid significant adverse health effects. Noise Policy 11 states that when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses, non-residential/and uses should mitigate noise generation to meet the 55 DNL guideline at the property line.

While the Draft REIRs used the time averaged noise levels for the significance thresholds, the noise impact discussion also included descriptions of the maximum measured noise levels resulting from the various noise sources and the technical noise study in the Draft EIR included measured maximum noise levels and time averaged noise levels over five minute increments during a football game. Through all of this information, a complete disclosure of the project noise impacts was provided in the Draft REIR.

COMMENT A-10:

In addition, the noise analysis implies that noise impacts from practices will be significant, but fails to adequately disclose that fact. For example, the REIRs reject a number of mitigation measures because they will not reduce noise levels below the City's noise thresholds. See, e.g., Lynbrook REIR at 12; MV REIR at 12 (rejecting combined noise barriers because noise from football games would still exceed City 55 Leq by 9 dBA and noise from practices would still exceed City's 55 dBA Leq by 4 dBA.)

These statements indicate that noise impacts from practices will be significant because they will exceed City noise thresholds, but they are buried in a discussion of the REIRs' view of why mitigation measures would not be feasible. Because the REIRs contain nothing more than this oblique reference to significant noise impacts from practices, it fails to adequately disclose these impacts and it fails to adequately consider mitigation measures to reduce this impact. For example, the REIRs include no discussion of earlier end times for practices even though that might limit the significance of the noise levels associated with practices.
In fact, the comments of Neil Shaw indicate that the city noise standards rely on an LMax measure, not Leq. By failing to measure noise levels using the LMax and comparing it to the cities’ standards, the REIRs underestimate the impacts of Projects.

**RESPONSE A-10:**

The Draft REIR states that evening activity allowed under the proposed field lights, including non-football games and practices, will result in a significant unavoidable noise impact. “Noise generated by evening games and practices at Monta Vista/Lynbrook High School under the Reduced Use and Light Levels alternative would substantially increase hourly average noise levels at sensitive receptors nearest the main field and track, compared to existing conditions.” (REIR page 5) The Draft REIR describes the times of use for the various activities (including non-football games and practices) proposed by the Reduced Use and Light Levels alternative (Draft REIR page 5). It then states, “…the noise would still result in a significant unavoidable impact, because it exceeds the City’s normally acceptable nighttime exterior noise level standard of 50 dBA Leq (exterior noise level standard of 55 dBA Leq for Lynbrook Draft REIR).”

As described in the Draft REIR (page 5), the Reduced Use and Light Levels alternative would reduce the total number of hours the lights and noise activity would occur by 66%, compared to the original project evaluated in the Draft EIR. Since the alternative retains the five to six evening football games per year, the entire reduction in hours results from earlier end times and fewer days for practices and non-football games. The purpose of this alternative is to reduce both the duration of non-football game noise and limit the noise to the earlier hours, thereby reducing the significance of the noise levels associated with practices and non-football games. In this respect, the Reduced Use and Light Levels alternative responds to the request in this comment for earlier practice end times.

The Environmental Noise Assessment report and Addendum Noise use Lmax, Leq, CNEL, and DNL to compare to ambient conditions and to local standards.

The San Jose Noise Ordinance does not define what it means by maximum noise level. An Lmax limit of 55 dBA is inconsistent with the State of California Model Noise Ordinance, is not supported by research, and is an unreasonably restrictive standard. The project noise consultant has consistently interpreted this limit as an hourly average when used as a CEQA threshold; this interpretation has never been questioned by the City of San Jose.

Table 2.4-1 in the MVHS Draft EIR Environmental Noise Assessment refers to a table contained in the City of Cupertino Municipal Code Section 10.48.040, Daytime and Nighttime Maximum Noise Levels. This table establishes a maximum noise level at the complaint site of the receiving property. The term “maximum” as identified in the table is not intended to regulate the noise level of instantaneous
events, but rather to establish the “maximum” allowable average noise level (Leq). The interpretation of the term “maximum” was provided by the City of Cupertino on a previous project, and is confirmed based on a comparison with similar standards in the State of California Model Noise Ordinance and that the fact that the following section in the Municipal Code allows brief exceedances of the “maximum” noise limits during the daytime period provided, that the sum of the noise duration in minutes plus the excess noise level does not exceed twenty in a two-hour period. This adjustment confirms that the intent of the limit is not to limit maximum instantaneous noise levels to 60 dBA L_max during the day and 50 dBA L_max at night, but rather to limit average noise levels to 60 dBA Leq during the day and 50 dBA Leq at night. The interpretation of the vague language in the Municipal Code, confirmed by City Staff on a previous project, as well as when compared to the State Model Noise Ordinance demonstrates that the intent of the Code is to not limit L_max noise levels to 60 dBA L_max during the day and 50 dBA L_max at night.

COMMENT A-11:

This failure to adequately characterize the Project's significant noise impacts is particularly relevant to the consideration of mitigation measures and alternatives. Although the REIRs attempt to downplay the impacts, the Projects will have far more significant noise impacts than disclosed. As a result, the District should seriously consider alternatives that would avoid or substantially reduce these impacts as discussed in more detail below.

RESPONSE A-11:

The Draft REIRs accurately and fully characterize the Projects’ significant noise impacts, in conformance with standard methodology and practice for CEQA noise impact analyses and the thresholds of significance used by each of the jurisdictions in which the subject high schools are located. Please refer to the previous responses to Comments 1-10 for additional information in response to this comment.

COMMENT A-12:

Finally, the REIRs fail to identify an environmentally superior alternative. With its repeated statements that the RULL will be environmentally superior to the original proposal, the REIRs create the impression that the RULL is the environmentally superior alternative. Inasmuch as the RULL will continue to have significant environmental impacts that the District does not intend to mitigate, this impression cannot be correct. The result is a document that is misleading and fails to convey the full scale of the noise impacts associated the Project. Accordingly, the REIRs fail to comply with its obligation for public disclosure under CEQA and must be revised and recirculated.

RESPONSE A-12:

The Lynbrook and Monta Vista Draft REIRs, together with the previously circulated EIRs and these amendments to the Draft REIRs, each comprise the respective EIR for
the Lynbrook and Monta Vista Sports Field Improvements and Lighting projects. As noted in the Draft REIRs (MVHS page 19 and LHS page 18), the previously circulated EIRs found that there were no alternatives to the project that meet the objective of holding evening football games at the subject campus and avoid the significant noise impact. The Amendment to the Draft EIRs found that the No Sports Light alternative, where home football games were played during the day on the home field, would meet all but two of the project objectives. It would not meet the objective of extending the student school day by allowing band and sport practices to extend into the evening and it would not increase school spirit and pride through being able to hold more events (i.e., evening football games) on the home campus. As described in the Amendment to the Draft EIRs (MVHS page 254 and LHS page 275), “Compared to the Reduced Use, Practice Lights, Practice Lights and Homecoming, and the Reduced Use and Light Levels alternatives, the No Sports Lights alternative will result in fewer environmental impacts and, therefore, is the Environmentally Superior alternative.”

COMMENT A-13:

II. The Revised EIRs Fail To Address the Health Impacts Associated with Significant Noise Levels.

Again, this document is the first to disclose that the Projects will result in significant noise impacts from both practices and Friday night football games. The health impacts of noise are one of the most serious public health issues in modern society, yet the REIRs fail completely to discuss what Projects' significant noise impacts mean in terms of their impacts of on human health. Exposure to increase noise levels has been associated with increased stress, cardiovascular impacts, and mental health impacts. See Exhibit B (Journal of Occupational and Environmental Medicine, 200259:380-386); Exhibit C (Wikipedia); Exhibit D. ("Noise Pollution: A Modern Plague"). Having identified substantial increases in noise associated with the Projects, the REIRs must also discuss the health effects of those noise impacts on affected members of the public.

RESPONSE A-13:

The evening activities allowed under the proposed project will not result in noise levels causing significant impacts on human health; therefore, the Draft REIRs do not describe the health impacts of the project. The environmental noise assessment contained in the Draft EIRs describes the adverse effects of noise, including sleep and speech interference and annoyance; it does not describe more serious health impacts of noise, because the project would not cause noise levels reaching those thresholds. While it is acknowledged that exposure to high noise levels can cause physical and mental health impacts, the noise levels associated with the project would not be loud enough or of long enough duration to cause a significant health impact.

For Monta Vista, during a bleacher-capacity football game, the noisiest hour outdoor noise level at the nearest residences are calculated to be 74 dBA Leq. For the 24-
hour period containing a bleacher-capacity football game, the CNEL for the nearest residence would be 70 dBA (Existing CNEL ranges from 52-56 dBA). During a typical Monta Vista attendance game (700 spectators), the noisiest hour noise level outside the nearest residence is calculated to be 69 dBA Leq. The resulting 24-hour CNEL would be 65 dBA. During practices and non-football games, worst-hour hourly average outdoor noise levels at the nearest residences to the Monta Vista track and field are calculated to range between 50 and 69 dBA Leq. The 24-hour CNEL for non-football games and practices would be below 60 dBA.

For Lynbrook, during a bleacher-capacity football game, the noisiest hour outdoor noise level at the nearest residences are calculated to be 71 dBA Leq. For the 24-hour period containing a bleacher-capacity football game, the DNL for the nearest residence would be 64 dBA (Existing DNL ranges from 52-57 dBA).\(^2\) During a typical Lynbrook attendance game (600 spectators), the noisiest hour noise level outside the nearest residence is calculated to be 65 dBA Leq. The resulting 24-hour DNL would be 58 dBA. During practices and non-football games, worst-hour hourly average noise levels outside the nearest residences to the Lynbrook track and field are calculated to range between 53 and 65 dBA Leq. The 24-hour DNL for non-football games and practices would be below 55 dBA. The existing and project noise levels are summarized in the table below.

<table>
<thead>
<tr>
<th>High School</th>
<th>Existing Noise Levels Fridays 4-11pm</th>
<th>Bleacher Capacity Football Game outside nearest residence</th>
<th>Typical Attendance Football Game outside nearest residence</th>
<th>Non-Football Games &amp; Practices outside nearest residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monta Vista HS</td>
<td>45-55 dBA Leq</td>
<td>74 dBA Leq</td>
<td>69 dBA Leq (700 spectators)</td>
<td>50-69</td>
</tr>
<tr>
<td>Lynbrook HS</td>
<td>45-50 dBA Leq</td>
<td>71 dBA Leq</td>
<td>65 dBA Leq (600 spectators)</td>
<td>53-65</td>
</tr>
</tbody>
</table>

The EIR noise analysis based its evaluation of project noise levels on noise measurements taken at several similar high school football games. Highest measured noise from cheering crowds resulted in maximum instantaneous noise levels ranging from 70-80 dBA \(L_{\text{max}}\). These maximum noise levels contributed to the noisiest hour levels described in the above text.

As described in the City of San Jose General Plan, Noise Policy 1 states that the City's acceptable noise level objectives are 55 DNL as the long-range exterior noise.

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\(^2\) The City of San Jose General Plan utilizes the Day-Night Average Sound Level, or DNL, while the City of Cupertino General Plan utilizes the Community Noise Equivalent Level, or CNEL.
quality level, 60 DNL as the short-range exterior noise quality level, 4) 45 DNL as the interior noise quality level, and 76 DNL as the maximum exterior noise level necessary to avoid significant adverse health effects. For the 24-hour period containing a bleacher-capacity football game, the 24-hour noise level at the nearest residence to either the Monta Vista or Lynbrook field would be below 76 DNL. For the typical attendance games or non-football games, the 24-hour time averaged noise levels would be far less. Furthermore, as described in the Draft REIR, the oldest and poorest condition windows and doors provide at least 20 decibels of noise reduction, while newer windows and doors typically provide at least 25 to 30 decibels of noise reduction. Therefore, interior noise levels during the noisiest hour bleacher-capacity football game would be 51-54 dBA Leq for nearest homes with the poorest condition windows and 44-49 dBA Leq for newer, more typical windows.

The Exhibits referenced in the comment provide highly detailed statistical studies and more general discussions of the adverse health effects of high and long-term noise exposure. The exhibits do not provide any information specifically regarding significant health impacts resulting from the noise levels and exposure duration periods projected to occur under the originally proposed project, the Reduced Use and Light Levels alternative, or any of the other identified EIR project alternatives. While the exterior noise levels generated by the project will result in a significant unavoidable impact, they are not expected to result in significant health or safety impacts.

COMMENT A-14:

III. The Revised EIRs Fail to Adequately Analyze Project Alternatives and Mitigation Measures.

The REIRs are also deficient for failure to adequately address alternatives and mitigation measure that would reduce the noise impacts that the REIRs show will occur. First, the REIRs fail entirely to evaluate any alternatives that would reduce the now identified significant noise impacts from the Projects. CEQA requires an agency to evaluate both mitigation measures and alternatives that will reduce a project's significant impacts. Pub. Res. Code §21002; Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692, 731.

RESPONSE A-14:

The Draft REIRs, together with the previously circulated EIRs, constitute the EIRs for the projects. The previously circulated Draft EIRs and Amendment to the Draft EIRs evaluate a range of alternatives to the project and their ability to avoid or reduce the project’s significant noise impact. Refer to the previous response to Comment 2.

COMMENT A-15:

The REIRs, however, focus exclusively on only a few mitigation measures, and ignore a number of alternatives discussed in the original EIRs that could substantially reduce or avoid significant noise
impacts from the football games and that would substantially limit practice noise. In fact, with the disclosure that the Projects will result in significant impacts both from practices and from Friday night football games, the District must evaluate alternatives that would reduce both these impacts. However, currently, the District has only evaluated one alternative - the No Sports Lights alternative - that would address these impacts. This does not constitute a reasonable range of alternatives. In addition to the No Sports Lights alternative, the District should evaluate other alternatives that might reduce practice noise, including limits on the timing of band practice, elimination of evening band practice altogether, or reducing the size of the bleachers and redesigning them to provide greater opportunities for noise mitigation.

RESPONSE A-15:

The Draft REIRs, together with the previously circulated EIRs, constitute the EIRs for the project; therefore, the Draft REIRs do not ignore the alternatives discussed in the original EIRs.

As described in the Draft REIRs (page 5), the Reduced Use and Light Levels alternative would reduce the total number of hours the lights and noise activity would occur by 66%, compared to the original project evaluated in the Draft EIRs. Since the Alternative retains the five to six evening football games per year, the entire reduction in hours results from earlier end times and fewer days for practices and non-football games. The purpose of this alternative is to reduce both the duration of non-football game noise and limit the noise to the earlier hours, thereby reducing the significance of the noise levels associated with practices and non-football games.

One of the stated objectives of the project is to extend the student school day by allowing sports and band practices to extend into the evening. Therefore, eliminating band practice would not meet a stated objective of the project. As part of the Monta Vista High School project, the visitor bleachers, which are smaller than the home bleachers and typically have lower attendance are located closest to the nearest residence. In this way, the proposed bleacher placement is intended to reduce the significant noise impact. As described in the Draft EIRs (MVHS Draft EIR page 66, LHS Draft EIR page 65) the projected worst-hour noise levels for football attendance ranging from 300 spectators up to 2,364 spectators all exceed the City’s normally acceptable outdoor noise standard and result in a significant unavoidable noise impact. Therefore, reducing the bleacher size of the project would not avoid the impact and would not meet the spectator needs of the District for large-draw events, such as graduation.

Mitigation measures, including the placement of noise barriers behind the bleachers, are described in the Draft REIRs. Constructing the bleachers on a berm would change the character of the sound made by stomping feet, as the stomping would occur on concrete rather than metal, but would not substantially affect overall measured noise levels. The noise levels generated by stomping are well below maximum noise levels from the predominant noise sources that contribute to hourly
average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level and do not result in the maximum instantaneous noise level.

The project environmental noise consultant evaluated the noise reduction benefits of constructing the bleachers on a berm. Constructing the bleachers on a berm would not reduce the noise impact to a less than significant level. Unless the berm is six feet above the uppermost bench, the noise attenuation provided by the berm would be less than the attenuation provided by the mitigation identified in the REIR (i.e., constructing a soundwall behind the bleachers that extends six feet above the top row of the bleachers).

**COMMENT A-16:**

The District should also evaluate a combination of the No Sports Lighting and Practice Lights alternative, which would substantially reduce noise impacts from night football games as compared to the RULL. A combination of these two alternatives which would allow the District to meet all of the identified objectives in the final EIRs: (1) to extend the student school day by having later sports and band practices, (2) to reduce the burden on Cupertino High School, which currently hosts Monta Vista and Lynbrook home football games, and (3) to increase student school spirit and pride by being able to hold home football games. MV AR 851,281; Lynbrook AR 2:828

**RESPONSE A-16:**

The comment is not clear. It is not evident from the comment how the No Sports Lighting and Practice Lights alternatives would be combined to meet all of the identified objectives of the project.

**COMMENT A-17:**

The District is already holding nighttime football games for Monta Vista High School at Fremont High School, which reduces the impact of such football games on Cupertino High School. It also has not increased the burden on Fremont High School because Homestead High, which formerly held night games at Fremont, now holds night games at its own fields. Thus, holding night football games at Monta Vista High School is not necessary to reduce the burden on Cupertino High School.

**RESPONSE A-17:**

The intent of the project is to allow Monta Vista and Lynbrook to hold school events, including football games and non-football games and practices, on their home field; thereby reducing the burden on the other District high schools. Since the circulation of the Draft EIRs, Monta Vista has held nighttime football games at Fremont High School instead of Cupertino High School. Lynbrook High School still plays home football games at Cupertino High School. Monta Vista and Lynbrook are still both unable to hold evening games and practices on their home fields.
COMMENT A-18:

The REIRs also improperly claim that the "primary" objective of the Projects is to allow for Friday night home football games. Lynbrook REIR at 18; MV REIR at 19. However, in responses to comments, the District took the position that none of the project objectives were "primary." Monta Vista FEIR Response to Comment BB5. Moreover, the District has repeatedly touted the purpose of the project as extending the school day; holding night football games is not necessary to extend the school day. Nor is there any evidence to support the District's assertion.

RESPONSE A-18:

The District has multiple objectives for the proposed field lighting projects at Lynbrook and Monta Vista High Schools, all of which were described in the previously circulated EIRs. The objectives of the proposed sports lights, as described in the Monta Vista HS Draft EIR are:

“Sports Lights – extend the student school day by allowing sport practices to extend into the evening; reduce the burden on the Cupertino High School track and fields facilities which are currently shared by Monta Vista; and increase students’ school spirit and pride through being able to hold more Monta Vista events on their home campus.”

The objectives of the proposed sports lights, as described in the Lynbrook HS Draft EIR are:

“Sports Lights – extend the student school day by allowing band and sport practices to extend into the evening; reduce the burden on the Cupertino High School track and fields facilities which are currently shared by Lynbrook; and increase students’ school spirit and pride through being able to hold more Lynbrook events on their home campus.”

The District has always maintained that allowing Friday evening football games to occur on the Monta Vista and Lynbrook home fields will promote school spirit and pride. This opinion is shared by many school parents and neighbors who wrote Draft REIR comment letters in support of the project that are included in the Amendment to the Draft REIR.

COMMENT A-19:

Given that the District can meet the objectives of the projects to increase the school day, hold home football games, and reduce the burden on Cupertino High School without night football games, the District cannot allow such an amorphous and factually unsupported assertion that only night football games are necessary.

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3 Although not required under the Monta Vista band’s current program, if the band becomes a competitive marching band, then the proposed project would also allow members of the band to attend afternoon academic classes and practice in the evening should that need arise in the future.
games will increase school spirit to dictate the ultimate decision regarding project alternatives. Indeed, even assuming that holding nighttime football games is itself a project objective, the District cannot define the Project's objectives so narrowly as to preclude a reasonable alternatives analysis. (See Nat 'I Parks & Conservation Assn. v. Bureau of Land Mgmt.(9th Cir. 2010) 606 F.3d 1058, 1072 [striking down a narrowly drawn statement of project objectives where it "necessarily and unreasonably constrain[ed] the possible range of alternatives" and "foreordain[ed] approval of the [proposed project]"].) Watsonville Pilots Assn. v. City of Watsonville (2010) 183 Cal.AppAth 1059, 1089 (the "key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts," not to identity alternatives that meet few of the project's objectives so that they can be "readily eliminated." )

RESPONSE A-19:

The District proposes Sports Field Improvement and Lighting projects at Lynbrook and Monta Vista High Schools. The objectives of the sports lighting element of the project are described in the above response to Comment 18 and include holding evening events at the home campus. Since sports lighting is a major component of the project, the project objectives are not narrowly drawn to include evening school activities under the lights.

COMMENT A-20:

Moreover, the REIRs fail to address alternatives that would reduce impacts from practices. Because the REIRs now indicate that practices will have significant noise impacts - an impact that was not disclosed in the final EIRs - the REIRs must evaluate alternatives that would reduce these impacts. In addition to the "No Sports Lights" alternative, the REIRs should look at alternatives that would reduce the schedule and number of evening practices thereby reducing the impacts associated with the practices.

RESPONSE A-20:

The previously circulated EIRs state the non-football games and practices will result in significant noise impact (MVHS Draft EIR page 68 and LHS Draft EIR page 67), as described in the following impact statement:

Impact NOI – 1: Noise from games and practices during the school year, Monday through Saturday until 9:00 p.m. and until 10:30 PM for up to six football games would substantially increase hourly and daily average noise levels at nearby residences. (Significant Impact)

As described in the Draft REIRs (page 5), the Reduced Use and Light Levels alternative would reduce the total number of hours the lights and noise activity would occur by 66%, compared to the original project evaluated in the Draft EIRs. Since the Alternative retains the five to six evening football games per year, the entire
reduction in hours results from earlier end times and fewer days for practices and non-football games. The purpose of this alternative is to reduce both the duration of non-football game noise and limit the noise to the earlier hours, thereby reducing the significance of the noise levels associated with practices and non-football games.

COMMENT A-21:

In addition to modification in practice schedules and a reduction or elimination of Friday night football games, the REIRs should have evaluated a number of other measures that could reduce the Projects' noise impacts. For example, the REIRs should have looked more closely at the option to reduce the number of bleachers and to place them in a berm that would act both as a sound barrier and that would help reduce noise from the use of metal bleachers. See Shaw Report at p. 5.

RESPONSE A-21:

As part of the Monta Vista High School project, the visitor bleachers, which are smaller than the home bleachers and typically have lower attendance, are located closest to the nearest residence. As described in the Draft EIRs (MVHS DEIR page 66, LHS DEIR page 65) the projected worst-hour noise levels for football attendance ranging from 300 spectators up to 2,364 spectators all exceed the City’s normally acceptable outdoor noise standard and result in a significant unavoidable noise impact. Therefore, reducing the bleacher size of the project would not avoid the impact and would not meet the spectator needs of the District for large-draw events, such as graduation.

Mitigation measures including the placement of noise barriers behind the bleachers are described in the Draft REIRs. Constructing the bleachers on a berm would change the character of the sound made by stomping feet, as the stomping would occur on concrete rather than metal, but would not substantially affect overall measured noise levels. The noise levels generated by stomping are well below maximum noise levels from the predominant noise sources that contribute to hourly average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level and do not result in the maximum instantaneous noise level.

Constructing the bleachers on a berm would not reduce the noise impact to a less than significant level. Unless the berm is six feet above the uppermost bench, the noise attenuation provided by the berm would be less than the attenuation provided by the mitigation identified in the Draft REIRs (i.e., constructing a soundwall behind the bleachers that extends six feet above the top row of the bleachers).

COMMENT A-22:

IV. The Revised EIRs' Determination That Mitigation Would Be Infeasible Is Legally Improper and Unsupported by Substantial Evidence.
To the extent the REIRs address mitigation at all, they then go on to reject all but one measure - limits on the PA system - as infeasible. The REIRs' determination of infeasibility ignores the relevant legal standard and is not supported by the evidence.

First, the REIRs reject a number of mitigation measures on the ground that they would be too expensive. See e.g., MV REIR at 11 (rejecting soundwalls); Lynbrook REIR at 11 (same); Lynbrook REIR at 13 (rejecting bleacher barriers); MV REIR at 13 (same). However, the absolute cost of the improvements is not the relevant factor for determining the economic feasibility of mitigation or an alternative. "[T]he [feasibility] question is not whether [the City] can afford the proposed alternative, but whether the marginal costs of the alternative as compared to the cost of the proposed project are so great that a reasonably prudent property owner would not proceed with the [alternative]." Uphold Our Heritage v. Town of Woodside (2007) 147 Cal.App.4th 587, 600.

Here, the cost of the noise barriers or sound insulation (or a combination of them) is minimal when compared to the overall cost of the Projects. As detailed in Exhibit E, the cost of each of the Projects is over $14,000,000. The cost of the mitigation measures is minimal in comparison and under the relevant standard is clearly feasible. The District also fails to support its assertion that sound insulation would not be accepted by the local community; the District has not even made such an inquiry.

Moreover, the fact that the mitigation measures might not completely eliminate the significant noise impacts of the Projects does not mean that they should be rejected. Instead, CEQA requires an agency to adopt all feasible measures that will reduce a project's impacts, even if they do not completely avoid a significant effect. Pub. Res. Code §21002; see also City of Marina v. Board of Trustees of the California State University (2006) 39 Cal.4th 341; 1 Stephen Kostka & Michael Zischke, Practice Under the California Environmental Quality Act § 14.6 (2d ed. 2011) ("A mitigation measure may reduce or minimize a significant impact without avoiding the impact entirely.").

**RESPONSE A-22:**

The Draft REIRs conclude that two mitigation measures are infeasible: 1) lowering the track and field 25 feet below the proposed grade; and 2) enclosing the track and field with a dome. No other mitigation measures are described in the Draft REIRs as infeasible. The feasibility of the measures, for their cost and the benefit they provide, will be determined by the District Board. With the exception of enclosing the track and field with a dome, there are no measures available that would meet all of the objectives of the project and avoid the project’s unavoidable noise impact. The mitigation measures that are described would reduce, but not avoid the impact. These measures include:

- Public Address System Controls
- Noise barrier along Property Line
- Noise barriers behind bleachers
- Sound Insulation
• Lower the Field and Track Elevation

Furthermore, as noted previously, the project has included additional design features, where possible, to reduce the project’s noise impact. As part of the Monta Vista High School project, the visitor bleachers, which are smaller than the home bleachers and typically have lower attendance, are located closest to the nearest residence.

COMMENT A-23:

Finally, the REIRs fail to adequately address the feasibility of alternative designs, in particular, a design that would set the bleachers into a berm and thereby greatly reduce noise impacts. As discussed in more detail in the comments of David Radtke, the REIRs inappropriately assume that such a design would require lowering of the fields and the presence of a hillside. However, setting the bleachers into a berm does not require either. The purpose of setting the bleachers in a berm is to substantially reduce the noise impacts associated with vibration and cheering from the bleachers and to act as an additional sound barrier. This can be accomplished with the construction of a berm, and could have easily been accomplished here with the dirt available on site during construction. The District's decision to remove this dirt during construction that continued after this court's ruling was taken at the District's own risk and the additional cost associated with re-importing dirt to support the bleachers cannot be used as a factor to determine that such a mitigation measure would be infeasible. Pub. Res. Code §21167.3(b); Kings County Farm Bureau, 220 Cal. App. 3d at 737.

RESPONSE A-23:

Constructing the bleachers on a berm would change the character of the sound made by stomping feet, as the stomping would occur on concrete rather than metal, but would not substantially affect overall measured noise levels. As discussed in Response 9, the noise levels generated by stomping are well below maximum noise levels from the predominant noise sources that contribute to hourly average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level and do not result in the maximum instantaneous noise level.

Constructing the bleachers on a berm would not reduce the noise impact to a less than significant level. Unless the berm is six feet above the uppermost bench, the noise attenuation provided by the berm would be less than the attenuation provided by the mitigation identified in the REIR (i.e., constructing a soundwall behind the bleachers that extends six feet above the top row of the bleachers).

COMMENT A-24:

In view of these deficiencies, the District must revise and recirculate the REIRs with a complete analysis of noise impacts, mitigation measures, and alternatives.
RESPONSE A-24:

The Draft REIRs together with the previously circulated EIRs form a complete environmental review of the proposed project and include complete and adequate analysis of the project’s noise impacts, mitigation measures, and alternatives. Specific comments are addressed in the previous responses to Comments 1-23. The Draft REIRs do not require recirculation.

EXHIBIT A - COMMENTS ON THE DRAFT REIR FROM MENLO ACOUSTICS

COMMENT A-25:

We have reviewed the Draft Recirculated Environmental Impact Reports (REIR) dated January 2012 for the Monte Vista High School Sports Fields Improvements and Lighting and the Lynwood High School Sports Fields Improvements projects.

For background we also reviewed the Monte Vista High School Sports Fields Improvements and Lighting Project Environmental Noise Assessment report and the Lynwood High School Sports Fields Improvements and Lighting Project Environmental Noise Assessment report, both dated 20 May 2010; the City of Cupertino Municipal Code Chapter 10.48. Community Noise Control; the City of San Jose Code of Ordinance Section 20.30.700 Residential Zoning Districts Performance Standards; the Noise section in Part IV. Goals and Policies, of the current City of San Jose General Plan; and the Noise Pollution section of the current City of Cupertino General Plan.

As set forth below, we do not believe that the REIRs adequately analyze or disclose the significant noise impacts from these Projects. Based on our review, the noise impacts of the Projects will be more significant than assumed by the REIRs and we recommend that the District closely evaluate measures that will reduce these impacts.

1. Our review found that the findings in the REIRs and EIRs do not identify some important assumptions including, but not limited to, the character of all noise sources present during a measurement, the spectral and time character of noises from the proposed events, and why a particular metric was chosen, and is appropriate, for a measurement. For example, the REIRs assume that increases in crowd size result in a linear increase in noise. However, as crowd size increases, noise increases exponentially as people in the crowd encourage each other and thus need to shout over each other to be heard and to be part of the general excitement of the moment.

RESPONSE A-25:

The Environmental Noise Assessments completed for the EIRs were prepared by a professional acoustic consultant, using the methodologies, procedures, and thresholds typical for CEQA noise impact analyses. While the commenter, according to his attached curriculum vitae, has 35 years of acoustic experience designing and operating performance and other building spaces, there is no mention of experience conducting, preparing, or reviewing CEQA noise impact analyses.
The Draft REIRs, together with the previously circulated EIRs, provide a detailed discussion of the existing noise environment at adjacent residential land uses and include tables and figures that summarize the noise data collected as part of the noise monitoring survey. Noise metrics selected for monitoring purposes included the $L_{\text{max}}$, $L_1$, $L_{10}$, $L_{50}$, $L_{90}$, and $L_{\text{eq}}$. The CNEL and DNL levels were calculated from these data. Table 2.4-2 in the text of the Monta Vista Draft EIR and Table 2.4-1 in the text of the Lynbrook Draft EIR summarize ambient maximum instantaneous noise levels ($L_{\text{max}}$), hourly average noise levels ($L_{\text{eq}}$), and background noise levels ($L_{90}$). CNEL and DNL levels were calculated and reported to establish existing daily-average noise levels. Ambient noise data is also graphically displayed in the Draft EIRs; Figures 2 through 21 in Appendix D of the Lynbrook Draft EIR and Figures 2 through 17 of Appendix D of the Monta Vista Draft EIR. The data contained in the Draft EIR tables and figures show the varying time character of noises, from those that occur over brief instances ($L_{\text{max}}$), to background noise levels (the noise level exceeded 90 percent of the time - $L_{90}$), to hourly average noise levels ($L_{\text{eq}}$), and to daily average noise levels (CNEL or DNL). The Draft EIRs then describe the results of noise measurements made at three high schools during similar events. A complete description of the event, noise sources, measurement locations, and measurement results is provided and tabularized in Appendix D of the Draft EIRs.

The commenter is incorrect in stating that the noise analysis assumes that increases in crowd size would result in a linear increase in noise. This assertion is simply not the case as detailed in the noise assessment. All noise levels and calculations are presented in terms of decibels, which are logarithmic units that quantify the ratio of sound pressures. Crowd noise (i.e., cheering at maximum voice effort) increases proportionally based on the number of spectators. For example, Table 9 of the Draft EIR noise assessment (Appendix D) shows that hourly average noise levels from a football game, which are predominantly the results of cheering, will be 59 dBA $L_{\text{eq}}$ at a distance of 360 feet assuming 300 cheering spectators, and that noise levels from the cheering of 700 spectators will be 63 dBA $L_{\text{eq}}$ at the same distance. This increase in noise level is calculated logarithmically, which by definition is an exponential calculation.

COMMENT A-26:

2. In addition, the presentation depends on a prosaic description of measurements which does not adequately provide a complete understanding of the impact on the surrounding area. All measurements presented in the reports should include annotated drawings or photos that identify the location of any and all noise sources, the datum for any distances to receivers used in a calculation, as the location of the location of the receiver locations. Any measurement should and needs to be reproducible others. Data and calculations must be included to support claims made in the reports.
RESPONSE A-26:

The descriptions of the noise monitoring surveys were written in a manner that those unfamiliar with acoustical terminology and concepts could easily understand. The purpose of the CEQA document is to disclose impacts to the public and decision makers. Noise measurements locations are adequately described in the text and on the noise data summary figures, and are also depicted on the project’s site plan. These descriptions, in combination with the discussion provided in the text, are sufficient to replicate the measurements.

COMMENT A-27:

For data taken over a period of time, such as the Leq metric, the time history of the measurement should be presented as well as the Leq time period. The REIRs and the EIRs in many cases present just a range of values in a table and these values are average (Leq) noise levels over an hour, which does not adequately describe the intermittent, impulsive, nature of the noises produced by some of the proposed events for the projects as the longer the time for which an Leq is taken the more the noises are hidden. A more accurate way to present Leq data is to measure one-minute Leqs over a time period of interest and then determine the running logarithmically average of these one minute Leqs for 5, 10, or 15 minutes, and then present this data graphically along with the running one minute Lmax and L90 levels for the time period of interest. In some instances, such as for intermittent, impulsive sounds such as those from foot stomping on metal bleachers, marching bands, and drum lines, one second levels should be used to determine the running logarithmically average and the three averages (Lmax, Leq, and L90) presented graphically for the time period of interest. For certain noises, such as those that are bass heavy, foot stomping on metal bleachers, marching bands, and drum lines, the octave band Leq and Lmax data for the 63 Hz to 8000 Hz octave bands, in addition to the overall level of data described above, should be presented to properly characterize the noise spectrum.

RESPONSE A-27:

Ambient noise data collected at Lynbrook High School are presented in one-hour intervals in Appendix D of the Lynbrook Draft EIR (Figures 2 through 21). Ambient noise data collected at Monta Vista High School are also presented in one-hour intervals in Appendix D of the Monta Vista Draft EIR (Figures 2 through 17). During each hour that a measurement occurred, the sound-level meter sampled noise levels in each second and a running logarithmic average noise level was calculated for each hour. The maximum instantaneous noise level during the hour (i.e., the loudest instantaneous sound occurring during the hour - Lmax) was also documented. Further, the noise levels exceeding 1%, 10%, 50%, and 90% of the hour (the L1, L10, L50, and L90, respectively) were also documented. This method of establishing ambient noise levels is the standard practice used to describe ambient noise conditions at receptors in the project vicinity.
The noise data gathered during a high school football game at Cupertino High School were collected in a slightly different manner in an effort to show how noise levels varied during the course of the football game. As shown in Appendix D (Figure 22 in the Lynbrook Draft EIR and Figure 18 for the Monta Vista Draft EIR), an averaging time of five-minutes was used. However, the sound-level meter continued to sample noise levels in each second and a running logarithmic average noise level was calculated for each five-minute period. The maximum instantaneous noise level during each five-minute interval was also documented to quantify noise levels from intermittent sounds such as cheering and the marching band. Further, the noise levels exceeding 1%, 10%, 50%, and 90% of the five-minute period were also documented. The noise levels exceeded 1%, 10%, and 50% of the measurement period were not displayed in order to keep the data legible on the figure. This method of establishing noise levels during the game showed the wide range in maximum instantaneous noise levels, the range in five-minute average noise levels, and the consistency of the $L_{90}$ noise levels during the game. Finally, the figure shows the ambient noise levels at the measurement location after the game ended to provide a direct comparison of noise levels with and without the game.

**COMMENT A-28:**

The reports use Leq, CNEL, and DNL metrics for reference noise levels and community standards. The local noise codes specify a maximum noise level, $L_{max}$, in decibels, at the residential property line. Several problems with the way the various metrics are used in the report include:

- The $L_{max}$ metric is not defined in Table 1 of the EIRs although it is used in the reports.

- Table 3 in the Monte Vista High School is captioned "Maximum Nighttime Noise Levels (Leq)." The maximum sound level is the highest RMS sound pressure level within the measuring period, it is not the Leq as defined in Table 1 of the EIRs or the Leq defined by international standards.

- The $L_{max}$ level is always greater than the Leq, CNEL or DNL, and depending on the time period for the Leq, such as one hour, much greater. Using the Leq, CNEL, or DNL for the sound level the projects need to meet, means that the actual code limit (maximum noise level in both the San Jose and Cupertino noise codes) will be exceeded in all cases, and the impact on the surrounding area will be more than that reported in the noise analysis or the REIRS.

- The CNEL and the DNL (also called the Ldn) are calculations typically used to describe the impact of transportation noise. This is why these metrics are used in the General Plans, where the noise impact of transportation sources is the major concern. These metrics are a weighted average of the 1 hour Leqs measured over a twenty-four hour period while the time period of interest for the proposed projects is limited to dark until sometime later in the evening, depending on the event. These metrics do not characterize the intermittent, impulsive nature of the noise from the proposed activities that will be produced by the proposed project and they do not adequately predict how these activities may interfere with sleep, speech, and other activities in the affected neighborhoods. This type of noise is
very disturbing and includes such noises the staccato drum beats from the band, the on and off cheering of the crowd, whistles, noise creating instruments and devices used by fans (such as Vuvuzelas).

-When noise levels are measured using an "A" weighting, as the Leq, CNEL, and DNL metrics in the report do, the contribution of low frequency sounds are greatly diminished as the A weighting subtracts the contribution of these sounds, and to a lesser extent the contribution of high frequency sound. The A weighting curve is the inverse of the equal loudness response of human hearing at 1000 Hz at 40 dB. As noise levels increase, the response to low frequency noise increases, as shown in Attachment A, Figure A1, Acoustic Weighting Curves and ISO Equal Loudness Curves. Note that Table 2 in the EIR shows 40 dBA to be slightly higher in level than a "suburban nighttime environment," which is much lower in level than the proposed events.

RESPONSE A-28:

The Draft EIRs use L_{max}, L_{eq}, CNEL, and DNL to compare to ambient conditions and to local standards.

The $L_{max}$ metric is defined in Table 1 of the environmental noise assessments completed for the Draft EIRs. As stated in Table 1, the $L_{max}$ is the maximum A-weighted noise level during the measurement period.

The project noise consultant has prepared numerous noise studies for projects in the City of San Jose. The San Jose Noise Ordinance does not define what it means by maximum noise level. An $L_{max}$ limit of 55 dBA is inconsistent with the State of California Model Noise Ordinance, is not supported by research, and is an unreasonably restrictive standard. The project noise consultant has consistently interpreted this limit as an hourly average when used as a CEQA threshold; this interpretation has never been questioned by the City of San Jose.

Average and maximum noise levels are presented throughout the Draft EIRs to characterize the noise impacts of the field lighting project. In an effort to analyze the projects in a manner consistent with the requirements of the local General Plans, and to provide full disclosure of project impacts, the CNEL and DNL descriptors were also used. The analyses using the CNEL and DNL descriptors showed that the projects would generate noise levels in excess of the local CNEL and DNL noise thresholds.

Utilizing the A-weighting network is an industry-accepted approach to monitoring noise levels for environmental assessments. Both the City of Cupertino and the City of San Jose establish noise level limits in their respective General Plans and municipal codes in terms of A-weighted decibels.

The text of the REIR has been revised to reflect that noisemakers (e.g., whistles, horns, thundersticks, vuvuzelas, etc.) will not be allowed at evening games and
practices, as part of the project. The revised text is included in Section 4 of this document.

COMMENT A-29:

The report uses the term Loudness. The term Loudness has a specific meaning that is not correct when presenting objective measurements, such as Leq, CNEL, and DNL. There is one way to objectively describe sound, the decibel, which is the unit of the sound pressure level, and it is calculated from sound pressure. The subjective human response to sound can be described using the phon, the unit for loudness level, which is defined by the equal loudness curves shown in Figure A.2. Loudness level is non-linear - you cannot add loudness levels arithmetically. A less common Metric is the sone, the unit for loudness, shown in Figure B1. In short: sound level is expressed in decibels, physiological loudness level is expressed in phons, and subjective loudness is expressed in sones. The REIRs fail to use appropriate terminology to describe loudness and fail to measure it appropriately. Instead, the REIRs appear to minimize noise impacts by using subjective terms such as "infrequently", "non-threatening” of "short duration” or consistent with "community expectations". These terms may be good word-smithing but they do not properly describe the noise from the proposed activities. General statements are misleading and do not describe the character of the noises from proposed events.

RESPONSE A-29:

Loudness level was not used in the EIRs or the Draft REIRs. The term “loudness” is defined in the setting section of the environmental noise assessments (refer to Appendix D of the Draft EIRs) completed for the projects as the intensity of sound waves combined with the reception characteristics of the ear. As stated in the setting section of the environmental noise assessments, there is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. The use of the term in the setting section of the report has no effect on the analysis or conclusion reached in the impact and mitigation sections.

The REIRs’ use of the terms “infrequently”, “non-threatening”, and “short-duration” are part of a discussion of the factors affecting an individual’s typical reaction to noise.

COMMENT A-30:

Speech interference, deep disturbance and annoyance are discussed in the reports but the noise level for interference, disturbance, and annoyance used to calculate impact are higher than that reported in the literature or those recommended by governmental bodies.

-The reports state the noise level for interference and disturbance is greater for fluctuating noises than for steady noises. Humans have a physiological startle response that is very sensitive and sudden,
intermittent, random, and/or impulsive sounds - such as those associated with the football games and band practices trigger this response.

The reports state that sleep disturbance continuously occurs when noise levels are greater than 35 dBA for continuous noise and 45 dBA for fluctuating noise. The reports should cite the reference for this statement. WHO Guidelines state 30 to 35 dBA as the onset level for sleep disturbance with a peak nighttime maximum of 45 dBA. See Attachment 3. United Nations World Health Organization Sleep Disturbance Guideline Summary. Sources with low frequency components are especially disturbing, and a disturbance may occur even though the sound pressure level during exposure is below 30 dBA. If negative effects on sleep are to be avoided the equivalent sound pressure level should not exceed 30 dBA indoor for continuous noise, if the noise is not continuous, sleep disturbance correlates best with Lmax and effects have been observed at 45 dB and less.

The reports discuss annoyance but cite only statistics of transportation noise. The annoyance from noises that will be produced from the proposed projects are not discussed. Thresholds depend on the type of noise. The percentage of people annoyed depends on the type of noise. As previously mentioned, the type of noises caused by the projects are of a sort that is very disturbing and are not adequately captured by reference to statistics for transportation noise.

RESPONSE A-30:

The setting section of the environmental noise assessments provides background information on noise, describes acoustical terminology, and provides a discussion of the effects of noise including speech interference, sleep disturbance, and annoyance. The analysis of impacts, however, compared projected noise levels to local noise standards, as described in the regulatory background section of the report and the section establishing significance criteria, in conformance with standard CEQA methodology for analyzing noise impacts. The CEQA checklist questions related to the assessment of environmental noise impacts do not address health risk. Local standards are designed to minimize annoyance resulting from activity or sleep disturbance. There is no evidence to suggest that there would be health risks associated with the project generated noise levels calculated at the receptor locations in the community.

COMMENT A-31:

The reports deal only with overall sound level, and these are modified by the A weighting. Low frequency noise from the proposed activities are not discussed. Low frequency sounds are pernicious since these sounds to travel much further than high frequency sounds and so these low frequency sounds will impact additional residences beyond those residences directly adjacent to the project sites. It will also be more difficult to mitigate the intrusion of low frequency noises into the residences adjacent to and near the proposed project sites without redesign of the project or a restriction on the number and type of events. The intermittent nature of these sounds adds to their impact, but is not disclosed in the REIRs,
RESPONSE A-31:

As stated in the setting section of the environmental noise assessment, the most common method of quantifying and assessing noise in California is the A-weighted sound level or dBA. The A-weighted scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Further, all regulatory criteria applicable to the proposed project establish noise limits that utilize the A-weighted scale.

Lower-frequency noises generated by proposed activities would primarily result from the marching band (e.g., drumming). The spectral content of drumming noise, and overall sound level, results primarily from sounds that are at frequencies of 250 Hz and above. Music played through the public address system may also have some lower-frequency content, but the overall sound level typically results from sounds at 250 Hz or above. Also, most public address systems do not have the power to output high sound pressures in the low-frequency range.

The spectral content of perceived “low-frequency” noises such as drumming and music played through the PA system would be similar to the spectral content of cheering. It is agreed that low-frequency sounds are more difficult to attenuate, may be audible at greater distances, and may be audible at times indoors. However, audibility in itself does not constitute a significant environmental noise impact.

COMMENT A-32:

The reports somewhat discuss noise from public address systems, spectator (crowd) noise, and band noise as well as noise from practice sessions. The sound level limit described for the public address system is not realistic as the noise level from the crowd in the bleachers will be greater in level than the proposed limits. Limiting the PA system to these limits, especially with the great increase in spectator seating for the home side of the field and the new bleachers (which will require additional loudspeakers serving the new seating) for the visitor seating which will be closer to residences), may not be practical.

RESPONSE A-32:

The environmental noise assessments completed for the projects present detailed descriptions of noise attributable to public address systems, spectator noise, band noise, and practices. The intent of the mitigation measure for public address systems is to minimize spillover into the community and the noise limit is achievable with the implementation of a distributed speaker system. The distributed system would localize the announcement to the bleachers. Experience attending and measuring noise from football games shows that the public address announcements are not intended to be audible above a cheering crowd, and are typically drowned out when spectators cheer. Announcements are normally limited to time period between plays when crowd noise is lower. Additionally, the Monta Vista High School project
proposes to move the home bleachers, which would be larger and likely to draw more spectators, to the east side of the field, away from the closest residential property line west of the field.

COMMENT A-33:

The reports do not address the impact of spectator stomping in the metal bleachers nor do they discuss the character of sounds from the marching bands and drumlins, but are typical of the type of events proposed and which are very intrusive and disturbing.

RESPONSE A-33:

The stomping of feet on bleachers is an intermittent source of noise that is observed at sporting events. When this particular source of noise is observed, the duration of the event is brief, and the noise levels generated during the event is well below maximum noise levels from the predominant noise sources that contribute to hourly average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level.

Marching band noise levels, documented at Cupertino High School on October 24, 2009 and at Mt. Pleasant High School on September 13, 2002 confirm date, are presented in Tables 6 and 7 and Tables 4 and 5 of the environmental noise assessments completed for the Monta Vista and Lynbrook Draft EIRs, respectively.

COMMENT A-34:

The REIRs repeatedly states that the reduced use alternative will offer a 66% reduction in impact compared to the original submission. How this reduction was determined is not clear and no backup or calculations are included in the reports. A comparison is discussed, but only the alternative hours are listed. A side-by-side listing of the original and alternative hours should be provided

RESPONSE A-34:

As described in the Draft REIRs, the Reduced Use and Light Levels alternative would reduce the total number of hours the lights and noise activity would occur by 66%, compared to the original project evaluated in the Draft EIRs. Since the Alternative retains the five to six evening football games per year, the entire reduction in hours results from earlier end times and fewer days for practices and non-football games. The spreadsheet used to calculate the hourly use of the lights is included as Appendix F to the Final EIRs.
COMMENT A-35:

The reports skirt around the significant impacts from the original and alternative proposals. The terms "infrequently, “non threatening,” short duration may be good word-smithing but they do not properly describe the noise events from the proposed activities. General statements are misleading. The character of the noises from proposed events is not described. What is meant by the phrase "community expectations"?

RESPONSE A-35:

The Draft REIRs, together with the previously circulated Draft and Final EIRs provide a full disclosure of the significant impact of the project and discussion of mitigation measures and alternatives that have been identified and considered to avoid and reduce the significant impact. The terms noted in the comment are part of a discussion of the factors affecting an individual’s typical response to noise. The term “infrequent” is used to describe the character of the sounds and the relative frequency of the events during a game. The term “non-threatening” is used to describe the character of the sound as well. This term describes the sound as a known source of noise, particularly in the vicinity of a high school, as opposed to an unknown or unusual sound such as an engine backfire, which may startle some people. The term “community expectation” is used in the documents to describe the fact that sound generated by activities at a high school are expected by residents that live in the vicinity of the high school.

COMMENT A-36:

In addition to the mitigation measures described in the REIRs, not all mitigation measures are discussed. These additional mitigation measures include:

-Reduce the number of band practices/limit the use of the band at night games. Bands produce some of the most disturbing noise from the Projects. A limit on the band practices and band playing at the games would help reduce this noise impact.

-Replace the metal bleacher with bleachers built on a berm. This does not necessarily mean lowering of the field but the construction of a berm into which the bleachers could be set. The berm would act as a sound barrier and would also reduce noise from the bleachers, such as vibration and foot stomping.

-Reduce the seating capacity of the bleachers. This measure would reduce crowd noise and would create more options for design alternatives that could reduce noise impacts.

-Reorient the fields and include the soccer field as part of the football field. This could provide options to reduce noise impacts to adjacent residents and could open up options for mitigation of noise from the bleachers and for the use of noise barriers that might be more visually acceptable.
-Include air-conditioning as part of sound insulation. This would ensure that sound insulation is effective even when it is hot outside.

**RESPONSE A-36:**

One of the stated objectives of the project is to extend the student school day by allowing sports and band practices to extend into the evening. Therefore, eliminating band practice would not meet a stated objective of the project. As described in the Draft REIRs (page 5), the Reduced Use and Light Levels Alternative would reduce the total number of hours the lights and noise activity would occur by 66%, compared to the original project evaluated in the Draft EIRs. Since the Alternative retains the five to six evening football games per year, the entire reduction in hours results from earlier end times and fewer days for (band) practices and non-football games. The purpose of this alternative is to reduce both the duration of non-football game noise and limit the noise to the earlier hours, thereby reducing the significance of the noise levels associated with practices and non-football games.

Under the Reduced Use and Light Levels alternative, band practice would occur on up to 26 evenings per year until 8:30 PM at Lynbrook High School. Possible future band practices at Monta Vista High School were also assumed to occur on up to 26 evenings per year until 8:30 PM, if future band activities require evening band practice. Reducing the number of band practices and limiting the use of the band at football games would eliminate or reduce band noise levels on those specific days, however, the mitigation would not reduce the impact to less than significant, as there would still be some number of days/events where the band would generate noise levels that would substantially exceed ambient noise conditions.

Foot stomping by a crowd on metal bleachers generates a rumble that is distinguishable from other sounds in the stadium. Constructing the bleachers on a berm would change the character of the sound made by stomping feet, as the stomping would occur on concrete rather than metal, but would not substantially affect overall measured noise levels. As discussed in Response 33, the noise levels generated by stomping are well below maximum noise levels from the predominant noise sources that contribute to hourly average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level and foot stomping is not the source of the maximum instantaneous noise level during a football game. Mitigation measures to reduce the noise generated by foot stomping would not reduce the degree of the noise impact and, therefore, are not warranted.

Constructing the bleachers on a berm would not reduce the noise impact to a less than significant level. Unless the berm is six feet above the uppermost bench, the noise attenuation provided by the berm would be less than the attenuation provided by the mitigation identified in the Draft REIRs (i.e., constructing a soundwall behind the bleachers that extends six feet above the top row of the bleachers).
Reducing the seating capacity of the bleachers would reduce noise levels; however, the reduction in noise would be relatively small. For instance, if the seating capacity were reduced by half, the reduction in noise levels would only be three dBA. This reduction in noise would be just perceptible at adjacent residential land uses, however, worst-hour noise levels and maximum instantaneous noise levels would continue to substantially exceed ambient noise conditions and community noise standards.

Given the proximity of receptors surrounding the playfields, there would be no suitable location to move the lighted field to avoid a significant noise increase at some receptor in the vicinity.

High school football games are proposed on evenings during the fall (beginning at the end of August and continuing through early November). A review of the monthly temperatures recorded in San Jose during August 2014⁴, which would normally be characterized as the hottest month, shows that maximum daily temperatures ranged from 73° to 93° F, and mean daily temperatures ranged from 66° to 76° F. Similarly, monthly temperatures recorded in Cupertino during August 2011⁵ showed a range of 70° to 89° F for maximum daily temperatures, and mean daily temperatures ranged from 64° to 74° F. The ambient air temperature would not normally be characterized as hot on a fall evening in San Jose or Cupertino and it is not unreasonable to assume that residents could not close their windows during the evening football game to control noise.

B. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM PEGGY ALRECK-ANTHONY DATED FEBRUARY 2, 2012

COMMENT B-1:

I am the owner of one of the houses that would be impacted by the sound wall at Lynbrook.

Please do not put that up.

A wall that would impact people who ARE NOT the ones who were complaining about the noise seems pretty silly. A wall for 5 or 6 nights a year seems extreme.

I welcome the new field, occasional noise and lights. I believe the school's efforts to regulate times is more than enough to ensure a good solution for all.

May I also suggest that the school makes sure to send out schedules to those who border the school? Just informing them of them of the schedules may help people to plan.

**RESPONSE B-1:**

The comment is noted. The comment does not raise any issues regarding the analysis in the Draft REIR. The football game schedule is posted on the District website. The comment will be considered by the Board during their deliberation on the project. No further response is required.

**C. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CHRISTOPHER J. ANTHONY DATED MARCH 2, 2012**

**COMMENT C-1:**

I am very much in support of the district, and everything they have done in relation to the upgrade to the athletic fields.

My property DIRECTLY borders the fields, and the back turn of the track will be about 50ft from my fence.

I applaud the installation of the lights, and approve of the remedial steps the District has taken to reduce their impact.

I am VERY MUCH against the installation of sound walls, or the other sound mitigation options.

**RESPONSE C-1:**

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

**D. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM TYLER ANTHONY DATED MARCH 2, 2012**

**COMMENT D-1:**

I graduated from Lynbrook in 2010, but I am still a neighbor that lives directly behind Lynbrook, I back up to the fence. I played varsity baseball and varsity soccer for 4 years, and I think that lights would be a tremendous improvement to the community. Not only will our football team actually get to play at home, but it will help improve the community as well. Instead of complaining about the lights they should come together and celebrate the school that makes this neighborhood so great. The students at Lynbrook work very hard to give their school a good reputation, and they shouldn't be
deprived of a quintessential high school opportunity that they only have one chance at, cheering on their high school football team on their own home field under the lights. It's not going to be every night. It's not going to go until midnight. They will respect the neighbors around them. Putting in lights at Lynbrook can only be a positive for the school and its students, and I feel that it will not affect me or my neighbors at all, especially if the correct technology is used.

RESPONSE D-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

E. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM SU-MIAO CHEN
DATED MARCH 2, 2012

COMMENT E-1:

As a parent of two Lynbrook students, I wholehearted support the upgrade of the athletic fields. I am excited that my children will be able to benefit from quality facilities that will serve to enhance their school experience and bring the community together.

RESPONSE E-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

F. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ANIRUDDH DIKHIT
DATED MARCH 2, 2012

COMMENT F-1:

As a parent of two Lynbrook students, I wholehearted support the upgrade of the athletic fields. I am excited that my children will be able to benefit from quality facilities that will serve to enhance their school experience and bring the community together.

RESPONSE F-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
G. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM JULIE FERRARIO
DATED MARCH 2, 2012

COMMENT G-1:

In regards to the lighting at Lynbrook Sports fields, I certainly think my two sons missed a great deal of school spirit due to the lack of home field playing time. I have a 20 year old son who is now attending UC Berklely and played football & track while attending Lynbrook. I also have a Senior at Lynbrook now who has also been on football, soccer and track. All these sports are outside sports that have missed out on the school support they deserved. They both have never seen a true home field event at his school - and I believe the sports teams suffer the most in this regard. The student body in general have less enthusiasm to come out and support their teams when they have to travel to watch their teams play. I saw this when I went to watch our indoor sports take place on campus. For both Basketball and Swimming (waterpolo - which has lighting for night time games), the attendance of the student body as a spectator is high. The spirit is there for those sports, however in Football, Track and Soccer (those are the ones I have observed) the student body at a home game is extremely low.

Even though we will miss out on the new track and lighting, I strongly support the lighting to be installed at Lynbrook. I think our sports should be as highly regarded as our academics! It is time to support our athletes!

RESPONSE G-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

H. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ED AND SUZANNE
FORD DATED MARCH 2, 2012

COMMENT H-1:

The January 2012 Draft Recirculated Environmental Impact Reports for both Monta Vista and Lynbrook high schools have been read and will be discussed in the following text. Hereafter these documents will be referred to as DREIR’s.

The comments are intended to be constructive towards achieving a resolution that retains the existing quality of life in both communities. Since FUHSD provides an educational service to our communities we chose to use a report card measure with as straightforward comments as civility allows.
RESPONSE H-1:

The comment is noted. Responses to specific comments are provided below. The comment will be considered by the Board during their deliberation on the project.

COMMENT H-2:

Both documents are given a grade of A plus for consistency – consistently inaccurate and self-serving in terms of CEQA preparation and analysis. Grade F minus for communication, use of common sense and honesty, which are also required in proper CEQA compliance. Facts and fundamental questions relative to the DREIR’s and how these relate to communication, common sense and honesty are as follows.

RESPONSE H-2:

This document, together with the July 2010 Draft Environmental Impact Report (Draft EIR), December 2010 Amendment to the Draft EIR, and January 2012 Draft Recirculated Environmental Impact Report (Draft REIR) for the Lynbrook High School Sports Fields Improvements and Lighting, constitutes the Final Environmental Impact Report (Final EIR) for the proposed project. Together, these documents meet the requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 1500 of the California Code of Regulations). The comment is noted and will be considered by the Board during their deliberation on the project.

COMMENT H-3:

Facts and Questions:

- Measure B has a Bond Authorization of $198m, debt to the community. It has four primary items: 1) Energy, Technology & Infrastructure Improvements with eight sub bullets, 2) Renovation and Construction of Classrooms and School Facilities with nine sub bullets, 3) Exterior & Grounds Improvements with eleven sub bullets and 4) Additional Necessary and Incidental Projects with seven sub bullets. None of these had specific or approximate dollar allocations. If one now adds up the dollars being spent and allocated, it appears that more than 50% of our community debt is going to renovation and construction of fields and Administration facilities. Connectivity to education is not apparent by this allocation of our debt. A fully detailed “specific list” with dollars per sub item should have been in the Measure B disclosure to properly inform the public. Why was that detail not provided? It appears to have pushed FUHSD on a path of CEQA non-compliance.
RESPONSE H-3:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

COMMENT H-4:

- Stadiums with lights to extend usage and with resulting noise was a sub sub item buried in bullet 14 of 24 bullet items in the “specific list” while a more clarified explanation was only uncovered after passage of Measure B. Stadiums with tall lights finally came out to the public. This is the primary source of your F minus grade in communication, common sense and honesty.

RESPONSE H-4:

The comment is noted. While the comment does not raise any issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

COMMENT H-5:

- That failure to communicate resulted in an uproar from all surrounding neighborhood homes at both school sites and resulted in issue of Draft EIRS by FUHSD. Approximately 800 signatures were gathered to oppose lights for extended usage and resulting noise. FUHSD dismissed these concerns, which is an insult to the communities. These community concerns all centered on lights with accompanying noise, which severely exceed both municipal codes and common sense. Both High School sites were built as pedestrian access from nearby homes. School districts sold off open land and schools. We now have major traffic problems every school day with insufficient help or communication from FUHSD. How does FUHSD intend to correct these failures and comply with CEQA? Actions to date on light, noise and traffic are inadequate.

RESPONSE H-5:

The comment is noted. While the comment does not raise any issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR. Please refer to Response A-2 regarding the focus of the Draft REIR.

COMMENT H-6:

- These neighborhoods are residential on 3 and 4 sides with no open end to freeway or Major Street as buffers. FUHSD has shoehorned these Sport fields directly adjacent to residential lots. These residences have taxpaying adults that care for ill family members and young children who nap in daytime and go to bed in early evening, some work from home, some must retire in the afternoon or early evening to get to their jobs, some work in high stress positions. Everyone
needs to come home to peace and quiet. Everyone needs a place of refuge- home- that is peaceful and quiet free from outdoor noise. Noise standards along with many other laws, Ordinances and Municipal codes are to protect all taxpayers equally. FUHSD, in these DREIR’s, needs to comply with CEQA elements and noise standards. There are solutions but FUHSD has not included these. Why? Stop trying to achieve bragging rights and putting 6lbs of sand in 3 lb bags. These are not Universities or Community colleges. FUHSD needs to get a real oar in the water working in an integrated manner with the entire community. When will this happen?

RESPONSE H-6:

The comment is noted. The Draft REIR was prepared and circulated to disclose that the Reduced Use and Light Levels alternative would result in a significant unavoidable noise impact. The comment does not raise any issues regarding the analysis in the Draft REIR. The comment will be considered by the Board during their deliberation on the project.

COMMENT H-7:

- FUHSD was directed by the Court in the LMU lawsuit to partake in negotiations. FUHSD offered no compromise. LMU members wanted to stop after two meetings but were persuaded by several members of LMU to attempt a 3rd meeting. LMU made concessions while FUHSD made none and rejected offers. FUHSD truly fails communication – when and how will this be corrected?

RESPONSE H-7:

The Court Order does not direct the District to partake in negotiation. The comment is noted. While the comment does not raise any issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

COMMENT H-8:

- FUHSD Superintendent stated in 3 separate meetings that FUHSD would comply with noise standards. FUHSD subsequently held a Board meeting voting not to honor those commitments. LMU is trying to help resolve these issues so please do not dismiss as in the past. Actions and statements from FUHSD to date cement that “These EIR’s and DREIR’s want to walk like ducks and quake like ducks- but they are not a ducks”. How will FUHSD change this pattern and help our community? Is this a common practice at FUHSD? Failures in communication, common sense and honesty trickle down to our children whom we entrust to educators. Are you trustworthy? Prove it by providing CEQA compliant documents and analyses.

RESPONSE H-8:

Please refer to Response H-2.
COMMENT H-9:

- FUHSD issued a FEIR, which attempted to override noise code standards, via subcontractor, Illingworth & Rodkin, Inc. advise using a “qualitative” approach to transform a “significant, unavoidable noise impact” to a “less than significant”. Court rejected FEIR – show analytic route. Subcontractors are hired to complete assignments successfully – FUHSD expected answers that allow project approval hence the qualitative approach and we should enjoy the noise. The DREIR’s now state that FUHSD cannot comply using court directed “analytic route” for the single option plan “Reduced Use and Light Levels Alternative”. Is it “cannot” or “will not”? No reasonable alternative plans were examined – WHY? It is important to know both because it places all statements in the new DREIR’s as self-serving and yet again on the path of deception.

RESPONSE H-9:

Please refer to Response G-1.

COMMENT H-10:

- DREIR’s cite Sections 15121(a), 15142 and 15147 from CEQA Guidelines as to how FUHSD is complying with required standards and adequacy. Section 15121 (a) is part of 13 elements in Article 9 of CEQA and when reading it the DREIR’s appear non compliant for more than one element in Article 9. Same problem exists in Section 10, which has 16 elements including 15142 and 15147. More elements in each article should have been used. Will FUHSD explain in detail why it chooses minimal CEQA elements and then goes non compliant on the selected elements?

RESPONSE H-10:

The District did not choose minimal elements. This document, together with the July 2010 Draft Environmental Impact Report (Draft EIR), December 2010 Amendment to the Draft EIR, and January 2012 Draft Recirculated Environmental Impact Report (Draft REIR) for the Lynbrook High School Sports Fields Improvements and Lighting, constitutes the Final Environmental Impact Report (Final EIR) for the proposed project. Together, these documents meet the requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 1500 of the California Code of Regulations).

COMMENT H-11:

- How did the noise level go up from 73% reduction to now 66%?

RESPONSE H-11:

The maximum number of hours of field lighting under the Draft EIR Reduced Use alternative is a 73 percent reduction in hours, compared to the maximum hours of field lighting under the originally proposed project. Under the Reduce Use and Light
Levels alternative, the maximum hours of field lighting represent 66 percent reduction in hours, compared to the originally proposed project. The difference between the Reduced Use alternative and the Reduced Use and Light Levels alternative is that under the Reduced Use and Light Levels alternative the lights would remain on an additional half hour after practices and games, to allow for cleanup, putting away equipment and instruments, and egress. The additional half hour of light use to allow for cleanup and egress is the seven percent difference between the two alternatives.

COMMENT H-12:

- How many homes would need replacement windows to get down to 50dBA Leq at Monta Vista and 55dBA Leq at Lynbrook?

RESPONSE H-12:

As shown on Figure 2.2-2 of the Monta Vista High School Draft REIR, there are 23 affected residences. Assuming the existing windows and/or doors at these affected residences do not reduce interior noise levels to 45 dBA, all 23 affected residences would need replacement windows/doors.

As shown on Figure 2.2-1 of the Lynbrook High School Draft REIR, there are 25 affected residences. Assuming the existing windows and/or doors at these affected residences do not reduce interior noise levels to 45 dBA, all 25 affected residences would need replacement windows/doors.

COMMENT H-13:

Revise and reissue DEIR’s by removing all statements that tell us how well we should enjoy extended usage, lights and increased noise. We do not need to be bullied or fed self-serving erroneous statements in these DREIR’s. The “qualitative” sales approach does not sell and the Noise Addendum has apparent CEQA flaws. Annoying lights and excessive sound during any time of the day and particularly after 5 PM and later are unnecessary. If one wanted to hear loud noise from sporting events then it should be by choice. Noise is easy to get but hard to eliminate unless you can unplug the source. That is the purpose of noise standards. You do want to comply with CEQA and noise standards?

RESPONSE H-13:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
COMMENT H-14:

We request a result-committed discussion to communicate, exercise common sense and honesty. Community acceptance at both schools is the product. FUHSD must have these same objectives to achieve acceptable solutions.

RESPONSE H-14:

The comment is noted. While the comment does not raise any issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

I. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM RAHUL GAUR DATED MARCH 2, 2012

COMMENT I-1:

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

RESPONSE I-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

J. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM KATHLEEN HERINGTON DATED MARCH 1, 2012

COMMENT J-1:

I disagree with the FUSHD revision of the environmental impact report, because this report does not state that outside adult soccer leagues will be able to use the new facilities. Therefore, this report is incomplete.

RESPONSE J-1:

The Lynbrook High School Draft REIR, together with the previously circulated EIR and this amendment to the Draft REIR, comprises the EIR for the Lynbrook Sports Fields Improvements and Lighting project. The Draft EIR states at the top of page 18...
that the District will not allow the sports lights to be used by non-District recreational leagues or groups.

K. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM KATHLEEN HERINGTON DATED MARCH 1, 2012

COMMENT K-1:

There seems to be something left out.

At 2.1 the definition of "Late August" must be explained further in order to make the claims of reduced impact.

Otherwise, how were the statistics compiled?

RESPONSE K-1:

The spreadsheet used to calculate the hourly use of the lights under the Proposed Project, Reduced Use alternative, and Reduced Use and Light Levels alternative is included as Appendix F of the Amendment to the Draft EIR prepared for the Lynbrook High School Sports Fields Improvements and Lighting project.

L. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM JI HUAFAANG DATED MARCH 1, 2012

COMMENT L-1:

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

RESPONSE L-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
M. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ANNA STERNAD JAMES DATED MARCH 2, 2012

COMMENT M-1:

As a Lynbrook parent and neighbor, I am very much in favor of the improvements to the Athletic fields, including the addition of field lighting. I have reviewed the numerous iterations of the Environmental Impact Report and I feel the School District and Lynbrook have taken great strides to mitigate the impact of the lights and noise to the neighboring homes. The previous lighting schedule reduced the noise and lighting levels to a less than significant level, and the new proposed schedule reduces the level even more. Please do not delay this project any more than it already has, these new fields will provide a much safer alternative for my children and the future student athletes of Lynbrook High School.

RESPONSE M-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

N. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CHRISOULA KANTIOTOU DATED MARCH 2, 2012

COMMENT N-1:

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my son will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

RESPONSE N-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

O. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM HANK LAWSON DATED MARCH 2, 2012

COMMENT O-1:

Let the school have lights. It's not like the neighbors didn't know they were moving in next to a school when they bought their house. Set up an agreement like the neighbors did with Saratoga HS
when they put in their lights. And please do outlaw "Rock Concerts" at the Lynbrook campus but Friday Night Lights is part of what HS is about.

RESPONSE O-1:

Student sponsored outdoor events and musical activities currently occur on the campus during the daytime, which would continue under the proposed project. The use of the sports lights for a student sponsored Battle of the Bands is not evaluated as a use under the proposed project or the alternatives to the proposed project and, therefore, would require separate environmental review and Board approval.

P. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DAISY LEE DATED MARCH 2, 2012

COMMENT P-1:

As a parent of three Lynbrook students, I wholeheartedly support the upgrade of the athletic fields. I am excited that my children will be able to benefit from quality facilities that will serve to enhance their school experience and bring the community together.

RESPONSE P-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

Q. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM MEYVAYE LEE DATED MARCH 2, 2012

COMMENT Q-1:

As a parent of a Lynbrook student, I wholeheartedly support the upgrade of the athletic fields. I am excited that my daughter will be able to benefit from quality facilities that will serve to enhance her school experience and bring the community together.

RESPONSE Q-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
R. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM MAOJUAN LI
DATED MARCH 2, 2012

COMMENT R-1:

As a parent of a Lynbrook student, I fully support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

RESPONSE R-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

S. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DORIS LIVEZEY
DATED MARCH 1, 2012

COMMENT S-1:

I have read the recirculated EIR and I do not agree with it.

You are not considering the families who purchased their homes many years ago with the understanding that there would not be a lighted sports field.

RESPONSE S-1:

The comment is noted. Responses to specific comments are provided below. The comment will be considered by the Board during their deliberation on the project.

COMMENT S-2:

Portable lights would be acceptable for a few games a year (similar to Mitty High School), but the permanent huge structure is unconscionable. We have driven by Cupertino High when their field is lighted and the light spill from the new lights covers many city blocks.

RESPONSE S-2:

As stated in Section 1.2 Contents and Format of the Document of the Draft REIR, the Draft REIR contains only the additional information that is needed to make the previously prepared EIR complete. As described in the Court’s November 30, 2011 Order, the Court found that the previously prepared EIR adequately addressed the remaining issues raised in the Petition. The Draft REIR and this Amendment to the Draft REIR is, therefore, limited to the following: the significance of impacts...
resulting from the Reduced Use and Light Levels alternative, identified mitigation measures for the significant noise impact, and a discussion of whether any alternatives to the project feasibly attain most of the basic objectives of the project and would avoid or substantially lessen the significant noise impact. The Draft EIR and Amendment to the Draft EIR adequately address all other issues, including visual impacts resulting from the proposed project. Please refer to the Lynbrook High School Sports Fields and Lighting Draft EIR and Amendment to the Draft EIR for all other project-related issues.

COMMENT S-3:

What has been totally ignored is the potential traffic.

We have experienced the traffic congestion when the parents bring their students to our neighborhood commuter school: Murdock-Portal School. We have to schedule our trips around their schedule.

We DO NOT have any businesses surrounding Lynbrook. There are no public parking lots. We have seen what happens on Graduation night when the visitors park on our streets and partially in our driveways and the traffic congestion while people look for a parking place.

It is ludicrous to believe that people will take the bus. The bus drops off at Prospect or Johnson Avenues. Visitors will not walk the 5 blocks to get to the school.

RESPONSE S-3:

The traffic impacts of the proposed project are fully evaluated in the Draft EIR and the Amendment to the Draft that were previously circulated for the proposed project. Please refer to Response S-2.

COMMENT S-4:

FUHSD is out of touch with the neighbors in the Lynbrook, Murdock Neighborhood.

RESPONSE S-4:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
T. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ROLF AND MARY LUND DATED MARCH 2, 2012

COMMENT T-1:

As community members and homeowners we wanted to voice our positive feedback to have lights at Lynbrook High School.

We live very near Calabazas Park which has lights at night. These lights were put in long time ago. They are not directional or "sensitive" in any way. They do not bother us at all. We want to ensure the Lynbrook neighbors who are opposed, that they are not intrusive. The traffic is impacted, but we love the fact that we have a well used park. This keeps the transients and potential trouble-makers away.

We know the Lynbrook administration has taken great strides to compromise use and the times they are used. I think considering newer technology and sensitivity to the community, the lights will be a fantastic addition to Lynbrook. Not to mention the building of a great student community, with pride in their home school!

RESPONSE T-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

U. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ED MYERS DATED FEBRUARY 26, 2012

COMMENT U-1:

I am a home owner who backs up to the Lynbrook sports fields. My property is located in opposite corner from the football field (next to the unused softball field). While I am less affected by the designs, I still have a couple of questions/concerns.

RESPONSE U-1:

The comment is noted. The comment will be considered by the Board during their deliberation on the project. Responses to specific comments are provided below.

COMMENT U-2:

1) What about the morning usage, especially band practice. Often we hear the band on the field early on the weekends, especially the drum line which can often start as early as 8am and go all day long.
I imagine this violates the 55 dBA limit. I would like to see the school district make a commitment as to the morning and afternoon noise levels as well as the evening noise levels.

**RESPONSE U-2:**

The Lynbrook High School band currently practices Monday and Wednesday evenings and Saturday 9am to 5pm. Band practice starts at 9AM Saturday (not 8 AM as stated in the comment). These practices occur during the band season, which typically extends from the first week of August through the Thanksgiving Break. The proposed use of the fields for band practice would not increase noise levels beyond that which has occurred under existing conditions for many years.

**COMMENT U-3:**

2) My property is outside the proposed sound barriers. Having been here for years, I can safely state, I will hear the noise from the football field. To state properties outside the sound barrier will not be effected by the noise is ridiculous. On the flip side, I have not minded most of the activities on the field and have even enjoyed watching the softball games. This leads me to item #3.

**RESPONSE U-3:**

The noise barriers were designed to reduce exterior noise levels from a typical game to 60 dBA Leq and to block the line-of-sight from residential rear yard areas to the football field. Property line noise barriers would work in conjunction with the solid noise barriers recommended at the rear of the bleachers to block the line of sight to the field. Noise barriers were not extended further north along the northeast property line because attenuation due to distance alone would result in noise levels of 60 dBA Leq or less. The receivers would have a limited view of the field because of the shielding provided by the property line barrier and bleacher barrier.

The Draft REIR does not state the properties outside the noise barrier will not hear noise from the football field and will not be affected by the proposed project. While noise from the football field may be audible, audibility does not constitute a significant noise impact.

**COMMENT U-4:**

3) On various layouts, I will sometimes see plantings along my fence line. In the original draft, it was stated these plantings will not affect the vista view of the mountains. I do not see any current wording or even a cohesive plan to these plantings. Any plantings which reach 8 feet will definitely have a negative on the views from my property. I would like to see enforceable statements as to the intentions of the property lines for all of the schools perimeter.
RESPONSE U-4:

As stated in Section 1.2 Contents and Format of the Document of the Draft REIR, the Draft REIR contains only the additional information that is needed to make the previously prepared EIR complete. As described in the Court’s November 30, 2011 Order, the Court found that the previously prepared EIR adequately addressed the remaining issues raised in the Petition. The Draft REIR and this Amendment to the Draft REIR is, therefore, limited to the following: the significance of impacts resulting from the Reduced Use and Light Levels alternative, identified mitigation measures for the significant noise impact, and a discussion of whether any alternatives to the project feasibly attain most of the basic objectives of the project and would avoid or substantially lessen the significant noise impact. The Draft EIR and Amendment to the Draft EIR adequately address all other issues, including visual impacts resulting from the proposed project. Please refer to the Lynbrook High School Sports Fields and Lighting Draft EIR and Amendment to the Draft EIR for all other project-related issues.

COMMENT U-5:

I purchased this property knowing I backed up to a sports field. This was acceptable and in fact my children have used these fields when they attended LHS. The only negative experiences I've had included a three day weekend volleyball tournament on the field, the yearly drum line practice and the arrogance of the school district. Many of the concerns of the neighbors could have been adverted if you engaged us in the planning process. Twice now they have mislead use on the use of the measures of your "infrastructure" bonds. I first became upset with the late 1990's measure. In this case, the school sent out a survey asking how to spend the bond money. Surprisingly, very few of the items on the survey were supported. Instead we got a new pool and weight room. Items not on the survey.

The district has lost all credibility in my eyes.

RESPONSE U-5:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

V. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DAVID NISHIJIMA
DATED MARCH 2, 2012

COMMENT V-1:

I am a parent of three children. Two are currently attending Lynbrook and the other will be attending in the future.
Our family is in FULL SUPPORT of putting up lights at the new Lynbrook football field for the following reasons:

- Night football games at home are a fond memory of my high school experience as it was a positive and safe environment for student interaction unlike any other.
- The ability to play home night games provides fairer competition versus schools that have lights. Marching band is also at a disadvantage if they are required to practice in conditions different from where they compete.
- When games or other events that require field lighting are needed, they had to be held at another field (e.g., Cupertino High). It is not fair to those neighbors who need continue playing host a different school.
- There is additional gas (pollution) and human labor required to transport hundreds of people and equipment to another field. This includes the football team, marching band, cheerleaders, fans, concessions products, etc. that would not have to travel to a different school to host a game.
- Marching band practice requires the transport of a huge amount of instruments that require two trailers twice a week.
- If the band were to practice at Lynbrook without permanent lights, then there would be an additional cost to rent portable lights and these lights will shine more directly on the neighbors, make more noise, and create more air pollution.
- There are actually few dates that field lights will be required each year.
- It is not fair that the whole community suffer just to satisfy the selfishness of a handful of neighbors, and not all the neighbors near the field are against lights.
- I live near a community swimming pool (Queensboro pool) and there are cars parked all around and noise from kids playing in the pool, however I am okay with it since it comes with where I chose to live.

I am sure I have more reasons for my support of lights at the Lynbrook football field. I request that you support this as well.

**RESPONSE V-1:**

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

**W. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM MIKE PAKALUK DATED MARCH 2, 2012**

**COMMENT W-1:**

This past fall, I experienced my first FUHSD Marching Band Exposition, which was hosted by Homestead High School and featured the band programs in our district. I was amazed and impressed by the quality of Homestead’s athletic fields, facilities, track, and stadium. It occurred to me that a
school district with such an outstanding reputation for supporting and promoting student
development and achievement should certainly provide students with facilities that represent those
standards.

I emphatically support and appreciate the construction of the Lynbrook stadium and athletic fields,
not simply because it provides a necessary venue for my marching band to practice and perform in,
but also because it provides all of our student athletes with a resource that will greatly enhance their
experience. I believe the new stadium and fields will serve to unite our community even more, and as
the band director, I am willing to do everything in my power to act as a good neighbor to those
whose homes surround our school.

RESPONSE W-1:

The comment is noted. While the comment does not raise any specific issues
regarding the analysis in the Draft REIR, it will be considered by the Board during
their deliberation on the project. No further response is necessary in this REIR.

X. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DAVID PARKER
DATED FEBRUARY 28, 2012

COMMENT X-1:

The FUHSD needs to follow thru with the plans that they have for both high schools. The lights
would really help the neighborhoods around Cupertino and Fremont High Schools by giving us a
break. The Cupertino and the Fremont neighborhoods have supported Lynbrook and Monta Vista
High School for a long time. Why is it that Lynbrook and Monta Vista neighborhoods don’t mind
coming over to Cupertino and Fremont neighborhoods to make noise and enjoy themselves but then
they don’t want anyone coming into there neighborhood to do the same. That’s not right. Who do
they think they are? I think it’s about time that the neighborhoods around Monta Vista and Lynbrook
High School step up and share the responsibility that goes along with having a High School in your
neighborhood.

Has the city of Cupertino or the Lynbrook and Monta Vista neighborhoods even consider what our
neighborhoods go thru during the football season and band practice and numerous other events that
the field and lights support. Think about it. Do what’s right. It won’t kill you. Why wouldn’t you
want to support your school’s sports activities? You sure don’t mind having our neighborhoods doing
it for you. If you don’t want light’s then play all of your games and other activities during the day.

I have lived across the street from the fields and the light’s at Cupertino High School for 55 years. As
a matter of fact, Cupertino High School did not exist when I moved here. I have played under those
lights and have supported the lights for a long time. I think it’s time for your neighborhoods to step
and do the same.
RESPONSE X-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

Y. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DAVE RADTKE DATED MARCH 2, 2012

COMMENT Y-1:

This is a revised version of comments that can replace the comments dated on March 1. The only changes are this paragraph, the paragraph that immediately follows and the date. I also plan to send an addendum to these comments.

RESPONSE Y-1:

We have replaced the comment letter dated March 1 with this comment letter. Comments in an addendum will receive separate responses under the date they are received.

COMMENT Y-2:

The comments below primarily address the Monta Vista Improvement Projects; however, many of the comments apply to the Lynbrook Improvement Projects as well.

RESPONSE Y-2:

Responses will be provided as they relate to either the Monta Vista project, the Lynbrook project, or both projects.

COMMENT Y-3:

The Draft Recirculated Environmental Impact Report (DREIR) is severely flawed. Instead of providing objective information to the decision makers and the general public, the DREIR misinforms the public. Instead of objectively presenting the significant noise impact of the "Reduced Use and Lighting" alternative, the DREIR portrays the impact as not at all significant except in a technical sense and goes so far as to claim that many people will enjoy the noise. The DREIR does in fact state that noise from the project is a significant impact because the District was forced to state that fact by a court in light of facts presented to the court, but it does so with a wink to the decision makers as it makes numerous assertions and statements of opinion, portrayed as facts, that imply that the noise impact is not at all significant.
RESPONSE Y-3:

The purpose of the Draft REIRs are to disclose that the Reduced Use and Light Levels alternative would result in the same significant unavoidable noise impact that was identified in the previously circulated EIR. The Draft REIRs state that the Reduced Use and Light Levels alternative would result in a significant unavoidable noise impact (REIR, page 5). The Draft REIRs state that evening activity noise under the proposed field lights would result in a significant unavoidable impact, because the increased noise levels would exceed the Cities’ normally acceptable exterior noise level standards (Monta Vista project would exceed Cupertino’s nighttime exterior noise level standard of 50 dBA Leq and Lynbrook project would exceed San Jose’s normally acceptable exterior noise level standard of 55 dBA Leq). The comment regarding the “claim that many people will enjoy the noise” refers to the Draft REIRs discussion of factors affecting a person’s typical response to noise. Draft REIRs page 6 state,

“The type of noise resulting from the project would be sounds commonly associated with high school activities, including the sounds of athletes on the field, the band, the public address (PA) system, and the cheers and stomping of spectators. For many people, these sounds are received positively and for others they are an intrusion into an otherwise quiet neighborhood.”

COMMENT Y-4:

The Draft REIR also misrepresents the previously circulated EIR the District previously approved; or, since the previously circulated EIR, together with this Draft Recirculated EIR constitutes the new EIR, the DREIR contradicts other parts of the new EIR. Specifically, the DREIR misrepresents the previously Circulated EIR in the conclusion section with statement that "the previously circulated EIR found that there are no alternatives to the project that meet the primary objective of holding evening football games at the Monta Vista campus and avoid the significant noise impact.” A complete explanation of how it misrepresents the previously circulated EIR is provided below. In addition the Draft REIR has major omissions

RESPONSE Y-4:

It is not clear what misrepresentations and/or omissions are raised by the Draft REIRs. Responses to specific comments are provided in the following responses.

COMMENT Y-5:

The Draft REIR claims the Court required the District to reconsider only the sections of the previously circulated EIR that are included in the DREIR, but other sections of the previously circulated EIR are also deficient because of conclusions made concerning noise impacts. The court ordered the District to set aside certification of the Final Environmental Impact Report for the Monta Vista High School Sports Field Improvements and Lighting Project and the adoption of the
Mitigation Monitoring and Reporting Program for the Monta Vista High School Sports Field Improvements and Lighting Project. It also ordered the District "to reconsider those approvals after appropriate review under CEQA."

The District erroneously interprets "reconsider those approvals" to mean that only the project that they previously approved should be considered. The court did not state that only the project approved by the District suffered from incorrect conclusions on the impact of noise. However, from the court's decision it was a forgone conclusion that the project approved by the District had a significant noise impact.

**RESPONSE Y-5:**

The Court order states that the previously circulated EIRs were deficient in that it did not show the analytic route leading to the conclusion that the Reduced Use and Light Levels alternative would result in a less than significant noise impact. The Court directed the District to declare void its resolution certifying and adopting the EIRs and adopting the Mitigation and Monitoring Program and to reconsider those decisions after appropriate CEQA review. In response, the Draft REIRs reevaluate the significance of the noise impact of the Reduced Use and Light Levels alternative (RULLA), and considers mitigation measures and alternatives to the RULLA to either avoid or reduce the significant impact of the RULLA.

**COMMENT Y-6:**

That would seem to make it more important for the revised EIR to examine other alternatives in the previously circulated EIR to determine if their noise impacts were correctly stated. One would think that the District would not restrict itself to consider only an alternative that was known to have a significant noise impact. The previously circulated EIR also claimed that the Reduced Use Alternative, the Practice Lights Alternative, the Practice Lights and Homecoming Alternative did not have significant noise impacts. The REIR does not either correct that error or state why those alternatives do not have significant noise impacts.

Obviously, the Reduced Use Alternative suffers from the same significant noise impacts as the Reduced Use and Light level Alternative, and the DREIR should address that. Without that correction the previously circulated EIR, together with the Draft Recirculated EIR still does not correctly state the impact of noise.

**RESPONSE Y-6:**

The Draft REIRs (page 19) state that there are no alternatives to the project that meet the primary objective of holding evening football games at the Monta Vista/Lynbrook campus and avoid the significant noise impact. The text of the Draft REIRs has been revised to clarify that the Reduced Use alternative, the Practice Lights alternative, and the Practice Lights and Homecoming alternative all result in a significant noise impact. The revised text is presented in Section 4 of this Amendment to the REIR.
COMMENT Y-7:

The previously circulated EIR does not state if band practices will be allowed for the Practice Lights Alternative and the Practice Lights and Homecoming Alternative. If band practices are allowed, then it is not obvious that those alternatives do not also have significant noise impacts because the DREIR states that band practices have the same noise levels as "typical" football games. The Reduced Use Alternative (RUA) and Reduced Use and Light level Alternative (RULLA) allow two band practices per week in the fall, but the Practice Lights Alternative (PLA) and the Practice Lights and Homecoming Alternative (PLHA) do not specify any limit on the number of band practices in a week or time of year.

In addition the Practice Lights and Homecoming Alternative does include one football game, and the EIR estimates that the crowd will be very large and the noise levels will be at their highest. It is not obvious that the noise impact from a single game is not significant even though the noise impact from the 5 or 6 games allowed under the Reduced Use Alternative and Reduced Use and Light level Alternative is much worse.

As a result, the District has failed to consider almost any alternatives - except the no sports lights alternative - that would eliminate significant noise impacts associated with practices. The District should consider alternatives that would reduce evening noise from practices, in addition to the No Sports Light Alternative, such as eliminating evening band practice, or redesigning and reducing the field to take advantage of opportunities for better sound insulation and noise reduction.

RESPONSE Y-7:

As stated in the Amendments to the Draft EIRs, “the Practice Lights alternatives would be identical to the proposed project, except the proposed sports lights would be used only for practices and would be turned off by 7:30 PM.” Not related to noise, the light levels of the Practice Lights alternative would be reduced from 50 footcandles to 30 footcandles. Practice means both sport and band practices. The Practice Lights and Homecoming alternative would add one evening football game, presumably Homecoming, and would bring in portable lighting to provide the 50 footcandles necessary to play football. The text of the Draft REIRs has been revised to clarify the significant noise impact that would result from the Reduced Use, Practice Lights, and Practice Lights and Homecoming alternative, in addition to the significant unavoidable noise impact of the Reduced Use and Light Levels alternative. As stated in the Court order (pages 10-11) dated November 30, 2011,

“Here both EIRs adequately discussed ‘a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project...’ The location and basic layouts of both projects cannot be significantly changed simply because of their nature – to improve/renovate the track and field facilities at specific existing high school campuses. The EIRs address an adequate number of alternatives, and explain that the alternatives that
would most lessen the environmental impacts – such as the No Sports Lights alternatives – fail to attain the basic objectives of the projects, extending the school day and allowing both schools to host athletic practices and games that take place after school hours and therefore are often in darkness during the fall and winter.”

The Draft REIRs include an evaluation of mitigation measures to reduce the significant noise impact of the Reduced Use and Light Levels alternative. Additional information regarding the attenuation provided by measures identified in comments to the Draft REIRs is provided in Section 4, Revisions to the Text of the Draft REIR.

COMMENT Y-8:

The flaws in the DREIR fall into these six major areas with considerable overlap:
1. Incorrect application of CEQA in evaluation of alternatives and objectives
2. Misleading information
3. Inadequacy of information supplied or glossing over important relevant facts
4. Treating opinions and conjecture as facts
5. Incorrect application of cost/benefit ratios and incorrect application of CEQA in evaluating mitigation measures
6. Use of nebulous and overly narrow objectives to limit alternate designs

Comments on specific sections of the DREIR are listed for each type of flaw.

RESPONSE Y-8:

Responses to specific comments are provided below.

COMMENT Y-9:

Incorrect application of CEQA standards
1. In paragraph nine of Section 2.1.1 when reporting the increase in noise levels above the current ambient levels, it is irrelevant whether or not the noises are commonly associated with high schools. The standard to be applied is how much increase in noise the project will produce above the current ambient noise conditions.

RESPONSE Y-9:

The paragraph noted in the comment is a general discussion about the noise generated by the Reduced Use and Light Levels alternative. It does not specifically relate to any noise standards used as thresholds of significance for a noise impact. In the same section, paragraph five states, “….the noise would still result in a significant unavoidable impact, because it exceeds the City’s normally acceptable exterior noise level standard of 50 dBA Leq.”
COMMENT Y-10:

2. In Section 3 Conclusions there are several problems with this statement "The previously circulated EIR found that there are no alternatives to the project that meet the primary objective of holding evening football games at the Monta Vista campus and avoid the significant noise impact."

a. The first is use of the term "primary objective." In response to Comment 88-5 to the previously circulated Draft EIR, the District stated "All references to the primary objective of the sports lighting have been deleted from the Draft EIR." The previously circulated EIR approved by the District makes no statements concerning the primary objective of the project as a whole, nor does it state that holding evening football games at the Monta Vista campus is a primary objective of the project or a primary objective of installing lights.

In the previously circulated EIR Section 1.13 Objectives lists Synthetic Turf and Track, Sports Lights, ADA Compliance, and Upgrade/Modernize as the objectives of the project and the Sports Light objective is shown as:

Sports Lights - extend the student school day by allowing sport practices to extend into the evening; reduce the burden on the Cupertino High School track and field facilities which are currently shared with Monta Vista; and increase student school spirit and pride through being able to hold more Monta Vista events on their home campus

"More Monta Vista events on their home campus" might or might not include night football games. And even "increase(ing) student school spirit and pride," which the District asserts would result from holding more events on their campus, is only one of three objectives within an objective that itself is only one of the four stated objectives of the project.

RESPONSE Y-10:

The Draft REIRs used the word primary as a synonym for basic. The word was used in error and has been deleted from the text of the Draft REIRs. The revised text is presented in Section 4, Revisions to Text of the Draft REIR.

COMMENT Y-11:

b. Next, the District does not properly use the CEQA criteria for evaluating alternatives. It implies that any alternative that does not meet the objective of holding evening football games at the Monta Vista should be summarily dismissed. Furthermore, the "Practice Lights and Homecoming Alternative" does include an evening football game at the Monta Vista, but even that alternative is said not to meet the objective of holding evening football games on campus.

The proper criteria to evaluate alternatives are described in Section 8.1 of the previously circulated and approved EIR. "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects..." And "the alternatives should feasibly attain most of the project's basic objectives, but are to be considered even if they impede to
"some degree': the attainment of project objectives, or could be more costly than the proposed project. (Emphasis added.)

The Final EIR approved by the District never states that the No Lights Alternative (NLA), the Practice Lights Alternative (PLA), or the Practice Lights and Homecoming Alternative (PLHA) do not feasibly attain most of the project's basic objectives, perhaps because they do attain them even though they might impede attaining them to some degree.

RESPONSE Y-11:

The text of the Draft REIRs has been revised to clarify the significant noise impact that would result from the Reduced Use, Practice Lights, and Practice Lights and Homecoming alternative, in addition to the significant unavoidable noise impact of the Reduced Use and Light Levels alternative. The previously circulated EIRs evaluate a range of reasonable alternatives, in conformance with CEQA. As stated in the Court order (pages 10-11) dated November 30, 2011,

“Here both EIRs adequately discussed ‘a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project…’ The location and basic layouts of both projects cannot be significantly changed simply because of their nature – to improve/renovate the track and field facilities at specific existing high school campuses. The EIRs address an adequate number of alternatives, and explain that the alternatives that would most lessen the environmental impacts – such as the No Sports Lights alternatives – fail to attain the basic objectives of the projects, extending the school day and allowing both schools to host athletic practices and games that take place after school hours and therefore are often in darkness during the fall and winter.”

COMMENT Y-12:

It should be noted that Monta Vista High School did not play any of its home games at Cupertino High School last year and instead played them at Fremont High School. Monta Vista does not make any other use of the Cupertino High School fields. Therefore, the objective of reducing wear on the Cupertino High School fields has been met even with no project at all. And no matter what alternative is finally used there is no reason for the District to revert to playing Monta Vista games at Cupertino High School.

RESPONSE Y-12:

It is acknowledged that last year Monta Vista played its home games at Fremont High School instead of Cupertino High School. Whether at Cupertino or Fremont, the “home” games were not played on the Monta Vista campus and resulted in wear and tear on a District high school campus other than Monta Vista.
COMMENT Y-13:

i. For the No Sports Lights Alternative the previously circulated EIR states that "Under the No Sports Lights alternative it is also possible that home football games could be played at home during the day." Later it states, "If under the No Sports Lights alternative home football games are played on the Monta Vista campus, the objective of reducing the burden on the Cupertino High School track and field facilities will be met. The objectives of extending the student school day by allowing band and sport practices to extend into the evening and increasing school spirit and pride through being able to hold more Monta Vista events (i.e., evening football games) on their home campus, however, would not be met." Strangely, holding home football games at Monta Vista is said not to meet the objective of holding more Monta Vista events on campus apparently because although more events will be on campus, day football games don't increase spirit and pride by the method the District prefers.

RESPONSE Y-13:

Yes, day home football games are not considered by the District to increase spirit and pride as much as evening home football games.

COMMENT Y-14:

ii. The Practice Lights Alternative can obviously meet all the objectives that the No Lights alternative can meet. The previously circulated EIR even states that it meets "all of the objectives related to installing the synthetic turf and track, ADA compliance, and upgrading and modernizing the outdoor athletic facilities" and "would extend the school day by allowing practices to extend into the evening." The previously circulated EIR claims that the Practice Lights Alternative would not reduce the burden on the Cupertino High School (CHS) track and field facilities or increase school spirit and pride through Monta Vista High School being able to hold more school events on their home campus." It has already been determined that reducing the burden on CHS facilities can be met with no project at all.

Furthermore, just as with the No Sports Light Alternative, home games could be played on the Monta Vista campus. Therefore, the Practice Lights Alternative can also meet the objective of being able to hold more Monta Vista events on their home campus, but not by the method the District prefers. It would seem that the Practice Lights Alternative can feasibly attain most of the basic objectives of the project. Arguably it attains all of the basic objectives of the project; and even if the alternative impedes "to some degree" attaining project objectives, it passes the CEQA criteria for an alternative that should be considered. Since it also reduces, if not eliminates, the significant noise impact of the Reduced Use and Light Level Alternative, the alternative should be chosen over the Reduced Use and Light Level Alternative.

RESPONSE Y-14:

The Practice Lights alternative will be considered by the District, as will all of the alternatives and mitigation measures identified in the Draft REIRs and previously circulated EIRs.
COMMENT Y-15:

iii. The Practice Lights and Homecoming Alternative meets all the objectives that are met by the Practice Lights Alternative. In addition the Practice Lights and Homecoming Alternative allows for one night football game per year on the Monta Vista home campus.

The previously circulated EIR states that "holding the Homecoming game on the Monta Vista High School campus would increase school spirit and pride, but not to the extent of the proposed project, which allows for up to six evening football games per school year."

Thus the Practice Lights and Homecoming Alternative unquestionably passes the criteria set by CEQA in that it 1) "would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects..." And 2) it "should feasibly attain most of the project's basic objectives, but are to be considered even if they impede to "some degree", the attainment of project objectives." Since this alternative reduces the significant noise impact of the Reduced Use and Light Level Alternative, it should be chosen over the Reduced Use and Light Level Alternative. This alternative more fully attains of the objectives of the project than the Practice Lights alternative, but it does not reduce the significant noise impact as much as the Practice Lights alternative.

RESPONSE Y-15:

The comment reflects the opinions of the commenter and will be considered by the District Board in their consideration and deliberation of the project.

COMMENT Y-16:

Misleading information
(From Section 1.3)
1. Even the claim that "this Draft REIR provides objective information regarding the environmental consequences of the Reduced Use and Light Levels alternative..." is misleading. Although some objective information is in the Draft REIR, the Draft REIR contains many subjective statement and statements of what the District would like the facts to be.

RESPONSE Y-16:

The comment reflects the opinions of the commenter. Responses to specific comments are provided below.

COMMENT Y-17:

(From Section 2.11)
2. As with the previously circulated EIR the Draft REIR continues to mislead the public and the decision makers by making it seem as though the amount of field use and the noise it will produce has been significantly reduced from the original project. While the Draft REIR makes a technically
correct statement in comparing the field use of the alternative to what the original project could have used, rather than would have used, the District knows full well that they never planned to use the fields as much as the original plan allowed.

The public record shows that the planned field use, as provided by the principal of Monta Vista, was very close to that allowed by the Reduced Use and Light Levels alternative. The reason the use is so similar is because the Reduced Use alternative was based upon that planned use. Furthermore, comparisons with a theoretical or straw man project are irrelevant, and when treated as relevant they serve only to deceive. This misinformation is repeated four times in Section 2.1.1, quantitatively three times and qualitatively once, and twice in the conclusions in Section 2.1.3.

RESPONSE Y-17:

The REIR does not include misinformation. The original project proposed various days and times that the field lights and resulting field activity and noise could occur. As is common practice in CEQA documents, the originally circulated EIRs evaluated the environmental impacts of the maximum number of hours of potential lit field activity, to provide a conservative estimate of potential impacts. While the immediate District needs may have been less than the maximum hours proposed, the original project, if approved, would have allowed the District to increase activity up to the maximum number without any further environmental review or District Board consideration. The Reduced Use and Light Levels alternative limited the number of hours of lit field activity, reducing the maximum hours of field lighting by 66%, compared to the originally proposed project.

COMMENT Y-18:

(From Section 2.1.1)

3. Paragraph six states that neighbors will not be startled by the noise of football games because they will be aware of the schedule. Although the schedule may be known, a sudden eruption of noise could still be startling. However, one or two eruptions a game will be less of an impact than anticipation of the noise that will occur with each play. The nature of the noise is not a constant amplitude white noise. It will have peaks and valleys in both frequency content and amplitude making it more disruptive to thought, concentration, and sleep.

4. Paragraph seven makes the outrageously prejudicial and subjective statement that the "sounds" of the football games, not noise mind you, are "received positively" by many. One wonders how that was determined and what is meant by many? Have these "many people" actually been exposed to this noise, except when they have been part of it, or are these many people just people who state they would positively receive the sound (or noise) even though they will never actually experience it?

5. Paragraph seven states that a football game is "a relatively non-threatening event hosted by, played by, and attended by the local neighborhood community- the same neighborhood that is subject to the noise." It is misleading to claim that the neighborhood that is subject to the noise is the same as the members of the larger community that may attend the football games. Those attending the games are
normally the parents of the players, a small fraction of the student body and a few diehard high
school sports fans with most living outside the neighborhood affected by the noise. In addition, a
portion of those attending are fans of the opposing team.

6. The statement that "this could lead one to presume that school activity noise is also considered
compatible with residential neighborhoods" is both conjecture and misleading. Although much of
noise from school activities is compatible with residential neighborhoods, not all noise that a specific
school wants to generate is compatible with the residential neighborhood in which it resides. The
mere fact that the City of Cupertino includes schools in residential neighborhoods should not be
considered carte blanche for a school to generate any noise it wishes and claim that it is compatible
with the surrounding neighborhood. Lighted fields were not installed when Monta Vista was built.
That would seem to indicate that lights were not considered compatible with the neighborhood when
the school was built and there is no reason to believe they have become compatible in the 42+ years
since the school was built.

RESPONSE Y-18:

The comment refers to the Draft REIRs discussions of the factors affecting a person’s
typical response to noise. In this case, the factor relates to the regularity of the noise
and whether the noise is expected or not, and the circumstances creating the noise.

COMMENT Y-19:

7. Paragraph 8 says the substantial increase over the ambient is from cheering spectators and other
noise sources do not measurably affect hourly noise levels. Foot stomping by spectators is a
contributor to the increase in noise. Referee whistles, even though of short duration, could also
increase the hourly noise levels and they definitely cause annoying peaks in the noise with effects on
people that are not adequately acknowledged by use of hourly averages.

There has been no consideration of what sorts of noise future spectators may make. Sports fans
increasingly rely on objects such as thunder sticks to amplify the noise they make. Such objects are
available and there is nothing in the EIR that would preclude their use.

RESPONSE Y-19:

The text of the Draft REIRs has been revised to reflect that noisemakers (e.g.,
whistles, horns, thundersticks, vuvuzelas, etc.) will not be allowed at evening games
and practices, as part of the project. The revised text is included in Section 4 of this
Draft REIR.

COMMENT Y-20:

8. Paragraph nine contains misleading statements about the significance of the noise impact. Stating
that "a strict interpretation of the CEQA noise thresholds would conclude the Reduced Use and Light
levels alternative results in a significant noise impact" leaves the impression that this alternative
results in a significant noise impact only in a technical sense. Is there a loose interpretation of the CEQA noise thresholds that the District believes should be used?

The same noise thresholds applied when the uncirculated draft EIR concluded that the noise levels from the football games alone resulted in a significant impact and also that the noise from non-football activities would result in a significant noise impact, and there was no mention of those conclusions being based upon a strict interpretation of the CEQA. That draft was written by the consulting firm company hired by the District, and that consulting firm had a vested interest in providing their clients what they wanted. Even so, the consulting firm concluded the noise from the football games alone resulted in a significant impact and also that the noise from non-football activities would result in a significant noise impact. Only after the District applied pressure to them including a request to "push the envelope" did the consultants change their conclusions.

RESPONSE Y-20:

Under CEQA, lead agencies do not always apply thresholds of significance to infrequent events. For example, vehicular traffic around a shopping mall during the holidays may exceed a City’s level of service standard, but a City usually does not consider this a significant environmental impact or implement roadway improvements to mitigate the intersection impacts caused by the infrequent traffic. In this case, the District has chosen to conclude in the REIR that increased noise levels resulting from lit field activity, especially evening football games, results in a significant noise impact.

The consulting firms preparing the noise impact analyses and EIRs used their professional judgment and experience in the impact evaluations contained in the EIRs. They were not pressured by the District to change their conclusions.

COMMENT Y-21:

Inadequacy of information supplied or glossing over important relevant facts

(From Section 2.1.1)
9. Paragraph three of this section avoids or evades the issue of noise produced by bands using the field. It states "from late August to mid-November, two nights per week practice would last until 8:30 PM" without supplying very relevant information. The practices held at those late hours are band practices. Band use results in much louder noise than sport practices, as later stated in the same section. Many people in the neighborhood are just as concerned about night-time band practice as they are with football games because of the total number of practices that will occur.

The apparent purpose of this paragraph is to provide information on the hours of use for various activities. It seems like a major omission not to point out the fact that, other than football games, the activity that will use lights in the latest hours of the evening is band practice, the loudest non-football game activity and as loud as football games with what the District considers "typical" attendance.
10. Paragraph 8 contained the seemingly innocuous statement that "the largest increase (i.e., 15 dBA) in noise would result from possible future band practice. During practices and non-football games, worst-hour hourly average noise levels at the nearest residences are calculated to range between 50 and 69 dBA Leq" deserves far more emphasis.

This is the first time that it has been stated that band use is in fact what will cause the greatest increase in noise besides football games. It would seem very relevant to bring out the fact that band practices will occur at the latest hours of any non-football game use. It would also seem relevant to point out that the amplitude of the noise during band practice is the same amplitude as that of a "typical" football game. In addition, it would seem relevant to point out that evening band practices will take place about 26 times each fall. This means that the neighborhood will be significantly impacted by noise over 30 times each fall even if only band practices and football games are considered to have significant impacts.

This is a major new disclosure.

**RESPONSE Y-21:**

The Draft REIRs do not avoid or evade the issue of noise produced by band practice. Page 4 of the Draft REIRs describes the days and times band practice would occur, and REIR page 6 describes the maximum noise level increases projected to occur during evening band practice. The previously circulated EIRs also describes the band practice.

It should be noted, Monta Vista High School’s band does not currently participate in activities that would require regular evening practice. If, in the future, the band’s activities require evening practice, the band could practice up to two nights per week, at which time instrument playing will end at 8:00 PM, but lights will remain on until 8:30 PM while the band instruments and equipment are put away.

**COMMENT Y-22:**

Treating opinions and conjecture as facts

1. Paragraph nine of Section 2.1.1 states that increases in noise would be infrequent and of relatively short duration. Those statements are opinions and not facts. In addition, band practices will occur twice a week during the fall and the previous paragraph states that band practices will increase noise levels by 15 dBA, just as much as a typical football game. The residents will be subjected to two or three noise events per week that generate significant noise for hours at a time. And there would be over 30 high noise producing events from football games and band practices alone.

**RESPONSE Y-22:**

The approximately 30 high noise producing events per year that are noted in the comment, all but six of which last two hours, when compared to a permanent increase
in noise levels, are considered by the District to be infrequent and of relatively short duration.

COMMENT Y-23:

2. In Section 2.1.2 I question the accuracy of the claim that the objective of "allow[ing] students enrolled in classes that meet in the last period of the day to participate in after school athletics and activities without conflicts" is only partially met. The administration and board members have stated their goal is not to have students take classes in all seven class periods but to allow students to maximize course selection while taking six courses and to make scheduling easier. Monta Vista is a very large school with close to 2400 students and it has many sections of all the main courses and multiple sections of many other courses. More students and more course sections make scheduling easier. Of course as a large school Monta Vista offers a more variety of optional courses that smaller schools are unable to offer. Although not every student may be able to take every course he or she wants, Monta Vista students have a greater choice of classes than most schools. The school has accommodated athletes for many years by giving them priority in scheduling so they could avoid a 7th period class. It does not seem like a major problem to continue that policy even though some students might not get their first choice of an elective.

RESPONSE Y-23:

The Reduced Use and Light Levels alternative limits the maximum number of hours the sports light can be used, thereby reducing the hours afterschool activity can be held. In this regard, it does not meet the stated objective of the District to the same extent as the originally proposed project.

COMMENT Y-24:

3. Regarding the letter from the noise consultant: Very little new information is provided by the Noise consultant. However, he does bring to light one extremely important new piece of information that had previously been withheld. Band practices are the cause of the highest noise levels for non-football game events, and they will occur 26 times a year. These facts show the Reduced Use and light Level Alternative to be even more impactful than what might have been thought from the original EIR.

RESPONSE Y-24:

Information about the proposed day and time of band practice and the noise levels caused by band practice was not previously withheld. The Draft EIR (MVHS Draft EIR page 67 and LHS Draft EIR page 66) states, “Noise from practices and non-football games, including the infrequent use of the PA system, would substantially increase hourly average noise levels approximately five to 15 dBA above current conditions…” Additionally, the three sample noise measurements included in the noise impact analysis (which were the basis of the projected noise levels) included maximum and hourly average noise levels of the marching band.
COMMENT Y-25:

Although the noise consultant may be able to measure noise and estimate the intensity of noise at various locations, there is no reason to believe his opinion regarding what frequency or duration of noise is significant is of any worth. His biography on LinkedIn gives no indication of expertise in the impact of noise on people. He reports that his expertise includes performing field research, analyzing data, and noise modeling. Similarly his biography on the Illingworth & Rodkin, Inc. website also gives no indication such expertise. Yet the entire argument being made that the Reduced Use and Light Level Alternative does not have a significant noise impact is based upon his opinion.

What is more the court has already rejected the arguments that this alternative does not have a significant noise impact based upon essentially the same information regurgitated in his letter and within the DREIR.

RESPONSE Y-25:

The significance conclusion made by the noise consultant for the Reduced Use and Light Levels alternative is based upon the professional opinion of a senior acoustical consultant and Principal of Illingworth & Rodkin, a well-regarded acoustical engineering firm with 25 years experience preparing CEQA noise impact analyses.

COMMENT Y-26:

One might ask the consultant, or for that matter a member of the Fremont Union High School District Board of Trustees, if a neighborhood resident held 5 or 6 evening parties each fall that had the noise levels of the Monta Vista football games and also had a band practice in his garage 26 evenings each fall if he would consider that to be insignificant. Is noise of equivalent amplitude, duration, and frequency of occurrence produced by his client less significant than what would be considered unacceptable if produced by a resident of the neighborhood?

RESPONSE Y-26:

The Draft REIRs conclude that the noise levels generated by football games and non-football games and practices under the proposed sports lights would result in a significant unavoidable noise impact. The comment does not raise any questions regarding the adequacy of the REIR.

COMMENT Y-27:

Incorrect application of cost/benefit ratios and incorrect application of CEQA in evaluating mitigation measures
(From Section 2.2.1.4)

1. The conclusion that "this mitigation measure has no beneficial effect on the identified significant noise impact" is incorrect. Although this mitigation (sound insulating doors and windows) does not completely eliminate the impact, it does have a substantial beneficial effect on the interior noise
impact. Although the noise produced at the property line determines whether the noise impact is significant, noise reduction indoors provides a clear benefit.

The conclusion correctly states that "the measure provides no benefit to the outdoor use areas of the affected residences" and although those living near the football field would like to be able to enjoy themselves outside their homes during football games and band practices, many will prefer to remain indoors while those night time noise activities are taking place. As a result they will receive a very worthwhile benefit. It seems as though this conclusion was reached by considering only the ability of the mitigation measure to bring the noise levels below the threshold of significance and without considering the benefit to the people who will be exposed to the noise, especially compared to what will result if no mitigation is performed.

RESPONSE Y-27:

The Draft REIRs text evaluates the identified measures ability to avoid or reduce the significant noise impact, in this case exterior noise level exceeding the City’s exterior noise level limits. The comment states the opinion of the commenter regarding the mitigation measure of providing sound insulating windows and doors to the most affected residents. The comment does not relate to cost/benefit ratios.

COMMENT Y-28:

2. The District should consider providing sound insulating doors and windows to more residents than those identified.

RESPONSE Y-28:

The Draft REIRs (page 14) provide an explanation for determining the residences identified for the mitigation measure. The opinion of the commenter is noted and will be considered in the District’s deliberation of the project.

COMMENT Y-29:

3. To further improve the benefits of installing sound insulating doors and windows for those residents most impacted, the District should also consider installing central air conditioning for those residents. That would at least partially provide mitigation when homeowners would like to open their windows in the evening to provide cooling.

RESPONSE Y-29:

The opinion of the commenter is noted and will be considered in the District’s deliberation of the project.
COMMENT Y-30:

4. The conclusion that "the cost to install sound-rated windows and doors would be substantial, for the benefit provided" is very subjective and not justified. The estimated cost is only $207,000 as compared with the projected $14.25 million cost of the entire Monta Vista project. (Reference: FUHSD 2010 Program Improvement Plan) And as stated in the previously circulated EIR the source of funding is a $198 million bond measure. This comment is not meant to imply that no consideration should be given to cost, only that in this case the cost seems to be very low and the benefit is really very high if the Reduced Use and light Level alternative is actually used. If cost is that much of a concern, lights could be eliminated from the project and the savings would be far more than the cost of this mitigation.

5. The cost to benefit ratio is relevant if applied to the entire project; however, the District has never considered how the cost of the project could have been reduced with minimal or no reduction in the benefits provided by the project. And it has never considered how much benefit is generated for the cost in terms of both money, impact on the neighborhood, and lost trust and goodwill.

RESPONSE Y-30:

The opinion of the commenter is noted and will be considered in the District’s deliberation of the project.

COMMENT Y-31:

6. While it is correct that "the District has no control over implementing the measure without permission from the homeowner," this does not seem to be a major impediment to making this mitigation available to those who want it. Of course if the District is able to eliminate the significant impact of the noise, e.g., by using a different alternative then there would be no need for the mitigation or to request permission of the homeowners.

RESPONSE Y-31:

The opinion of the commenter is noted and will be considered in the District’s deliberation of the project. A survey letter was sent to the homeowners and occupants of the homes adjacent to the Lynbrook High School athletic fields that would be most affected by the noise barriers along the property line and/or behind the bleachers. The survey letter asked for their opinion whether the noise barriers would be acceptable. A total of 25 survey letters were sent out to the Lynbrook High School neighbors. Ten responses were received. Nine of the responses stated that the noise barriers would not be acceptable. One response did not clearly state whether the noise barriers were acceptable or unacceptable. Many of the responses gave reasons why the noise barriers would not be acceptable, which mostly included blocked views and a feeling of confinement. The Draft REIRs evaluate the visual impact of both the property line and bleacher noise barriers. The survey letter and responses to the
survey letter are included as Appendix B to this Amendment to the Draft REIR.

COMMENT Y-32:

(From Section 2.2.1.5)
7. I question the accuracy of the statement "based on this input from the public, the bleacher heights and the elevation of the field and track were lowered during design of the original project." At the meeting at Monta Vista at the start of the EIR process the public was told the football field would be lowered by three feet from its then current elevation and District spokespersons suggested four feet might be possible until the designer choked and said the field was really only being lowered by 2½ feet. By the time the EIR was written the lowering was only 1½ feet. This is another example of the District taking credit for making a positive change when in fact the change from the project as initially presented was actually detrimental.

RESPONSE Y-32:

The Monta Vista track and field layout first considered was at grade. Efforts were made to reduce the elevation of the track and field during the design process. The existing athletic fields are tiered. The lower tier contains the baseball and softball fields and the upper tier contains the football field and track. The elevation of the football field and track would be lowered under the proposed project approximately 1.5 feet on average and the elevation of the baseball and softball fields would be raised approximately 2.5 feet on average.

COMMENT Y-33:

8. This claim is inaccurate: "Unlike Gunn High School, there is no existing hillside between residences and the field and track at Monta Vista High School or adequate space to construct a hill," In fact the area to the west side of the track is lower than the adjacent residences because it was at least partially cut out of a hillside. There is a retaining wall extending four foot above the school grounds (prior to construction) because the hill was cut away to make the ground on the school side of the retaining wall level with the track. With the use of a Gunn-like design much of the dirt would be returned to the hillside and the retaining wall would not be required. The Gunn design may be more difficult on the east side of the football field, but even there with additional spreading out of the seating and reduction in the capacity of the stadium a modified Gunn type design could work. (Despite what the District may claim, the current design has little in common with the Gunn design.)

Perhaps the District completely misunderstood the suggestion to make the stadium more like the Gunn High School stadium. Statements in the DREIR seem to indicate that the District believed the local residents wanted the field lowered so it would be more like Gunn. In fact the suggestion to lower the field was completely separate from the suggestion to make the design more like Gunn. The Gunn design was considered more desirable than the Monta Vista design because the bleachers were supported by soil/dirt instead of being free standing. Seating supported by soil is preferable from a sound standpoint because foot stomping will not cause as much noise. There should be plenty
of available dirt to be able to provide the support for the seating at least on the west side of the field. Instead, even more of the existing hillside soil has actually been removed. A huge mound of dirt was on the site and it could have been used. However, the District paid to have the dirt hauled away. This was done even though I informed the District that dirt that could be used for support of the seats was being hauled away. In addition the Gunn design is superior for reasons extending beyond noise. The Gunn design has a lower profile because it spreads out the seating more than the Monta Vista design, and it does not have a press box elevated as in the Monta Vista design thus making it more compatible with the neighborhood.

The Gunn design should be considered as a separate mitigation measure from lowering the field. The Gunn design can provide noise mitigation and also provide benefits of a less intrusive design within the neighborhood.

**RESPONSE Y-33:**

In response to the comment, the noise consultant evaluated the potential noise attenuation gained by constructing the bleachers over an earthen berm. Constructing the bleachers on a berm would change the character of the sound made by stomping feet, as the stomping would occur on concrete (The Gunn High School bleachers are set on concrete over the berm) rather than metal, but would not substantially affect overall measured noise levels. The stomping of feet on bleachers is a source of noise that is intermittently observed at sporting events. When this particular source of noise is observed, the duration of the event is brief, and the noise levels generated during the event is well below maximum noise levels from the predominant noise sources that contribute to hourly average noise levels (i.e., cheering). The brief periods of foot stomping do not substantially affect the hourly average noise level. The brief periods of foot stomping do not substantially affect the hourly average noise level and do not result in the maximum instantaneous noise level. Constructing the bleachers on a berm would not reduce the noise impact to a less than significant level. Unless the berm is six feet above the uppermost bench, the noise attenuation provided by the berm would be less than the attenuation provided by the mitigation identified in the REIR (i.e., constructing a soundwall behind the bleachers that extends six feet above the top row of the bleachers).

The home bleachers and press box would be on the east side of the field, so they would not be adjacent or visually intrusive to the homes in the neighborhood.

**COMMENT Y-34:**

Use of nebulous and overly narrow objectives to avoid alternatives

1. The District's stated objective of increasing student school spirit and pride through being able to hold more Monta Vista events on their home campus is both overly narrow and extremely nebulous. It is overly narrow because it overly restricts alternatives. School spirit and pride are nebulous concepts. What characteristics does the administration want students to exhibit and what do they find
lacking? Is there something wrong with students who don't exhibit the characteristics that the school administration venerates, and will having a lighted football stadium on campus transform these students into the prototypical form they prefer?

The administration seems to be begging the question by assuming holding night football games on campus will increase school spirit and pride in students that don't exhibit the requisite level. Won't the students who already show the type of spirit and pride that the administration wants to instill be the ones who benefit from night games rather than those they find lacking?

It is a failure of the first order by the District administration if they look to night football games as the best or only method to engage students. In addition, pride is not always an admirable quality. What sort of pride do students acquire by knowing that their school has a lighted football field? Have they accomplished something of which to be proud? Apparently the District believes merely knowing Monta Vista has a lighted field will make them spirited and proud, since they don't expect many to actually attend most games. They have estimated that typical games will have an attendance of 700. Of those easily 200 could be from the opposition and likely another 100 parents, teachers, and other adults will attend. That leaves an estimate of only 400 students, including cheerleaders and pep band members, attending the games, only 1/6 of the student body. Either they don't expect many students to attain spirit and pride through football game attendance, or the estimates of attendance were low balled to lower the reported noise impact. The one game per year when attendance is expected to be high is Homecoming where the District expects about 2300 to attend. If that is accurate, there may well be 4 or 5 times as many students that attend homecoming as attend a typical game. It would seem that Homecoming is the only game of much benefit at all in creating school spirit.

**RESPONSE Y-34:**

The previously circulated EIRs sufficiently described and supported the District’s stated project objectives and evaluated a range of project alternatives. No further justification for the District’s objectives is required in response to the court order, as it concluded that a sufficient range of alternatives had already been addressed. As stated in the Court order (pages 10-11) dated November 30, 2011,

“Here both EIRs adequately discussed ‘a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project…’ The location and basic layouts of both projects cannot be significantly changed simply because of their nature – to improve/renovate the track and field facilities at specific existing high school campuses. The EIRs address an adequate number of alternatives, and explain that the alternatives that would most lessen the environmental impacts – such as the No Sports Lights alternatives – fail to attain the basic objectives of the projects, extending the school day and allowing both schools to host athletic practices and games that take place after school hours and therefore are often in darkness during the fall and winter.”
Z. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DAVE RADTKE
DATED MARCH 2, 2012

COMMENT Z-1:

This is letter is an addendum to the comments I submitted by email at 12:20 PM today, March 2, 2012.

The Draft Recirculated Environmental Impact Report (DREIR) should have addressed additional alternatives because of the highly relevant new information disclosed in the DREIR and also new information that is not disclosed in the DREIR.

RESPONSE Z-1:

The previously circulated EIRs evaluated a sufficient range of alternatives, as stated in the Court Order, (pages 10-11) dated November 30, 2011,

“Here both EIRs adequately discussed ‘a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project…’ The location and basic layouts of both projects cannot be significantly changed simply because of their nature – to improve/renovate the track and field facilities at specific existing high school campuses. The EIRs address an adequate number of alternatives, and explain that the alternatives that would most lessen the environmental impacts – such as the No Sports Lights alternatives – fail to attain the basic objectives of the projects, extending the school day and allowing both schools to host athletic practices and games that take place after school hours and therefore are often in darkness during the fall and winter.”

COMMENT Z-2:

The previously circulated EIR reported that “noise from practices and non-football games, Including the infrequent use of the PA system for games, would substantially increase hourly average noise levels approximately five to 15 dBA above current conditions between the hours of 5:00 PM and 9:00 PM.” However, it never disclosed at what hours the highest noise levels would occur or what would cause the highest noise levels. The DREIR reveals for the first time that band practices are the source of the highest increases in noise above ambient conditions of any of the non-football game events, and band practices are the latest of all field uses. Furthermore the noise produced by the band is the same noise levels produced from typical football games, and there will be 26 band practice each fall. These are a major new disclosures.

RESPONSE Z-2:

The information about the band practice noise is not a new disclosure. The previously circulated EIRs describe the days and times band practice would be held
and the noise levels that could be generated during band and sport practice. The Environmental Noise Assessment included in the circulated Draft EIRs included the hourly average and maximum noise levels generated by marching bands that were measured at three high schools; this information was used to project the band practice noise levels. It is unknown and speculative to project at what exact hours the highest noise levels would occur, or what would cause the highest noise levels, since it would likely depend upon the songs being played by the band and the specific circumstances of a given practice.

It should be noted, Monta Vista High School’s band does not currently participate in activities that would require regular evening practice. If, in the future, the band’s activities require evening practice, the band could practice up to two nights per week, at which time instrument playing will end at 8:00 PM, but lights will remain on until 8:30 PM while the band instruments and equipment are put away.

COMMENT Z-3:

In addition, the DREIR never reveals that Monta Vista High School played all of its night football games at Fremont High School last season and played no football games at Cupertino High School. In doing so the District demonstrated that it can meet one of the objectives of Sports Light, that of reducing the burden on Cupertino High School fields, with all alternative designs including the No Project alternative.

RESPONSE Z-3:

It is acknowledged that last year Monta Vista played its home games at Fremont High School instead of Cupertino High School. Whether at Cupertino or Fremont, the “home” games were not played on the Monta Vista campus and resulted in wear and tear on a District high school campus other than Monta Vista. Similarly, whether at Cupertino or Fremont, Monta Vista was not able to hold the night football games at their home campus.

COMMENT Z-4:

As a result of the new information alternatives should be considered that reduce band noise and include the use of Fremont High School fields, and Homestead High School fields if permitted, for Monta Vista High School home night games.

A highly attractive alternative could be a combination of the No Sports Lights alternative and the Practice Lights and Homecoming alternative. Installing no permanent lights and using portable lights for the Homecoming game would eliminate night band practices and the Homecoming game could be played on the Monta Vista campus at night. The remaining four games might be split between two games at Fremont or Homestead High Schools and two day games on the Monta Vista field. Monta Vista has historically played one day game, so this plan would increase that by one game which seems like a minor change. This plan would have three new events on the Monta Vista campus, and
that would seem to attain most of the objective “increase(ing) student school spirit and pride through being able to hold more Monta Vista events on their home campus.” There are numerous possibilities with the number of night games and number of day games and the use of various fields that the District might consider even if every one of those alternatives is not explicitly examined in the DREIR. However, enough alternatives that don’t have significant noise impacts need to be evaluated. Currently except for the No Sports Light Alternative and the No Project Alternative there are no Alternatives that have properly been shown not to have a significant noise impact, although if they were examined some of them might meet that standard.

Concerning a possible Central Coast Section (CCS) playoff game, some playoff games are played on Saturday afternoons now so a day game at Monta Vista is possible; and an occasional night playoff game could be a topic of negotiations. Of course the Monta Vista field should be used for playoff games only if Monta Vista is actually playing in the game.

The Practice Lights Alternative and the Practice Lights and Homecoming Alternative are less attractive options for two reasons. First those options don’t preclude band practices although they would not run as late as other alternatives, and perhaps there may have been no intention of having band practices with those alternatives even though the description would not preclude them. Second, it would be too easy for the District to incrementally increase the times the light would be used. Third, even though the District refers to the lights that they would use as practice lights, those lights could easily become game lights very possibly without even increasing the number or illuminating power of the lights.

**RESPONSE Z-4:**

The project alternative described in the above comment is hereby included in the environmental record and will be considered by the District in their deliberations on the project. The previously circulated EIRs evaluate alternatives of using portable lights and limiting games to the Homecoming game. There are an infinite number of combinations and permutations of alternatives to the project. The previously circulated EIRs evaluated a sufficient range of alternatives, as stated in the Court Order, (pages 10-11) dated November 30, 2011,

“Here both EIRs adequately discussed ‘a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project…’ The location and basic layouts of both projects cannot be significantly changed simply because of their nature – to improve/renovate the track and field facilities at specific existing high school campuses. The EIRs address an adequate number of alternatives, and explain that the alternatives that would most lessen the environmental impacts – such as the No Sports Lights alternatives – fail to attain the basic objectives of the projects, extending the school day and allowing both schools to host athletic practices and games that take place after school hours and therefore are often in darkness during the fall and winter.”
COMMENT Z-5:

With the planned noise increases that are allowed under these plans, and even more so for the Reduced Use and Light Level Alternative, the District will establish a new “existing” ambient noise level that future increases in noise production will be measured against, if the District would even go to the trouble of doing another EIR to change the usage. Only by agreeing that any additional noise producing use of the fields will use the ambient conditions prior to the start of the initial EIRs as the baseline for a new EIR could that be prevented, if it is possible to prevent at all.

RESPONSE Z-5:

As projects are approved and development occurs, the existing conditions at a given location change, including the ambient noise level. The proposal described in the comment will be considered by the District in their deliberations on the project.

COMMENT Z-6:

The need for practice lights at all is highly questionable and the district has been presented with information that it has thus far ignored showing the very limited benefit of extending sports Practices. The planned use of lights for band practice would be the only extended usage of practice lights if the lights were used only when they were really needed as opposed to the turn on times planned. From the new information provided in the DREIR, it would seem that the 26 scheduled band practices would be a significant noise impact that should not be allowed. As a result the installation of practice lights is not warranted.

RESPONSE Z-6:

The District’s objectives for the project, including the objective of holding evening band and sports practices, is documented in the EIRs.

COMMENT Z-7:

In addition, it is questionable if the District is using the correct lighting standards for practice use or if there are any real standards at all as opposed to recommendations. Most of the recommended levels are set with the view of the spectator in mind and have little or nothing to do with safety. The reason being that much more light is required for spectators to easily see the action than is needed for safety. As a result the recommendation for illumination increases as the size of the stadium increases; however, crowd size or stadium size have no impact on the light needed for players to see. The next consideration is the capability of the players to be able to compete well and again more light is needed for that than for safety. Only sports like baseball where it is possible to be hit be a hard ball it not seen does safety become a factor.

The Illuminating Engineering Society of North America’s IESNA Lighting Handbook calls for 200 Lx or 20 Fc for Class IV use vs. the 30 Fc of the District’s practice lights, and it is questionable if practices require even that level of light. That same Handbook also lists 20 Fc for illumination in
baseball outfields where there is a greater chance of losing the ball than in football because of the size of the ball and the height at which the balls reach, and getting hit be a baseball is more dangerous than getting hit be a football even if the football player was not wearing a helmet and padding.


RESPONSE Z-7:

The light levels proposed by the project were recommended by a consulting lighting engineer, for the location of the field and light standards, and the activities proposed by the District to occur on the field. It is acknowledged that lower light levels are acceptable for practices, when there are few spectators, and at the end of practices, when equipment is being put away. The Reduced Use and Light Levels alternatives includes the use of lower light levels during the last 30 minutes of sport and band practice for this reason. The opinions stated in the comment are hereby included in the record and will be considered by the District in their deliberations of the project.

COMMENT Z-8:

The previously circulated EIR makes claims regarding the need for diesel generators to run portable lights and the neighbors could be more concerned with that noise. Those are just excuses and not reasons to eliminate portable lights. First it is certainly possible to provide power to portable lights through the regular grid especially if the district puts in the necessary outlets or wiring for that to occur as the project is built. Second, all the resident I know would much prefer a single game each year with a higher noise level than to have 5 or 6 games and 26 band practices.

Also the District claims that it has the interests of the neighboring residents in mind by using 80 foot high light structures; however, most neighbors would much prefer much shorter structures if the lights were not used for games and preferably also not for band practices and they were truly of only the illumination level actually necessary. When LMU was in discussions with the District, LMU pointed to this as a possible area of agreement, and members of LMU volunteered to help the District ask the neighbors what they would prefer; however, as yet the District has ignored the offers.

Finally, neighboring residents of both schools are more than willing to help design alternatives. That would avoid all the erroneous assumptions the District has made concerning what the neighbors would prefer.

RESPONSE Z-8:

The opinions stated in the comment are hereby included in the record and will be considered by the District in their deliberations of the project.
COMMENT Z-9:

Again some of these comments apply more to Monta Vista than Lynbrook but most are easily transferable. The fact that Monta Vista does not play football at Cupertino High School (CHS) lessens the need for Lynbrook to reduce its use of CHS. The concepts of one night Homecoming game with portable lights and No Sports Lights installed works for Lynbrook, and with the alternative defined above Lynbrook’s use of CHS would drop to two games.

RESPONSE Z-9:

Please refer to previous response to Comment Y-4 regarding the evaluation of additional alternatives to the project. The opinions stated in the comment are hereby included in the record and will be considered by the District in their deliberations of the project.

AA. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DOROTHY RHEUARK DATED FEBRUARY 28, 2012

COMMENT AA-1:

STADIUM NOISE
I have lived on Johnson Ave for over 50 years and I can hear the loud speakers from Cupertino High the nights of football games and other times. I have double pane windows installed and I hear the loudspeakers over my TV. I have called the District Office in the past and complained about the sound. If you are in my living room and you hear it, then it is too loud for the whole neighborhood. Other neighbors on my street hear it also. Those who still have single pane windows hear the sound and rattle of them. This noise is unacceptable to our quiet neighborhood and cannot imagine what it will sound like in the houses whose yards back up to the playing field of Lynbrook High School and the rest of our neighborhood. Reminder: Lynbrook is in a QUIET RESIDENTIAL neighborhood which does not have business, open space, or freeways next to it. Put yourself in one of these houses and decide just how much these neighbors need to hear.

RESPONSE AA-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

COMMENT AA-2:

STADIUM LIGHTS
Our first neighborhood association members and neighbors were told when Lynbrook was built that there would never be a big stadium with lights. We were told all games would be at Cupertino High as they had the large field. This is not “hearsay” as some have been lead to believe. I have lived in
my same house for 52 years and there are other neighbors still alive who can testify to this information.

**RESPONSE AA-2:**

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

**COMMENT AA-3:**

Lynbrook High School was not built yet when the houses were built on other side of the chain link fence, which divides Lynbrook parking lot/field. Those houses were built before 1956. (These are the houses that will have the stadium lights shining in their backyards, and the noise.) \textit{LET ME REPEAT:} Lynbrook is in the middle of a QUIET RESIDENTIAL neighborhood which does not have business, open space, or freeways next to it.

Thank You for the opportunity to respond to this issue.

**RESPONSE AA-3:**

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

**BB. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM KIM SILVERMAN DATED MARCH 2, 2012**

**COMMENT BB-1:**

I am a parent of a student who attends Lynbrook High School. I am in favor for moving the project along. Lynbrook should be able to set up lights and a stadium for their school and be able to use it when needed. It is ridiculous to see the school has been required to pay for all of this legal back and forth. If you are not aware, California is in an education budget crisis. The school should not be wasting its money and time on something like this. Requiring the school to pay for full noise barriers seems to be going too far, especially when the use of the stadium over one year’s time is minimal.

You are forgetting the benefit to our children that this facility would provide. The neighbors who purchased homes around a school were well aware of the noise impact it would bring. The only real change seems to be the lights, and the school has more than compensated for minimizing the lights by changing their physical plans around. So I am in favor of allowing Lynbrook High School to build their fields & facilities without the requirement of a noise barrier and without the requirement to limit the use of such a facility. They should be able to put up lights for their new stadium. The students will be very proud of their school and will benefit a great deal.
RESPONSE BB-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

CC. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CHRISTINE SIRECI DATED MARCH 2, 2012

COMMENT CC-1:

I approve of the field upgrades to Lynbrook’s fields. Every high school should have a lighted football field. It is unfair to the Cupertino High neighbors to have all of our activities at their field. It is time to share the burden.

RESPONSE CC-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

DD. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM THOMAS SOUKUP DATED MARCH 2, 2012

COMMENT DD-1:

I am a parent of a Lynbrook High School Junior and am also the current president of the Lynbrook Instrumental Music Boosters organizations. I am asking that you accept this environmental impact report and move forward with the plans for the Sports Fields Improvements and Lighting. I feel that this EIR has adequately examined all of the noise mitigation possibilities, from the practical (minimizing use and constructing the sound system to direct sound away from the homes) to the absurd (a domed stadium!).

As the parent of two Lynbrook students who have participated in the marching band, I can attest to the positive impact this activity has had on my own children and through my participation with the booster organization I can see the dedication and hard work that all of the students bring to this activity. I believe that having a true home field where they can practice and perform for their school and community will help to reinforce the positive impacts of marching band participation.

As a homeowner in the FUHSD, I know that our property values are tied in a major way to the high quality of the schools in our district. I believe that each of our schools should have the same, modern facilities. This includes the sports facilities. I can't help but believe that, if Lynbrook does not provide the same facilities as the other FUHSD schools, or as schools in our neighboring districts...
such as Saratoga, the Lynbrook neighborhood could become a less desirable area for families to move into.

Again, I ask that you accept this EIR and move forward with all of the field improvements.

RESPONSE DD-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

EE. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM SIEW-MING TANG DATED MARCH 2, 2012

COMMENT EE-1:

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

RESPONSE EE-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

FF. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ALEX TANNER DATED MARCH 2, 2012

COMMENT FF-1:

As a former Lynbrook student and marching band member, I support the upgrade of the Lynbrook fields.

RESPONSE FF-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
GG. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM BRIAN TANNER
DATED MARCH 2, 2012

COMMENT GG-1:

As the parent of a Lynbrook student, I support the upgrade of the athletic fields.

RESPONSE GG-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

HH. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM MARY TANNER
DATED MARCH 2, 2012

COMMENT HH-1:

As a parent of a student in the Lynbrook marching band, I wholehearted support the upgrade of the athletic fields including the addition of lights on the football field. I'd like the marching band to be able to perform during halftime shows on the Lynbrook campus rather than having to travel to Cupertino High.

As a community member, I believe that we should be supporting wholesome activities for high school students such as football games and marching band practices. The fields will be a real asset for the entire community.

RESPONSE HH-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

II. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CELIA TSENG
DATED MARCH 2, 2012

COMMENT II-1:

As a parent of a Lynbrook student, I support the upgrade of the athletic fields. I believe that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.
RESPONSE II-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

JJ. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM PHILIP TURNER DATED FEBRUARY 29, 2012

COMMENT JJ-1:

After looking at your review the Draft REIR, I have several comments.

I have installed many concert and smaller Sound Reinforcement Systems (PA), and think you have missed some things in the Sound System design, that could help you reduce sound levels the neighbors will hear from the sound system.

There are several ways to design a PA system, depending on your needs, and the design will directly affect how sound how much sound the neighbors will hear.

The most common way to create a PA is to use several speakers, high up on a pole outputting very high sound levels. Since sound is not completely directional there will always be sound overflowing the seating area, at a high level.

The alternative is called Distributed System, where there are many smaller speakers, located closer to the spectators, and operated at a much lower level. Any sound from these speakers, since it originated at a lower level will reach the neighbors at a lower level. In addition since the speakers are closer to the audience, the can be directed more to them, and have less sound overflowing to the neighbors.

RESPONSE JJ-1:

This document, together with the July 2010 Draft Environmental Impact Report (Draft EIR), December 2010 Amendment to the Draft EIR, and January 2012 Draft Recirculated Environmental Impact Report (Draft REIR) for the Lynbrook High School Sports Fields Improvements and Lighting, constitutes the Final Environmental Impact Report (Final EIR) for the proposed project. As described on page 67 of the Draft EIR, the PA system proposed by the project is a distributed speaker system.

COMMENT JJ-2:

The second point is that if you limit the frequency response to just human voice requirements, this will also limit annoying sound to the neighbors. The main thing here is to reduce the Bass
frequencies, which are the least directional, and travel several times farther and with much more energy. To do this you will need to limit the Bass frequencies to over the 150 Hz - 200 Hz range.

RESPONSE JJ-2:

Limiting the bass frequencies to over the 150 Hz - 200 Hz range may slightly distort the sound quality of announcements or music played through the PA. The project includes the following measures to reduce the PA system’s contribution to the significant unavoidable noise impact during evening football games under the Reduced Use and Light Levels alternative:

- Control noise generated by PA system to be as low as feasible and in no case exceeding 60 dBA L_{max} at the residences in the project area, measured at the school’s property line. This can be accomplished by increasing the number of speakers such that each speaker would output to a smaller area, orienting the speakers away from residential receivers, and using noise barriers or baffles to shield the speakers from adjacent receivers. The following measures will be implemented by the District to ensure this measure is implemented correctly:
  - District will retain a qualified audio specialist to assist in the selection of a speaker system and its placement in proximity to the bleachers.
  - The audio specialist will adjust the volume at the time of installation so that it is as low as feasible and in no case exceeds 60 dBA L_{max} measured at the school’s property line.
  - Sound limiters will be installed, which will limit the sound from the PA system to 60 dBA L_{max} measured at the school’s property line.
  - The PA system volume settings will be protected to prevent unauthorized changes.

COMMENT JJ-3:

The third thing that can be done is to try to aim any speakers, so that they do not aim at any of the neighbors. Hard to do but a very simple and easy way to reduce the sound the neighbors will hear from the PA.

I hope these suggestions help. If you have any questions, feel free to contact me.

RESPONSE JJ-3:

As stated in Response JJ-2, the measure suggested in the comment is included in the proposed project. The comment is noted and will be considered by the Board during their deliberations on the project.
KK. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM WARREN UESATO
DATED MARCH 2, 2012

COMMENT KK-1:

As a parent of a Lynbrook junior, I fully endorse the efforts to improve the Lynbrook sports field to benefit the school’s excellent music program. Although our son is no longer involved in the school marching band (he is a member of the wind ensemble there), he did participate in the marching band as a freshman. We were grateful that we had use of Cupertino HS’s field to have marching band practice, but it would have been so much better at our own school. Future generations of marching band deserve better.

Thank you very much for supporting Lynbrook High School's efforts to help its excellent music program.

RESPONSE KK-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

LL. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM AUBREY WANG
DATED MARCH 2, 2012

COMMENT LL-1:

I would like to make a comment about lights for Lynbrook fields and the environment. It would be BETTER for the environment for Lynbrook students to practice sports and/or rehearse band music on Lynbrook fields rather than having to drive/be driven by parents to another school with lights since there is less automobile pollution when many students can walk or bike to Lynbrook because they live closer. Unless the school decides to remove programs that require evening practices, installing lights is the right thing to do.

RESPONSE LL-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
MM. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ERIC WANG
DATED MARCH 2, 2012

COMMENT MM-1:

As a parent of a Lynbrook student, I fully support the new Athletic field in Lynbrook high school. The students participated in marching bands and athletic teams deserve to have the state-of-the-art field. My child can benefit tremendously from the new facilities, especially the marching band practice during the cold fall and winter seasons. The field will benefit hundreds of students at Lynbrook every year for the years to come.

RESPONSE MM-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

NN. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DEBBIE WARD
DATED MARCH 2, 2012

COMMENT NN-1:

I would like to express my full support for the proposed improvements to the Lynbrook Track and Fields including the Lights. I attended the meetings where the EIR was presented and thought that the Board made an excellent decision and had made many significant changes and concessions to lessen the impact on the surrounding neighbors. The lights will make a huge bonus to the school as it will provide many opportunities for the students to play and perform at the own school, and although I understand there may be some extra noise involved, it will be JOYFUL noise - Lynbrook is a great school and deserves the chance to CELEBRATE at home. I sincerely hope that no further objections will be made to this project and that Lynbrook's Homecoming Game 2012 will take place on Lynbrook's field.

RESPONSE NN-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
OO. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM NICHOLAS WARD  
DATED MARCH 2, 2012

COMMENT OO-1:

I’m extremely pleased to see that considerable thought has gone into the impact of the proposed lighting and field use at LHS.

It is very encouraging that FUHSD are so committed to a vital aspect of youth development; sports activities are critical to youth development throughout the school year. At the same time it is necessary to support the full academic program necessary to prepare youth for the challenges that they will be facing in the very competitive world of today. As a consequence of this potentially heavy time load, access to sport facilities that can function in the evening, throughout the year, is essential.

Access to a full and effective sport and academic environment adds to our community in several ways: in terms of engaged families; an improved educational outcome for youth and finally in maintaining the high reputation/standing that our community has in the education field in this country – something that we can all be proud of and benefit from.

RESPONSE OO-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

PP. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM DEBORAH WEI  
DATED MARCH 2, 2012

COMMENT PP-1:

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

I am happy that we don’t have to attend Lynbrook “HOME” game in Cupertino High anymore....

RESPONSE PP-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
QQ. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ANTHONY WEI
DATED MARCH 2, 2012

COMMENT QQ-1:

We fully believe this new lighting facility is needed and will be beneficial to the students and the community in the years to come. The impact to the surrounding neighborhood should be minimal if enough coordination is done prior to each year’s event planning and are communicated to the neighbors. It will increase the community pride if the likes of football game and marching band events can be held on site at Lynbrook (instead of off-site to other school).

We support this project wholeheartedly and urge all participants to this project to move forward expeditiously.

RESPONSE QQ-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

RR. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CALVIN WEN
DATED MARCH 2, 2012

COMMENT RR-1:

My home is right next to the Lynbrook property line. It was quite a distance to the old track, I enjoyed the view very much. But the new track moves to almost the boundary, make me feel so offensive. The new layout feels like all the fields got squeezed in, I don't think you can say it is a good design if there is no margins at the boundary.

RESPONSE RR-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

COMMENT RR-2:

Back to the REIR, I still disagree with this "lighted" stadium project. Lynbrook High is a great school, that's why I choose this school for my kids. But this school is famous at academic, not football. I don't think home football games can make this school any better, on the other hand, the evening games will impact all neighbors on quietness, brightness, and traffic. The noise level will exceed what the law allows, and not much you can do according to this REIR.
RESPONSE RR-2:

The visual and traffic impacts of the proposed project are fully evaluated in the Draft EIR and the Amendment to the Draft that were previously circulated for the proposed project. Please refer to Response S-2.

The Reduced Use and Light Levels alternative would reduce the significant unavoidable noise impact that would occur under the original project evaluated in the Draft EIR, but not to a less than significant level. As stated in the Draft REIR, the Public Address System Controls mitigation measure is proposed by the District as part of the Reduced Use and Light Levels alternative (refer to Response JJ-2). In addition to this measure identified in the Draft REIR, the following measures have been added:

- noisemakers (e.g., whistles, horns, thundersticks, vuvuzelas, etc.) will not be allowed at evening games and practices.
- the proposed PA systems will not be used for field practices.

Please refer to Section 4 Revisions to the Text of the Draft REIR.

COMMENT RR-3:

Lynbrook High lays in a quiet residential area. I can stand the construction noise for a new, modern track, which is much needed by students. But in order to obey the law, and minimize the noise impact to neighbors, the football games have to be held on day time. I don't see why football games have to be held on evening time, are you too rich to pay the energy bill, but laying off teachers on the other hand? I hope the school district can show students how to respect others by being a good neighbor to the surrounding residents.

RESPONSE RR-3:

The alternative described in this comment is a variation of the Practice Lights Only and the No Lights alternatives, both of which were evaluated in the Amendment to the Draft EIR. Playing football games during the daylight hours would not meet the project objective of holding evening football games on the Lynbrook High School home campus. Please refer to Response A-2. The comment is noted and will be considered by the Board during their deliberation on the project.
SS. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM CINDY WEN DATED MARCH 2, 2012

COMMENT SS-1:

I am in favor of the revised Draft REIR. The LHS community needs to move forward on this project to provide a new venue for our students. We have been fortunate to have Cupertino HS fields available to our community but it is time for LHS to take responsibility for our own events. Cupertino HS has not only provided for us, but the surrounding neighbors have sacrificed for many years. It is time that the LHS neighbors, who chose to live near a high school, realize the benefits they have reaped must also be matched with the sacrifices that others have made for them....for too long.

The District has complied with all the rules, laws and open dialogue with the community. I hope the community will work collaboratively with the accommodations made to move this project forward to completion.

RESPONSE SS-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

TT. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM SCOTT WENDLER DATED MARCH 2, 2012

COMMENT TT-1:

As a Lynbrook parent and neighbor, I am very much in favor of the improvements to the Athletic fields, including the addition of field lighting. I have reviewed the numerous iterations of the Environmental Impact Report and I feel the School District and Lynbrook have taken great strides to mitigate the impact of the lights and noise to the neighboring homes. The previous lighting schedule reduced the noise and lighting levels to a less than significant level, and the new proposed schedule reduces the level even more. Please do not delay this project any more than it already has, these new fields will provide a much safer alternative for my children and the future student athletes of Lynbrook High School.

RESPONSE TT-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
UU. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM TERESA YANG DATED MARCH 2, 2012

COMMENT UU-1:

As a parent of a Lynbrook student, I wholeheartedly support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance my kids' school experience and bring the community together.

RESPONSE UU-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.

VV. RESPONSES TO COMMENTS ON THE DRAFT REIR FROM ART AND SUSAN ZIMMERMANN DATED MARCH 2, 2012

COMMENT VV-1:

I have lived in the Lynbrook Neighborhood for over 50 years. Both my wife and I attended Lynbrook as well as our 3 daughters. Our family is very much in favor of the improvements to the athletic fields, especially the addition of field lighting. I cannot stress the importance to students in have games played on their own campus and allowing parents to attend and watch. With the new lights there is very little light pollution. Combine this with the propose schedule there will be very little impact on the neighbors. Please do not delay these badly needed improvements.

RESPONSE VV-1:

The comment is noted. While the comment does not raise any specific issues regarding the analysis in the Draft REIR, it will be considered by the Board during their deliberation on the project. No further response is necessary in this REIR.
SECTION 4  REVISIONS TO THE TEXT OF THE DRAFT REIR

The following section contains revisions to the text of the Draft Recirculated Environmental Impact Report, Lynbrook High School Sports Fields Improvements and Lighting, dated January 2012. Text additions are underlined and text deletions are struck out.

Page 18  Section 3 Conclusion, add the following text:

The Public Address System Controls mitigation measure is proposed by the District as part of the Reduced Use and Light Levels alternative. In addition, noisemakers (e.g., whistles, horns, thundersticks, vuvuzelas, etc.) will not be allowed at evening games and practices and the proposed PA systems will not be used for field practices. While these measures would reduce the PA systems and the cheering crowds contribution to the significant noise impact during evening football games, implementation of these measures would not reduce the noise impact during football games to a less than significant level. Cheering spectators would continue to be the main source of noise. The other identified mitigation measures would have the following effects:

Page 18  Section 3 Conclusion, the last paragraph is revised as shown below:

Short of enclosing the track and field within a dome, there are no mitigation measures to reduce the substantial increase in exterior noise levels during evening football games. Similarly, the previously circulated EIR found that there are no alternatives to the project that meet the primary basic objectives of holding evening football games at the Lynbrook campus and avoid the significant noise impact. In fact, even the project alternatives that reduce or delete evening football games, but include sports and band practice in the evening under sports lights would generate noise levels that exceed the City’s normally acceptable exterior noise level standards (55 dBA Leq). The previously circulated EIR evaluated the following alternatives to the originally proposed project:

No Sports Lights Alternative

The No Sports Lights alternative would include the field improvements, but would not meet project objectives related to installation of the sports lighting. If, under this alternative, home football games are played on the Lynbrook campus during the day, the objective of reducing the burden on the Cupertino High School (or other District high school) track and field facilities would be met. The objectives of extending the student school day by allowing band and sport practices to extend into the evening and increasing school spirit and pride through being able to hold more Lynbrook events (i.e., evening football games) on their home campus would not be met. Without sports lights, there would be no evening activity on the field causing noise that would exceed the City’s normally acceptable nighttime exterior noise level standard of 55 dBA Leq. Daytime activity and noise levels would continue as they have under existing conditions. Compared to the Reduced Use, Practice Lights, Practice Lights and Homecoming, and the Reduced Use and Light Levels alternatives, the No Sports

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6 Existing daytime sports field activity may, at times, exceed the City’s normally acceptable daytime exterior noise level standard. That activity is part of the existing ambient noise environment and not part of the project.
Lights alternative will result in fewer environmental impacts and, therefore, is the Environmentally Superior Alternative.

Reduced Use Alternative

The Reduced Use alternative would limit the evening hours the proposed sports lighting is used. Compared to the originally proposed project, the maximum number of hours the main field and track lights could be used under the Reduced Use alternative would be reduced approximately 73 percent. The Reduced Use alternative is the same as the Reduced Use and Light Levels alternative, except the Reduced Use and Light Levels alternative keeps the lights on 30 minutes later (at a reduced level) during weekday practice and non-football game time, while band instruments and equipment are put away, and for cleanup and egress after soccer games. The time period for noise-generating practices and games, including up to six football games, would be identical under the Reduced Use and Reduced use and Light Levels alternative. The noise impacts of the Reduced Use alternative would be the same as the Reduced Use and Light Levels alternative; the Reduced Use alternative would result in a significant unavoidable noise impact.

The Reduced Use alternative would meet all of the objectives of the Reduced Use and Light Levels alternative, except it would not provide the last 30 minutes of lit field time needed after non-football games and practices for putting away instruments and equipment, and clean up and egress. The Reduced Use alternative is environmentally preferable to the originally proposed project, since it reduced the maximum number of hours the sports lights could be used and potential evening noise would be generated. It is not environmentally preferable to the Reduced Use and Light Levels alternative, because it would not reduce or avoid any impacts of that project.

Practice Lights Alternative

The Practice Lights alternative would extend the school day by allowing sport and band practices to extend until 7:30 PM in the evening. The Practice Lights alternative would include fewer light fixtures, to provide 30 footcandles of light on the field, instead of the 50 footcandles proposed by the original project. The Practice Lights alternative would reduce the significant unavoidable long-term noise impact that would occur under the originally proposed project and under the Reduced Use and Light Levels alternative, but not to a less than significant level. Lit evening sports and band practices at the main field and track would continue to substantially increase noise levels at nearby residences, but there would be no football games, which generate the highest noise levels. During practices, worst-hour hourly average noise levels at the nearest residences are calculated to range between 50 and 69 dBA Leq, exceeding the City’s normally acceptable nighttime exterior noise level standard of 50 dBA Leq. The Practice Lights alternative would both reduce the duration of increased evening noise levels and limit the noise level increases to the early evening hours. These two effects make the Practice Lights alternative environmentally superior to the original project and the Reduced Use and Light Levels alternative. In addition, compared to the proposed project, the Practice Lights alternative would reduce the visual, aesthetics, and lighting impacts and electricity use and associated greenhouse gas emissions and avoid the traffic congestion and parking issues associated with football games.
This alternative would not fully meet the project objectives related to installing sports lights. The Practice Lights alternative would not reduce the burden on the Cupertino High School (or other District) track and field facilities or increase school spirit and pride through Lynbrook High School being able to hold more school events on their home campus (i.e., evening football games). While the Practice Lights alternative would result in significant noise impacts, it is environmentally preferable to the Reduced Use and Light Levels alternative, because it would avoid the noisiest activity, football games, and the overall duration of lit field activity and noise.

Practice Lights and Homecoming Alternative

The Practice Lights and Homecoming alternative is a slight variation of the Practice Lights alternative in that it would also allow for one football game per year (presumably Homecoming). Portable lighting would be used during the football game in order to provide the 50 footcandles necessary to play football. Lit evening sports and band practices at the main field and track would continue to substantially increase noise levels at nearby residences; worst-hour hourly average noise levels during practices at the nearest residences are calculated to range between 50 and 69 dBA Leq, exceeding the City’s normally acceptable nighttime exterior noise level standard of 55 dBA Leq. One night a year, a football game would generate worst-hour average noise levels up to 74 dBA Leq (bleacher-capacity game). The Practice Lights and Homecoming alternative would both reduce the duration of increased evening noise levels and limit the noise level increases to the early evening hours, with the exception of the one football game per year. These effects make the Practice Lights and Homecoming alternative environmentally superior to the original project and the Reduced Use and Light Levels alternative.

While this alternative would also reduce the less than significant visual impact of the sports lights, on the night of the one football game there would be additional spill light and glare from the portable lights, which would need to be angled out across the field. Other impacts that were not identified as significant but would be reduced under the Practice Lights and Homecoming alternative include football game traffic and parking issues and electricity use and associated greenhouse gas emissions. The generator for the portable lights would cause air pollutant emissions, however, when in use.

This Practice Lights and Homecoming alternative would partially meet the project objectives related to installing sports lights. The Practice Lights and Homecoming alternative would reduce Lynbrook High School’s burden on the Cupertino High School (or other District school) track and field facilities by one game. The Practice Lights and Homecoming alternative would extend the school day by allowing practices to extend into the evening, but not to the extent of the proposed project, which allows non-football games and practices Monday through Saturday until 9:00 PM in the evening. These objectives would only be partially met under the Practice Lights and Homecoming alternative. While the Practice Lights and Homecoming alternative would result in significant noise impacts, it is environmentally preferable to the Reduced Use and Light Levels alternative, because it would avoid the five of the six football games, and the overall duration of lit field activity and noise.

Additionally, the following alternatives were initially considered in the previously circulated EIR, but were not evaluated further, because they either did not avoid or substantially reduce the identified impact, or resulted in indirect impacts that were either not a result of the project or were greater.
under the identified alternative than under the originally proposed project. These alternatives included the following:

- Field Layout Alternative
- Bleacher Location Alternative
- No Synthetic Turf Alternative
- Retractable Portable Lights Alternative

While the Reduced Use and Light Levels alternative would reduce the noise impact, compared to the original project evaluated in the Draft EIR, it would still result in a significant unavoidable noise impact.
Appendix A

Comment Letters
March 1, 2012

Via Federal Express Overnight Delivery
Ellie Johnson
Fremont Union High School District
589 W. Fremont Avenue
Sunnyvale, CA 94087

Re: Draft Recirculated Environmental Impact Reports for the Lynbrook and Monta Vista Sports Lighting and Improvement Projects

Dear Ms. Ellie Johnson:

This firm represents Lynbrook-Monta Vista United on matters related to the environmental review for the Lynbrook and Monta Vista High School field lighting and improvement projects (the “Projects”). I have reviewed the draft Recirculated Environmental Impact Reports (“REIR”) for each of the Projects and the draft REIRs have been reviewed by a noise expert. I do not believe that the REIRs comply with the requirements of the California Environmental Quality Act (“CEQA”) for a full analysis, disclosure, and mitigation of the Projects’ significant environmental impacts. Moreover, the draft REIRs reveal for the first time that the Projects will have significant environmental impacts. Therefore, the District should have evaluated project alternatives that would avoid these impacts as required by CEQA. Because the draft REIRs do not comply with CEQA, Lynbrook-Monta Vista United requests that the documents be revised to include a complete analysis and disclosure of the Projects’ significant noise impacts and a full discussion of mitigation measures and alternatives that would reduce these impacts.

I. The Draft REIR Improperly Downplays the Project’s Significant Noise Impacts and Fails To Identify An Environmentally Superior Alternative.

In the draft REIR the District acknowledges for the first time that the Projects will have significant noise impacts from Friday night football games. However, the REIR continues to downplay the identified significant impacts of the Project. For example, the REIR continues to compare the impacts of the “Reduced Use and Light Levels
Alternative” to the original project when discussing the impacts of the Project the District apparently intends to approve. See e.g., Lynbrook REIR at 5-7; MV REIR at 5-7 (relying on 66% reduction in noise as compared to the original proposal and claiming that the RULL is “environmentally superior to the original project evaluated in the Draft EIR.”). Conclusions about the significance of a project’s impacts should be based on a comparison to the existing physical environment, not a comparison to a hypothetical project that has not even been approved. *(Communities For A Better Env’t v. S. Coast Air Quality Mgmt. Dist. (“CBE II”) (2010) 48 Cal.4th 310, 320-21; see also Sunnyvale W. Neighborhood Assn. v. City of Sunnyvale City Council (2010) 190 Cal.App. 4th 1351, 1373 [*“Case law makes clear that ‘[a]n EIR must focus on impacts to the existing environment, not hypothetical situations.’”* (internal citations omitted)].)

Moreover, the REIR continues to downplay what are clearly significant noise impacts from the Friday night football games. For example, the REIR continues to take the unsupported position that “the noise impact may be considered less than significant using a qualitative standard based on infrequency, duration, time of day and community expectation . . . .” Lynbrook REIR at 2; MV REIR at 2. An EIR is a document of public disclosure designed to alert the public to the potentially significant impacts of a project. *Laurel Heights Improvement Assn. v. Regents of Univ. of California* (1988) 47 Cal.3d 376, 392 (*“Laurel Heights II”*) (citations omitted). Under CEQA, an EIR must reflect a good-faith effort at full disclosure, including “detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” *Id.* at p. 405; CEQA Guidelines, § 15151.¹ To accomplish CEQA’s informational purpose, an “EIR must contain facts and analysis, not just the agency’s bare conclusions.” *(Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 568 (*“Goleta II”*) (citations omitted).)

By playing down the significant noise impacts of the Friday night football games, the REIRs improperly mislead the public as to the true consequences of the District’s action. As detailed in the comments of Neil A. Shaw of Menlo Scientific, the noise analysis fails to disclose the full range of significant project impacts and the use of such words as “infrequent” or “non-threatening” are misleading. Exhibit A to this letter. The REIRs also make the unsupported claim that the Projects are compatible with surrounding land uses because the cities of Cupertino and San Jose allow for the location of schools in residential areas, but they ignore the fact that the Projects will actually

¹ The CEQA Guidelines (“Guidelines”) are found at California Code of Regulations, title 14, section 15000.
exceed noise standards established by the Cities. Thus, the REIRs’ attempt to downplay noise from the Projects as the type of noise to be expected in a residential community cannot be reconciled with their clear exceedences of the noise standards established by those same cities.

A more accurate analysis of the full range of noise impacts would reveal that the Projects will result in the type of noise that people find quite disturbing, including low frequency noises such as bass drums and foot stomping, vibrations, and random, sharp, and non-regular sounds – such as crowd cheers, staccato drumming, and whistles. The draft REIRs fail to disclose any of these significant noise impacts, and therefore fail to disclose how significant the impacts of the Projects will actually be. The REIRs also improperly use an average noise analysis to determine significant project impacts. As a result noise levels will be much higher than actually disclosed.

In addition, the noise analysis implies that noise impacts from practices will be significant, but fails to adequately disclose that fact. For example, the REIRs reject a number of mitigation measures because they will not reduce noise levels below the City’s noise thresholds. See, e.g., Lynbrook REIR at 12; MV REIR at 12 (rejecting combined noise barriers because noise from football games would still exceed City 55 Leq by 9 dBA and noise from practices would still exceed City’s 55 dBA Leq by 4 dBA.)2 These statements indicate that noise impacts from practices will be significant because they will exceed City noise thresholds, but they are buried in a discussion of the REIRs’ view of why mitigation measures would not be feasible. Because the REIRs contain nothing more than this oblique reference to significant noise impacts from practices, it fails to adequately disclose these impacts and it fails to adequately consider mitigation measures to reduce this impact. For example, the REIRs include no discussion of earlier end times for practices even though that might limit the significance of the noise levels associated with practices.

This failure to adequately characterize the Project’s significant noise impacts is particularly relevant to the consideration of mitigation measures and alternatives. Although the REIRs attempt to downplay the impacts, the Projects will have far more significant noise impacts than disclosed. As a result, the District should seriously

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2 In fact, the comments of Neil Shaw indicate that the city noise standards rely on an LMax measure, not Leq. By failing to measure noise levels using the LMax and comparing it to the cities’ standards, the REIRs underestimate the impacts of Projects.
consider alternatives that would avoid or substantially reduce these impacts as discussed in more detail below.

Finally, the REIRs fail to identify an environmentally superior alternative. With its repeated statements that the RULL will be environmentally superior to the original proposal, the REIRs create the impression that the RULL is the environmentally superior alternative. Inasmuch as the RULL will continue to have significant environmental impacts that the District does not intend to mitigate, this impression cannot be correct. The result is a document that is misleading and fails to convey the full scale of the noise impacts associated the Project. Accordingly, the REIRs fail to comply with its obligation for public disclosure under CEQA and must be revised and recirculated.

II. The Revised EIRs Fail To Address the Health Impacts Associated with Significant Noise Levels.

Again, this document is the first to disclose that the Projects will result in significant noise impacts from both practices and Friday night football games. The health impacts of noise are one of the most serious public health issues in modern society, yet the REIRs fail completely to discuss what Projects’ significant noise impacts mean in terms of their impacts of on human health. Exposure to increase noise levels has been associated with increased stress, cardiovascular impacts, and mental health impacts. See Exhibit B (Journal of Occupational and Environmental Medicine, 2002 59:380-386); Exhibit C (Wikipedia); Exhibit D. (“Noise Pollution: A Modern Plague”). Having identified substantial increases in noise associated with the Projects, the REIRs must also discuss the health effects of those noise impacts on affected members of the public.

III. The Revised EIRs Fail to Adequately Analyze Project Alternatives and Mitigation Measures.

The REIRs are also deficient for failure to adequately address alternatives and mitigation measure that would reduce the noise impacts that the REIRs show will occur. First, the REIRs fail entirely to evaluate any alternatives that would reduce the now identified significant noise impacts from the Projects. CEQA requires an agency to evaluate both mitigation measures and alternatives that will reduce a project’s significant impacts. Pub. Res. Code §21002; Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692, 731.

The REIRs, however, focus exclusively on only a few mitigation measures, and ignore a number of alternatives discussed in the original EIRs that could substantially reduce or avoid significant noise impacts from the football games and that would
substantially limit practice noise. In fact, with the disclosure that the Projects will result in significant impacts both from practices and from Friday night football games, the District must evaluate alternatives that would reduce both these impacts. However, currently, the District has only evaluated one alternative – the No Sports Lights alternative – that would address these impacts. This does not constitute a reasonable range of alternatives. In addition to the No Sports Lights alternative, the District should evaluate other alternatives that might reduce practice noise, including limits on the timing of band practice, elimination of evening band practice altogether, or reducing the size of the bleachers and redesigning them to provide greater opportunities for noise mitigation.

The District should also evaluate a combination of the No Sports Lighting and Practice Lights alternative, which would substantially reduce noise impacts from night football games as compared to the RULL. A combination of these two alternatives which would allow the District to meet all of the identified objectives in the final EIRs: (1) to extend the student school day by having later sports and band practices, (2) to reduce the burden on Cupertino High School, which currently hosts Monta Vista and Lynbrook home football games, and (3) to increase student school spirit and pride by being able to hold home football games. MV AR 851, 281; Lynbrook AR 2:828. The District is already holding nighttime football games for Monta Vista High School at Fremont High School, which reduces the impact of such football games on Cupertino High School. It also has not increased the burden on Fremont High School because Homestead High, which formerly held night games at Fremont, now holds night games at its own fields. Thus, holding night football games at Monta Vista High School is not necessary to reduce the burden on Cupertino High School.

The REIRs also improperly claim that the “primary” objective of the Projects is to allow for Friday night home football games. Lynbrook REIR at 18; MV REIR at 19. However, in responses to comments, the District took the position that none of the project objectives were “primary.” Monta Vista FEIR Response to Comment BB5. Moreover, the District has repeatedly touted the purpose of the project as extending the school day; holding night football games is not necessary to extend the school day. Nor is there any evidence to support the District’s assertion now that holding night football games is necessary to promote school spirit. Given that the District can meet the objectives of the projects to increase the school day, hold home football games, and reduce the burden on Cupertino High School without night football games, the District cannot allow such an amorphous and factually unsupported assertion that only night football games will increase school spirit to dictate the ultimate decision regarding project alternatives.

Indeed, even assuming that holding nighttime football games is itself a project objective, the District cannot define the Project’s objectives so narrowly as to preclude a reasonable
alternatives analysis. *(See Nat'l Parks & Conservation Assn. v. Bureau of Land Mgmt. (9th Cir. 2010) 606 F.3d 1058, 1072 [striking down a narrowly drawn statement of project objectives where it “necessarily and unreasonably constrain[ed] the possible range of alternatives” and “foreordain[ed] approval of the [proposed project]”].)* Watsonville Pilots Assn. v. City of Watsonville (2010) 183 Cal.App.4th 1059, 1089 (the “key to the selection of the range of alternatives is to identify alternatives that meet most of the project’s objectives but have a reduced level of environmental impacts,” not to identify alternatives that meet few of the project’s objectives so that they can be “readily eliminated.”)

Moreover, the REIRs fail to address alternatives that would reduce impacts from practices. Because the REIRs now indicate that practices will have significant noise impacts – an impact that was not disclosed in the final EIRs – the REIRs must evaluate alternatives that would reduce these impacts. In addition to the “No Sports Lights” alternative, the REIRs should look at alternatives that would reduce the schedule and number of evening practices thereby reducing the impacts associated with the practices.

In addition to modification in practice schedules and a reduction or elimination of Friday night football games, the REIRs should have evaluated a number of other measures that could reduce the Projects’ noise impacts. For example, the REIRs should have looked more closely at the option to reduce the number of bleachers and to place them in a berm that would act both as a sound barrier and that would help reduce noise from the use of metal bleachers. See Shaw Report at p. 5.

IV. The Revised EIRs’ Determination That Mitigation Would Be Infeasible Is Legally Improper and Unsupported by Substantial Evidence.

To the extent the REIRs address mitigation at all, they then go on to reject all but one measure – limits on the PA system – as infeasible. The REIRs’ determination of infeasibility ignores the relevant legal standard and is not supported by the evidence.

First, the REIRs reject a number of mitigation measures on the ground that they would be too expensive. *See e.g.*, MV REIR at 11 (rejecting soundwalls); Lynbrook REIR at 11 (same); Lynbrook REIR at 13 (rejecting bleacher barriers); MV REIR at 13 (same). However, the absolute cost of the improvements is not the relevant factor for determining the economic feasibility of mitigation or an alternative. “*T*he *[feasibility]* question is not whether [the City] can afford the proposed alternative, but whether the marginal costs of the alternative as compared to the cost of the proposed project are so great that *a reasonably prudent property owner* would not proceed with the
Here, the cost of the noise barriers or sound insulation (or a combination of them) is minimal when compared to the overall cost of the Projects. As detailed in Exhibit E, the cost of each of the Projects is over $14,000,000. The cost of the mitigation measures is minimal in comparison and under the relevant standard is clearly feasible. The District also fails to support its assertion that sound insulation would not be accepted by the local community; the District has not even made such an inquiry.

Moreover, the fact that the mitigation measures might not completely eliminate the significant noise impacts of the Projects does not mean that they should be rejected. Instead, CEQA requires an agency to adopt all feasible measures that will reduce a project’s impacts, even if they do not completely avoid a significant effect. Pub. Res. Code §21002; see also City of Marina v. Board of Trustees of the California State University (2006) 39 Cal.4th 341; 1 Stephen Kostka & Michael Zischke, Practice Under the California Environmental Quality Act § 14.6 (2d ed. 2011) (“A mitigation measure may reduce or minimize a significant impact without avoiding the impact entirely.”).

Finally, the REIRs fail to adequately address the feasibility of alternative designs, in particular, a design that would set the bleachers into a berm and thereby greatly reduce noise impacts. As discussed in more detail in the comments of David Radtke, the REIRs inappropriately assume that such a design would require lowering of the fields and the presence of a hillside. However, setting the bleachers into a berm does not require either. The purpose of setting the bleachers in a berm is to substantially reduce the noise impacts associated with vibration and cheering from the bleachers and to act as an additional sound barrier. This can be accomplished with the construction of a berm, and could have easily been accomplished here with the dirt available on site during construction. The District’s decision to remove this dirt during construction that continued after this court’s ruling was taken at the District’s own risk and the additional cost associated with re-importing dirt to support the bleachers cannot be used as a factor to determine that such a mitigation measure would be infeasible. Pub. Res. Code §21167.3(b); Kings County Farm Bureau, 220 Cal. App. 3d at 737.
In view of these deficiencies, the District must revise and recirculate the REIRs with a complete analysis of noise impacts, mitigation measures, and alternatives.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Ellison Folk

SHUTE, MIHALY & WEINBERGER LLP
EXHIBIT A
Ms. Ellison Folk  

SHUTE, MIHALY & WEINBERGER  
396 Hayes Street  
San Francisco, California 94102  

Subject: Environmental Noise Assessment  
Monte Vista High School and Lynwood High School  
Sports Fields Improvements and Lighting  

Dear Ms. Folk;  

We have reviewed the Draft Recirculated Environmental Impact Reports (REIR) dated January 2012 for the Monte Vista High School Sports Fields Improvements and Lighting and the Lynwood High School Sports Fields Improvements projects.  

For background we also reviewed the Monte Vista High School Sports Fields Improvements and Lighting Project Environmental Noise Assessment report and the Lynwood High School Sports Fields Improvements and Lighting Project Environmental Noise Assessment report, both dated 20 May 2010; the City of Cupertino Municipal Code Chapter 10.48, Community Noise Control; the City of San Jose Code of Ordinances Section 20.30.700 Residential Zoning Districts Performance Standards; the Noise section in Part IV, Goals and Policies, of the current City of San Jose General Plan; and the Noise Pollution section of the current City of Cupertino General Plan.  

As set forth below, we do not believe that the REIRs adequately analyze or disclose the significant noise impacts from these Projects. Based on our review, the noise impacts of the Projects will be more significant than assumed by the REIRs and we recommend that the District closely evaluate measures that will reduce these impacts.  

1. Our review found that the findings in the REIRs and EIRs do not identify some important assumptions including, but not limited to, the character of all noise sources present during a measurement, the spectral and time character of noises from the proposed events, and why a particular metric was chosen, and is appropriate, for a measurement. For example, the REIRs assume that increases in crowd size result in a linear increase in noise. However, as crowd size increases, noise increases exponentially as people in the crowd encourage each other and thus need to shout over each other to be heard and to be part of the general excitement of the moment.  

2. In addition, the presentation depends on a prosaic description of measurements which does not adequately provide a complete understanding of the impact on the surrounding area. All measurements presented in the reports should include annotated drawings or photos that identify the location of any and all noise sources, the datum for any distances to receivers used in a calculation, as well as the location of the receiver locations. Any measurement should and needs to
be reproducible by others. Data and calculations must be included to support claims made in the reports.

3. For data taken over a period of time, such as the Leq metric, the time history of the measurement should be presented as well as the Leq time period. The REIRs and the EIRs in many cases present a just range of values in a table and these values are average (Leq) noise levels over an hour, which does not adequately describe the intermittent, impulsive nature of the noises produced by some of the proposed events for the projects as the longer the time for which an Leq is taken the more the impact of the intermittent, impulsive noises are hidden. A more accurate way to present Leq data is to measure one-minute Leqs over the time period of interest and then determine the running logarithmically average of these one minute Leqs for 5, 10, or 15 minutes, and then present this data graphically along with the running one-minute Lmax and L90 levels for the time period of interest. In some instances, such as for intermittent, impulsive sounds such as those from foot stomping on metal bleachers, marching bands, and drum lines, one-second levels should be used to determine the running logarithmically average and the three averages (Lmax, Leq, and L90) presented graphically for the time period of interest. For certain noises, such as those that are bass heavy, foot stomping on metal bleachers, marching bands and drum lines, the octave band Leq and Lmax data for the 63 Hz to 8000 Hz octave bands, in addition to the overall level data described above, should be presented to properly characterize the noise spectrum.

4. The reports use Leq, CNEIL, and DNL metrics for reference noise levels and community standards. The local noise codes specify a maximum noise level, Lmax, in decibels, at the residential property line. Several problems with the way the various metrics are used in the reports include:

- The Lmax metric is not defined in Table 1 of the EIRs although it is used in the reports.

- Table 3 in the Monte Vista High School is captioned “Maximum Nighttime Noise Levels (Leq).” The maximum sound level, Lmax, is the highest RMS sound pressure level within the measuring period. It is not the Leq as defined in Table 1 of the EIRs or the Leq as defined by international standards.

- The Lmax level is always greater than the Leq, CNEIL, or DNL, and depending on the time period for the Leq, such as one hour, much greater. Using the Leq, CNEIL, or DNL for the sound level the projects need to meet, means that the actual code limit (maximum noise level in both the San Jose and Cupertino noise codes) will be exceeded in all cases, and the impact on the surrounding area will be more than that reported in the noise analysis or the REIRs.

- The CNEIL and the DNL (also called the Ldn) are calculations typically used to describe the impact of transportation noise. This is why these metrics were used in the General Plans, where the noise impact of transportation sources is the major concern. These metrics are a weighted average of the 1 hour Leqs measured over a twenty-four hour period while the time period of interest for the proposed projects is limited to dark until sometime later in the evening, depending on the event. These metrics do not characterize the intermittent, impulsive nature of the noise from the proposed activities that will be produced by the proposed project and they do not
adequately predict how these activities may interfere with sleep, speech, and other activities in the affected neighborhoods. This type of noise is very disturbing and includes such noises the staccato drum beats from the band, the on and off cheering of the crowd, whistles, noise creating instruments and devices used by fans (such as Vuvuzelas).

-When noise levels are measured using an “A” weighting, as the Leq, CNEL, and DNL metrics in the report do, the contribution of low frequency sounds are greatly diminished as the A weighting subtracts the contribution of these sounds, and to a lesser extent the contribution of high frequency sounds. The A weighting curve is the inverse of the equal loudness response of human hearing at 1000 Hz at 40 dB. As noise levels increase, the response to low frequency noises increases, as shown in Attachment A, Figure A1, Acoustic Weighting Curves and ISO Equal Loudness Curves. Note that Table 2 in the EIRs shows 40 dBA to be slightly higher in level than a “suburban nighttime environment,” which is much lower in level than the proposed events.

5. The report uses the term Loudness. The term Loudness has a specific meaning that is not correct when presenting objective measurements, such as Leq, CNEL, and DNL. There is one way to objectively describe sound, the decibel, which is the unit for the sound pressure level, and it is calculated from sound pressure. The subjective human response to sound can be described using the phon, the unit for loudness level, which is defined by the equal loudness curves shown in Figure A2. Loudness level is non-linear – you cannot add loudness levels arithmetically. A less common metric is the sone, the unit for loudness, shown in Figure B1. In short: sound level is expressed in decibels, physiological loudness level is expressed in phons, and subjective loudness is expressed in sones. The REIRs fail to use appropriate terminology to describe loudness and fail to measure it appropriately. Instead, the REIRs appear to minimize noise impacts by using subjective terms such as “infrequently,” “non-threatening,” or “short duration” or consistent with “community expectations”. These terms may be good word-smithing but they do not properly describe the noise events from the proposed activities. General statements are misleading and do not describe the character of the noises from proposed events.

6. Speech interference, sleep disturbance and annoyance are discussed in the reports but the noise level for interference, disturbance, and annoyance used to calculate impact are higher than that reported in the literature or those recommended by governmental bodies.

- The reports state the noise level for interference and disturbance is greater for fluctuating noises than for steady noises. Humans have a physiological startle response that is very sensitive and sudden, intermittent, random, and/or impulsive sounds – such as those associated with the football games and band practices – trigger this response.

- The reports state that sleep disturbance continuous occurs when noise levels are greater than 35 dBA for continuous noise and 45 dBA for fluctuating noise. The reports should cite the reference for this statement. WHO Guidelines state 30 to 35 dBA as the onset level for sleep disturbance with a peak nighttime maximum of 45 dBA. See Attachment 3, United Nations World Health Organization Sleep Disturbance Guideline Summary. Sources with low frequency components are especially disturbing, and a disturbance may occur even though the sound pressure
level during exposure is below 30 dBA. If negative effects on sleep are to be avoided the equivalent sound pressure level should not exceed 30 dBA indoors for continuous noise. If the noise is not continuous, sleep disturbance correlates best with Lmax and effects have been observed at 45 dB and less.

The reports discuss annoyance but cite only statistics for transportation noise. The annoyance from noises that will be produced from the proposed projects are not discussed. Thresholds depend on the type of noise. The percentage of people annoyed depends on the type of noise. As previously mentioned, the type of noises caused by the projects are of a sort that is very disturbing and are not adequately captured by reference to statistics for transportation noise.

7. The reports deal only with overall sound levels, and these are modified by the A weighting. Low frequency noises from the proposed activities are not discussed. Low frequency sounds are pernicious since these sounds to travel much further than high frequency sounds and so these low frequency sounds will impact additional residences beyond those residences directly adjacent to the project sites. It will also be more difficult to mitigate the intrusion of low frequency noises into the residences adjacent to and near the proposed project sites without redesign of the project or a restriction on the number and type of events. The intermittent nature of these sounds adds to their impact, but is not disclosed in the REIRs.

8. The reports somewhat discuss noise from public address systems, spectator (crowd) noise, and band noise as well as noise from practice sessions. The sound level limit described for the public address system is not realistic as the noise levels from the crowd in the bleachers will be greater in level than the proposed limits. Limiting the PA system to these limits, especially with the great increase in spectator seating for the home side of the field and the new bleachers (which will require additional loudspeakers serving the new seating) for the visitor seating which will be closer to residences), may not be practical.

9. The reports do not address the impact of spectator stomping in the metal bleachers nor do they discuss the character of sounds from the marching bands and drums, but are typical of the type of events proposed and which are very intrusive and disturbing.

10. The REIRs repeatedly states that the reduced use alternative will offer a 66% reduction in impact compared to the original submission. How this reduction was determined is not clear and no backup or calculations are included in the reports. A comparison is discussed, but only the alternative hours are listed. A side-by-side listing of the original and alternative hours should be provided.

11. The reports skirt around the significant impacts from the original and alternative proposals. The terms “infrequently, “non-threatening,” short duration may be good word-smithing but they do not properly describe the noise events from the proposed activities. General statements are misleading. The character of the noises from proposed events is not described. What is meant by the phrase “community expectations”?

12. In addition to the mitigation measures described in the REIRs, not all mitigation measures are discussed. These additional mitigation measures include:
-Reduce the number of band practices/limit the use of the band at night games. Bands produce some of the most disturbing noise from the Projects. A limit on the band practices and band playing at the games would help reduce this noise impact.

-Replace the metal bleacher with bleachers built on a berm. This does not necessarily require lowering of the field, but the construction of a berm into which the bleachers could be set. The berm would act as a sound barrier and would also reduce noise from the bleachers, such as vibration and foot stomping.

-Reduce the seating capacity of the bleachers. This measure would reduce crowd noise and would create more options for design alternatives that could reduce noise impacts.

-Reorient the fields and include the soccer field as part of the football field. This could provide options to reduce noise impacts to adjacent residents, and could open up options for mitigation of noise from the bleachers and for the use of noise barriers that might be more visually acceptable.

-Include air-conditioning as part of sound insulation. This would ensure that sound insulation is effective even when it is hot outside.

Please contact me to discuss the foregoing if you have any questions.

Sincerely,

MENLO SCIENTIFIC ACOUSTICS, INC.

Neil A. Shaw

Neil A. Shaw, FASA, FAES

NAS:sk

Attachments
Attachment A

Acoustic Weighting Curves and ISO Equal Loudness Curves (after Fletcher-Munson)

Figure A1 – Acoustic Weighting Curves

Note: The C curve is mandated by standards for precision (Class one) sound level meters. The B and D curves are no longer used.
Figure A2 – Equal Loudness Contours/Fletcher Munson Curves
Sound Level, Loudness Level, and Loudness

Sound level, or sound pressure level, \( L_p \), is 20 times the logarithm of the sound pressure divided by the reference sound pressure, 20 micropascals. The unit of sound level is the decibel (dB). It is the objective measure of sound pressure. Decibels cannot be added arithmetically but must be added logarithmically.

Loudness level, \( L_N \), is the level of an equal loudness curve labeled by its \( L_1 \) at 1 kHz. See Figure A2, above. The unit of loudness level is the phon. Loudness levels cannot be added.

Loudness — A loudness \( N=1 \) is equal by definition to \( L_N=40 \) phon, independent of frequency. The unit of loudness is the sone. A loudness of 16 sones is twice as loud as one of 8 sones and four times as loud as one of 4 sones. The unit of loudness is the sone. The relationship between sound level in decibels and loudness in sones is shown in Figure B1.

![Figure B1 - Sound Level (dB) vs Loudness (Sone)](image-url)

Attachment C

United Nations World Health Organization Sleep Disturbance Guideline Summary

Health

- Noise pollution

Noise is an increasingly omnipresent, yet underestimated, form of pollution. Long periods of exposure to relatively low levels of noise can have adverse effects on human health, such as raised blood pressure, hypertension, disrupted sleep and cognitive development in children (Klierman, 1997b), diminished working memory span, and psychiatric disorders (Bond, 1996). An estimated 80 million people suffer unacceptable levels of continuous outdoor transport noise within the EU (New Scientist, 1998). In Amsterdam, 29% of the city's inhabitants complain of noisy neighbours, 28% are regularly disturbed by the jarring sounds of traffic, and 26% suffer the dissonance that comes from living under the airport flight paths. In Great Britain survey results showed that for 7% of homes in Britain, noise levels outside the building were more than 68 dB (Bond, 1996). Even in the American national parks, it is estimated that noise-free intervals rarely exceed several minutes (Geary, 1996).

The World Health Organisation's guidelines recommend a nighttime average level of noise suitable for undisturbed sleep of from 35 to 30 dB, and include a peak nighttime maximum of 45 decibels. However, an OECD survey of traffic noise estimates that 16% of people in Europe suffer more than 40 dB in their bedrooms at night (Bond, 1996). In the United States, a conservation initiative has been established with the goal of creating sites where human-caused noise pollution will not be tolerated (Geary, 1996). Furthermore, every city in the European Union with more than 250,000 inhabitants will be required to draw up 'noise maps' of their streets by 2002 (New Scientist, 1998). In the Netherlands, it is illegal to build houses in areas where 24-hour average noise levels exceed 50dB. And in Great Britain, the Noise Act gives local authorities powers to confiscate noisy equipment and to fine people who create excessive noise at night. Several countries are also investing in porous asphalt, which can cut traffic noise by up to 5dB.

References


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Shute, Mihaly & Weinberger – EIR and REIR Review
Neil A. Shaw, FASA, FAES, consultant in acoustics and communication technologies, has over 35 years of experience in the design and operation of performance, production, and academic spaces as well as corporate meeting and conference facilities, sacred spaces, and research laboratories.

He studied Electrical Engineering at the Cooper Union and received his BS Engineering and MS Engineering degrees in 1977 from the University of California, Los Angeles. He was the author of, and was the adjunct faculty for acoustics courses at the Southern California Institute of Architecture and a member of the adjunct faculty at the Thornton School of Music at University of Southern California and has presented invited papers for the Acoustical Society of America and the Audio Engineering Society. He is a Fellow of both the Acoustical Society of America and the Audio Engineering Society and is a Senior Member of the Institute of Electrical and Electronic Engineers.

His commissions include the renovation of Barnum Hall and the expansion of the Music Building at Santa Monica High School; the renovation of the auditorium at Malibu High School; Sobrato High School in Morgan Hill, California; and the new South Region High School No. 9 in Los Angeles. University projects include the College of Humanities, Arts, and Social Sciences building at the University of California, Riverside; the Arts Building at the University of California, Irvine; the South Lawn building at the University of Virginia, Charlottesville; and the Intimate Theater at California State University, Los Angeles. Performance and production venues include the Coral Sky Amphitheater in Palm Beach; the screening room and production spaces for Media Artists, Pty, in Chennai, India; the Getty Villa Amphitheater; the Getty Center Museum Auditorium; the screening room and edit facilities at MGM Constellation Headquarters in Century City, California; new edit and production rooms at Capitol Records in Hollywood; and performance spaces in the Legend of the Seas, Grandeur of the Seas, Disney Magic, and Crystal Harmony cruise ships. He was the acoustic designer for the Microsoft Audio Research Laboratory in Redmond, Washington, and a large 70 Hz cutoff anechoic chamber facility now under construction in Cupertino, California.

He is a patent reviewer for the Journal of the Acoustical Society of America, a book reviewer for the Journal of the Audio Engineering Society, and is the manager of the Society of Motion Picture and Television Engineers ST-SG Theatre B-Chain Study Group Theater Testing Subcommittee.

28 February 2012
Ambient neighbourhood noise and children’s mental health

P Lercher, G W Evans, M Meis, W W Kofler

Objectives: To investigate the relation between typical ambient noise levels (highway, rail, road) and multiple mental health indices of school children considering psychosocial and biological risk factors as potential moderators.

Methods: With a two stage design strategy (representative sample and extreme sample) two cross sectional samples (n=1280; n=123) of primary school children (age 8–11) were studied. Individual exposure to noise at home was linked with two indices of mental health (self reporting by the child on a standard scale and rating by the teacher of classroom adjustment on a standard scale). Noise exposure was modelled firstly according to Austrian guidelines with the aid of a geographical information system and then calibrated and corrected against measurements from 31 locations. Information on potential confounders and risk factors was collected by mothers and controlled in regression modelling through a hierarchical forward stepping procedure. Interaction terms were also analysed to examine subgroups of children at risk—for example, low birth weight and preterm birth.

Results: Noise exposure was significantly associated in both samples with classroom adjustment ratings. Child self reported mental health was significantly linked to ambient noise only in children with a history of early biological risk (low birth weight and preterm birth).

Conclusions: Exposure to ambient noise was associated with small decrements in children’s mental health and poorer classroom behaviour. The correlation between mental health and ambient noise is larger in children with early biological risk.

The present study focuses on the relation between typical, everyday neighbourhood noise levels and children’s mental health. Mental health in children is usually measured in one of three ways: psychiatric evaluation of anxiety, depression, conduct disorder, or psychoses; self reported questionnaire measures of clinical symptoms of anxiety, depression, and conduct disorders; or by either teacher or parent ratings of behavioural adjustment. Numerous studies in the child psychiatric and clinical literature indicate the reliability and validity of all three types of measurement for non-clinical populations, with psychiatric evaluation reserved for more serious, clinically relevant symptoms of serious disorders such as disassociation. In the present study we incorporated child self reported and teacher ratings of mental health. We judged that psychiatric evaluations were overly intrusive and unnecessary for the modest increases in the non-clinical range of mental health symptoms we expected to see in a sample of the general population.

There are several important gaps in the noise and mental health literature considered by the present study. Firstly, previous studies of noise and mental health all focused on major noise sources—such as airports or major highway traffic—and neglect typical neighbourhood noise as experienced by most of the population. Although it is obviously important to focus noise protection efforts on those most heavily impacted, we should not overlook the fact that nearly half of the World Health Organisation European region is exposed to daily community noise levels of between 55 and 65 adjusted noise levels (dB(A)). This ambient noise level exceeds recommended criteria for residential areas, schools, and hospitals.

A second gap we considered is that nearly all studies of noise and mental health have focused exclusively on adults. Only one study has examined noise and mental health in children. Bullinger et al studied 326 8–11 year olds attending primary schools in high noise impact zones and comparison groups around the Munich-Riem airport. A third shortcoming in the noise and mental health literature that we considered is the problem of the small sample sizes. This has precluded the incorporation of sufficient multivariate controls for other relevant mental health factors (biological, psychosocial, and environmental risks) and therefore not provided researchers with the opportunity of examining mental health within a multivariate risk model.

A common analytical strategy in environmental epidemiology is to examine the relation between an environmental agent and health, while statistically controlling for other variables. The application of general linear models depends upon the assumption that the slopes of the regression plots for the predictor are parallel across each statistical control (the regression plots all have the same slope). When this assumption is violated, there is an interaction between the predictor variable (noise) and the control variable as they affect the outcome of interest (mental health). Therefore, it is important to first test whether any control variables interact with the environmental risk factor of interest. The presence of a statistical interaction is also important for theoretical and practical reasons. Statistical interactions can help us better understand the nature of environment and health relations, pointing towards potential explanatory mechanisms and processes. From a policy perspective, interactions may uncover vulnerable population subgroups, hidden by weak or non-significant overall effects.

Thus the present study was designed to investigate whether a large representative sample of children living under typical neighbourhood noise levels in small, alpine towns and villages in Central Europe (Austria) would show...
any relation between a broad range of exposures to noise and two indices of mental health. The sample was sufficiently large so that we could examine multiple biological and social risk factors and as already explained, investigate statistical interactions. We also employed an innovative variant of a classic two stage study design. As well as obtaining a broad, representative sample of the population, we also oversampled a subset of children at the high and low ends of the range of exposure to noise in the community. We did this because extreme group analysis, whereas not ecologically representative, has a distinct advantage—they provide substantially greater statistical power. This enables investigators in a new area to identify suspected environmental risk factors—such as noise for children—where there is a paucity of knowledge. Such research designs on extreme exposure can uncover early warning signs of a potential public health problem before they reach levels sufficient to be seen in the overall population. This research design also provides possible internal replication. Do the conclusions from the highly exposed population generalise to the dose-response analysis in the general population?

Methods

Subjects and procedures

In June 1998 all school children in grades 3–4 (mean 9.44 years) were approached in a demarcated area defined by the Austrian Government as an environmental health impact assessment. A total of 1280 children from 26 local schools participated (response 79.5%) after a letter was sent to their parents (population study). Children, their mothers, and their teachers were informed that this was a study of traffic, environment, and health required by law to supplement the environmental health impact assessment. The survey area (about 45 km long) is in the lower Inn Valley of Tyrol in Austria (fig 1). This mainly rural, alpine area consists of small towns and villages with a mix of industry, small business, and agricultural activities outside Innsbruck. A geographical information system was set up to enable multiple data linkages and to ease additional sampling.

After the geographical information system link of calculated noise exposure (equivalent sound pressure level, dB(A),Leq) with the child's home address two new samples of children in grade 4 were drawn in September 1998 from the extremes of the available exposure information (< 50 dB(A),Leq and > 60 dB(A),Leq (day-night levels)). Sixty three children inhabited low and 60 resided in moderate and higher noise exposure locations (fig 2). Participation rates in the extreme analysis was lower (64%) because the data were not collected at school and required more time. However, as table 1 shows, the two samples did not differ significantly on various social, lifestyle, and biological factors.

Background information

Sociodemographic data and biological risk information were collected from each child's mother to assess standard risk factors and to check for possible statistical interactions. Prenatal and perinatal data were assessed from doctor's entries in the "mother-child-passports"—every pregnant mother in

Figure 1 Children study 1. Sample distribution across study area by noise exposure levels: from a representative sample of a population study.
Austria receives one of these. Biological risk (0 or 1) was defined as low birth weight less than 2500 g or preterm birth less than 37 weeks gestation. Other biological variables recorded were maternal age, parity, and birth order. Further biological, social, and environmental data were collected with a self-administered, standardised questionnaire from the mother. Mother's education was recorded along with type of prebirth care (dichotomous sampling on type of hospital delivery). Family size, single parenthood, house type (1=single family detached, 2=terraced house, 3=multiple dwelling units), duration of residence (years), and months of breast feeding, were recorded.

**Exposure assessment**

Residential noise exposure is usually assessed by an index that describes the average noise exposure (dB,A) over a specified time period (Leq, day or night or 24 hours). In this study noise exposure (Leq) was assessed first by modelling (Soundplan) the three major sources (highway, rail, local main road) according to Austrian guidelines (OAL Nr 28+30, ONORM S 5011). The dichotomous sampling for the pilot study was based on this information. Afterwards a calibration study (31 measuring points) was conducted (day and night measurements) and linear corrections were applied to the modelled data when the difference to the measured data exceeded 2 dB. Based on both data sources approximate day-night levels (dB,A, Ldn) were calculated for each child's home to enable comparison with available dose-response data. This calibrated noise exposure information (combined levels from all sources) was used in all the dose-response analyses. The noise range in the field study was between 31 and 81 dB,A, Ldn (95% within 40-65 dB,A, Ldn). The range in the pilot study was 31 to 72 dB,A, Ldn (95% within: 34-50 dB,A, Ldn) in the low exposure group, 52-71 dB,A, Ldn in the high exposure group.

**Psychological health**

A 22 item scale was formed from two subscales of the KINDL, a valid and reliable index of children's quality of life and four items on a sleep disturbance scale. Analyses of the intercorrelations of the three scales showed the potential to combine the scales, which yielded one internally consistent index of psychological health (Cronbach's α=0.87). Children reported from 0=never to 4=very often, how often they experienced various symptoms indicative of anxiety and depression appropriate for a non-clinical population (I feel lonely; I have trouble falling asleep at night; everything I start turns out right). The psychological health scale was administered to children in their classroom by two graduate students who were blind to the child's exposure to ambient noise.

**Classroom adjustment**

Each child's teacher was asked to rate the child on a standard index of behaviour. This item, dichotomous (yes or no)
scale was reliable (Cronbach's α = 0.80). Sample items included. In general is this child functioning as well as other children his or her own age? Is this child easily distracted during his or her work? The teacher was blind to each child's level of ambient noise exposure.

Statistical procedures

Exposure and survey data were linked through the geographical information system, and statistical analysis was conducted with SPSS 8.0 and S+4.5 including F Harrell's HMISC and DESIGN libraries. Multiple linear regression techniques were used and 95% confidence intervals (95% CIs) were calculated based on normal approximation. Based on existing knowledge, a hierarchical forward stepping procedure was applied. We entered first a minimum set of standard risk factors (sex, maternal education, density, house type, biological risk) and noise exposure. Then further testing for the effects of other variables followed (breast feeding, lone parent, birth order, duration of residence). The most consistent and parsimonious set of variables across the four analyses was chosen to test for three prespecified interactions with noise exposure (biological risk, sex, education). No higher order interactions were uncovered. Finally, sensitivity analyses were conducted to test the stability of the estimates.

Results

Psychological health

Table 2 describes the results for child self reported psychological health. In the population study there are significant main effects due to education, house type, household density, and a borderline effect for sex. While higher education is associated with better psychological health, all the other variables (household crowding, apartment block housing versus single detached housing, male sex) show a negative impact. The main finding of interest, however, is the significant interaction of early biological risk and ambient noise exposure on psychological health. Figure 3 shows the effect of noise exposure (adjusted for maternal education, sex, number of persons in household, and house type) on those with early biological risk whereas children without this risk seem unaffected by noise exposure.

Although the main effects are less consistent in the extreme noise exposure sample, the interaction is replicated and shows

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Population study*</th>
<th>Extreme exposure study†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size (n)</td>
<td>1280</td>
<td>123</td>
</tr>
<tr>
<td>Age (y, mean (SD))</td>
<td>9.44 (0.70)</td>
<td>8.96 (0.45)</td>
</tr>
<tr>
<td>Age (months, mean (SD))</td>
<td>26.25 (4.50)</td>
<td>36.48 (4.68)</td>
</tr>
<tr>
<td>Sex (% male)</td>
<td>51</td>
<td>55</td>
</tr>
<tr>
<td>Body mass index (kg/m², mean (SD))</td>
<td>17.28 (2.61)</td>
<td>17.49 (2.79)</td>
</tr>
<tr>
<td>Birth order (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First born</td>
<td>47</td>
<td>44</td>
</tr>
<tr>
<td>Second born</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Maternal education (%) Basic</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>Vocational</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Technical trade</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>High school</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Graduate school</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Single parent (%)</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Housing type (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple dwelling</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Row house</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Single family detached</td>
<td>60</td>
<td>53</td>
</tr>
<tr>
<td>Mother current smoking (%)</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>Density (people/room, mean (SD))</td>
<td>0.85 (0.28)</td>
<td>1.04 (0.34)</td>
</tr>
<tr>
<td>Duration of residence (y, mean (SD))</td>
<td>10.23 (7.63)</td>
<td>9.96 (6.33)</td>
</tr>
<tr>
<td>Breastfeeding (moths, mean (SD))</td>
<td>3.66 (4.74)</td>
<td>3.72 (5.35)</td>
</tr>
<tr>
<td>Noise exposure (dB,A,Ldn, mean (SD))</td>
<td>51.67 (7.69)</td>
<td>53.04 (10.47)</td>
</tr>
<tr>
<td>Mental health (self report, mean (SD))</td>
<td>93.06 (13.51)</td>
<td>92.82 (12.97)</td>
</tr>
<tr>
<td>School behaviour (teacher, mean (SD))</td>
<td>19.60 (2.54)</td>
<td>20.04 (2.26)</td>
</tr>
</tbody>
</table>

*Representative sample; † sampling on exposure extremes (<50 dB,A,Ldn; >60 dB,A,Ldn).

Table 2 Multiple regression model of children's psychological health (self reporting scale) (comparison of the effects (mean differences [95% confidence intervals]) in the two samples

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Population study*</th>
<th>Extreme exposure study†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal education (1–5)</td>
<td>3.96 (1.88 to 6.04)</td>
<td>0.0002</td>
</tr>
<tr>
<td>Sex (male/female)</td>
<td>-1.47 (-3.09 to 0.15)</td>
<td>0.0752</td>
</tr>
<tr>
<td>People in household (1–9)</td>
<td>-2.47 (-4.59 to -0.35)</td>
<td>0.0227</td>
</tr>
<tr>
<td>House type (1–3)</td>
<td>-3.42 (-5.32 to -1.52)</td>
<td>0.0012</td>
</tr>
<tr>
<td>Biological risk (0–1)</td>
<td>-5.83 (-10.07 to -1.64)</td>
<td></td>
</tr>
<tr>
<td>Noise exposure (30–73)</td>
<td>-2.77 (-5.46 to -0.08)</td>
<td>0.0344</td>
</tr>
<tr>
<td>R²</td>
<td>0.04</td>
<td>R² 0.23</td>
</tr>
</tbody>
</table>

*Representative sample; † sampling on exposure extremes (<50 dB,A,Ldn; >60 dB,A,Ldn); † differences based on the following contrasts: maternal education (high school vs basic), male vs female, persons in household (6 vs 3), house type (multiple dwelling v single family), interaction term: noise exposure × (65 dB,A,Ldn; >60 dB,A,Ldn) and biological risk × (birth weight <2500 g or <37 weeks of gestation).
large effects (table 3). Note, that the explained variance of the model increased to 23% in the extreme exposure group design.

**Classroom adjustment**

Table 4 presents the regression results for the second outcome measure—the teacher’s rating of class room adjustment. In the population study no interaction was detected. However, significant main effects were evident for education, sex, house type, and exposure to noise, and biological risk was marginally significant. The direction of the effect was replicated for all factors, although household density did not reach significance. The total explained variance ($R^2=0.09$) was slightly higher than for psychological health as rated by the children ($R^2=0.04$). Figure 4 presents the adjusted dose-response pattern for the relation between noise and behaviour. A decrement in teacher ratings with increasing ambient noise was evident.

The model results for the extreme exposure analyses resemble the field findings, except that house type and household density reversed their significance. The model total $R^2$ increased to $0.21$ from $0.09$, again showing enhanced statistical power with the extreme exposure group design.

**Discussion**

Ambient levels of noise in the community are associated with decreased mental health in elementary school children. This association, a linear dose-response function in a large population study, holds with multiple statistical controls, replicates in two samples, and was robust across reliable and valid self reported measures and teacher ratings. Furthermore, children with low birth weight and preterm delivery may be at greater risk of noise related mental health outcomes.

Data from the population survey indicate that variations in typical community noise levels were associated with psychological symptoms and quality of life reported by the child, but only in those with a pre-existing biological risk (low birth weight, fig 3). This significant interaction was replicated in the extreme exposure study as shown in table 3. It is also interesting to note the evidence of a dose-response function for the high risk subsample in the general population study. For

---

**Table 3** Children’s psychological health*

<table>
<thead>
<tr>
<th>Biological risk</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise exposure &lt;50 dB,A,Ldn</td>
<td>n=50</td>
<td>n=7</td>
</tr>
<tr>
<td>Mean (95% CI)</td>
<td>96.2 (93.0 to 99.4)</td>
<td>94.6 (87.4 to 101.8)</td>
</tr>
<tr>
<td>Noise exposure &gt;50 dB,A,Ldn</td>
<td>n=3</td>
<td>n=15</td>
</tr>
<tr>
<td>Mean (95% CI)</td>
<td>92.8 (89.4 to 96.1)</td>
<td>80.9 (70.3 to 91.5)</td>
</tr>
</tbody>
</table>

*Self reporting scale; adjusted for maternal education, sex, number of people in household, and house type; sampling on exposure extremes (<50 dB,A,Ldn; >60 dB,A,Ldn), birth weight <2500 g or <37 weeks of gestation.

**Table 4** Multiple regression model of children’s classroom adjustment (teacher-rating scale) [comparison of the effects of the differences [mean (95% CI)] between the two samples]

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Population study*</th>
<th>Extreme exposure study†</th>
<th>p Value</th>
<th>Mean difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material education</td>
<td>1.20 (0.82 to 1.58)</td>
<td>0.88 (0.16 to 1.92)</td>
<td>&lt;0.0001</td>
<td>0.0013</td>
</tr>
<tr>
<td>Sex (male/female)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People in household</td>
<td>-1.04 (-1.33 to -0.74)</td>
<td>-1.39 (-2.23 to -0.55)</td>
<td>&lt;0.0001</td>
<td>0.0017</td>
</tr>
<tr>
<td>House type</td>
<td>-0.14 (-0.52 to 0.25)</td>
<td>0.94 (0.02 to 1.87)</td>
<td>0.4087</td>
<td>0.0469</td>
</tr>
<tr>
<td>Biological risk</td>
<td>-0.48 (-0.85 to -0.11)</td>
<td>-0.04 (-1.07 to 1.00)</td>
<td>0.0112</td>
<td>0.9472</td>
</tr>
<tr>
<td>Noise exposure</td>
<td>-0.33 (-0.71 to 0.05)</td>
<td>-0.72 (-1.68 to 0.23)</td>
<td>0.0555</td>
<td>0.3729</td>
</tr>
<tr>
<td>R²</td>
<td>-0.09</td>
<td>0.11 (0.28 to 1.95)</td>
<td>0.0015</td>
<td></td>
</tr>
</tbody>
</table>

*Representative sample; sampling on exposure extremes (<50 dB,A,Ldn; >60 dB,A,Ldn); †differences based on the following contrasts: maternal education (high school v basic), male v female, people in household (6 v 3), house type (multiple dwelling v single family), biological risk=1 (birth weight <2500 g or <37 weeks of gestation) v 0 (normal birth weight/length of gestation), noise exposure (65 v 40 dB,A,Ldn; >60 v <30 dB,A,Ldn).
Ambient neighbourhood noise and children's mental health

Teacher ratings of children's behavioural adjustment, both in the general population and the extreme community noise exposure comparisons (table 4), there were significant main effects of noise on behaviour. All these significant results incorporate multiple adjustments for individual and social factors.

Examining each of our objectives, we showed that typical fluctuations in ambient community noise are associated with mental health among children. This finding replicates the only previous study of noise and mental health among children which showed an association between exposure to airport noise and psychological distress in 8–11 year old children.64 We extend this study by showing similar effects at lower, more typical levels of ambient noise, across two different measures of mental health in children, with a substantially larger array of statistical controls. We also provided the first evidence of a dose-response function between exposure to noise and mental health in children. Only two studies with adults have uncovered dose-response functions between those with high levels of transportation noise and mental health.65,66 Thus the present study adds to the small amount of literature on noise and mental health in children and provides further evidence of a relation between noise and mental health.

As well as showing that everyday noise may have mental health consequences among children, we examined the potential moderating role of several biological and social risk factors. The data indicate that children who had a low birth weight or were born preterm may be more vulnerable to the adverse mental health consequences of exposure to ambient noise. These children could be more reactive to the harmful consequences of noise because of their known greater susceptibility to behavioural problems in early childhood67,68 or because of physiological effects of "early programming".69,70 The evidence for greater vulnerability to noise among children with low birth weight is mixed, however. This interaction was restricted to the standardised self reported measure of mental health symptoms. We did not find a similar interaction between noise and biological risk for teacher ratings of behavioural adjustment in the classroom. One possible explanation for this are differences in the symptoms assessed by the two indices. The self reported symptom checklist focuses primarily on anxiety and depression, whereas the teacher ratings emphasise interpersonal social skills and emotional and attentional regulation in the classroom.

The data on psychological distress reported by the children also illustrate the potential value to public policy of examining moderator functions. In the overall population, there is little or no evidence of mental health sequelae of exposure to noise in the community. This could have led to the incorrect conclusion that therefore ambient levels of noise are irrelevant for mental health among children. As figure 3 and table 3 clearly show, such a conclusion would be incorrect. There is a subsample of children who are reliably at risk of poorer mental health relative to even the lower levels of ambient noise found in rural, central European communities. Furthermore as explained earlier, the uncovering of such an interaction prohibits use of the same variable (low birth weight) as a statistical control when examining the main effects of noise on mental health.

Another objective of our study was to show the potential use of a mixed research design, incorporating both a general population study and a smaller, more focused analysis of people exposed to extreme levels of the environmental risk factor. As a comparison of the results from the two samples shows, the evidence for adverse effects of noise is much stronger in the extreme level comparisons (compare the total \( R^2 \) in tables 2 and 4 for the two designs). Especially in the early stages of environmental risk investigations there is need for cost efficient designs66 with high sensitivity to detect potential adverse environmental risk factors. The extreme exposure research design does have some limitations: it is not representative of the general population, and, relative to dose response evidence, is more subject to plausible rival hypotheses. None the less enhanced sensitivity to detect potential health effects, coupled with reduced costs and effort, make this type of design worthy of greater consideration in the field of environmental health. Ideally, investigators could combine both research designs in the same study.

It is important to reiterate that the cross sectional design of this study precludes drawing causal inferences. However, our data are stronger than a simple correlational study because of several features: (a) dose response function; (b) the replication and predicted stronger associations in the extreme exposure groups; (c) the use of multiple individual and social controls; (d) the predicted interaction between biological risk and noise. Nevertheless, unmeasured confounders and measurement error could bias the results.69 Short of random assignment of children to different noise exposures, probably the best approach to strengthening the evidence for the causal effects of noise on children's mental health would be to conduct a prospective longitudinal study comparing the same child across different noise conditions. It is worth mentioning that the study by Bullinger et al of aircraft noise and children's mental health was prospective.71

This Journal and other sources document adverse physical health consequences of suboptimal environmental conditions, both in the workplace and at home.71,72 Similar exploration of the mental health consequences of unhealthy social and environmental conditions is just beginning.73 Population studies generating dose-response functions along with comparisons of groups with extreme environmental risk can assist us in this new area of environmental medicine and health. Due consideration of potential moderators is warranted for conceptual, statistical, and policy reasons, in physical and psychological morbidity studies of occupational and environmental health.74

ACKNOWLEDGEMENTS

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EXHIBIT C
Health effects from noise

From Wikipedia, the free encyclopedia

**Noise health effects** are the health consequences of elevated sound levels. Elevated workplace or other noise can cause hearing impairment, hypertension, ischemic heart disease, annoyance and sleep disturbance. Changes in the immune system and birth defects have been attributed to noise exposure.[1]

Although some presbycusis may occur naturally with age,[2] in many developed nations the cumulative impact of noise is sufficient to impair the hearing of a large fraction of the population over the course of a lifetime.[3][4] Noise exposure has also been known to induce tinnitus, hypertension, vasoconstriction and other cardiovascular impacts.[5]

Beyond these effects, elevated noise levels can create stress, increase workplace accident rates, and stimulate aggression and other anti-social behaviors.[6] The most significant causes are vehicle and aircraft noise, prolonged exposure to loud music, and industrial noise. Road traffic causes almost 80% of the noise annoyances in Norway.[7]

There may be psychological definitions of noise as well. Firecrackers may upset some animals or noise-traumatized individuals. The most common noise traumatized persons are those exposed to military conflicts, but often loud groups of people can trigger complaints and other behaviors about noise.

The social costs of traffic noise in EU22 are over €40 billion per year, and passenger cars and lorries (trucks) are responsible for bulk of costs.[8] Traffic noise alone is harming the health of almost every third person in the WHO European Region. One in five Europeans is regularly exposed to sound levels at night that could significantly damage health.[9]

Noise is also a threat to marine[10] and terrestrial ecosystems.

**Contents**

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- 2 Cardiovascular effects
- 3 Stress
- 4 Annoyance
- 5 Child physical development
  - 5.1 Cognitive development
- 6 Regulations
Hearing loss

Main article: Noise-induced hearing loss

The mechanism of hearing loss arises from trauma to stereocilia of the cochlea, the principal fluid filled structure of the inner ear. The pinna combined with the middle ear amplifies sound pressure levels by a factor of twenty, so that extremely high sound pressure levels arrive in the cochlea, even from moderate atmospheric sound stimuli. Underlying pathology to the cochlea are reactive oxygen species, which play a significant role in noise-induced necrosis and apoptosis of the stereocilia. Exposure to high levels of noise have differing effects within a given population, and the involvement of reactive oxygen species suggests possible avenues to treat or prevent damage to hearing and related cellular structures.

The elevated sound levels cause trauma to cochlear structure in the inner ear, which gives rise to irreversible hearing loss. A very loud sound in a particular frequency range can damage the cochlea's hair cells that respond to that range thereby reducing the ear's ability to hear those frequencies in the future. However, loud noise in any frequency range has deleterious effects across the entire range of human hearing. The outer ear (visible portion of the human ear) combined with the middle ear amplifies sound levels by a factor of 20 when sound reaches the inner ear.

Age-related (Presbycusis)

Further information: Presbycusis

Hearing loss is somewhat inevitable with age. Though older males exposed to significant occupational noise demonstrate significantly reduced hearing sensitivity compared to non-exposed peers, differences in hearing sensitivity decrease with time and the two groups are indistinguishable by age 79.

Women exposed to occupational noise do not differ from their peers in hearing sensitivity, though they do hear better than their non-exposed male counterparts. Due to loud music and a generally noisy environment, young people in the United States have a rate of impaired hearing 2.5 times greater than their parents and grandparents, with an estimated 50 million individuals with impaired hearing estimated in 2050.

In Rosen's work on health effects and hearing loss, one of his findings derived from tracking Maaban tribesmen, who were insignificantly exposed to transportation or industrial noise. This population was systematically compared by cohort group to a typical U.S. population. The findings proved that aging is an almost insignificant cause of hearing loss, which instead is associated with chronic exposure to moderately high levels of environmental noise.

Cardiovascular effects
Noise has been associated with important cardiovascular health problems. In 1999, the World Health Organization concluded that the available evidence showed suggested a weak seeassociation between long-term noise exposure above 67-70 dB(A) and hypertension. More recent studies have suggested that noise levels of 50 dB(A) at night may also increase the risk of myocardial infarction by chronically elevating cortisol production.

Fairly typical roadway noise levels are sufficient to constrict arterial blood flow and lead to elevated blood pressure; in this case, it appears that a certain fraction of the population is more susceptible to vasoconstriction. This may result because annoyance from the sound causes elevated adrenaline levels trigger a narrowing of the blood vessels (vasoconstriction), or independently through medical stress reactions. Other effects of high noise levels are increased frequency of headaches, fatigue, stomach ulcers and vertigo.

**Stress**

Research commissioned by Rockwool, a UK insulation manufacturer, reveals in the UK one third (33%) of victims of domestic disturbances claim loud parties have left them unable to sleep or made them stressed in the last two years. Around one in eleven (9%) of those affected by domestic disturbances claims it has left them continually disturbed and stressed. Over 1.8 million people claim noisy neighbours have made their life a misery and they cannot enjoy their own homes. The impact of noise on health is potentially a significant problem across the UK given over 17.5 million Britons (38%) have been disturbed by the inhabitants of neighbouring properties in the last two years. For almost one in ten (7%) Britons this is a regular occurrence.

The extent of the problem of noise pollution for public health is reinforced by figures collated by Rockwool from local authority responses to a Freedom of Information Act (FOI) request. This research reveals in the period April 2008 - 2009 UK councils received 315,838 complaints about noise pollution from private residences. This resulted in environmental health officers across the UK serving 8,069 noise abatement notices, or citations under the terms of the Anti-Social Behaviour (Scotland) Act.

Westminster City Council has received more complaints per head of population than any other district in the UK with 9,814 grievances about noise, which equates to 42.32 complaints per thousand residents. Eight of the top 10 councils ranked by complaints per 1,000 residents are located in London.

**Annoyance**

Because some stressful effects depend on qualities of the sound other than its absolute decibel value, the annoyance associated with sound may need to be considered in regard to health effects. For example, noise from airports is typically perceived as more bothersome than noise from traffic of equal volume. Annoyance effects of noise are minimally affected by demographics, but fear of the noise source and sensitivity to noise both strongly affect the 'annoyance' of a noise. Even sound levels as low as 40 dB(A) (about as loud as a refrigerator or library) can generate noise complaints and the lower threshold for noise producing sleep disturbance is 45 dB(A) or lower.

Other factors that affect the 'annoyance level' of sound include beliefs about noise prevention and the
importance of the noise source, and annoyance at the cause (i.e. non-noise related factors) of the noise.[31]
For instance, in an office setting, audible telephone conversations and discussions between co-workers were considered to be irritating, depending upon the contents of the conversations. Many of the interpretations of the level of annoyance and the relationship between noise levels and resulting health symptoms could be influenced by the quality of interpersonal relationships at the workplace, as well as the stress level generated by the work itself.[32][33] Evidence regarding the impact of long-term noise versus recent changes in ongoing noise is equivocal on its impact on annoyance.[31]

Estimates of sound annoyance typically rely on weighting filters, which consider some sound frequencies to be more important than others based on their presumed audibility to the human ear. The older dB(A) weighting filter described above is used widely in the U.S., but underestimates the impact of frequencies around 6000 Hz and at very low frequencies. The newer ITU-R 468 noise weighting filter is used more widely in Europe. The propagation of sound varies between environments; for example, low frequencies typically carry over longer distances. Therefore different filters, such as dB(B) and dB(C), may be recommended for specific situations.

Furthermore, studies have shown that neighborhood noise (consisting of noise from neighboring apartments, as well as noise within one's own apartment or home) can cause significant irritation and noise stress within people, due to the great deal of time people spend within their residences. This can result in an increased risk of depression and psychological disorders,[34][35] migraines, and even emotional stress.[35]

In the workplace, noise pollution is generally a problem once the noise level is greater than 55 dB(A). Selected studies show that approximately 35 to 40% of workers in office settings find noise levels from 55 to 60 dB(A) to be extremely irritating.[32] The noise standard in Germany for mentally stressful tasks is set at 55 dB(A).[36] However, if the noise is source is continuous, the threshold level for tolerable noise levels amongst office workers actually becomes lower than 55 dB(A).[32]

One important effect of noise is to make a person's speech less easy to hear. The human brain automatically compensates the production of speech for background noise in a process called the Lombard effect in which it becomes louder with more distinct syllables. But this cannot fully remove the problems of communication intelligibility made in noise.

**Child physical development**

The U.S. Environmental Protection Agency authored a pamphlet in 1978 that suggested a correlation between low-birthweight babies (using the World Health Organization definition of less than 2,500 g (~5.5 lb) and high sound levels, and also correlations in abnormally high rates of birth defects, where expectant mothers are exposed to elevated sound levels, such as typical airport environs. Specific birth abnormalities included harelip, cleft palate, and defects in the spine.[37]

According to Lester W. Sontag of The Fels Research Institute (as presented in the same EPA study): "There is ample evidence that environment has a role in shaping the physique, behavior and function of animals, including man, from conception and not merely from birth. The fetus is capable of perceiving sounds and responding to them by motor activity and cardiac rate change." Noise exposure is deemed to be particularly pernicious when it occurs between 15 and 60 days after conception, when major internal organs and the central nervous system are formed.[38]
Later developmental effects occur as vasoconstriction in the mother reduces blood flow and hence oxygen and nutrition to the fetus. Low birth weights and noise were also associated with lower levels of certain hormones in the mother, these hormones being thought to affect fetal growth and to be a good indicator of protein production. The difference between the hormone levels of pregnant mothers in noisy versus quiet areas increased as birth approached.\[39\]

In a 2000 publication, a review of studies on birthweight and noise exposure note that while some older studies suggest that when women are exposed to >65 dB aircraft noise a small decrease in birthweight occurs, in a more recent study of 200 Taiwanese women including noise dosimetry measurements of individual noise exposure the authors found no significant association between noise exposure and birth weight after adjusting for relevant confounders, e.g. social class, maternal weight gain during pregnancy, etc.\[1\]

**Cognitive development**

When young children are exposed to speech interference levels of noise on a regular basis (the actual volume of which varies depending on distance and loudness of the speaker), they may develop speech or reading difficulties, because auditory processing functions are compromised. Children continue to develop their speech perception abilities until they reach their teenage years. Evidence has shown that when children learn in noisier classrooms, they have a more difficult time understanding speech than those who learn in quieter settings.\[40\]

In a study conducted by Cornell University in 1993, children exposed to noise in learning environments experienced trouble with word discrimination as well as various cognitive developmental delays.\[41\] In particular the writing learning impairment known as dysgraphia is commonly associated with environmental stressors in the classroom.\[citation needed\] The effect of high noise levels on small children has been known to cause physical health damages as well. Children from noisy residences often possess a heart rate that is significantly higher (by 2 beats/min on average) than in children from quieter residences.\[42\]

**Regulations**

*Main article: Noise regulation*

Environmental noise regulations usually specify a maximum outdoor noise level of 60 to 65 dB(A), while occupational safety organizations recommend that the maximum exposure to noise is 40 hours per week at 85 to 90 dB(A). For every additional 3 dB(A), the maximum exposure time is reduced by a factor 2, e.g. 20 hours per week at 88 dB(A). Sometimes, a factor of two per additional 5 dB(A) is used. However, these occupational regulations are acknowledged by the health literature as inadequate to protect against hearing loss and other health effects.

With regard to indoor noise pollution in residences, the U.S. EPA has not set any restrictions on limits to the level of noise. Rather, it has provided a list of recommended levels in its Model Community Noise Control Ordinance, which was published in 1975. For instance, the recommended noise level for indoor residences is less than or equal to 45 dB.\[43\]\[44\]

Noise pollution control in residences is not funded by the federal government in part because of the disagreements in establishing causal links between sounds and health risks, since the effect of noise is often
psychological and also because it leaves no singular tangible trace of damage on the human body. For instance, hearing loss could be attributed to a variety of factors including age, rather than solely due to excessive exposure to noise.\[^{45}\][^{46}\] However, a state or local government is able to regulate indoor residential noise, such as when excessive noise from within a home causes disturbances to nearby residences.\[^{45}\][^{47}\]

### See also

- Aircraft noise
- Noise mitigation
- Noise pollution
- Tinnitus

### References


4. ^\(^{a}\) Senate Public Works Committee, *Noise Pollution and Abatement Act of 1972*, S. Rep. No. 1160, 92nd Cong. 2nd session


10. ^\(^{a}\) http://www.whaleacoustics.com/purposeimpactofnoise.html


12. ^\(^{ab}\) S. Rosen and P. Olin, *Hearing Loss and Coronary Heart Disease*, Archives of Otolaryngology, **82**:236 (1965)

31. ^ a b Field, JM (1993). "Effect of personal and situational variables upon noise annoyance in residential
Health effects from noise - Wikipedia, the free encyclopedia

Health effects


41. Wakefield, Julie (June 2002). "Learning the Hard Way". Environmental Health Perspectives 110 (6).


External links

- Acoustical Society of America (http://asa.aip.org/)
- Noise and Health (http://www.noiseandhealth.org) International Journal devoted to research on all aspects of noise and its effects on human health
- ICBEN (http://www.icben.org/) International Commission on Biological Effects of Noise
EXHIBIT D
Noise Pollution: A Modern Plague: Adverse Health Effects of Noise

Adverse Health Effects of Noise

The WHO has documented seven categories of adverse health effects of noise pollution on humans. Much of the following comes from the WHO Guideline on Community Noise and follows its format. The guideline provides an excellent, reasonably up-to-date, and comprehensive overview of noise-related issues, as do the other recent reviews on this subject.

1. Hearing Impairment

Hearing is essential for well-being and safety. Hearing impairment is typically defined as an increase in the threshold of hearing as clinically assessed by audiometry. Impaired hearing may come from the workplace, from the community, and from a variety of other causes (eg, trauma, ototoxic drugs, infection, and heredity). There is general agreement that exposure to sound levels less than 70 dB does not produce hearing damage, regardless of the duration of exposure. There is also general agreement that exposure for more than 8 hours to sound levels in excess of 85 dB is potentially hazardous; to place this in context, 85 dB is roughly equivalent to the noise of heavy truck traffic on a busy road. With sound levels above 85 dB, damage is related to sound pressure (measured in dB) and to time of exposure. The major cause of hearing loss is occupational exposure, although other sources of noise, particularly recreational noise, may produce significant deficits. Studies suggest that children seem to be more vulnerable than adults to noise induced hearing impairment.

Noise induced hearing impairment may be accompanied by abnormal loudness perception (loudness recruitment), distortion (paracusis), and tinnitus. Tinnitus may be temporary or may become permanent after prolonged exposure. The eventual results of hearing losses are loneliness, depression, impaired speech discrimination, impaired school and job performance, limited job opportunities, and a sense of isolation.

In 2001, it was estimated that 12.5% of American children between the ages of 6 to 19 years had impaired hearing in one or both ears. As many as 80% of elementary school children use personal music players, many for extended periods of time and at potentially dangerous volume settings. There is little doubt that the use of consumer products, which produce increasingly high levels of noise and which are used with headsets or earphones, is growing and may well be responsible for the impaired hearing that is being seen with growing frequency in younger people. This form of noise is largely unregulated, despite warnings by the manufacturers.

In the young, hearing loss affects communication, cognition, behavior, social-emotional development, academic outcomes, and later vocational opportunities. These effects have been well documented in a number of large scale investigations in children.

Leisure-time exposure, which is generally unregulated, is increasing in other ways as well with resultant adverse effects. In a recent...
survey, a majority of young adults reported having experienced tinnitus or impaired hearing after exposure to loud music at concerts or in clubs. Very few (8%) considered loss of hearing a significant problem. Many of the respondents said they would be motivated to use ear protection if they were aware of the potential of permanent hearing loss (66%) or if such protection were advised by a medical professional (29%).

Those working in clubs, bars, and other places of entertainment are also at risk. It is well known that rock musicians frequently have noise-induced hearing loss. Apart from the musicians themselves, employees of music clubs, where noise frequently exceeds safe levels, are at risk. Thus, nearly a third of students who worked part time (bar staff or security staff) in a university entertainment venue were found to have permanent hearing loss of more than 30 dB.

The WHO recommends that unprotected exposure to sound levels greater than 100 dB (for example, the sound of a jackhammer or a snowmobile) should be limited in duration (4 h) and frequency (four times/year). The threshold for pain is usually given as 140 dB, a level readily achieved in today’s boom-cars. Impulse noise exposure (gunfire and similar sources of intense noise of brief duration) should never exceed 140 dB in adults and 120 dB in children. Firecrackers, cap pistols, and other toys can generate sufficient sound levels to cause sudden and permanent hearing loss. Levels greater than 165 dB, even for a few milliseconds, are likely to cause acute cochlear damage. It is important to remember to counsel patients that ears do not get used to loud noise. As the League for the Hard of Hearing notes—they get deaf.

2. Interference with Spoken Communication

In 1974, in an attempt to protect public health and welfare against the adverse effects of noise, the EPA published so-called safe levels of environmental noise that would permit normal communication both in and out of doors. Noise pollution interferes with the ability to comprehend normal speech and may lead to a number of personal disabilities, handicaps, and behavioral changes. These include problems with concentration, fatigue, uncertainty, lack of self-confidence, irritation, misunderstandings, decreased working capacity, disturbed interpersonal relationships, and stress reactions. Some of these effects may lead to increased accidents, disruption of communication in the classroom, and impaired academic performance. Particularly vulnerable groups include children, the elderly, and those not familiar with the spoken language.

3. Sleep Disturbances

Uninterrupted sleep is known to be a prerequisite for good physiologic and mental functioning in healthy individuals. Environmental noise is one of the major causes of disturbed sleep. When sleep disruption becomes chronic, the results are mood changes, decrements in performance, and other long-term effects on health and well-being.[1] Much recent research has focused on noise from aircraft, roadways, and trains. It is known, for example, that continuous noise in excess of 30 dB disturbs sleep. For intermittent noise, the probability of being awakened increases with the number of noise events per night.[1]

The primary sleep disturbances are difficulty falling asleep, frequent awakenings, waking too early, and alterations in sleep stages and depth, especially a reduction in REM sleep. Apart from various effects on sleep itself, noise during sleep causes increased blood pressure, increased heart rate, increased pulse amplitude, vasoconstriction, changes in respiration, cardiac arrhythmias, and increased body movement.[1] For each of these, the threshold and response relationships may be different. Some of these effects (waking, for example) diminish with repeated exposure; others, particularly cardiovascular responses, do not.[2] Secondary effects (so-called after effects) measured the following day include fatigue, depressed mood and well-being, and decreased performance.[3] Decreased alertness leading to accidents, injuries, and death has also been attributed to lack of sleep and disrupted circadian rhythms.[3]

Long-term psychosocial effects have been related to noiseful sleep. Noise annoyance during the night increases total noise annoyance for the following 24 hours. Particularly sensitive groups include the elderly, shift workers, persons vulnerable to physical or mental disorders, and those with sleep disorders.[4]

Other factors that influence the problem of night-time noise include its occurrence in residential areas with low background noise levels and combinations of noise and vibration such as produced by trains or heavy trucks. Low frequency sound is more disturbing, even at very low sound pressure levels; these low frequency components appear to have a significant detrimental effect on health.[5]

4. Cardiovascular Disturbances

A growing body of evidence confirms that noise pollution has both temporary and permanent effects on humans (and other mammals) by way of the endocrine and autonomic nervous systems. It has been postulated that noise acts as a nonspecific biologic stressor eliciting reactions that prepare the body for a fight or flight response.[1,6,7] For this reason, noise can trigger both endocrine and autonomic nervous system responses that affect the cardiovascular system and thus may be a risk factor for cardiovascular disease.[1,6,7,33,34] These effects begin to be seen with long-term daily exposure to noise levels above 65 dB or with acute exposure to noise levels above 80 to 85 dB.[1,3] Acute exposure to noise activates nervous and hormonal responses, leading to temporary increases in blood pressure, heart rate, and vasoconstriction. Studies of individuals exposed to occupational or environmental noise show that exposure of sufficient intensity and duration increases heart rate and peripheral resistance, increases blood pressure, increases blood viscosity and levels of blood lipids, causes shifts in electrolytes, and increases levels of epinephrine, norepinephrine, and cortisol.[5] Sudden unexpected noise evokes reflex responses as well. Cardiovascular disturbances are independent of sleep disturbances; noise that does not interfere with the sleep of subjects may still provoke autonomic responses and secretion of epinephrine, norepinephrine, and cortisol.[33] These responses suggest that one can never completely get used to night-time noise.

Temporary noise exposure produces readily reversible physiologic changes. However, noise exposure of sufficient intensity, duration, and unpredictability provokes changes that may not be so readily reversible. The studies that have been done on the effects of environmental noise have shown an association between noise exposure and subsequent cardiovascular disease.[1,6,7,33,34] Even though the increased risk for noise-induced cardiovascular disease is small, it assumes public health importance because both the number of people at risk and the noise to which they are exposed continue to increase.[1,5]

Children are at risk as well. Children who live in noisy environments have been shown to have elevated blood pressures and elevated levels of stress-induced hormones.[2,11,18]

5. Disturbances in Mental Health
Noise pollution is not believed to be a cause of mental illness, but it is assumed to accelerate and intensify the development of latent mental disorders. Noise pollution may cause or contribute to the following adverse effects: anxiety, stress, nervousness, nausea, headache, emotional instability, argumentativeness, sexual impotence, changes in mood, increase in social conflicts, neurasthenia, hysteria, and psychosis. Population studies have suggested associations between noise and mental-health indicators, such as rating of well-being, symptom profiles, the use of psychoactive drugs and sleeping pills, and mental-hospital admission rates. Children, the elderly, and those with underlying depression may be particularly vulnerable to these effects because they may lack adequate coping mechanisms.[1]

Children in noisy environments find the noise annoying and report a diminished quality of life.[10,37]

Noise levels above 80 dB are associated with both an increase in aggressive behavior and a decrease in behavior helpful to others.[38-40]

The news media regularly report violent behavior arising out of disputes over noise; in many cases these disputes ended in injury or death. The aforementioned effects of noise may help explain some of the dehumanization seen in the modern, congested, and noisy urban environment.[2]

6. Impaired Task Performance

The effects of noise pollution on cognitive task performance have been well-studied. Noise pollution impairs task performance at school and at work, increases errors, and decreases motivation.[11,41] Reading attention, problem solving, and memory are most strongly affected by noise. Two types of memory deficits have been identified under experimental conditions: recall of subject content and recall of incidental details. Both are adversely influenced by noise. Deficits in performance can lead to errors and accidents, both of which have health and economic consequences.[1]

Cognitive and language development and reading achievement are diminished in noisy homes, even though the children's schools may be no noisier than average.[13] Cognitive development is impaired when homes or schools are near sources of noise such as highways and airports.[4,14] Noise affects learning, reading, problem solving, motivation, school performance, and social and emotional development.[5,5,10,18,47] These findings suggest that more attention needs to be paid to the effects of noise on the ability of children to learn and on the nature of the learning environment, both in school and at home. Moreover, there is concern that high and continuous environmental noise may contribute to feelings of helplessness in children.[11,14]

Noise produces negative after-effects on performance, particularly in children. It appears that the longer the exposure, the greater the effect. Children from noisy areas have been found to have heightened sympathetic arousal indicated by increased levels of stress-related hormones and elevated resting blood pressure.[14] These changes were larger in children with lower academic achievement. As a whole, these findings suggest that schools and daycare centers should be located in areas that are as noise-free as possible.[1]

7. Negative Social Behavior and Annoyance Reactions

Annoyance is defined as a feeling of displeasure associated with any agent or condition believed by an individual to adversely affect him or her. Perhaps a better description of this response would be aversion or distress. Noise has been used as a noxious stimulus in a variety of studies because it produces the same kinds of effects as other stressors.[3] Annoyance increases significantly when noise is accompanied by vibration or by low frequency components.[52] The term annoyance does not begin to cover the wide range of negative reactions associated with noise pollution; these include anger, disappointment, dissatisfaction, withdrawal, helplessness, depression, anxiety, distraction, agitation, or exhaustion. Lack of perceived control over the noise intensifies these effects.[1,10]

Social and behavioral effects of noise exposure are complex, subtle, and indirect. These effects include changes in everyday behavior (e.g., closing windows and doors to eliminate outside noise; avoiding the use of balconies, patios and yards; and turning up the volume of radios and television sets); changes in social behavior (e.g., aggressiveness, unfriendliness, nonparticipation, or disengagement); and changes in social indicators (e.g., residential mobility, hospital admissions, drug consumption, and accident rates); and changes in mood (increased reports of depression).[1]

Noise exposure per se is not believed to produce aggressive behavior. However, in combination with provocation, preexisting anger or hostility, alcohol or other psychoactive agents, noise may trigger aggressive behavior.[38] Our news is filled with examples of this kind of behavior.

The degree of annoyance produced by noise may vary with the time of day, the unpleasant characteristics of the noise, the duration and intensity of the noise, the meaning associated with it, and the nature of the activity that the noise interrupted.[1] Annoyance may be influenced by a variety of nonacoustical factors including individual sensitivity to noise.[43] These include fear of the noise source, conviction that noise could be reduced by third parties, individual sensitivity, the degree to which an individual feels able to control the noise, and whether or not the noise originated from an important economic activity.[1,10] Other less direct effects of annoyance are disruption of one's peace of mind, the enjoyment of one's property, and the enjoyment of solitude.

Greater annoyance has been observed when noise is of low frequency, is accompanied by vibrations that contain low-frequency components, or when it contains impulses such as the noise of gunshot.[1,22] Annoyance is greater when noise progressively increases rather than remaining constant. Average outdoor residential day-night sound levels below 55 dB were defined as acceptable by the EPA; acceptable average indoor levels were less than 45 dB.[17] To put these levels into perspective, sound levels produced by the average refrigerator or the sounds in the typical quiet neighborhood measure about 45 dB.[17] Sound levels above this produce annoyance in significant numbers of people.

The results of annoyance are privately felt dissatisfaction, publicly expressed complaints to authorities (although underreporting is probably significant), and the adverse health effects already noted. Given that annoyance can metamorphose more than slight irritation, it describes a significant degradation in the quality of life, which corresponds to degradation in health and well-being. In this regard, it is important to note that annoyance does not abate over time despite continuing exposure to noise.[12]
EXHIBIT E
Program Implementation Plan
Fremont Union High School District • December 2010
Volume 1
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Section I

Executive Summary

On June 3, 2008, District voters approved a Proposition 39 Bond - known as Measure B - in the amount of $198,000,000. In October of 2008, the District advertised for a construction management firm and an architectural firm to develop a Program Implementation Plan (PIP). These firms, along with the District Steering Committee, would make up the team to develop the plan. In December of 2008, Kitchell and HMC Architects were selected to work with the District to begin the process. The intent of this plan is to provide a road map for the implementation of identified projects developed after gathering information from throughout the District. This information included a detailed facility assessment conducted by Kitchell, HMC Architects, and the staff from each site. Many meetings were conducted over a period of months to ensure the team gathered all the information necessary to provide the comprehensive plan described in detail in the following sections of report. The process of the plan’s development is described in detail in Section 2A.

The passage of Measure B follows the April 1998 Measure H Facilities Modernization Program, which modernized Classrooms and added or expanded Libraries, Drama, and Music facilities at all five sites while also adding Field Houses on three campuses. Measure B is slated to complement the previously completed work. The program is defined by the bond language as summarized below:

- Create a dedicated Technology Fund to allow the District to upgrade computers and related technology
- Build new Science Labs
- Construct new Classrooms needed to avoid overcrowding
- Replace aging heating, lighting, plumbing and electrical systems
- Improve energy efficiency at each high school
- Create Classroom/Labs designed for career and technical education classes that supplement traditional college preparatory courses
- Upgrade and improve athletic facilities and fields
- Improve campus safety and security
- Upgrade and improve emergency communication systems
- Add solar power and make the dollars now spent on utility bills available for other programs

1 District Website Measure B Bond Language
A. PROGRAM GOALS

- Goal 1: Correct facility system deficiencies (Heating, Ventilation, and Air Conditioning (HVAC), Electrical, Plumbing, Infrastructure)
- Goal 2: Increase number of classrooms, science labs, and collaboration spaces
- Goal 3: Improve energy efficiency with solar panels
- Goal 4: Upgrade athletic facilities
- Goal 5: Create a dedicated technology fund
- Goal 6: Renovate existing Kitchen and Cafeteria Facilities
- Goal 7: Modernize existing spaces and make required ADA upgrades

Scope of Work Priorities and Project Recommendations

The Measure B Bond Program began with renovations of the fields and sports facilities at each of the five high schools and extensive solar energy projects throughout the District. Included in the following list of work scopes and priorities are those items identified by the PIP team as a result of multiple District-level Steering Committee meetings, site meetings, and extensive physical site assessments conducted by Kitchell and HMC Architects. As the extent of work needed to accomplish the bond scope and site priorities were defined, cost estimates were prepared. This information became the basis for identification of the proposed scope of work at each school. This scope of work has been divided into discrete projects for implementation.

Typical site related projects include:

New Construction Capital Improvement Projects

- Build new two-story Library, Guidance and Support Services, and Kitchen/Cafeteria Building at Cupertino High School
- Build new Field House/Classroom Building at Homestead High School
- Build new PE Classroom, Weight Room, and Team Room Building at Cupertino High School
- Build new single-story classroom building at Monta Vista High School
- Build new single-story classroom building at Fremont High School
Modernization and Renovations

Cupertino High School
- Convert existing Guidance and Support Services Building to Classrooms
- Convert existing Library Building to Classrooms
- Upgrade Restrooms to meet current code and ADA requirements at Pioneer Park
- Create additional Restrooms in Wagon Wheel
- Replace identified HVAC units, provide exhaust hoods, and install dust removal system as well as service and replace fan coil units

Fremont High School
- Expand and renovate existing Kitchen and Cafeteria
- Replace identified fan coil and HVAC units

Homestead High School
- Expand and renovate existing Kitchen and Cafeteria and reconfigure Quad
- Improve Mechanical and Central Plant including replacement of cooling towers, chillers, and pumps; HVAC repair and rebalance
- Repair problematic issues within the Utility Tunnels
- Renovate existing Library
- Renovate the Guidance/Support Services Building

Lynbrook High School
- Expand and renovate existing Kitchen and Cafeteria
- Renovate and expand existing Guidance and Support Services Building
- Expand the Library to add a Global Learning Center component
- Upgrade Mechanical and Boiler Rooms; install exhaust systems in the Kitchen, and fans and louvers in Classrooms; and replace AC unit in Wing 00
- Install new automatic Gym Bleachers
- Formalize student and visitor entrances and improve wayfinding
- Enclose Auditorium Lobby Entrance
- Expand the Pool deck
Monta Vista High School
- Expand and renovate existing Kitchen and Cafeteria
- Upgrade Building B Restrooms for ADA compliance
- Repair/replace rafter tails and re-roof at various locations
- Repair HVAC in Buildings A, B, and C

Central Office and Educational Options Center
- Add a portable classroom and improve utilities to support the Young Parent Program (YPP)
- Reconfigure entrance to the Community School to reclaim needed parking spaces
- Renovate Education Options Center and Professional Learning Center Building Restroom for ADA compliance with upgrades including mechanical, electrical, plumbing, and finishes.
- Renovate Restrooms in the Main Building and in Adult and Community Education (ACE)

Infrastructure Projects
- Infrastructure projects have been identified at all five high school sites. The projects vary in extent from site to site but generally include:
  - A utility site and video survey of all underground utilities to determine existing conditions and the extent of needed repairs
  - Replacement of water and irrigation lines as well as waste water and drainage systems
  - Repair or replacement with new hardscape of roadways, parking, and paving areas as needed
- Identified above-ground utilities are addressed as well, including utilities on covered walkways

Campus Security
- In order to increase safety and security at each high school site, it was determined that security cameras were needed. The projects provide security cameras at all five sites within allocated budgets.
Priority 1, 2, 3, and 4 Budgeting Process

It is rare for a school district to have at its disposal sufficient funds to tackle all of the facility improvement projects it deems desirable. With that in mind, the Management team structured -- from the beginning -- a prioritization process for the Measure B Bond Program. The process coordinated the priorities of the sites, the Steering Committee, and the physical site assessment results.

- **Priority 1 Scopes of Work:** The identified scope of work in Priority 1 has four components:
  - It meets the requirements of the bond language
  - It includes the major priorities for each site
  - It addresses the needs identified in the Facility Assessments
  - It provides the Capital Improvement Projects selected to improve campus facilities for students.

- **Priority 2 & 3 Scopes of Work:** The scopes of work in Priorities 2 and 3 are those identified as meeting the intent of the bond language but not at the top of the priority lists and/or those items determined as not critical to the immediate and/or near term ongoing operations of the site facilities or otherwise needed for immediate support of FUHSD's educational program. Priority 3 scopes are primarily identified as those needed to support the District's future growth.

- **Priority 4 Scopes of Work:** Scopes included in Priority 4 are those meeting the criteria of the bond language but potentially able to be completed by District staff either through the typical work order processes or the District's Deferred Maintenance Program.

Detailed Scopes of Work can be found in Section 3C entitled Matrix of Proposed Upgrades and in Section 5 entitled Detailed Project Data.

**Budget**

Table 1 on the next page indicates all estimated costs for Priorities 1 through 4 as well as District-initiated projects which include technology, photovoltaics, and fields projects. Project recommendations are based on specific budgets which are prioritized in the estimate section of this report and detailed by site in Section 5 entitled Detailed Project Data.

The current projected cost for all of these projects is $393M approximately.
### Capital Improvement and Modernization Projects

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<td>Homestead HS</td>
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<td>$55,595,305</td>
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<td>Monta Vista HS</td>
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<td>$1,455,605</td>
<td>$180,739</td>
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<td>$15,931,055</td>
<td>$291,020</td>
<td>$-</td>
<td>$19,524,576</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>$52,308,859</strong></td>
<td><strong>$1,320,597</strong></td>
<td><strong>$224,495,671</strong></td>
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<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim Housing</td>
<td>$3,617,000</td>
</tr>
<tr>
<td>Abatement</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Program Management Costs</td>
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<td>Program Contingency</td>
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<tr>
<td>Escalation</td>
<td>$29,570,123</td>
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<tr>
<td><strong>Total, Priorities 1-4</strong></td>
<td><strong>$282,141,433</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields Projects</td>
<td>$70,000,000</td>
</tr>
<tr>
<td>Photovoltaics</td>
<td>$33,000,000</td>
</tr>
<tr>
<td>Technology</td>
<td>$8,000,000</td>
</tr>
<tr>
<td><strong>Total Master Plan Summary of All Priorities and Projects</strong></td>
<td><strong>$393,141,433</strong></td>
</tr>
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</table>

Table 1

As noted above, not all projects identified as desirable are needed immediately so those projects identified as either Priority Two or Three have been deferred to the future, thereby reducing the total estimated cost of the projects included under the auspices of this plan to approximately $231.4M as outlined in Table 2 on the next page.
<table>
<thead>
<tr>
<th>School</th>
<th>Fields Project</th>
<th>Photovoltaics</th>
<th>Capital Improvement Projects - Priority One</th>
<th>Modernization Projects - Priority One</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Cupertino High School</td>
<td></td>
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<td>$22,833,654</td>
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<td>$8,575,864</td>
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<td>Monta Vista High School</td>
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<td>$5,768,267</td>
<td>$8,122,696</td>
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<td></td>
<td>$3,551,917</td>
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<td>Other Identified Projects</td>
<td>Program Contingency</td>
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<tr>
<td></td>
<td>Technology</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Haz Mat Abatement</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interim Housing</td>
<td>$3,617,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program Costs</td>
<td>$11,244,903</td>
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Table 2
Table 3 illustrates a breakdown of the budget by category.

<table>
<thead>
<tr>
<th>Budget Categories</th>
<th>Budget</th>
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</thead>
<tbody>
<tr>
<td>1 Fields Projects</td>
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</tr>
<tr>
<td>2 Photovoltaic Projects</td>
<td>$33,000,000</td>
</tr>
<tr>
<td>3 Capital Improvement Projects</td>
<td>$60,794,012</td>
</tr>
<tr>
<td>4 Modernization Projects</td>
<td>$59,584,144</td>
</tr>
<tr>
<td>5 Technology</td>
<td>$8,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$231,378,156</strong></td>
</tr>
</tbody>
</table>

While there is still a gap between projected revenue from the currently identified funding sources and the total estimated costs of the Priority 1 and District-initiated projects (noted as other funding sources), the District has identified a number of different possible funding sources to reduce the differential between the projected revenue and the currently identified budget. Those sources include:

- State matching money - new construction: The currently identified revenue of $5M is very conservative. FUHSD has greater eligibility for funding from this program than this. Current state bonds, however, are likely to be exhausted soon, and the ability of FUHSD to claim in a timely manner more of the funds it is eligible for will be dependent on the passage of a new state-wide school facilities bond. For a more detailed description of state matching money, see Section 3G.
- State matching money-modernization: Each year in January, the state reviews the grant amounts for modernization and may make adjustments to the grants - either up or down - based on changes in the cost of construction over the course of the past year. All adjustments in the recent years have been increases. While increases in grant amounts are likely, they cannot currently be estimated or even counted upon.
- Federal funding: The federal government periodically makes funds available for specific types of school facilities projects. FUHSD will monitor the availability of such funds and aggressively pursue any such programs for which our projects qualify. For a more detailed description of currently identified federal funding, see Section 3G.
- Lease revenue: FUHSD receives lease revenue from sites/facilities it leases to other organizations. Some revenues could be tapped into if need be to support this program.
- Bid/Project savings: Any bid savings and unused change order contingencies will be returned to the overall project budget for attribution to other identified projects as projects are completed. Monitoring the overall budget is an ongoing process, one to which FUHSD will pay close attention. An, if need be, the project list and/or identified project scopes may need to be altered if anticipated additional funding does not become available.

Schedule Strategy

The schedule strategy for this plan has been developed taking four primary factors into account.

1. All funds from Measure B and other identified sources will not be available all at once.
2. Identifying and implementing the priority projects by the most immediate need at each site.
3. The time of year a project may be started, its duration, and the need for interim housing for students and staff.

See Section 3-E for the master schedule. The master plan of all identified needs can be found in Appendix A.
B. DISTRICT OVERVIEW

Description of Fremont Union High School District
Originally organized in 1921 as the West Side Union High School District, today's Fremont Union High School District has evolved from those early days. The District purchased the present Fremont High School Site with a temporary building in 1923 and added a new building in 1924.

From the 1924 base of 400 students, the District has grown to over 10,000 students. This growth lead to the development of six high schools sites - including the currently leased Sunnyvale High School site - serving students and the community from Cupertino, Sunnyvale, San Jose, Los Altos, Saratoga, and Santa Clara. The current District office was established in 1961.

Sunnyvale High School opened in 1956 with 9th and 10th grade classes. As a result of projected declining enrollment and Proposition 13-related budget cuts throughout the District, the high school was closed in 1981 and leased to Westinghouse until 1992. The site is currently leased to private schools, a church, and a daycare center.

Cupertino High School opened in 1958 with 700 9th and 10th graders. Enrollment peaked between 1964 and 1968 with over 2,500 students. In 1986 the science building burned down. It was rebuilt, and a new Field House was constructed with Measure H Bond funds between 2000 and 2006.

Homestead High School opened in the fall of 1962 with 9th and 10th grade classes. The students were housed temporarily at Fremont High School - attending half days due to severe winter weather while Fremont High School students also attended half days. Peak enrollment of 2,500 students occurred in 1968 to 1969.

Lynbrook High School opened in the fall of 1965 with 9th and 10th grade classes. The addition of the District's fourth high school relieved the overcrowding at Cupertino High School.

Monta Vista High School opened in the fall of 1969 with 9th and 10th grade classes easing the overcrowding at Homestead High School.
I am very much in support of the district, and everything they have done in relation to the upgrade to the athletic fields.

My property DIRECTLY borders the fields, and the back turn of the track will be about 50ft from my fence.

I applaud the installation of the lights, and approve of the remedial steps the District has taken to reduce their impact.

I am VERY MUCH against the installation of sound walls, or the other sound mitigation options.

Thank you.

Christopher J. Anthony
AVP/Team Leader - Collateral Examination Group

Comerica Bank
333 W. Santa Clara Street
12th Floor, M/C 4840
San Jose, CA  95113

Ph:(408) 556-5846    Fax:(408) 556-5852

Please be aware that if you reply directly to this particular message, your reply may not be secure. Do not use browser email to send us communications which contain unencrypted confidential information such as passwords, account numbers, or Social Security numbers. If you must provide this type of information, please visit www.comerica.com to submit a secure form using any of the "Contact Us" forms. In addition, you should not send via email any inquiry or request that may be time sensitive.

If you receive this email by mistake, please destroy or delete the message and advise the sender of the error by return email.
Scanned by Barracuda Spam Firewall  --
Hello,
I am the owner of one of the houses that would be impacted by the sound wall at Lynbrook.

Please do not put that up.

A wall that would impact people who ARE NOT the ones who were complaining about the noise seems pretty silly. A wall for 5 or 6 nights a year seems extreme.

I welcome the new field, occasional noise and lights. I believe the school's efforts to regulate times is more than enough to ensure a good solution for all.

May I also suggest that the school makes sure to send out schedules to those who border the school? Just informing them of them of the schedules may help people to plan.

Thanks,
Peggy Alreck-Anthony

Scanned by Barracuda Spam Firewall --
Hi,
I graduated from Lynbrook in 2010, but I am still a neighbor that lives directly behind Lynbrook, I back up to the fence. I played varsity baseball and varsity soccer for 4 years, and I think that lights would be a tremendous improvement to the community. Not only will our football team actually get to play at home, but it will help improve the community as well. Instead of complaining about the lights, they should come together and celebrate the school that makes this neighborhood so great. The students at Lynbrook work very hard to give their school a good reputation, and they shouldn't be deprived of a quintessential high school opportunity that they only have one chance at, cheering on their high school football team on their own home field under the lights. It's not going to be every night, it's not going to go until midnight. They will respect the neighbors around them. Putting in lights at Lynbrook can only be a positive for the school and it's student, and I feel that it will not affect me or my neighbors at all, especially if the correct technology is used.

Tyler Anthony
(408) 391-1883
tyler.lee.anthony@gmail.com
5516 Oak Park Dr.
San Jose, California 95129

Sent from my iPhone
To Whom May Help,

As a parent of two Lynbrook students, I wholehearted support the upgrade of the athletic fields. I am excited that my children will be able to benefit from quality facilities that will serve to enhance their school experience and bring the community together.

Sincerely,

Su-Miao Chen

(408)255-7677

Derek and Ryan Wang, 11th Grade

---
0 0
\________________/

Scanned by Barracuda Spam Firewall   --
As a parent of a Lynbrook student, I wholeheartedly support the upgrade of the athletic facility. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together. As a marching band member he will be able to perform on his home field for his school's home coming ceremonies and other games for which the students at Lynbrook have to go to other schools.

Aniruddh Dikhit
Tel : 408 338 8350
In regards to the lighting at Lynbrook Sports fields, I certainly think my two sons missed a great deal of school spirit due to the lack of home field playing time. I have a 20 year old son who is now attending UC Berkeley and played football & track while attending Lynbrook. I also have a Senior at Lynbrook now who has also been on football, soccer and track. All these sports are outside sports that have missed out on the school support they deserved. They both have never seen a true home field event at his school - and I believe the sports teams suffer the most in this regard. The student body in general have less enthusiasm to come out and support their teams when they have to travel to watch their teams play. I saw this when I went to watch our indoor sports take place on campus. For both Basketball and Swimming (waterpolo - which has lighting for night time games), the attendance of the student body as a spectator is high. The spirit is there for those sports, however in Football, Track and Soccer (those are the ones I have observed) the student body at a home game is extremely low.

Even though we will miss out on the new track and lighting, I strongly support the lighting to be installed at Lynbrook. I think our sports should be as highly regarded as our academics! It is time to support our athletes!

--

Thank you,

Julie Ferrario (408-981-3361)

Parent of two good students who missed out home field events due to lack of lights!

Scanned by Barracuda Spam Firewall --
"As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together."

Sincerely,

Rahul Gaur
I disagree with the FUSHD revision of the environmental impact report, because this report does not state that outside adult soccer leagues will be able to use the new facilities.

Therefore, this report is incomplete.

Kathleen Herington
Lynbrook neighbor
There seems to be something left out.

At 2.1 the definition of "Late August" must be explained further in order to make the claims of reduced impact.

Otherwise, how were the statistics compiled?

Lynbrook Neighbor
Hello,

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together."

Sincerely,

A. Parent

Scanned by Barracuda Spam Firewall   --
To Whom it may concern,

As a Lynbrook parent and neighbor, I am very much in favor of the improvements to the Athletic fields, including the addition of field lighting. I have reviewed the numerous iterations of the Environmental Impact Report and I feel the School District and Lynbrook have taken great strides to mitigate the impact of the lights and noise to the neighboring homes. The previous lighting schedule reduced the noise and lighting levels to a less than significant level, and the new proposed schedule reduces the level even more. Please do not delay this project any more than it already has, these new fields will provide a much safer alternative for my children and the future student athletes of Lynbrook High School.

Regards,
Anna Sternad James
Lynbrook Athletic Boosters

(408) 914-0416 Cell
Dear Madam/Sir,

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my son will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

Sincerely,
Chrisoula Kantiotou Ph.D.
408-892-4939

Scanned by Barracuda Spam Firewall   --
Let the school have lights. It's not like the neighbors didn't know they were moving in next to a school when they bought their house. Set up an agreement like the neighbors did with Saratoga HS when they put in their lights. And please do outlaw "Rock Concerts" at the Lynbrook campus but Friday Night Lights is part of what HS is about.

hank lawson
Saratoga CA

Scanned by Barracuda Spam Firewall --
As a parent of three Lynbrook students, I wholehearted support the upgrade of the athletic fields. I am excited that my children will be able to benefit from quality facilities that will serve to enhance their school experience and bring the community together.

Sincerely,

Daisy Lee

Scanned by Barracuda Spam Firewall
Hello,
As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields.
I am excited that my daughter will be able to benefit from quality facilities that will serve to enhance her school experience and bring the community together.

Sincerely,
Meeyae Lee

--
Thanks,
Meeyae Lee mysmilelee@gmail.com

Scanned by Barracuda Spam Firewall
To whom it may concern:

As a parent of a Lynbrook students, I fully support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

Sincerely,

Maojuan Li
I have read the recirculated EIR and I do not agree with it.

You are not considering the families who purchased their homes many years ago with the understanding that there would not be a lighted sports field.

Portable lights would be acceptable for a few games a year (similar to Mitty High School), but the permanent huge structure is unconscionable. We have driven by Cupertino High when their field is lighted and the light spill from the new lights covers many city blocks.

What has been totally ignored is the potential traffic.

We have experienced the traffic congestion when the parents bring their students to our neighborhood commuter school: Murdock-Portal School. We have to schedule our trips around their schedule.

We DO NOT have any businesses surrounding Lynbrook. There are no public parking lots. We have seen what happens on Graduation night when the visitors park on our streets and partially in our driveways and the traffic congestion while people look for a parking place

It is ludicrous to believe that people will take the bus. The bus drops off at Prospect or Johnson Avenues. Visitors will not walk the 5 blocks to get to the school.

FUHSD is out of touch with the neighbors in the Lynbrook, Murdock Neighborhood.

Doris M Livezey
As community members and homeowners we wanted to voice our positive feedback to have lights at Lynbrook High School.

We live very near Calabazas Park which has lights at night. These lights were put in long time ago. They are not directional or "sensitive" in any way. They do not bother us at all. We want to ensure the Lynbrook neighbors who are opposed, that they are not intrusive. The traffic is impacted, but we love the fact that we have a well used park. This keeps the transients and potential trouble-makers away.

We know the Lynbrook administration has taken great strides to compromise use and the times they are used. I think considering newer technology and sensitivity to the community, the lights will be a fantastic addition to Lynbrook. Not to mention the building of a great student community, with pride in their home school!

Thank you for consideration of this matter,

Rolf and Mary Lund
1069 Cynthia Lane
San Jose, CA 95129

Scanned by Barracuda Spam Firewall --
From: Ed Myers
To: REIR_MVHS@fuhsd.org;
cc: "Dave Radtke spacegopher"@live.com; REC_LHS@fuhsd.org;
Doris Livezey;
Subject: EIR Response
Date: Sunday, February 26, 2012 1:46:29 PM

I am a home owner who backs up to the Lynbrook sports fields. My property is located in opposite corner from the football field (next to the unused softball field). While I am less effected by the designs, I still have a couple of questions/concerns.

1) What about the morning usage, especially band practice. Often we hear the band on the field early on the weekends, especially the drum line which can often start as early as 8am and go all day long. I imagine this violates the 55 dBA limit. I would like to see the school district make a commitment as to the morning and afternoon noise levels as well as the evening noise levels.

2) My property is outside the proposed sound barriers. Having been here for years, I can safely state, I will hear the noise from the football field. To state properties outside the sound barrier will not be effected by the noise is ridiculous. On the flip side, I have not minded most of the activities on the field and have even enjoyed watching the softball games. This leads me to item #3.

3) On various layouts, I will sometimes see plantings along my fence line. In the original draft, it was stated these plantings will not effect the vista view of the mountains. I do not see any current wording or even a cohesive plan to these plantings. Any plantings which reach 8 feet will definitely have a negative on the views from my property. I would like to see enforceable statements as to the intentions of the property lines for all of the schools perimeter.

I purchased this property knowing I backed up to a sports field. This was acceptable and in fact my children have used these fields when they attended LHS. The only negative experiences I’ve had included a three day weekend volleyball tournament on the field, the yearly drum line practice and the arrogance of the school district. Many of the concerns of the neighbors could have been adverted if you engaged us in the planning process. Twice now they have mislead use on the use of the measures of your "infrastructure" bonds. I first became upset with the late 1990's measure. In this case the school sent out a survey asking how to spend the bond money. Surprisingly, very few of the items on the
survey were supported. Instead we got a new pool and weight room. Items not on the survey.

The district has lost all credibility in my eyes.

Regards,
Ed Myers
Dear FUHSD,

I am a parent of three children. Two are currently attending Lynbrook and the other will be attending in the future.

Our family is in FULL SUPPORT of putting up lights at the new Lynbrook football field for the following reasons:

- Night football games at home are a fond memory of my high school experience as it was a positive and safe environment for student interaction unlike any other.
- The ability to play home night games provides fairer competition versus schools that have lights. Marching band is also at a disadvantage if they are required to practice in conditions different form where they compete.
- When games or other events that require field lighting are needed, they had to be held at another field (e.g., Cupertino High). It is not fair to those neighbors who need continue playing host a different school.
- There is additional gas (pollution) and human labor required to transport hundreds of people and equipment to another field. This includes the football team, marching band, cheerleaders, fans, concessions products, etc. that would not have to travel to a different school to host a game.
- Marching band practice requires the transport of a huge amount of instruments that require two trailers twice a week.
- If the band were to practice at Lynbrook without permanent lights, then there would be an additional cost to rent portable lights and these lights will shine more directly on the neighbors, make more noise, and create more air pollution.
- There are actually few dates that field lights will be required each year.
- It is not fair that the whole community suffer just to satisfy the selfishness of a handful of neighbors, and not all the neighbors near the field are against lights.
- I live near a community swimming pool (Queensboro pool) and there are cars parked all around and noise from kids playing in the pool, however I am okay with it since it comes with where I chose to live.

I am sure I have more reasons for my support of lights at the Lynbrook football field. I request that you support this as well.
Sincerely,

David Nishijima  
1138 White Cliff Dr., San Jose, CA 95129

Scanned by Barracuda Spam Firewall  --
Dear FUHSD board,

This past fall, I experienced my first FUHSD Marching Band Exposition, which was hosted by Homestead High School and featured the band programs in our district. I was amazed and impressed by the quality of Homestead’s athletic fields, facilities, track, and stadium. It occurred to me that a school district with such an outstanding reputation for supporting and promoting student development and achievement should certainly provide students with facilities that represent those standards.

I emphatically support and appreciate the construction of the Lynbrook stadium and athletic fields, not simply because it provides a necessary venue for my marching band to practice and perform in, but also because it provides all of our student athletes with a resource that will greatly enhance their experience. I believe the new stadium and fields will serve to unite our community even more, and as the band director, I am willing to do everything in my power to act as a good neighbor to those whose homes surround our school.

Mike Pakaluk
Instrumental Music Director
Lynbrook HS
To the FUHSD and the Neighborhoods around Monta Vista and Lynbrook High School.

The FUHSD needs to follow thru with the plans that they have for both high schools. The lights would really help the neighborhoods around Cupertino and Fremont High Schools by giving us a break. The Cupertino and the Fremont neighborhoods have supported Lynbrook and Monta Vista High School for a long time. Why is it that Lynbrook and Monta Vista neighborhoods don¹t mind coming over to Cupertino and Fremont neighborhoods to make noise and enjoy themselves but then they don¹t want anyone coming into there neighborhood to do the same. That¹s not right. Who do they think they are? I think it¹s about time that the neighborhoods around Monta Vista and Lynbrook High School step up and share the responsibility that goes along with having a High School in your neighborhood.

Has the city of Cupertino or the Lynbrook and Monta Vista neighborhoods even consider what our neighborhoods go thru during the football season and band practice and numerous other events that the field and lights support. Think about it. Do what¹s right. It won¹t kill you. Why wouldn¹t you want to support your school¹s sports activities? You sure don¹t mind having our neighborhoods doing it for you. If you don¹t want light¹s then play all of you games and other activities during the day.

I have lived across the street from the fields and the light¹s at Cupertino High School for 55 years. As a matter of fact Cupertino High School did not exist when I moved here. I have played under those lights and have supported the lights for a long time. I think it¹s time for your neighborhoods to step and do the same.

David Parker
Re: Draft Recirculated Environmental Impact Reports for the Lynbrook and Monta Vista Sports Lighting and Improvement Projects

Dear Ms. Ellie Johnson:

This is a revised version of comments that can replace the comments dated on March 1. The only changes are this paragraph, the paragraph that immediately follows and the date. I also plan to send an addendum to these comments.

The comments below primarily address the Monta Vista Improvement Projects; however, many of the comments apply to the Lynbrook Improvement Projects as well.

The Draft Recirculated Environmental Impact Report (DREIR) is severely flawed. Instead of providing objective information to the decision makers and the general public, the DREIR misinforms the public. Instead of objectively presenting the significant noise impact of the “Reduced Use and Lighting” alternative, the DREIR portrays the impact as not at all significant except in a technical sense and goes so far as to claim that many people will enjoy the noise. The DREIR does in fact state that noise from the project is a significant impact because the District was forced to state that fact by a court in light of facts presented to the court, but it does so with a wink to the decision makers as it makes numerous assertions and statements of opinion, portrayed as facts, that imply that the noise impact is not at all significant.

The Draft REIR also misrepresents the previously circulated EIR the District previously approved; or, since the previously circulated EIR, together with this Draft Recirculated EIR constitutes the new EIR, the DREIR contradicts other parts of the new EIR. Specifically, the DREIR misrepresents the previously circulated EIR in the conclusion section with statement that “the previously circulated EIR found that there are no alternatives to the project that meet the primary objective of holding evening football games at the Monta Vista campus and avoid the
significant noise impact.” A complete explanation of how it misrepresents the previously circulated EIR is provided below.

In addition the Draft REIR has major omissions

The Draft REIR claims the Court required the District to reconsider only the sections of the previously circulated EIR that are included in the DREIR, but other sections of the previously circulated EIR are also deficient because of conclusions made concerning noise impacts. The court ordered the District to set aside certification of the Final Environmental Impact Report for the Monta Vista High School Sports Field Improvements and Lighting Project and the adoption of the Mitigation Monitoring and Reporting Program for the Monta Vista High School Sports Field Improvements and Lighting Project. It also ordered the District “to reconsider those approvals after appropriate review under CEQA.”

The District erroneously interprets “reconsider those approvals” to mean that only the project that they previously approved should be considered. The court did not state that only the project approved by the District suffered from incorrect conclusions on the impact of noise. However, from the court’s decision it was a forgone conclusion that the project approved by the District had a significant noise impact. That would seem to make it more important for the revised EIR to examine other alternatives in the previously circulated EIR to determine if their noise impacts were correctly stated. One would think that the District would not restrict itself to consider only an alternative that was known to have a significant noise impact.

The previously circulated EIR also claimed that the Reduced Use Alternative, the Practice Lights Alternative, the Practice Lights and Homecoming Alternative did not have significant noise impacts. The REIR does not either correct that error or state why those alternatives do not have significant noise impacts.

Obviously, the Reduced Use Alternative suffers from the same significant noise impacts as the Reduced Use and Light Level Alternative, and the DREIR should address that. Without that correction the previously circulated EIR, together with the Draft Recirculated EIR still does not correctly state the impact of noise.

The previously circulated EIR does not state if band practices will be allowed for the Practice Lights Alternative and the Practice Lights and Homecoming Alternative. If band practices are allowed, then it is not obvious that those alternatives do not also have significant noise impacts because the DREIR states that band practices have the same noise levels as “typical” football games. The Reduced Use Alternative (RUA) and Reduced Use and Light Level Alternative (RULLA) allow two band practices per week in the fall, but the Practice Lights Alternative (PLA) and the Practice Lights and Homecoming Alternative (PLHA) do not specify any limit on the number of band practices in a week or time of year.

In addition the Practice Lights and Homecoming Alternative does include one football game, and the EIR estimates that the crowd will be very large and the noise levels will be at their
highest. It is not obvious that the noise impact from a single game is not significant even though the noise impact from the 5 or 6 games allowed under the Reduced Use Alternative and Reduced Use and Light Level Alternative is much worse.

As a result, the District has failed to consider almost any alternatives – except the no sports lights alternative – that would eliminate significant noise impacts associated with practices. The District should consider alternatives that would reduce evening noise from practices, in addition to the No Sports Light Alternative, such as eliminating evening band practice, or redesigning and reducing the field to take advantage of opportunities for better sound insulation and noise reduction.

The flaws in the DREIR fall into these six major areas with considerable overlap:

1. Incorrect application of CEQA in evaluation of alternatives and objectives
2. Misleading information
3. Inadequacy of information supplied or glossing over important relevant facts
4. Treating opinions and conjecture as facts
5. Incorrect application of cost/benefit ratios and incorrect application of CEQA in evaluating mitigation measures
6. Use of nebulous and overly narrow objectives to limit alternate designs

Comments on specific sections of the DREIR are listed for each type of flaw.

**Incorrect application of CEQA standards**

1. In paragraph nine of Section 2.1.1 when reporting the increase in noise levels above the current ambient levels, it is irrelevant whether or not the noises are commonly associated with high schools. The standard to be applied is how much increase in noise the project will produce above the current ambient noise conditions.

2. In **Section 3 Conclusions** there are several problems with this statement “The previously circulated EIR found that there are no alternatives to the project that meet the primary objective of holding evening football games at the Monta Vista campus and avoid the significant noise impact.”
   a. The first is use of the term “primary objective.” In response to Comment BB-5 to the previously circulated Draft EIR, the District stated “All references to the primary objective of the sports lighting have been deleted from the Draft EIR.” The previously circulated EIR approved by the District makes no statements concerning the primary objective of the project as a whole, nor does it state that holding evening football games at the Monta Vista campus is a primary objective of the project or a primary objective of installing lights.
In the previously circulated EIR *Section 1.13 Objectives* lists Synthetic Turf and Track, Sports Lights, ADA Compliance, and Upgrade/Modernize as the objectives of the project and the Sports Light objective is shown as:

**Sports Lights** - extend the student school day by allowing sport practices to extend into the evening; reduce the burden on the Cupertino High School track and field facilities which are currently shared with Monta Vista; and increase student school spirit and pride through being able to hold more Monta Vista events on their home campus

“More Monta Vista events on their home campus” might or might not include night football games. And even “increase(ing) student school spirit and pride,” which the District asserts would result from holding more events on their campus, is only one of three objectives within an objective that itself is only one of the four stated objectives of the project.

b. Next, the District does not properly use the CEQA criteria for evaluating alternatives. It implies that any alternative that does not meet the objective of holding evening football games at the Monta Vista should be summarily dismissed.

Furthermore, the “Practice Lights and Homecoming Alternative” does include an evening football game at the Monta Vista, but even that alternative is said not to meet the objective of holding evening football games on campus.

The proper criteria to evaluate alternatives are described in Section 8.1 of the previously circulated and approved EIR. “An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects...” And “the alternatives should feasibly attain most of the project’s basic objectives, but are to be considered even if they impede to “some degree”, the attainment of project objectives, or could be more costly than the proposed project. (Emphasis added.)

The Final EIR approved by the District never states that the No Lights Alternative (NLA), the Practice Lights Alternative (PLA), or the Practice Lights and Homecoming Alternative (PLHA) do not feasibly attain most of the project’s basic objectives, perhaps because they do attain them even though they might impede attaining them to some degree.
It should be noted that Monta Vista High School did not play any of its home games at Cupertino High School last year and instead played them at Fremont High School. Monta Vista does not make any other use of the Cupertino High School fields. Therefore, the objective of reducing wear on the Cupertino High School fields has been met even with no project at all. And no matter what alternative is finally used there is no reason for the District to revert to playing Monta Vista games at Cupertino High School.

i. For the **No Sports Lights Alternative** the previously circulated EIR states that “Under the No Sports Lights alternative it is also possible that home football games could be played at home during the day.”

Later it states, “If under the No Sports Lights alternative home football games are played on the Monta Vista campus, the objective of reducing the burden on the Cupertino High School track and field facilities will be met. The objectives of extending the student school day by allowing band and sport practices to extend into the evening and increasing school spirit and pride through being able to hold more Monta Vista events (i.e., evening football games) on their home campus, however, would not be met.”

Strangely, holding home football games at Monta Vista is said not to meet the objective of holding more Monta Vista events on campus apparently because although more events will be on campus, day football games don’t increase spirit and pride by the method the District prefers.

ii. The Practice Lights Alternative can obviously meet all the objectives that the No Lights Alternative can meet. The previously circulated EIR even states that it meets “all of the objectives related to installing the synthetic turf and track, ADA compliance, and upgrading and modernizing the outdoor athletic facilities” and “would extend the school day by allowing practices to extend into the evening.”

The previously circulated EIR claims that the Practice Lights Alternative would not reduce the burden on the Cupertino High School (CHS) track and field facilities or increase school spirit and pride through Monta Vista High School being able to hold more school events on their home campus.” It has already been determined that reducing the burden on CHS facilities can be met with no project at all.

Furthermore, just as with the No Sports Light Alternative, home games could be played on the Monta Vista campus. Therefore, the Practice Lights Alternative can also meet the objective of being able to hold more Monta
Vista events on their home campus, but not by the method the District prefers.

It would seem that the Practice Lights Alternative can feasibly attain most of the basic objectives of the project. Arguably it attains all of the basic objectives of the project; and even if the alternative impedes “to some degree” attaining project objectives, it passes the CEQA criteria for an alternative that should be considered. Since it also reduces, if not eliminates, the significant noise impact of the Reduced Use and Light Level Alternative, the alternative should be chosen over the Reduced Use and Light Level Alternative.

iii. The **Practice Lights and Homecoming Alternative** meets all the objectives that are met by the Practice Lights Alternative. In addition the Practice Lights and Homecoming Alternative allows for one night football game per year on the Monta Vista home campus.

The previously circulated EIR states that “holding the Homecoming game on the Monta Vista High School campus would increase school spirit and pride, but not to the extent of the proposed project, which allows for up to six evening football games per school year.”

Thus the Practice Lights and Homecoming Alternative unquestionably passes the criteria set by CEQA in that it 1) “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects…” And 2) it “should feasibly attain most of the project’s basic objectives, but are to be considered even if they impede to “some degree”, the attainment of project objectives.”

Since this alternative reduces the significant noise impact of the Reduced Use and Light Level Alternative, it should be chosen over the Reduced Use and Light Level Alternative.

This alternative more fully attains of the objectives of the project than the Practice Lights alternative, but it does not reduce the significant noise impact as much as the Practice Lights alternative.

**Misleading information**
(From Section 1.3)

1. Even the claim that “this Draft REIR provides objective information regarding the environmental consequences of the Reduced Use and Light Levels alternative...” is misleading. Although some objective information is in the Draft REIR, the Draft REIR contains many subjective statement and statements of what the District would like the facts to be.

(From Section 2.1)

2. As with the previously circulated EIR the Draft REIR continues to mislead the public and the decision makers by making it seem as though the amount of field use and the noise it will produce has been significantly reduced from the original project. While the Draft REIR makes a technically correct statement in comparing the field use of the alternative to what the original project could have used, rather than would have used, the District knows full well that they never planned to use the fields as much as the original plan allowed.

The public record shows that the planned field use, as provided by the principal of Monta Vista, was very close to that allowed by the Reduced Use and Light Levels alternative. The reason the use is so similar is because the Reduced Use alternative was based upon that planned use.

Furthermore, comparisons with a theoretical or straw man project are irrelevant, and when treated as relevant they serve only to deceive.

This misinformation is repeated four times in Section 2.1.1, quantitatively three times and qualitatively once, and twice in the conclusions in Section 2.1.3.

(From Section 2.1.1)

3. Paragraph six states that neighbors will not be startled by the noise of football games because they will be aware of the schedule. Although the schedule may be known, a sudden eruption of noise could still be startling. However, one or two eruptions a game will be less of an impact than anticipation of the noise that will occur with each play. The nature of the noise is not a constant amplitude white noise. It will have peaks and valleys in both frequency content and amplitude making it more disruptive to thought, concentration, and sleep.

4. Paragraph seven makes the outrageously prejudicial and subjective statement that the “sounds” of the football games, not noise mind you, are “received positively” by many. One wonders how that was determined and what is meant by many? Have these “many
people” actually been exposed to this noise, except when they have been part of it, or are these many people just people who state they would positively receive the sound (or noise) even though they will never actually experience it?

5. Paragraph seven states that a football game is “a relatively non-threatening event hosted by, played by, and attended by the local neighborhood community - the same neighborhood that is subject to the noise.” It is misleading to claim that the neighborhood that is subject to the noise is the same as the members of the larger community that may attend the football games. Those attending the games are normally the parents of the players, a small fraction of the student body and a few die-hard high school sports fans with most living outside the neighborhood affected by the noise. In addition, a portion of those attending are fans of the opposing team.

6. The statement that “this could lead one to presume that school activity noise is also considered compatible with residential neighborhoods” is both conjecture and misleading. Although much of noise from school activities is compatible with residential neighborhoods, not all noise that a specific school wants to generate is compatible with the residential neighborhood in which it resides. The mere fact that the City of Cupertino includes schools in residential neighborhoods should not be considered carte blanche for a school to generate any noise it wishes and claim that it is compatible with the surrounding neighborhood. Lighted fields were not installed when Monta Vista was built. That would seem to indicate that lights were not considered compatible with the neighborhood when the school was built and there is no reason to believe they have become compatible in the 42+ years since the school was built.

7. Paragraph 8 says the substantial increase over the ambient is from cheering spectators and other noise sources do not measurably affect hourly noise levels. Foot stomping by spectators is a contributor to the increase in noise. Referee whistles, even though of short duration, could also increase the hourly noise levels and they definitely cause annoying peaks in the noise with effects on people that are not adequately acknowledged by use of hourly averages. There has been no consideration of what sorts of noise future spectators may make. Sports fans increasingly rely on objects such as thunder sticks to amplify the noise they make. Such objects are available and there is nothing in the EIR that would preclude their use.

8. Paragraph nine contains misleading statements about the significance of the noise impact. Stating that “a strict interpretation of the CEQA noise thresholds would conclude the Reduced Use and Light Levels alternative results in a significant noise impact” leaves the impression that this alternative results in a significant noise impact
only in a technical sense. Is there a loose interpretation of the CEQA noise thresholds that the District believes should be used?

The same noise thresholds applied when the uncirculated draft EIR concluded that the noise levels from the football games alone resulted in a significant impact and also that the noise from non-football activities would result in a significant noise impact, and there was no mention of those conclusions being based upon a strict interpretation of the CEQA. That draft was written by the consulting firm company hired by the District, and that consulting firm had a vested interest in providing their clients what they wanted. Even so, the consulting firm concluded the noise from the football games alone resulted in a significant impact and also that the noise from non-football activities would result in a significant noise impact. Only after the District applied pressure to them including a request to “push the envelope” did the consultants change their conclusions.

Inadequacy of information supplied or glossing over important relevant facts

(From Section 2.1.1)

9. Paragraph three of this section avoids or evades the issue of noise produced by bands using the field. It states “from late August to mid-November, two nights per week practice would last until 8:30 PM” without supplying very relevant information. The practices held at those late hours are band practices. Band use results in much louder noise than sport practices, as later stated in the same section. Many people in the neighborhood are just as concerned about night-time band practice as they are with football games because of the total number of practices that will occur.

The apparent purpose of this paragraph is to provide information on the hours of use for various activities. It seems like a major omission not to point out the fact that, other than football games, the activity that will use lights in the latest hours of the evening is band practice, the loudest non-football game activity and as loud as football games with what the District considers “typical” attendance.

10. Paragraph 8 of contains the seemingly innocuous statement that “the largest increase (i.e., 15 dBA) in noise would result from possible future band practice. During practices and non-football games, worst-hour hourly average noise levels at the nearest residences are calculated to range between 50 and 69 dBA Leq” deserves far more emphasis.

This is the first time that it has been stated that band use is in fact what will cause the greatest increase in noise besides football games. It would seem very relevant to bring out the fact that band practices will occur at the latest hours of any non-football game use. It would also seem relevant to point out that the amplitude of the noise during
band practice is the same amplitude as that of a “typical” football game. In addition, it would seem relevant to point out that evening band practices will take place about 26 times each fall. This means that the neighborhood will be significantly impacted by noise over 30 times each fall even if only band practices and football games are considered to have significant impacts.

This is a major new disclosure.

**Treating opinions and conjecture as facts**

1. Paragraph nine of Section 2.1.1 states that increases in noise would be infrequent and of relatively short duration. Those statements are opinions and not facts. In addition, band practices will occur twice a week during the fall and the previous paragraph states that band practices will increase noise levels by 15 dBA, just as much as a typical football game. The residents will be subjected to two or three noise events per week that generate significant noise for hours at a time. And there would be over 30 high noise producing events from football games and band practices alone.

2. In Section 2.1.2 I question the accuracy of the claim that the objective of “allow[ing] students enrolled in classes that meet in the last period of the day to participate in after school athletics and activities without conflicts” is only partially met.

The administration and board members have stated their goal is not to have students take classes in all seven class periods but to allow students to maximize course selection while taking six courses and to make scheduling easier. Monta Vista is a very large school with close to 2400 students and it has many sections of all the main courses and multiple sections of many other courses. More students and more course sections make scheduling easier. Of course as a large school Monta Vista offers a more variety of optional courses that smaller schools are unable to offer. Although not every student may be able to take every course he or she wants, Monta Vista students have a greater choice of classes than most schools. The school has accommodated athletes for many years by giving them priority in scheduling so they could avoid a 7th period class. It does not seem like a major problem to continue that policy even though some students might not get their first choice of an elective.

3. Regarding the letter from the noise consultant: Very little new information is provided by the noise consultant. However, he does bring to light one extremely important new piece of information that had previously been withheld. Band practices are the cause of the highest noise levels for non-football game events, and they will occur 26 times a year. These facts show the Reduced Use and Light Level Alternative to be even more impactful than what might have been thought from the original EIR.
Although the noise consultant may be able to measure noise and estimate the intensity of noise at various locations, there is no reason to believe his opinion regarding what frequency or duration of noise is significant is of any worth. His biography on LinkedIn gives no indication of expertise in the impact of noise on people. He reports that his expertise includes performing field research, analyzing data, and noise modeling. Similarly his biography on the Illingworth & Rodkin, Inc. website also gives no indication such expertise. Yet the entire argument being made that the Reduced Use and Light Level Alternative does not have a significant noise impact is based upon his opinion.

What is more the court has already rejected the arguments that this alternative does not have a significant noise impact based upon essentially the same information regurgitated in his letter and within the DREIR.

One might ask the consultant, or for that matter a member of the Fremont Union High School District Board of Trustees, if a neighborhood resident held 5 or 6 evening parties each fall that had the noise levels of the Monta Vista football games and also had a band practice in his garage 26 evenings each fall if he would consider that to be insignificant. Is noise of equivalent amplitude, duration, and frequency of occurrence produced by his client less significant than what would be considered unacceptable if produced by a resident of the neighborhood?

Incorrect application of cost/benefit ratios and incorrect application of CEQA in evaluating mitigation measures
(From Section 2.2.1.4)

1. The conclusion that “this mitigation measure has no beneficial effect on the identified significant noise impact” is incorrect. Although this mitigation (sound insulating doors and windows) does not completely eliminate the impact, it does have a substantial beneficial effect on the interior noise impact. Although the noise produced at the property line determines whether the noise impact is significant, noise reduction indoors provides a clear benefit.

The conclusion correctly states that “the measure provides no benefit to the outdoor use areas of the affected residences” and although those living near the football field would like to be able to enjoy themselves outside their homes during football games and band practices, many will prefer to remain indoors while those night time noise activities are taking place. As a result they will receive a very worthwhile benefit.

It seems as though this conclusion was reached by considering only the ability of the mitigation measure to bring the noise levels below the threshold of significance and
without considering the benefit to the people who will be exposed to the noise, especially compared to what will result if no mitigation is performed.

2. The District should consider providing sound insulating doors and windows to more residents than those identified.

3. To further improve the benefits of installing sound insulating doors and windows for those residents most impacted, the District should also consider installing central air conditioning for those residents. That would at least partially provide mitigation when homeowners would like to open their windows in the evening to provide cooling.

4. The conclusion that “the cost to install sound-rated windows and doors would be substantial, for the benefit provided” is very subjective and not justified. The estimated cost is only $207,000 as compared with the projected $14.25 million cost of the entire Monta Vista project. (Reference: FUHSD 2010 Program Improvement Plan) And as stated in the previously circulated EIR the source of funding is a $198 million bond measure. This comment is not meant to imply that no consideration should be given to cost, only that in this case the cost seems to be very low and the benefit is really very high if the Reduced Use and Light Level alternative is actually used. If cost is that much of a concern, lights could be eliminated from the project and the savings would be far more than the cost of this mitigation.

5. The cost to benefit ratio is relevant if applied to the entire project; however, the District has never considered how the cost of the project could have been reduced with minimal or no reduction in the benefits provided by the project. And it has never considered how much benefit is generated for the cost in terms of both money, impact on the neighborhood, and lost trust and goodwill.

6. While it is correct that “the District has no control over implementing the measure without permission from the homeowner,” this does not seem to be a major impediment to making this mitigation available to those who want it. Of course if the District is able to eliminate the significant impact of the noise, e.g., by using a different alternative then there would be no need for the mitigation or to request permission of the homeowners.

(From Section 2.2.1.5)

7. I question the accuracy of the statement “based on this input from the public, the bleacher heights and the elevation of the field and track were lowered during design of the original project.” At the meeting at Monta Vista at the start of the EIR process the public was told the football field would be lowered by three feet from its then current elevation and District spokespersons suggested four feet might be possible until the designer choked and said the field was really only being lowered by 2 ½ feet. By the time
the EIR was written the lowering was only 1.5 feet. This is another example of the District taking credit for making a positive change when in fact the change from the project as initially presented was actually detrimental.

8. **This claim is inaccurate:** “Unlike Gunn High School, there is no existing hillside between residences and the field and track at Monta Vista High School or adequate space to construct a hill.”

In fact the area to the west side of the track is lower than the adjacent residences because it was at least partially cut out of a hillside. There is a retaining wall extending four foot above the school grounds (prior to construction) because the hill was cut away to make the ground on the school side of the retaining wall level with the track. With the use of a Gunn-like design much of the dirt would be returned to the hillside and the retaining wall would not be required.

The Gunn design may be more difficult on the east side of the football field, but even there with additional spreading out of the seating and reduction in the capacity of the stadium a modified Gunn type design could work. (Despite what the District may claim, the current design has little in common with the Gunn design.)

Perhaps the District completely misunderstood the suggestion to make the stadium more like the Gunn High School stadium. Statements in the DREIR seem to indicate that the District believed the local residents wanted the field lowered so it would be more like Gunn. In fact the suggestion to lower the field was completely separate from the suggestion to make the design more like Gunn.

The Gunn design was considered more desirable than the Monta Vista design because the bleachers were supported by soil/dirt instead of being free standing. Seating supported by soil is preferable from a sound standpoint because foot stomping will not cause as much noise. There should be plenty of available dirt to be able to provide the support for the seating at least on the west side of the field. Instead, even more of the existing hillside soil has actually been removed. A huge mound of dirt was on the site and it could have been used. However, the District paid to have the dirt hauled away. This was done even though I informed the District that dirt that could be used for support of the seats was being hauled away.

In addition the Gunn design is superior for reasons extending beyond noise. The Gunn design has a lower profile because it spreads out the seating more than the Monta Vista design, and it does not have a press box elevated as in the Monta Vista design thus making it more compatible with the neighborhood.
The Gunn design should be considered as a separate mitigation measure from lowering the field. The Gunn design can provide noise mitigation and also provide benefits of a less intrusive design within the neighborhood.

**Use of nebulous and overly narrow objectives to avoid alternatives**

1. The District’s stated objective of increasing student school spirit and pride through being able to hold more Monta Vista events on their home campus is both overly narrow and extremely nebulous. It is overly narrow because it overly restricts alternatives.

   School spirit and pride are nebulous concepts. What characteristics does the administration want students to exhibit and what do they find lacking? Is there something wrong with students who don’t exhibit the characteristics that the school administration venerates, and will having a lighted football stadium on campus transform these students into the prototypical form they prefer?

   The administration seems to be begging the question by assuming holding night football games on campus will increase school spirit and pride in students that don’t exhibit the requisite level. Won’t the students who already show the type of spirit and pride that the administration wants to instill be the ones who benefit from night games rather than those they find lacking?

   It is a failure of the first order by the District administration if they look to night football games as the best or only method to engage students.

   In addition, pride is not always an admirable quality. What sort of pride do students acquire by knowing that their school has a lighted football field? Have they accomplished something of which to be proud?

   Apparently the District believes merely knowing Monta Vista has a lighted field will make them spirited and proud, since they don’t expect many to actually attend most games. They have estimated that typical games will have an attendance of 700. Of those easily 200 could be from the opposition and likely another 100 parents, teachers, and other adults will attend. That leaves an estimate of only 400 students, including cheerleaders and pep band members, attending the games, only 1/6 of the student body.

   Either they don’t expect many students to attain spirit and pride through football game attendance, or the estimates of attendance were low balled to lower the reported noise impact.

   The one game per year when attendance is expected to be high is Homecoming where the District expects about 2300 to attend. If that is accurate, there may well be 4 or 5
times as many students that attend homecoming as attend a typical game. It would seem that Homecoming is the only game of much benefit at all in creating school spirit.

Yours truly,

David Radtke
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589 W. Fremont Avenue
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Re: Draft Recirculated Environmental Impact Reports for the Lynbrook and Monta Vista Sports Lighting and Improvement Projects

Dear Ms. Ellie Johnson:

This is letter is an addendum to the comments I submitted by email at 12:20 PM today, March 2, 2012.

The Draft Recirculated Environmental Impact Report (DREIR) should have addressed additional alternatives because of the highly relevant new information disclosed in the DREIR and also new information that is not disclosed in the DREIR.

The previously circulated EIR reported that “noise from practices and non-football games, including the infrequent use of the PA system for games, would substantially increase hourly average noise levels approximately five to 15 dBA above current conditions between the hours of 5:00 PM and 9:00 PM.” However, it never disclosed at what hours the highest noise levels would occur or what would cause the highest noise levels. The DREIR reveals for the first time that band practices are the source of the highest increases in noise above ambient conditions of any of the non-football game events, and band practices are the latest of all field uses. Furthermore the noise produced by the band is the same noise levels produced from typical football games, and there will be 26 band practice each fall. These are a major new disclosures.

In addition, the DREIR never reveals that Monta Vista High School played all of its night football games at Fremont High School last season and played no football games at Cupertino High School. In doing so the District demonstrated that it can meet one of the objectives of Sports Light, that of reducing the burden on Cupertino High School fields, with all alternative designs including the No Project alternative.
As a result of the new information alternatives should be considered that reduce band noise and include the use of Fremont High School fields, and Homestead High School fields if permitted, for Monta Vista High School home night games.

A highly attractive alternative could be a combination of the No Sports Lights alternative and the Practice Lights and Homecoming alternative. Installing no permanent lights and using portable lights for the Homecoming game would eliminate night band practices and the Homecoming game could be played on the Monta Vista campus at night. The remaining four games might be split between two games at Fremont or Homestead High Schools and two day games on the Monta Vista field. Monta Vista has historically played one day game, so this plan would increase that by one game which seems like a minor change. This plan would have three new events on the Monta Vista campus, and that would seem to attain most of the objective “increase(ing) student school spirit and pride through being able to hold more Monta Vista events on their home campus.” There are numerous possibilities with the number of night games and number of day games and the use of various fields that the District might consider even if every one of those alternatives is not explicitly examined in the DREIR. However, enough alternatives that don’t have significant noise impacts need to be evaluated. Currently except for the No Sports Light Alternative and the No Project Alternative there are no Alternatives that have properly been shown not to have a significant noise impact, although if they were examined some of them might meet that standard.

Concerning a possible Central Coast Section (CCS) playoff game, some playoff games are played on Saturday afternoons now so a day game at Monta Vista is possible; and an occasional night playoff game could be a topic of negotiations. Of course the Monta Vista field should be used for playoff games only if Monta Vista is actually playing in the game.

The Practice Lights Alternative and the Practice Lights and Homecoming Alternative are less attractive options for two reasons. First those options don’t preclude band practices although they would not run as late as other alternatives, and perhaps there may have been no intention of having band practices with those alternatives even though the description would not preclude them. Second, it would be too easy for the District to incrementally increase the times the light would be used. Third, even though the District refers to the lights that they would use as practice lights, those lights could easily become game lights very possibly without even increasing the number or illuminating power of the lights.

With the planned noise increases that are allowed under these plans, and even more so for the Reduced Use and Light Level Alternative, the District will establish a new “existing” ambient noise level that future increases in noise production will be measured against, if the District would even go to the trouble of doing another EIR to change the usage. Only by agreeing that any additional noise producing use of the fields will use the ambient conditions prior to the
start of the initial EIRs as the baseline for a new EIR could that be prevented, if it is possible to prevent at all.

The need for practice lights at all is highly questionable and the district has been presented with information that it has thus far ignored showing the very limited benefit of extending sports practices. The planned use of lights for band practice would be the only extended usage of practice lights if the lights were used only when they were really needed as opposed to the turn on times planned. From the new information provided in the DREIR, it would seem that the 26 scheduled band practices would be a significant noise impact that should not be allowed. As a result the installation of practice lights is not warranted.

In addition, it is questionable if the District is using the correct lighting standards for practice use or if there are any real standards at all as opposed to recommendations. Most of the recommended levels are set with the view of the spectator in mind and have little or nothing to do with safety. The reason being that much more light is required for spectators to easily see the action than is needed for safety. As a result the recommendation for illumination increases as the size of the stadium increases; however, crowd size or stadium size have no impact on the light needed for players to see. The next consideration is the capability of the players to be able to compete well and again more light is needed for that than for safety. Only sports like baseball where it is possible to be hit a hard ball it not seen does safety become a factor.

The Illuminating Engineering Society of North America’s IESNA Lighting Handbook calls for 200 Lx or 20 Fc for Class IV use vs. the 30 Fc of the District’s practice lights, and it is questionable if practices require even that level of light. That same Handbook also lists 20 Fc for illumination in baseball outfields where there is a greater chance of losing the ball than in football because of the size of the ball and the height at which the balls reach, and getting hit by a baseball is more dangerous than getting hit by a football even if the football player was not wearing a helmet and padding.


The previously circulated EIR makes claims regarding the need for diesel generators to run portable lights and the neighbors could be more concerned with that noise. Those are just excuses and not reasons to eliminate portable lights. First it is certainly possible to provide power to portable lights through the regular grid especially if the district puts in the necessary outlets or wiring for that to occur as the project is built. Second, all the resident I know would much prefer a single game each year with a higher noise level than to have 5 or 6 games and 26 band practices.

Also the District claims that it has the interests of the neighboring residents in mind by using 80 foot high light structures; however, most neighbors would much prefer much shorter structures
if the lights were not used for games and preferably also not for band practices and they were truly of only of the illumination level actually necessary. When LMU was in discussions with the District, LMU pointed to this as a possible area of agreement, and members of LMU volunteered to help the District ask the neighbors what they would prefer; however, as yet the District has ignored the offers.

Finally, neighboring residents of both schools are more than willing to help design alternatives. That would avoid all the erroneous assumptions the District has made concerning what the neighbors would prefer.

Again some of these comments apply more to Monta Vista than Lynbrook but most are easily transferable. The fact that Monta Vista does not play football at Cupertino High School (CHS) lessens the need for Lynbrook to reduce its use of CHS. The concepts of one night Homecoming game with portable lights and No Sports Lights installed works for Lynbrook, and with the alternative defined above Lynbrook’s use of CHS would drop to two games.

Yours truly,

David Radtke
STADIUM NOISE

I have lived on Johnson Ave for over 50 years and I can hear the loud speakers from Cupertino High the nights of football games and other times. I have double pane windows installed and I hear the loudspeakers over my TV. I have called the District Office in the past and complained about the sound. If you are in my living room and you hear it, then it is too loud for the whole neighborhood. Other neighbors on my street hear it also. Those who still have single pane windows hear the sound and rattle of them. This noise is unacceptable to our quiet neighborhood and cannot imagine what it will sound like in the houses whose yards back up to the playing field of Lynbrook High School and the rest of our neighborhood. Reminder: Lynbrook is in a QUIET RESIDENTIAL neighborhood which does not have business, open space, or freeways next to it. Put yourself in one of these houses and decide just how much these neighbors need to hear.

STADIUM LIGHTS

Our first neighborhood association members and neighbors were told when Lynbrook was built that there would never be a big stadium with lights. We were told all games would be at Cupertino High as they had the large field. This is not “hearsay” as some have been lead to believe. I have lived in my same house for 52 years and there are other neighbors still alive who can testify to this information. Lynbrook High School was not built yet when the houses were built on other side of the chain link fence, which divides Lynbrook parking lot/field. Those houses were built before 1956. (These are the houses that will have the stadium lights shining in their backyards, and the noise.) LET ME REPEAT: Lynbrook is in the middle of a QUIET RESIDENTIAL neighborhood which does not have business, open space, or freeways next to it.

Thank You for the opportunity to respond to this issue.

Dorothy Rheuark
1088 Johnson Avenue
San Jose CA 95129-3128
Hello,

I am a parent of a student who attends Lynbrook High School. I am in favor for moving the project along. Lynbrook should be able to set up lights and a stadium for their school and be able to use it when needed. It is ridiculous to see the school has been required to pay for all of this legal back and forth. If you are not aware, California is in an education budget crisis. The school should not be wasting its money and time on something like this. Requiring the school to pay for full noise barriers seems to be going too far, especially when the use of the stadium over one year’s time is minimal.

You are forgetting the benefit to our children that this facility would provide. The neighbors who purchased homes around a school were well aware of the noise impact it would bring. The only real change seems to be the lights, and the school has more than compensated for minimizing the lights by changing their physical plans around. So I am in favor of allowing Lynbrook High School to build their fields & facilities without the requirement of a noise barrier and without the requirement to limit the use of such a facility. They should be able to put up lights for their new stadium. The students will be very proud of their school and will benefit a great deal.

Sincerely,

Kim Silverman
I approve of the field upgrades to Lynbrook’s fields. Every high school should have a lighted football field. It is unfair to the Cupertino High neighbors to have all of our activities at their field. It is time to share the burden.

Christine Sireci

Scanned by Barracuda Spam Firewall   --
To the Superintendent and Board of the FUHSD:

I am a parent of a Lynbrook High School Junior and am also the current president of the Lynbrook Instrumental Music Boosters organizations. I am asking that you accept this environmental impact report and move forward with the plans for the Sports Fields Improvements and Lighting. I feel that this EIR has adequately examined all of the noise mitigation possibilities, from the practical (minimizing use and constructing the sound system to direct sound away from the homes) to the absurd (a domed stadium!).

As the parent of two Lynbrook students who have participated in the marching band, I can attest to the positive impact this activity has had on my own children and through my participation with the booster organization I can see the dedication and hard work that all of the students bring to this activity. I believe that having a true home field where they can practice and perform for their school and community will help to reinforce the positive impacts of marching band participation.

As a homeowner in the FUHSD, I know that our property values are tied in a major way to the high quality of the schools in our district. I believe that each of our schools should have the same, modern facilities. This includes the sports facilities. I can't help but believe that, if Lynbrook does not provide the same facilities as the other FUHSD schools, or as schools in our neighboring districts such as Saratoga, the Lynbrook neighborhood could become a less desirable area for families to move into.

Again, I ask that you accept this EIR and move forward with all of the field improvements.

Regards,
Thomas Soukup
12340 Goleta Ave
Saratoga, CA 95070
As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

Regards,
Siew-Ming Tang
As a former Lynbrook student and marching band member, I support the upgrade of the Lynbrook fields.

Scanned by Barracuda Spam Firewall  --
As the parent of a Lyn-brook student, I support the upgrade of the athletic fields. Thank you.

Brian Tanner
To the Fremont Union High School Board:

As a parent of a student in the Lynbrook marching band, I wholeheartedly support the upgrade of the athletic fields including the addition of lights on the football field. I'd like the marching band to be able to perform during halftime shows on the Lynbrook campus rather than having to travel to Cupertino High.

As a community member, I believe that we should be supporting wholesome activities for high school students such as football games and marching band practices. The fields will be a real asset for the entire community.

Sincerely,

Mary Tanner

Scanned by Barracuda Spam Firewall --
As a parent of a Lynbrook student, I support the upgrade of the athletic fields. I believe that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

Celia Tseng

Scanned by Barracuda Spam Firewall  --
Hello Ellie Johnson,

After looking at your review the Draft REIR, I have several comments.

I have installed many concert and smaller Sound Reinforcement Systems (PA), and think you have missed some things in the Sound System design, that could help you reduce sound levels the neighbors will hear from the sound system.

There are several ways to design a PA system, depending on your needs, and the design will directly affect how much sound the neighbors will hear. The most common way to create a PA is to use several speakers, high up on a pole outputting very high sound levels. Since sound is not completely directional there will always be sound overflowing the seating area, at a high level.

The alternative is called Distributed System, where there are many smaller speakers, located closer to the spectators, and operated at a much lower level. Any sound from these speakers, since it originated at a lower level will reach the neighbors at a lower level. In addition since the speakers are closer to the audience, the can be directed more to them, and have less sound overflowing to the neighbors.

The second point is that if you limit the frequency response to just human voice requirements, this will also limit annoying sound to the neighbors. The main thing here is to reduce the Bass frequencies, which are the least directional, and travel several times farther and with much more energy. To do this you will need to limit the Bass frequencies to over the 150 Hz - 200 Hz range.

The third thing that can be done is to try to aim any speakers, so that they do not aim at any of the neighbors. Hard to do but a very simple and easy way to reduce the sound the neighbors will hear from the PA.

I hope these suggestions help. If you have any questions, feel free to contact me.

Philip Turner
Dear FUHSD Board Members,

As a parent of a Lynbrook junior, I fully endorse the efforts to improve the Lynbrook sports field to benefit the school's excellent music program. Although our son is no longer involved in the school marching band (he is a member of the wind ensemble there), he did participate in the marching band as a freshman. We were grateful that we had use of Cupertino HS's field to have marching band practice, but it would have been so much better at our own school. Future generations of marching band deserve better.

Thank you very much for supporting Lynbrook High School's efforts to help its excellent music program.

Sincerely,
Warren Uesato

Scanned by Barracuda Spam Firewall --
Dear Sirs,

I would like to make a comment about lights for Lynbrook fields and the environment. It would be BETTER for the environment for Lynbrook students to practice sports and/or rehearse band music on Lynbrook fields rather than having to drive/be driven by parents to another school with lights since there is less automobile pollution when many students can walk or bike to Lynbrook because they live closer. Unless the school decides to remove programs that require evening practices, installing lights is the right thing to do.

Sincerely,
Audrey Wang, Lynbrook marching band parent

Scanned by Barracuda Spam Firewall  --
As a parent of a Lynbrook student, I fully support the new Athletic field in Lynbrook high school. The students participated in marching bands and athletic teams deserve to have the state-of-the-art field. My child can benefit tremendously from the new facilities, especially the marching band practice during the cold fall and winter seasons. The field will benefit hundreds of students at Lynbrook every year for the years to come.

Thanks,

Eric
To Whom it may Concern,

I would like to express my full support for the proposed improvements to the Lynbrook Track and Fields including the Lights. I attended the meetings where the EIR was presented and thought that the Board made an excellent decision and had made many significant changes and concessions to lessen the impact on the surrounding neighbors. The lights will make a huge bonus to the school as it will provide many opportunities for the students to play and perform at the own school, and although I understand there may be some extra noise involved, it will be JOYFUL noise - Lynbrook is a great school and deserves the chance to CELEBRATE at home. I sincerely hope that no further objections will be made to this project and that Lynbrook's Homecoming Game 2012 will take place on Lynbrook's field.

Thank you for your attention,

Debbie Ward
408 257 6076

Scanned by Barracuda Spam Firewall  --
I’m extremely pleased to see that considerable thought has gone into the impact of the proposed lighting and field use at LHS.

It is very encouraging that FUHSD are so committed to a vital aspect of youth development; sports activities are critical to youth development throughout the school year. At the same time it is necessary to support the full academic program necessary to prepare youth for the challenges that they will be facing in the very competitive world of today. As a consequence of this potentially heavy time load, access to sport facilities that can function in the evening, throughout the year, is essential.

Access to a full and effective sport and academic environment adds to our community in several ways: in terms of engaged families; an improved educational outcome for youth and finally in maintaining the high reputation/standing that our community has in the education field in this country – something that we can all be proud of and benefit from.

Regards
--
Nicholas  Ward
Parent of a current LHS student, one future student and two former students
Mobile +1 408.759.2769

Save paper and trees! Please consider the environment before printing this e-mail

Scanned by Barracuda Spam Firewall   --
We fully believe this new lighting facility is needed and will be beneficial to the students and the community in the years to come. The impact to the surrounding neighborhood should be minimal if enough coordination is done prior to each year’s event planning and are communicated to the neighbors. It will increase the community pride if the likes of football game and marching band events can be held on site at Lynbrook (instead of off-site to other school).

We support this project wholeheartedly and urge all participants to this project to move forward expeditiously.

Sincerely.

Deborah / Tony Wei
Lynbrook parents....

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As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance his/her school experience and bring the community together.

I am happy that we don’t have to attend Lynbrook “HOME” game in Cupertino High anymore....

Sincerely,
Deborah Wei
Dear Ellie:

My home is right next to the Lynbrook property line. It was quite a distance to the old track, I enjoyed the view very much. But the new track moves to almost the boundary, make me feel so offensive. The new layout feels like all the fields got squeezed in, I don't think you can say it is a good design if there is no margins at the boundary.

Back to the REIR, I still disagree with this "lighted" stadium project. Lynbrook High is a great school, that's why I choose this school for my kids. But this school is famous at academic, not football. I don't think home football games can make this school any better, on the other hand, the evening games will impact all neighbors on quietness, brightness, and traffic. The noise level will exceed what the law allows, and not much you can do according to this REIR.

Lynbrook High lays in a quiet residential area. I can stand the construction noise for a new, modern track, which is much needed by students. But in order to obey the law, and minimize the noise impact to neighbors, the football games have to be held on day time. I don't see why football games have to be held on evening time, are you too rich to pay the energy bill, but laying off teachers on the other hand? I hope the school district can show students how to respect others by being a good neighbor to the surrounding residents.

Best Regards,

Calvin Wen
5524 Oak Park Dr.
San Jose, CA 95129
I am in favor of the revised Draft REIR. The LHS community needs to move forward on this project to provide a new venue for our students. We have been fortunate to have Cupertino HS fields available to our community but it is time for LHS to take responsibility for our own events. Cupertino HS has not only provided for us, but the surrounding neighbors have sacrificed for many years. It is time that the LHS neighbors, who chose to live near a high school, realize the benefits they have reaped must also be matched with the sacrifices that others have made for them....for too long.

The District has complied with all the rules, laws and open dialogue with the community. I hope the community will work collaboratively with the accommodations made to move this project forward to completion.
To Whom it may concern,

As a Lynbrook parent and neighbor, I am very much in favor of the improvements to the Athletic fields, including the addition of field lighting. I have reviewed the numerous iterations of the Environmental Impact Report and I feel the School District and Lynbrook have taken great strides to mitigate the impact of the lights and noise to the neighboring homes. The previous lighting schedule reduced the noise and lighting levels to a less than significant level, and the new proposed schedule reduces the level even more. Please do not delay this project any more than it already has, these new fields will provide a much safer alternative for my children and the future student athletes of Lynbrook High School.

Regards,
Scott Wendler
President - Lynbrook Athletic Boosters

(408) 504-1715 Cell

Scanned by Barracuda Spam Firewall
Hi,

As a parent of a Lynbrook student, I wholehearted support the upgrade of the athletic fields. I am excited that my child will be able to benefit from quality facilities that will serve to enhance my kids' school experience and bring the community together."

Sincerely,

Teresa Yang

Scanned by Barracuda Spam Firewall   --
To Whom it May Concern,

I have lived in the Lynbrook Neighborhood for over 50 years. Both my wife and I attended Lynbrook as well as our 3 daughters. Our family is very much in favor of the improvements to the athletic fields, especially the addition of field lighting. I can not stress the importance to students in have games played on their own campus and allowing parents to attend and watch. With the new lights their is very little light pollution. Combine this with the propose schedule there will be very little impact on the neighbors. Please do not delay these badly needed improvements.

Sincerely,

Art & Susan Zimmermann  
(408) 257-5044

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Appendix B

Noise Barrier Survey Letter and Responses
March 14, 2012

Homeowner
22086 Linda Vista Place
Cupertino, CA 95014

Subject: Monta Vista High School Sports Fields Improvements and Lighting – Noise Barrier Mitigation Survey

Dear Homeowner:

As you may know, the Fremont Union High School District (District) is considering installing sports lights at the Monta Vista High School track and field as part of the sports field improvements project. The sports lights would allow evening games and practices, including up to six evening football games, to occur at the field per year. The District has prepared and circulated an Environmental Impact Report (EIR) and a Draft Recirculated EIR for the project, which are available for review at the District’s website at: www.fuhsd.org.

The Draft Recirculated EIR identifies measures to reduce the significant noise impact resulting from games and practices held under the proposed sports field lights. As part of considering the feasibility of the measures, the District would like to hear your views regarding the potential installation of two of the identified mitigation measures: 1) property line noise barrier, and 2) bleacher noise barrier. The noise barriers would be located adjacent to or along your property line and your neighbors, adjacent to the sports fields, and behind the proposed home and visitor bleachers at the reconfigured sports fields. The noise barriers and their proposed location are described in further detail, below.

Property Line Noise Barrier

A precast concrete wall would be installed along the residential property lines bordering the west and south ends of the main field and track. The extent of the noise barrier is shown on the attached site plan. The noise barrier would be at least eight (8) feet tall (relative to the residential elevation at the property line) and would be installed immediately outside of your property line. A photo of a lower precast wall, aesthetically similar to the one that could be installed, is attached for reference purposes.

Bleacher Noise Barrier

A concrete block wall would be constructed behind each bleacher that extends from the ground up to a point that is a minimum of six (6) feet above the top row of the bleachers. The proposed location of the bleacher noise barriers is shown on the attached site plan. The noise barrier behind the home and visitor bleachers would be approximately 28 feet and 14 feet in height,
respectively. A photo of a lower concrete block wall, aesthetically similar to those that could be installed, is attached for reference purposes.

We wish to know your opinion whether either or both of these mitigation measures would be acceptable to you.

☐ A Property Line Noise Barrier Wall would be acceptable.
☐ A Property Line Noise Barrier Wall would be unacceptable.

☐ A Bleacher Noise Barrier Wall would be acceptable.
☐ A Bleacher Noise Barrier Wall would be unacceptable.

Please add any additional information, concerning the noise barrier walls only, that you wish the District to consider.

Please provide your contact information (name and address) and send your comments by March 27, 2012 to:

Fremont Union High School District
Attention: Ellie Johnson
589 West Fremont Avenue / Sunnyvale, California 94087
email: EIR_MVHS@fuhsd.org

We appreciate your time and response.

Sincerely,

[Signature]

Polly Bove
Superintendent
Figure 1A  Site Plan (Option A) Showing Noise Measurement Locations and Proposed Noise Barriers

RESTROOM AND CONCESSIONS BUILDING
ENTRY RAMP SYSTEM
SCOREBOARD AND FLAG POLE
SHOT PUT AND DISCUS AREA
400 M TRACK (8 LANE, 164 RADIUS)
LONG AND TRIPLE JUMP
HOME BLEACHERS WITH PRESS BOX - 2,000 SEATS
RETAINING WALL WITH PROTECTIVE NETTING
VISITOR BLEACHERS - 500 SEATS
STADIUM LIGHTING, TYP.
FIELD HOCKEY FIELD
SOCCER FIELD - 65YRD X 11YRD
HIGH JUMP AREA
PARCOURSE
STORAGE AREA
PRACTICE FOOTBALL FIELD

LT-1

LT-2

8 ft Noise Barriers
Solid Rear Wall Extending
6 ft Above Top of Bleachers

5 ROW BLEACHERS
BASEBALL DUGOUT, TYP.
BASEBALL BULL PEN, TYP.
FINES BIN
BASEBALL FIELD
NETTING SYSTEM
BASEBALL BATTING CAGE
SCOREBOARD AND FLAG POLE
ADJUSTED BASKETBALL COURT
SYNTHETIC TURF MULTI-USE FIELDS
SLEEVED OUTFIELD FENCE
SOFTBALL FIELD
FINES BIN
SOFTBALL BULL PEN, TYP.
SOFTBALL DUGOUT, TYP.
LANDSCAPE BUFFER
5 ROW BLEACHERS
SOCCER FIELD 45YRD X 11YRD
SOFTBALL BATTING CAGES

Multi-Use Field Option A
Monta Vista High School
Fremont Union High School District
Example of concrete block wall.

Example of precast concrete wall.
Dear Ellie:

I spoke to you on the phone this past week regarding the letter that was sent out to homeowners. The notice provided information on the proposal for noise barriers to be installed in the between our property line and that of the high school.

I spoke to a few of my neighbors and they informed me that they had not received this notice. In addition, the manner in which the letter is written makes it seem as though we will not have any say rather to we are being asked to select from one of the options. I would also like to add that there are many families that are renters on my block and perhaps the homeowners are not concerned about what is going on at the high school.

I would also like to note that over the years I have been communicating with the high school about the ivy problem. Several neighbors have had issues with roof rats including myself. I contacted the Vectors Office and after their inspection the main source of the problem was due to the over growth of ivy from the high school. During the evening I often see rats running across the wires. The ivy continues to take over my fence as well as those of my neighbors.

Please let it be known that I am against any noise barrier being installed. What would happen if the wall goes up and the ivy grows between my fence and the wall? How will that be maintained?

My neighborhood has lost its charm and its esthetically pleasing surroundings. Now I look outside my living room window with a view of football field light past. What an eyesore. I drive down my street and instead of seeing the hills and trees I see the lights. I am extremely upset by this massive structure and invasiveness is it causing.

When this process was being introduced no one anticipated the magnitude of the light structure or that we would be faced with being having to look at a pre cast wall.

5689 West Walbrook has been my home since 1976. Over the past thirty plus years I’ve gotten use to the noise from the dances, band practice, and athletic events. However, the addition of the light fixtures and possibility of wall barriers are intrusive and evasive to my surroundings. My personal well-being is being compromised.

Sincerely,

Suzanne and Vicki Carlos
respectively. A photo of a lower concrete block wall, aesthetically similar to those that could be installed, is attached for reference purposes.

We wish to know your opinion whether either or both of these mitigation measures would be acceptable to you.

☐ A Property Line Noise Barrier Wall would be acceptable.
☑ A Property Line Noise Barrier Wall would be unacceptable.

☐ A Bleacher Noise Barrier Wall would be acceptable.
☑ A Bleacher Noise Barrier Wall would be unacceptable.

Please add any additional information, concerning the noise barrier walls only, that you wish the District to consider.

Please provide your contact information (name and address) and send your comments by March 27, 2012 to:

Fremont Union High School District
Attention: Ellie Johnson
589 West Fremont Avenue / Sunnyvale, California 94087
email: EIR_LHS@fuhsd.org

We appreciate your time and response.

Sincerely,

Polly Bove
Superintendent

522-2294
Direct Line
respectively. A photo of a lower concrete block wall, aesthetically similar to those that could be installed, is attached for reference purposes.

We wish to know your opinion whether either or both of these mitigation measures would be acceptable to you.

☐ A Property Line Noise Barrier Wall would be acceptable.
☐ A Property Line Noise Barrier Wall would be unacceptable.

☐ A Bleacher Noise Barrier Wall would be acceptable.
☒ A Bleacher Noise Barrier Wall would be unacceptable.

Please add any additional information, concerning the noise barrier walls only, that you wish the District to consider.

Please provide your contact information (name and address) and send your comments by March 27, 2012 to:

Fremont Union High School District
Attention: Ellie Johnson
589 West Fremont Avenue / Sunnyvale, California 94087
email: EIR_LHS@fuhsd.org

We appreciate your time and response.

Sincerely,

Polly Bove
Superintendent

* Noise levels in accordance with an independent report by Frenco Scientific Acoustics, Inc. dated 29 February, 2012, indicated the EIR & REIR reports do NOT adequately address the noise levels. I need more information regarding the proposed sound barrier wall, before full acceptance. The pre cast property-line noise
barrier concrete wall is particularly unattractive. Perhaps the cinder block wall construction would be less offensive for the surrounding properties.

I strongly recommend NO night football or band practice when the noise is most offensive.

Dorothy Lynn Irwin
5635 W. Walkerwood Dr.
San Jose, Ca. 95129
respectively. A photo of a lower concrete block wall, aesthetically similar to those that could be installed, is attached for reference purposes.

We wish to know your opinion whether either or both of these mitigation measures would be acceptable to you.

☐ A Property Line Noise Barrier Wall would be acceptable.
☒ A Property Line Noise Barrier Wall would be unacceptable.

☐ A Bleacher Noise Barrier Wall would be acceptable.
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Please add any additional information, concerning the noise barrier walls only, that you wish the District to consider.

Please provide your contact information (name and address) and send your comments by March 27, 2012 to:

Fremont Union High School District
Attention: Ellie Johnson
589 West Fremont Avenue / Sunnyvale, California 94087
email: EIR_LHS@fuhsd.org

We appreciate your time and response.

Sincerely,

Polly Bove
Superintendent

Robert Eggers
5674 Oakhurst Ct.
San Jose, CA
95129
(408) 252-7544
bobeggers@sbcglobal.net
MEMO

To: Fremont Union High School District
From: Robert Eggers
Address: 5576 Oakhurst Ct. San Jose
Date: March 20, 2012

Ref. Property line noise barrier wall at Lynbrook High School

First of all, let me say that I have been a firm advocate from the start for the upgrading of the athletic field at Lynbrook. I have had a minimum of concerns regarding this project and have discussed them with the appropriate school personnel to our mutual satisfaction, thus far. However, this construction of a sound wall at the rear of my property scares me.

My property, at the end of Oakhurst Ct., borders the athletic field, which has afforded me a beautiful view of the open space and mountains to the west for the forty-five years that I have lived here. If an eight-foot tall wall were built along the fence line, that view and feeling of openness would be destroyed. Additionally, the pleasure of watching marching band practice, football practice and other student activities would no longer be possible. I am attaching a photo of the view from my backyard of the field and mountains.

I IMPLORE YOU, DO NOT TAKE AWAY THESE LIFE'S PLEASURES!

Sincerely,

Robert Eggers

Robert Eggers

5576 Oakhurst Ct.
San Jose, CA
95129
252-7544
bdeaggers@sbcglobal.net
Hello,

We are the residents in either lot 19 or 20 on the map in the Environmental Impact Report. In response to the mail regarding the Noise Barrier Mitigation Survey, our replies are as follows:

A Property Line Noise Barrier Wall would be unacceptable.

A Bleacher Noise Barrier Wall would be unacceptable.

Neither solution would provide enough benefit to offset the deterioration to the view. We aren't happy that it appears the visitor bleachers are directly in front of our property.

Regards,
Bob and Shally Lin
5540 Oak Park Dr.
San Jose, CA 95129

Scanned by Barracuda Spam Firewall   --
Lynbrook High School:

The neighborhoods abutting Lynbrook High School consist of families with children and retired persons. I am sure that like us they do not appreciate the loud band practice that has occurred in the last few months. And with the stadium completion (with lights), the band will feel free to practice at all hours. I strongly object to the band’s practice at night and all other such activities generating noise and loud sounds, be they crowds, music, or singing, or anything else.

It has been suggested that sound walls be constructed. They would amount to ruining a beautiful view westward with their ugliness. Besides I strongly doubt that they would be much effective. Please do not even think of sound walls – architectural graffiti in our neighborhood! I can’t even begin to think of how much damage they would be to our property values. Please commit to never using the stadium at night.

Regards,

Gary Cyr
5518 Castle Manor Drive

Scanned by Barracuda Spam Firewall   --
Dear FUHS District,

As a neighbor that lives directly adjacent to Lynbrook High School, I am greatly concerned with the level of noise that will be generated during ALL events that will take place on your new sports field, especially after seeing the immense and imposing size of those 80ft stadium lights that are now installed in my backyard.

**Concerning the Noise Barriers:**
As the District’s photographs show, the walls would have significant aesthetic impacts. In particular, the concrete block wall, which would be up to 28 feet tall, is unacceptable in a residential neighborhood and the REIRs must evaluate the aesthetic impacts of these walls.

Noise barriers are the worst, and easiest cop-out solution, regarding noise mitigation. The noise reduction is severely limited and adding large, unattractive, view-blocking concrete walls cannot mitigate the over-all impact that a 2,500 seat stadium with 80 foot lighting creates. It's just that plain and simple.

**Other Alternatives**
- Temp lights with no night games or band practice past 8pm
- Provide, at the cost to the district, soundproof doors and windows for surrounding neighborhoods
- Reduce seating capacity of bleachers - both home and visiting
- Restrict ALL events to be held on the fields to 3-5 per year, neighborhood approved

Ultimately, is there a way we can make this a COMMUNITY decision and not just a few temporary district members' decision? Let's all think about the NEIGHBORHOODS in which we share!

Thank You for your time and consideration.
-Sue Everitt
5627 West Walbrook Drive

Scanned by Barracuda Spam Firewall  --
Hello,
I want to respond to your letter we received today.

Please NO sound barriers at all, no walls, nothing further behind the bleachers.

Please remember the first complaint from the neighbors that caused the move of the field, they did not want the views ruined.

Please note, higher fences and barriers to block sound, WHY? I live by a high school, we always have noise. A few lit games a year, I personally welcome them. Please DO NOT block our views any more than will happen with the bleachers, that would make no sense to me. Blocked views every single day, for a few nights of sound.

Please use that money for something better.

THANK YOU!
Peggy Alreck Anthony
5516 Oak Park Dr
San Jose, CA 95129
408-446-2144

Scanned by Barracuda Spam Firewall --
Dear Ellie:

I received the letter from you, regarding the District planning to build noise barriers in Lynbrook High to mitigate evening game noise. There are two proposals, one is property line noise barrier, another is bleacher noise barrier. However, there is no any scientific proof provided by the District to show how good they are, how much noise can be reduced before it reaches my house. Everybody who graduates from a high school knows the sound diffracts once it hits barriers. From my understanding, if you stand right next to the noise barrier, you may hear less. But my house is 20 to 50 feet away from the property line, unless the wall is 50 feet tall or higher, I don't see there is any point to mitigate the noise by building noise barriers (both property line and bleacher noise barriers). Besides that, the walls will block my open view horribly. Instead of noise barriers, the District should consider to pay for sound proof window/door/wall installation for adjacent houses.

Being a good neighbor, Lynbrook High should not allow any games later than 7pm. That's the best way to mitigate the noise impact to her neighborhood. The football games should be held during the DAYTIME. That solves all the problems you will create, and saves ton of money for facility improvement in the future.

The light poles have been installed in Lynbrook High. I cannot believe the District did this before a valid EIR comes out. That proves the District just wants to do things without thinking what the terrible effect is to the neighborhood. Lynbrook High is right in the middle of a residential area, any nighttime noise is not welcome and not accepted by law. There is no efficient way to eliminate noise once it is created, from today's technology.

Best Regards

Calvin Wen
5524 Oak Park Dr.
San Jose, CA 95129
Hi, Mr. Ellie Johnson (Fremont Union High School District), or Mr Pollay Bove (Superintendent).

In response to your mail regarding about the subject: Lnybrook High School Sports Fields Improvements and Lightning - Noise Barrier Mitigation Survey, I have the following comment.

My response to both of the mitigation measures are unacceptable.

A Property Line Noise Barrier Wall would be unacceptable.
A Bleacher Noise Barrier Wall would be unacceptable.

1. The wall is the same style as those in the highway, or anywhere in the expressway. It gives a strong feeling that we are living by the side of highway or expressway. Mr. Johnson and Mr. Bove, do you like to have your house by the side of highway or expressway? I paid extra money to get my present house is to avoid the highway/expressway feeling, but your Barrier Wall will give me back.

2. The Barrier Wall is ugly. Even worse, it blocks my view. I usually had a fence which was taken down a few years ago. Then it gave me a different view - my backyard became a big green field, the Lnybrook field. Of course it becomes a construction field now. I wish it would be a nice field again after the construction. The Barrier Wall will ruin the view entirely. What we can see will be the highway like wall. It may be better if it looks like the regular fence.

3. Another issue is about the gap in between the Barrier Wall and my property - I have a brick-built patio at my backyard, located next to the field. There is some native plant (I do not know the name of the plant) grown at the back of the wall of my patio, at the side facing Lynbrook field. After a few year, it will grow high, up to the top. I have to climb to the Lynbrook field to cut it down. In case if there is a Wall built along the field, the plant will keep growing. The Wall will keep me from pruning. The plant will grow until it ruins my patio.

4. Another potential issue: the gap in between the Wall and the wall of my patio will create a "dead" zone. This "dead" zone is a good place for rat/mouse, or other animals to stay. It is a very serious potential health issue. I experienced the trace of rat/mouse in my patio.

Please do not build the Wall.
Thanks and Regards,
KF Chiu
5544 Oak Park Drive
San Jose.
March 26, 2012

*Via Federal Express Overnight Delivery*

Ellie Johnson  
Fremont Union High School District  
589 W. Fremont Avenue  
Sunnyvale, CA 94087

Re: Draft Recirculated Environmental Impact Reports for the Lynbrook and Monta Vista Sports Field Improvements and Lighting Projects

Dear Ms. Johnson:

This firm represents Lynbrook-Monta Vista United on matters related to the environmental review for the Lynbrook and Monta Vista High School Sports Field Improvements and Lighting Projects (the “Projects”). On March 14, 2012, the District sent a letter to addresses near Monta Vista High School, attached as Exhibit A. It is my understanding that the District sent a similar letter to homes surrounding Lynbrook High School.

The District’s letter asks recipients to indicate whether two mitigation measures proposed in the Recirculated Environmental Impact Reports (“REIRs”) for the Projects would be acceptable: a property line noise barrier and a bleacher noise barrier. The property line noise barrier, made of precast concrete, would be eight feet tall and would be installed immediately outside of residents’ property lines. The bleacher noise barriers, made of concrete blocks, would be 14 to 28 feet tall and would also be visible to the surrounding public. The letter includes photographs of both types of walls.

As the District’s photographs show, both types of walls would have significant aesthetic impacts. In particular, the concrete block wall, which would be up to 28 feet tall, is unacceptable in a residential neighborhood. Under CEQA, an EIR “is required to discuss the impacts of mitigation measures.” *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors*, 87 Cal. App. 4th 99, 130 (2001); see also Guidelines, § 15126.4(a)(1)(D) (“If a mitigation measure would cause one or more
significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed . . .”). Therefore, the REIRs must evaluate the aesthetic impacts of these walls.

Furthermore, the designs the District chose for these walls were apparently intended to prompt neighbors, and thus the District, to reject the walls. The District failed to consider reconfiguring the fields to allow more space between the walls and the residences. The District’s proposal also fails to include any landscaping, such as covering the walls with vines or screening them with trees, that would make the walls more appealing to neighbors. For example, the Federal Highway Administration’s Noise Barrier Design Handbook contains a number of design features, including landscaping features, that reduce the aesthetic impacts of noise barriers. Exhibit B, Federal Highway Administration’s Noise Barrier Design Handbook at 6.2. The District should consider the methods in this handbook to address the visual impacts of these walls.

Indeed, the District’s survey presents neighbors with a false choice between noise mitigation with a significant visual impact or no noise mitigation at all. Notably, the District did not survey residents about whether they would prefer installation of double- or triple-paned windows or other soundproofing. The District’s proposal seems designed to invite neighbors to reject the noise barrier walls, thus violating CEQA’s direction to provide “good faith” analysis of mitigation measures. See Napa Citizens for Honest Gov’t v. Napa County Bd. of Supervisors, 91 Cal. App. 4th 342, 360 (2001).

In view of these deficiencies, the District must conduct a complete analysis of the aesthetic impacts of these mitigation measures and revise them to reduce those impacts.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

[Signature]

Jaclyn H. Prange

321705.1
March 14, 2012

Homeowner
22086 Linda Vista Place
Cupertino, CA 95014

Subject: Monta Vista High School Sports Fields Improvements and Lighting – Noise Barrier Mitigation Survey

Dear Homeowner:

As you may know, the Fremont Union High School District (District) is considering installing sports lights at the Monta Vista High School track and field as part of the sports field improvements project. The sports lights would allow evening games and practices, including up to six evening football games, to occur at the field per year. The District has prepared and circulated an Environmental Impact Report (EIR) and a Draft Recirculated EIR for the project, which are available for review at the District’s website at: www.fuhsd.org.

The Draft Recirculated EIR identifies measures to reduce the significant noise impact resulting from games and practices held under the proposed sports field lights. As part of considering the feasibility of the measures, the District would like to hear your views regarding the potential installation of two of the identified mitigation measures: 1) property line noise barrier, and 2) bleacher noise barrier. The noise barriers would be located adjacent to or along your property line and your neighbors, adjacent to the sports fields, and behind the proposed home and visitor bleachers at the reconfigured sports fields. The noise barriers and their proposed location are described in further detail, below.

**Property Line Noise Barrier**

A precast concrete wall would be installed along the residential property lines bordering the west and south ends of the main field and track. The extent of the noise barrier is shown on the attached site plan. The noise barrier would be at least eight (8) feet tall (relative to the residential elevation at the property line) and would be installed immediately outside of your property line. A photo of a lower precast wall, aesthetically similar to the one that could be installed, is attached for reference purposes.

**Bleacher Noise Barrier**

A concrete block wall would be constructed behind each bleacher that extends from the ground up to a point that is a minimum of six (6) feet above the top row of the bleachers. The proposed location of the bleacher noise barriers is shown on the attached site plan. The noise barrier behind the home and visitor bleachers would be approximately 28 feet and 14 feet in height,
respectively. A photo of a lower concrete block wall, aesthetically similar to those that could be installed, is attached for reference purposes.

We wish to know your opinion whether either or both of these mitigation measures would be acceptable to you.

☐ A Property Line Noise Barrier Wall would be acceptable.
☐ A Property Line Noise Barrier Wall would be unacceptable.

☐ A Bleacher Noise Barrier Wall would be acceptable.
☐ A Bleacher Noise Barrier Wall would be unacceptable.

Please add any additional information, concerning the noise barrier walls only, that you wish the District to consider.

Please provide your contact information (name and address) and send your comments by March 27, 2012 to:

Fremont Union High School District
Attention: Ellie Johnson
589 West Fremont Avenue / Sunnyvale, California 94087
email: EIR_MVHS@fuhsd.org

We appreciate your time and response.

Sincerely,

[Signature]

Polly Bove
Superintendent
Figure 1A  Site Plan (Option A) Showing Noise Measurement Locations and Proposed Noise Barriers

- 8 ft Noise Barriers
- Solid Rear Wall Extending 6 ft Above Top of Bleachers

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Multi-Use Field Option A
Monta Vista High School
Fremont Union High School District
Example of concrete block wall.

Example of precast concrete wall.
Highway Traffic Noise

Noise Barrier Design Handbook

6. Noise Barrier Aesthetics

Aesthetics is an issue that should be of concern to all people involved in the ultimate selection and design of a noise barrier. It is often felt to be as important as the noise reduction provided by the barrier and is the most subjective of any aspect of noise barrier design, with the phrase "beauty is in the eye of the beholder" often used in discussing noise barrier aesthetic treatments. Whether a jagged, stepped, sloped, uniform, non-uniform, colored, plain, straight, curved, or textured barrier is desired is any given location is a decision left to the responsible organization based on its policies and procedures regarding design philosophies, community input, and any other factors which are considered in the decision making process related to barrier aesthetics. Public input should always be considered in the aesthetic design of noise barriers. The intent of this section is not to justify any particular philosophy related to any element of aesthetic design, but rather to discuss elements that should be considered regardless of the particular aesthetic philosophy chosen.

6.1 Relationship of Noise Barrier to Surroundings

In designing noise barriers, there are two general approaches or philosophies related to aesthetic treatments. One philosophy is to aesthetically design the noise wall in a manner that it blends into the surrounding environment and is as unintrusive as possible. The other philosophy is to have the noise barrier be a prominent feature in the surrounding environment. Neither should be considered right or wrong in a general sense. Both philosophies have been successfully employed and even combined on the same project. In certain instances, highway sides of noise barriers have incorporated a "blend in" philosophy while community sides of the same barriers have employed more prominent architectural treatments. Certain elements of aesthetic design should be evaluated and considered separately in the design process dependent upon whether the barrier surface is being seen from the highway or from its adjacent land uses.

Prior to discussing aesthetic design issues specific to the views of the motorist (see Section 6.1.6) and the community (see Section 6.1.7), a number of aesthetic design issues common to both barrier view points are described below.

While on occasion, a barrier can be constructed at a continuously uniform distance from the roadway and at a uniform height or elevation, it is rare that barriers can be built without some change in horizontal and vertical alignment. In attempting to make aesthetically pleasing barrier transitions and profiles, barrier designers incorporate shifts and transitions into the barrier's alignment. Such changes must be made within the restrictions and tolerances of the barrier system components. For example, angles of horizontal alignment shifts on post and panel systems are restricted to those which the particular post design can accommodate. Barrier systems with cable secured, linear ball and socket style panel connections can accommodate much greater angles.

Combined shifts in both horizontal and vertical alignment (see Figure 130) can create conditions which may not be obvious to the noise barrier designer unless the barrier can be viewed from various angles. Such conditions can occur in areas where a barrier transitions from a location on the edge of shoulder of a fill section to a point at the top of a cut section (see Figure 131). The horizontal angle of the back (community) side of the barrier's transition section can actually reflect flanking sound waves back into the community which the barrier is designed to protect (see Figure 132). While such a condition cannot always be avoided, its recognition during the design process can enable the adverse condition to be rectified by placing acoustically absorptive material on the normally reflective back side.
Depending upon the type of barrier system utilized, vertical transitions in noise barriers can be accomplished in a variety of manners. Such transitions in post and panel systems are often accomplished by stepping the panels. A uniform appearance can be provided by designing barriers with sections containing consistently spaced equal height steps (see Figure 133). An irregular appearance can be provided by providing random height steps at irregular intervals (see Figure 134). To avoid having to cast non-rectangular panels, and for aesthetic reasons, such steps normally are made at the location of the posts. Keep in mind that on radically changing terrain, consideration should be given to sloping the bottom of the panels to avoid burying a large portion of the panels in the ground (see Figure 135). This would avoid reducing panel lengths (to ensure structural stability) and decreasing the distance between posts which would increase the number of posts required and the costs for more posts and foundations. Barrier transitions can also be accomplished using a smooth sloped top of barrier profile (see Figure 136). This technique is common with cast-in-place noise barriers. If this technique is used in a post and panel system, irregularly shaped panels are required, and consideration should be given to also sloping the post tops at a consistent angle.
For the purpose of this discussion, caps are considered to be separate elements of the barrier system applied to either the top of noise walls or to the top of the noise wall posts. The "cap look" is accomplished as an integral part of the fabrication/construction of the noise barrier wall panels.

### 6.1.3.1 Horizontal Caps.

Caps have been placed on the top of noise barriers (panels, posts, or both) for both aesthetic and
acoustical reasons (see Figures 137 to 140). Caps can smooth a barrier’s profile eliminating saw-toothed steps and gaps and provide a pleasing shading pattern. However, care should be taken to keep the size of the cap proportional to the scale of the noise wall. Too large of a cap can give the visual perception of the noise wall being “top heavy.” A cap can also interfere with the natural “washing” of the top portion of the noise wall which occurs during rain events. With the noise wall not being uniformly washed, streaking becomes more apparent over time and can become very unsightly.

Attachment and caulking details need to be carefully considered at the panel-to-post attachment points and between cap sections. Particular concern should be taken regarding the visual appearance of capped barriers which follow a meandering vertical and horizontal alignment. These conditions tend to create the potential for awkward looking barriers unless the proper care is taken in the design process.

Figure 137. Noise wall horizontal cap
photo #271

Figure 138. Noise wall horizontal cap
photo #1325

Figure 139. Noise wall horizontal cap
photo #2434
6.1.3.2 Vertical Caps.

Capping of vertical posts can provide a more aesthetically pleasing barrier system but requires careful considerations in order to avoid adverse maintenance situations (see Figures 141 and 142). Capping of a steel post with a pre-manufactured cap can negate the need to provide a visually pleasing treatment on the steel post itself. However, sufficient treatment of the steel post should be provided to assure durability and reduce the likelihood of premature rusting. The design of the cap and post should be consistent with long-term maintenance anticipations. For instance, if it is necessary to remove the cap from time to time, the attachment details may be different than if the cap to post attachment is considered "permanent." In either case, drainage considerations are critical and should be considered in light of the respective cap and post materials to avoid trapping of water, resulting in premature rusting, warping, or other material degradation.
Several methods have been successfully used to create aesthetically pleasing treatments at the ends of noise barrier systems. Where topography permits, the barrier end can be buried into the existing ground (see Figure 143). Barriers can also be curved back away from the road at their end points. This technique may have an added advantage of providing some additional acoustical abatement of flanking noise while softening the end of the barrier (see Section 3.5.2). Ends of barriers can be reduced in height (using stepped rectangular panels as in Figure 144, or sloped panels as in Figure 145) from their acoustically required height to a height of approximately 1.5 m (5 ft), equal to right-of-way fence height. While such a treatment may provide the desired aesthetic treatment, it is likely to require construction of some area of barrier which is not absolutely necessary for acoustical reasons. Decisions related to such a treatment should weigh the added costs against the aesthetic benefits and any additional acoustical benefits provided. Ending the barrier at its required acoustical height and buffering its end points with plantings (see Figure 146) and/or berming (see Figure 147) are other techniques.
Figure 144. Barrier end treatment: stepped panel
photo #193

Figure 145. Barrier end treatment: sloped panel
photo #2385

Figure 146. Barrier end treatment: vegetation
photo #1243
Special barrier aesthetic treatments may be required in areas of cultural and/or historic significance. Often such treatments have been incorporated via special inserts, castings, or designs which reflect the historic and/or cultural characteristics of the community (see Figures 148 and 149).

The view of noise barriers experienced by drivers and occupants of vehicles traveling on the highway is significantly different from the view experienced by adjacent land users. From a vehicle, a long expanse and wide viewing angle of a barrier can be seen in a very short time period. Small detail elements and textures are, therefore, less apparent from this perspective. The barrier is most often seen by the driver in a series of generally low angle views and its overall shape and patterns (the relationship of different barrier elements) becomes more apparent (see Figures 150 and 151). Issues related to the view of a noise barrier from the driver's perspective are complicated by the fact that the barrier is viewed from a different perspective by drivers traveling in one direction compared to those driving in the opposite direction.
6.1.6.1 Color.

The overall color of a barrier viewed from the driver's perspective becomes a major visual element. Depending upon the particular design philosophy, the chosen color can draw the eye towards the barrier (see Figure 152 and 153) or tend to blend it into the background of the surrounding terrain. In settings where trees and natural vegetation form the backdrop for the barrier, neutral to dark earthen colors can make the barrier less obtrusive, while lighter and non-earthen colors can make the barrier stand out. When viewed against an open backdrop such as the sky, lighter colored barriers may be less obtrusive.

6.1.6.2 Texture.

For texture treatments on barriers to be noticeable and meaningful from the driver's perspective, they need to have fairly deep patterns and generally should be capable of creating shadow
effects within the pattern itself. Aside from instances where textures are applied to create colors (such as exposed aggregate) or to deter graffiti, they provide little benefit if the design philosophy is to blend the wall into its surroundings. They can be a major element in helping to emphasizing a barrier's aesthetics if appropriately coordinated with color and pattern elements (see Figures 154 and 155).

![Figure 154. View from the road: texture](image)

![Figure 155. View from the road: texture](image)

### 6.1.6.3 Pattern.

The relationship of different barrier elements (posts, panels, adjacent panels, caps, etc.) is referred to as the barrier’s pattern. With the blended barrier philosophy, pattern is often de-emphasized by keeping the color and texture consistent for all barrier elements. On the other hand, the barrier's presence can be emphasized by the use of different patterns. Some examples of the wide variety of techniques used to create patterns include varying the color and/or texture of adjacent panels; providing a different color/texture on posts and/or caps than on panels; and changing the color, relief, and/or texture within the panel itself. On a long stretch of barrier, pattern (such as the occasional introduction of a non-standard panel) can help to break up the monotony of the barrier (see Figures 156 to 162).

![Figure 156. View from the road: pattern](image)
6.1.6.4 Shape.

The shape of a noise barrier is defined by its horizontal (plan view) and vertical (profile view) configurations. A change in either the horizontal geometry or vertical profile of a noise barrier can in itself have dramatic or subtle implications in terms of the aesthetics of the barrier (see Figures 163 and 164). Similarly, the manner (uniform, non-uniform, random) in which changes in plan and elevation occur will result in either a smooth, varied, or jagged barrier shape. Barriers can be designed to meander (in plan view) and follow existing ground contours, thus creating many visually interesting configurations. Such treatments can create shapes which cast shadows, thereby giving the overall barrier a different appearance at different times of the day. Such flexibility can also enable barriers to avoid obstacles (poles, inlets, trees, etc.) that would otherwise have to be relocated or removed.
The most visible portion of the noise barrier in terms of its shape is usually its top, especially when it is viewed against a uniform backdrop such as the sky or a uniform contrasting colored background. It is for this reason that particular attention needs to be paid to the top of a barrier. Due to the types of plans and profiles typically available to individuals developing the final acoustical top of a barrier profile and the final profile in the plans, specifications, and estimate (PS&E) drawings, top of barrier profiles are often developed on drawings viewed at a right angle to the barrier (and typically the highway), and with an exaggerated horizontal scale. While an apparent desired (uniform, jagged, etc.) top of barrier profile may be developed using such plans, the actual profile (as viewed by drivers on the highway) may not meet the intent of the designer. A true profile can only be assured if one can view the barrier from the true perspective of the drivers (traveling in both directions) and from various locations along the highway. Fortunately, computer aided drafting techniques and programs, such as the Federal Highway Administration’s Traffic Noise Model (FHWA TNM®), enable the designer to evaluate the barrier from such a perspective. Even after such considerations result in an acceptable top of barrier profile, the profile should be reviewed in terms of its relationship to the ground profile along the base of the barrier to assure that no unplanned awkward relationships exist.

The view of noise barriers experienced by occupants of properties behind the noise barrier (community side) is most often influenced by a relatively small, specific portion of a noise barrier system. Because of the potential closeness of such barriers to their protected receptors, the relative height of the barrier in proportion to the distance from the receptor is a factor requiring consideration. The appearance of a barrier overpowering a protected receptor by creating unwanted shadows (see Figure 165), impeding natural air flows and/or blocking panoramic views needs to be weighed against the acoustical benefits in any decision making process. Small detail elements and textures in the barrier are more easily seen and therefore are more apparent from this perspective. Since a relatively small section of the barrier is most often seen by any one observer, its overall shape and patterns are less of a factor. In general, the visual dominance of a noise barrier near residences is reduced when the barrier is placed at a distance of at least two to four times the barrier’s height. Additional landscaping on the residential side may also help to reduce a barrier’s visual impact ref. 18

**6.1.7.1 Color.**

The overall color of a barrier viewed from the community perspective is a major visual element and the discussions in Section 6.1.6.1 pertaining to color from the roadway perspective are applicable also to the community side of the barrier (see Figure 166 and 167).
6.1.7.2 Texture.

Detailed texture treatments on barriers are noticeable and meaningful when viewed from an observer in a stationary position on the community side of a noise barrier (see Figure 168). While deep textures can provide a desired look, textures of lesser relief can be successfully used in environments where the barrier is in relatively close proximity to the receptor. However, they can be a major element in helping to emphasize a barrier's aesthetics if appropriately coordinated with color and pattern elements.

6.1.7.3 Pattern.

As discussed in Section 6.1.6.3, pattern can play a major role in barrier aesthetics (see Figures 169 to 172). In the more confined and closely viewed community side environment, patterns need not be as bold or as large as those required along the highway side. Even if the desired philosophy tends toward uniformity of aesthetics, different community side patterns can be utilized in different areas since in many cases, only a small section of barrier is visible from any one location.
6.1.7.4 Shape.

While much of the discussion related to shape in Section 6.1.6.4 is also pertinent to the community side views, specific details regarding barrier plan and profile are important for the portion of the barrier seen from any particular view point. As such, horizontal shifts and top of barrier steps, slopes, and transitions, while possibly having a minor visual impact from a driver's view, can be significant from a community standpoint (see Figure 173). This is particularly noticeable where a transition (such as a step in the top of a barrier profile) or a horizontal shift occurs in the middle of a specific property. Planning such transitions to occur at property lines can in some cases minimize these types of adverse visual conditions. Since the community side of barriers is viewed from a stationary position and often from an angle perpendicular to the barrier, the need to view the barrier at shallow angles is not as critical as for the highway side.
6.2 Landscaping

Landscaping in the vicinity of noise barriers should be integrated with the landscaping theme chosen for the general highway environment as well as being compatible with the existing landscaping (if adequate and acceptable) of the adjacent land uses and surroundings (see Figures 174 and 175). This applies whether the noise barrier is a solid wall, a berm, a combination wall and berm, or a planted barrier. Wherever possible, consideration should be given to accommodating existing vegetation in the design process. It is suggested that a field review be conducted with a landscape architect or other knowledgeable tree expert to "flag" significant trees/vegetation to avoid/saved, if practical, before the final wall alignment is set. This dictates a commitment to consider integrating the horizontal alignment of the wall with the existing topography and can have a bearing on the type of noise barrier material, the footing type, and the size of noise barrier components utilized. The vertical profile of the barrier can also be influenced by these factors. A cooperative effort balancing good engineering practice with environmental sensitivity.

In areas where the existing landscaping is sparse or not of the type deemed desirable, consideration of supplementing or replacing such vegetation with new plantings should be given. Such plantings can be in the form of trees, bushes, shrubbery, and vines placed in the vicinity of the barrier (see Figures 176 and 177). Various methods have been utilized to plant vines, which ultimately climb the barrier (see Figure 178). One method of creating a vine-covered noise barrier involves drilling angled holes through the noise barrier wall, planting vines behind the walls, and training them to grow through the holes to the highway side (see Figure 179). This method is particularly applicable in areas where space on the highway side is not available for plantings.
Figure 176.
Landscaping: supplementing vegetation
photo #1975

Figure 177.
Landscaping: supplementing vegetation
photo #6530

Figure 178.
Landscaping: supplementing vegetation
photo #470
In areas where space on the highway side is available between a protective barrier (such as a Jersey barrier or steel guard rail) and the noise barrier, this area can be used for planting of vegetation, including vines (see Figures 180 and 181). In the case of a Jersey barrier, a raised planter can be created in the space between the protective barrier and the noise barrier. The type of vegetation capable of being planted and maintained in this area is dependant upon its width, soil type, irrigation (natural or artificial), orientation (full sun, shade, etc.), and climatic conditions. Even a narrow space between the noise wall and the protective barrier may be adequate to support vine growth. Such a treatment can also soften the appearance of the barrier and reduce its apparent height.

Other specific applications where planting in the vicinity of noise barriers may be appropriate are discussed below along with other planting considerations:
• In the vicinity of steps in the top of a barrier profile. Vegetation, typically trees, can soften or hide such steps and can be particularly useful in areas where large steps are unavoidable;
• At the ends of noise barriers, particularly where barriers cannot be stepped down or curved back;
• In areas known to be susceptible to graffiti. It may be far more cost effective to increase plantings on or in the vicinity of a plain surface barrier than to try to deter graffiti by providing a textured treatment with an anti-graffiti coating; and
• In pockets created by meanders or jogs in the noise barrier.

While a continuous planting scheme along a barrier can be beneficial, it can also become monotonous. Occasionally breaking up this continuous planting scheme with denser plantings can add interest and create diversity. Such diversity can also be obtained by varying the species, colors, and sizes of vegetation.

It is essential that the landscape plan be coordinated with the engineering of the noise barrier and with its aesthetic design. If such coordination does not occur, situations such as the following can occur:

• Plantings screen or block aesthetic features of the noise barrier (see Figure 182). Trees, high scrubs, and vines could hide aesthetic inserts, designs cast in noise barriers, or other specifically designed aesthetic features of the noise barriers;
• Plantings interfere with drainage in the vicinity of the barrier. Drainage under, along, or through the noise barrier could be affected by landscaping placed in inappropriate locations.
• Plantings interfere with maintenance or emergency access features of a particular barrier design. Plantings could restrict access through barrier overlap areas, to access doors or fire hose openings/valves, or to the noise barrier itself. Vines could grow in or around such fire hose valves, interfering with their use. Plantings could also obscure the identification signs for these access features.

![Figure 182. Landscaping: blocking panel aesthetic features](http://www.fhwa.dot.gov/environment/noise/noise_barriers/design_co...)

No matter how well designed a landscape plan may be from its aesthetic standpoint, it is only as good as the ability of the responsible organization to adequately maintain it. It is a waste of time and money to design an aesthetic treatment for which there is neither the commitment (in terms of manpower), the funding (long term) to adequately maintain or coordination with other maintenance considerations. Figure 183 shows a planted barrier that wasn't adequately watered. Figure 184 shows a barrier with a stain applied around the vine growth causing unstained patches on the wall; the landscapers should have coordinated the timing of their plantings with the maintenance personnel assigned to stain the wall. No matter what the desire from an aesthetic standpoint, the landscape plan needs to be responsive to these constraints. Such constraints may appropriately lead to the selection of vegetation that is native "maintenance free" and to a plan that will foster growth of natural vegetation.
### Section Summary

Aesthetic considerations for all noise barriers.

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<td>Alignment Changes</td>
<td>Acoustical</td>
<td>Shifts and transitions into the barrier's alignment must be made within the restrictions and tolerances of the barrier system components. Combined shifts in both horizontal and vertical alignment must avoid reflecting flanking sound waves back into the community.</td>
<td>6.1.1</td>
</tr>
<tr>
<td>6-2</td>
<td>Vertical Stepping/Sloping of Panels</td>
<td>Aesthetic</td>
<td>To avoid having to cast non-rectangular panels, stepping of panels should be made at the location of the posts with consideration also given to sloping the post tops at a consistent angle.</td>
<td>6.1.2</td>
</tr>
<tr>
<td>6-3</td>
<td>Caps</td>
<td>Aesthetic</td>
<td>Consider the aesthetic concerns related to the size of the cap in proportion to the scale of the noise wall and related to the horizontal and vertical alignment of the cap with the entire barrier.</td>
<td>6.1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drainage and Utility</td>
<td>Provide for adequate drainage requirements.</td>
<td>6.1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Structural</td>
<td>Attachment and caulking details need to be carefully considered at the panel-to-post attachment points and between cap sections.</td>
<td>6.1.3</td>
</tr>
<tr>
<td>Maintenance</td>
<td>6.4 Barrier Ends</td>
<td>Cost</td>
<td>When considering a barrier end treatment, the decision should weigh costs against any acoustical and/or aesthetic reasons.</td>
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<tr>
<td>6.5 View from the Road</td>
<td>Small detail elements and textures are less apparent from this perspective. The barrier is seen from low angle views, and its overall shape and patterns become more apparent. Also note the different perspective of drivers traveling in opposite directions.</td>
<td></td>
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<tr>
<td>6.6 View from Adjacent Land Uses</td>
<td>Because of the potential closeness of barriers, the relative height of the barrier in proportion to the distance from the receptor is a factor requiring consideration. Horizontal shifts and top of barrier steps, slopes and transitions property boundaries require planning to minimize adverse visual conditions.</td>
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<tr>
<td>6.7 Landscaping</td>
<td>Aesthetic</td>
<td>Trees, high scrubs, and vines could hide aesthetic inserts, designs cast in noise barriers, or other specifically designed aesthetic features of the noise barriers.</td>
<td></td>
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</tr>
<tr>
<td>Drainage and Utility</td>
<td>Drainage under, along, or through the noise barrier could be affected by landscaping placed in inappropriate locations.</td>
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<tr>
<td>Safety</td>
<td>Plantings could restrict access through barrier overlap areas, to access doors or fire hose valves, or to the noise barrier itself. Plantings could also obscure the identification signs for these access features.</td>
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</tr>
<tr>
<td>Litter</td>
<td>Landscaping in a high litter area should also consider what type of vegetation is best to use. A thorny type of bush may make litter cleanup more difficult than such litter removal from a grassy area.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>