NOISE
Chapter Seventeen

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Introduction:

The FEIS was updated to reflect DEIS comments on the traffic report and updates to the project scope and this response addresses the resultant changes on potential environmental impacts for the year of Project completion 2015. The DEIS traffic study was updated by Frederick P. Clark and Associates, Inc. (FPCA) to address public and agency review comments and resultant traffic generated impacts for the minor changes in project size, and resultant changes in the projected 2015 No Build and Build traffic volumes. The potential traffic related noise impacts of the proposed project as summarized in the DEIS were previously evaluated for the analysis year 2011. The results of the updated FPCA 2015 traffic analysis were reviewed with respect to the impact of the change in traffic volumes presented in Table A-1 included in Chapter 16 of the FEIS on the results and conclusions of the technical noise study. The results of this qualitative assessment are as follows:

Noise Assessment

No change in the DEIS equipment noise assessment was performed for the updated 2015 project plan described in the FEIS. The 2011 project noise assessment summarized in the DEIS did not indicate any equipment related noise impacts at adjacent receptors. The downsized project proposed in the FEIS will also reduce the outdoor equipment required based on the reduced square footage making the DEIS equipment noise study conclusions for the 2011 project conservative for the updated 2015 Project design.

The traffic noise impact was addressed at two residences along Route 312 in the vicinity of the intersections with both Zimmer Road and Prospect Road. Similar to the DEIS assessment, as shown in the revised traffic Table A-1, the 2011 No Build traffic volumes increase slightly along Route 312 at both intersections for the 2015 analysis year based on the updated projections. However, the proposed 2015 Build traffic volumes along Route 312 will decrease from the 2011 Build volumes near both the Prospect Road and Zimmer Road intersections based on the reduction in project size. The reduction in traffic volumes that occur near Zimmer Road and Prospect Road under 2015 Build conditions would not affect the magnitude of the projected change in noise levels for 2011 Build conditions. The results of the traffic noise analysis in the DEIS would not change for the updated FEIS traffic volumes and the incremental project impact would remain negligible at less than 1 dBA at both receptors analyzed. Therefore, the updated 2015 project traffic study will not alter the findings or conclusions regarding the project's insignificant traffic related impact on community noise levels determined in the DEIS.

Summary

Based on the review of the updated 2015 traffic study prepared for the FEIS, it was determined that the noise assessment conclusions presented in the DEIS would not change for the updated 2015 project Build conditions consisting of a smaller project in scope than the project analyzed in the DEIS. Correspondingly, the DEIS analysis that was performed for the larger Project scope would be conservative in addressing potential noise impacts for the smaller updated 2015 Project design presented in the FEIS. Therefore, an updated analysis of the 2015 Project described in the FEIS was not required to address the potential noise impacts since the conclusions described in the DEIS would not change.

Comment Noise-1

Chapter 14:Noise

1. *On page 14-2, it states that, "Receptor noise levels were measured during the midday traffic period between 2-4 PM to determine representative noise levels affecting the residences along Route 312." However, measurements should have been taken during a peak traffic period, specifically the PM peak traffic period used for the noise analysis. (AKRF (11/12/2013)*

Response:

The existing noise levels were measured during the midday period (3-4PM) based on the similarity of traffic volumes to the peak hour traffic period of 4-5PM. This determination was made based upon review of the 2009 existing 24-hour traffic count information provided in the project traffic report for the Route 312 study area. The hourly traffic volumes were of similar magnitude during both the midday and PM peak hour periods, concluding that noise levels measured during either time period would be similar. Therefore, the 3-4PM measurement period was considered to be representative of the existing ambient noise levels during the corresponding 4-5PM peak hour traffic period for addressing project impacts at the affected receptors along Route 312. The existing hourly traffic counts on Route 312 during the 4-5PM Weekday (907vph) and Saturday (705vph) peak hours were only 1-2% higher than the corresponding 3-4PM Weekday (898vph) and Saturday (701vph) existing volumes. The same order of magnitude volumes for both the 3-4PM and 4-5PM time periods indicated that noise levels measured during either time period would be similar and representative of Existing conditions. Therefore, the negligible difference in the hourly traffic volumes between the 3-4PM and 4-5PM time periods would not result in any significant difference in the measured noise levels presented in this FEIS as representative of the existing conditions. In addition, despite the DEIS measured noise level reported for Existing conditions, the critical project noise impact would still be related to the change in future traffic noise levels between the No Build and Build conditions. The future noise levels were predicted using the conservative TNM Screening Model and the future year No Build and Build traffic volumes, and the future noise level predictions would remain unaffected by the measured existing noise levels. The negligible effect of project traffic on community noise levels did not warrant making any adjustments to the measured noise levels just to coincide with the future TNM model predictions as discussed in response to Comment Noise-4.

Comment Noise-2

2. *The Noise analysis should be adjusted for the 2015 Build Year, and should be updated to reflect any changes presented in the traffic study. (AKRF (11/12/2013)*

Response:

Due to the minor project changes and in some cases lower projected traffic volumes for the 2015 Build conditions, the DEIS noise analysis results were qualitatively updated for the new project

scope and the corresponding Build Year. There was a supplemental discussion on noise impacts reflecting the effect of the slight changes in traffic volumes at intersections for the 2015 Build conditions that was included in Chapter 14 and Table A-1 in Chapter 16 of the FEIS. The revised Table A-1, included in Chapter 16 of the FEIS reflects the latest reduced project scope described in the FEIS that will result in the same minor changes and lower projected traffic volumes for the Build versus No Build conditions in 2015 as discussed in the DEIS. The reduced project scope will result in less project traffic and the same minor traffic volume increases between Existing, No Build and Build conditions that were evaluated in the DEIS noise study, therefore, the DEIS conclusions regarding the project's negligible impact on community noise levels would not change.

Comment Noise-3

3. The FEIS should clarify how mid-afternoon existing noise measurements represent the PM peak period. (AKRF (11/12/2013)

Response:

See response to Comment Noise-1.

Comment Noise-4

4. The DEIS indicates a >4 dBA increase in noise level a Site 2 in the Future without the Proposed Project. However, this is a relatively large increase since the No Build analysis also states that the traffic will not double. This increase should be further explained. One possible reason is that the TNM lookup method used traffic levels from the PM peak hour, whereas the measured noise levels are from an afternoon off-peak hour. (AKRF (11/12/2013)

Response*:*

The 4dBA increase in noise levels at Site 2 between the measured Existing and Future No Build conditions is due primarily to the conservatism built into the TNM screening model used for predicting the future No Build and Build traffic noise levels and potential project impacts. The measurement of existing noise levels during the 3-4PM off-peak hour instead of the 4-5pm peak hour was acceptable based on the similar hourly traffic volumes that would not factor into explaining the difference between measured Existing and future predicted No Build noise levels. As noted in the response to DEIS Comment Noise-1, the difference was more likely due to the randomness of traffic during the ambient noise measurement compared to the future TNM model predictions reflecting steady traffic flow. Despite the random nature of the ambient noise level measurements presented in the DEIS, the measured noise levels were considered the more accurate representation of Existing conditions and were not based on model results using the

Existing traffic volumes in the TNM screening model.

The future No Build noise levels could have been calculated without using the TNM screening model by taking into consideration only the change in traffic volumes between Existing and No Build conditions. That method would have reduced the No Build noise levels reported in the DEIS predicted using the TNM model, keeping future noise levels more in line with the expected incremental change over the measured noise levels based on Existing versus future No Build traffic volumes. However, the same method would then have been used to calculate the future Build conditions to compare with the No Build levels reported in the DEIS without using the TNM screening model results for the impact assessment. Using either method, the incremental difference between the No Build and Build noise levels presented in the DEIS as a negligible project impact would not change. Only the difference in the Existing vs No Build noise levels presented in the DEIS document would be reduced. The difference between existing and future No Build noise levels is slightly exaggerated due to the comparison of a measured noise level with future model predictions. However, since the TNM model results used are known to be conservative for noise impact assessments, and the incremental change in the traffic related noise levels between future No Build and Build conditions would not differ based on the existing ambient conditions, the magnitude of the project noise impact as presented in the DEIS remains accurate. No adjustments were considered for the measured existing noise levels just to close the gap between the model predicted future noise levels in the DEIS, and therefore, the measured Existing noise levels were not analyzed using the TNM model with existing traffic volumes. The revised Table A-1 in Chapter 16 of the FEIS reflects the latest reduced project scope that will result in the same minor changes and lower projected traffic volumes for the Build versus No Build conditions, and the same minor projected traffic volume increases between Existing and No Build conditions that will not alter the DEIS noise study conclusions regarding the negligible project impact on community noise levels at the critical receptor locations analyzed.

Comment Noise-5

5. In the "Vehicle Percentage from EPM Classifications for use in TNM Model" table in Appendix P (Page 17), the existing traffic should be shown as well to account for predicted changes in noise levels between existing and No Build conditions. (AKRF (11/12/2013), (Kim Cercena (11/12/2013), (Robert Zubrycki (11/12/2103)

Response:

The Existing traffic volume data is provided in traffic Chapter 11 and Appendix R of the DEIS for comparison with the No Build and Build traffic volumes in Appendix P that

were used in the traffic noise assessment. However, the breakdown of the 2009 count data into Existing condition flow diagrams or by vehicle percentages were not included in Appendix P technical backup data for the original noise assessment because Existing noise levels were based on measured noise levels and not on modeling of Existing traffic volumes. Therefore, that traffic information was not presented as input for use in the TNM Screening Model. See response to Comments Noise-1 and Noise-4 for the more detailed explanation regarding the difference between the measured Existing and the predicted future No Build and Build noise levels that were discussed in the DEIS.

Subsequent changes to the DEIS document to reflect the updated 2015 Build year were handled by a qualitative review of noise impacts due to changes in the future year traffic volumes compared to the original 2009 traffic count data. Changes in traffic volumes were used to quantify and describe any potential effect on the predicted noise levels for the new Build year. No changes were made to the Existing conditions noise levels in the DEIS based on the ambient measurements to account for the updated traffic counts reflected in Table 1 in Chapter 11 (p.13) in the DEIS. The traffic count data presented in Table 1 for the updated counts in 2012 did not show significant enough increases in 2009 traffic volumes on Route 312 near the measurement locations to warrant making any adjustments to the measured ambient noise levels used to reflect Existing conditions. The bottom line is that despite using measured noise levels for Existing conditions, the difference in traffic volumes between the No Build and Build conditions remains the critical impact issue. The Build traffic volumes resulted in a negligible increase of less than 1dBA in No Build noise levels or no significant noise impact at the affected receptors analyzed. The actual change in Existing noise levels based on normal traffic growth for the future No Build conditions would also be negligible. The revised Table A-1 included in Chapter 16 of the FEIS shows the updated change in traffic projections for the existing and prior analysis year conditions based on the reduced Project scope for 2015 that indicates the conclusions in the DEIS will remain unchanged.

Comment Noise-6

Will the noise from I-84 be louder at Lake Tonetta and surrounding roads once the trees are removed? (Lisa Eidlin McCarthy(11-11-2013) (Dr. Bernadette Brandon (10/25/2013) (Christine and William Capuano (10-14-2013),

Response:

The traffic noise from I-84 should not be significantly different in the Lake Tonetta area once existing trees onsite are removed. Although a negligible increase of 1 to 2 decibels might occur in some areas, such a small change would generally not be noticed or perceived by nearby residents. Much of the traffic noise is already screened from the

Lake Tonetta area by the existing topographic features of the site along I-84 that will not be altered by the project, leaving the adjacent highway section in a deep cut relative to the Lake Tonetta area. The attenuation benefit of the high rock wall along I-84 on screening traffic noise from the site and residences beyond will not be affected by the project. For the most part, trees have a minimal effect on the blocking of sound unless there are several hundred feet of dense evergreen trees totally screening the source from the receiver. Accordingly, trees and wooded areas are not generally given credit for any attenuation effects on sound when determining the impact of noise sources on receptors. Conversely, it is anticipated that the removal of the trees on the project site will not have any significant effect on the existing traffic noise levels affecting the Lake Tonetta area residences.

Comment Noise-7

15. If traffic volume is increasing, can you explain how there will be no rise in noise pollution? (Samantha Jacobs (*11/08/2013) (Public Hearing (11/07/2013)*

Response:

The traffic noise analysis took into consideration the projected increase in traffic volumes at critical receptors along the affected travel network. The increase in traffic volumes along the Route 312 corridor between the future No Build and Build conditions was evaluated at adjacent residential receptors. The incremental increase in receptor noise levels due to project traffic was determined to be less than 1dBA. A change in noise level of 1dBA represents a negligible increase in noise levels, therefore, the proposed project would not have a significant noise impact on the future No Build conditions at affected receptors. The effect of the FEIS reduced Project scope on the traffic projections are shown in Table A-1 in Chapter 16 of the FEIS and indicate that the DEIS conclusions will not change and the Project will continue to have a negligible impact on local traffic noise levels based on the revised 2015 Project traffic volumes.

Comment Noise-8

16. Currently the trees act as a buffer to I-84 noise. Has the noise pollution been determined for after tree removal? (Public Hearing 11/07/2013)

Response:

See response to Comment Noise-6 above

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