

## 3.12 NOISE

This section assesses the potential for implementation of the West Village Expansion component to result in impacts related to short-term construction, long-term operational noise sources, and the siting of new sensitive receptors at the project-specific level. This analysis addresses impacts at the project level that are not fully addressed in Section 3.12, “Noise” of Volume 1 of this EIR.

In response to the NOP, one comment was received regarding potential noise issues with respect to increases in student and faculty populations and the subsequent increase in noise levels. As this comment does not pertain specifically to implementation of the West Village Expansion component of the 2018 LRDP, these impacts are addressed within programmatic context and as part of Section 3.12, “Noise,” in Volume 1 of this EIR.

### 3.12.1 Regulatory Setting

Plans, policies, regulations, and laws applicable to the project are provided in Section 3.12, “Noise”, in Volume 1 of this EIR. As the regulatory setting provided in Volume 1 considers potential development, including the project, within the entirety of the UC Davis campus as envisioned through the 2018 LRDP, no additional regulatory setting is provided for the West Village Expansion component.

### 3.12.2 Environmental Setting

#### EXISTING NOISE SOURCES AND SENSITIVE LAND USES

Section 3.12, “Noise” of Volume 1 includes the regional environmental setting for the UC Davis campus, including the West Village Expansion component with respect to the noise environment. The site is currently used for agricultural operations and teaching for several University departments. Noise levels on the West Village Expansion site are primarily influenced by traffic on State Route (SR) 113 to the east, Hutchison Drive to the south, and Russell Boulevard to the north. Intermittent noise sources include agricultural equipment and aircraft take-offs and landings at the University Airport, which is located 0.4 mile to the southwest of the West Village Expansion site. The West Village Expansion site is not located within existing noise contours for the University Airport, as shown in Section 3.12, “Noise” of Volume 1 of this EIR. Noise sensitive land uses surrounding the site includes the existing West Village student housing approximately 100 feet to the south and east of the site. A low-density residential neighborhood also exists approximately 1,350 feet north of the West Village Expansion site within the City of Davis. The site is otherwise surrounded by agricultural land currently owned by UC Davis. As described in detail in Section 3.12, “Noise,” of the 2018 LRDP, one long-term measurement (LT-2) was conducted in November 2016. The location of the noise measurement is approximately 1,100 feet northeast of the West Village Expansion site, adjacent to SR 113 and south of Russell Boulevard. The noise measurement location is shown in Exhibit 3.12-1 in Volume 1 of this EIR. As summarized in Table 3.12-11 in Volume 1, existing noise levels at this location were measured to be 63.4 A-weighted decibels (dBA) community noise equivalent level (CNEL). This measurement serves as a reference for ambient noise levels in the proximity of the site under existing conditions.

The proposed remote parking area is previously disturbed former agricultural land. Existing elevated noise levels on site are primarily influenced by traffic on Interstate 80 (I-80), less than 300 feet northeast, and Old Davis Road, which is immediately adjacent to the eastern boundary of the parking area. The nearest noise sensitive land use (i.e., residential or open space land use designations) east of I-80 is the Putah Creek Riparian Reserve, approximately 0.6 miles south. The site is otherwise surrounded by current or former agricultural fields, campus utilities, and academic and administrative buildings.

### **3.12.3 Environmental Impacts and Mitigation Measures**

#### **SIGNIFICANCE CRITERIA**

Refer to Section 3.12, “Noise,” in Volume 1 of this EIR for a discussion of applicable Significance Criteria.

#### **ANALYSIS METHODOLOGY**

Refer to Section 3.12, “Noise,” in Volume 1 of this EIR for analytical background relative to noise. Overall noise impacts associated with the implementation of the 2018 LRDP are evaluated at the programmatic level in Volume 1. Technical noise modeling and propagation calculation methods used in this analysis are the same as those described in Volume 1.

This analysis focuses specifically on the noise related impacts associated with implementation of the West Village Expansion component including the remote parking area. The analysis focused on potential noise impacts of short-term construction activities and long-term operational activities associated with implementation of this component as well as the potential impacts from existing noise on the siting of new noise sensitive land uses that would result from implementation of the West Village Expansion component. Results of the analysis were compared to the significance criteria established in Table 3.12-13 in Volume 1 of this EIR.

#### **ISSUES NOT EVALUATED FURTHER**

The following impacts were identified as part of the analysis of the 2018 LRDP and are either (1) adequately evaluated at the program level of analysis of the 2018 LRDP, or (2) not applicable to the West Village Expansion component. Additionally, there are no sensitive receptors near the proposed remote parking area; therefore, noise impacts from construction activities at the remote parking area would not occur and are not analyzed further.

#### **Increases in Vibration Levels**

As discussed in Section 3.12 in Volume 1 of this EIR, construction activities that might expose persons to excessive groundborne vibration or groundborne noise could cause a potentially significant impact. This project is anticipated to involve construction activities using conventional construction techniques and equipment (i.e., non-impact equipment) and would not generate substantial levels of vibration or groundborne noise. Pile driving, blasting, or other substantial vibration-inducing construction equipment or techniques are not anticipated to be used for construction of the types of facilities identified under the 2018 LRDP, thus excessive ground vibration and ground-borne noise during construction would not occur. Further, the overarching land use associated with the West Village Expansion is residential and would not result in new or unique vibration levels that would exceed significance thresholds during operation. Therefore, construction and operation of the West Village Expansion would not result in vibration levels in exceedance of the significance thresholds, and this issue is not discussed further.

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## PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

### Impact 3.12-1: Construction noise.

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Implementation of the West Village Expansion component would result in construction-related noise at the West Village Expansion site from the use of heavy-duty construction equipment during the development of the West Village Expansion component. Construction noise modeling conducted for this found that noise levels during the loudest construction phase would be 85.1 dBA maximum noise level ( $L_{max}$ ) at 100 feet, which is the location of the nearest sensitive receptor. If construction were to occur during the more sensitive nighttime hours, nearby receptors could be exposed to disruptive noise levels. This impact would be considered **significant**.

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As discussed in detail in Chapter 2, "Project Description," the West Village Expansion component would include the development of housing for a total of 3,800 students including the remote parking area. The project would also include construction of a one-acre park and a variety of active and passive recreational located throughout site. As discussed above, the site is predominantly surrounded by agricultural land. Noise sensitive land uses located in close proximity to the site include the existing West Village Apartments, approximately 100 feet from the project site and a low-density residential neighborhood approximately 1,350 feet to the north of the West Village Expansion site, along the northern side of Russell Boulevard. Implementation of the West Village Expansion component would involve various stages of construction activity resulting in the short-term noise impacts associated with the use of heavy-duty construction equipment. Construction of the project would generally occur during the daytime over a 24-month period and is anticipated to commence as early as August 2018.

Assuming construction of the project would include typical construction phases associated with residential apartments, the use of construction equipment during the grading phase would generate the loudest noise sources (i.e., site preparation, grading). Modeling conducted for this analysis included heavy-duty construction equipment typical of the grading phase including an excavator, a dozer, a dump truck, a front-end loader, and a grader. Noise modeling results demonstrate that construction activity during this phase would be 62.5 dBA  $L_{max}$  at 1,350 feet from the project, the site of residential neighborhood in the City of Davis. Additionally, construction noise would be 85.1 dBA  $L_{max}$  at 100 feet from the construction activity, the location of the existing West Village apartments and the closest sensitive receptor to the West Village Expansion site. Thus, construction noise would not exceed City of Davis noise standards at receptors within the City of Davis (off-site). Construction noise would also not exceed 86 dBA significance threshold at nearest on-campus sensitive use (the existing West Village apartments).

Daytime construction activity would not exceed applicable standards at the nearest sensitive receptors. However, specific construction schedule and timing is unknown and if construction were to occur during the nighttime hours could expose nearby receptors to levels that could disturb sleep. As a result, impacts would be considered **significant**.

#### **WVE Mitigation Measure 3.12-1: Reduce construction noise.**

Implement 2018 LRDP Mitigation Measure 3.12-1.

#### **Significance after Mitigation**

Implementation of WVE Mitigation Measure 3.12-1 would ensure that construction activities are limited to the less-sensitive, daytime hours when people are typically not sleeping and that construction noise is limited through the appropriate location of staging/stationary equipment, as

well as equipment maintenance and muffling. As a result, this impact would be reduced to a **less-than-significant** level.

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### **Impact 3.12-2: Increase in non-transportation noise sources.**

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Implementation of this component would result in the development of apartment buildings that would include new stationary sources such as heating, ventilation, and air condition (HVAC) equipment and emergency backup generators that could subject existing residents within West Village to elevated noise levels. This impact would be **significant**.

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The West Village Expansion would involve the development of residential apartment buildings and parking facilities to house approximately 3,800 UC Davis students and faculty. Stationary equipment included in the design of the new apartment buildings could include mechanical HVAC equipment and emergency electrical generators. Impact 3.12-2 in Section 3.12, “Noise” in Volume 1 evaluated noise from these types of sources. Because site plans have not been finalized and specific location of mechanical equipment in proximity to dwelling units is unknown, it is possible that new and existing adjacent receptors could be exposed to excessive noise levels from these new sources.

Additional, long-term operational noise sources associated with the project would include operation of landscaping equipment as part of project maintenance as well as parking lot activity. Similar to the use of emergency generators, these noise sources could be noticeable, but noise level increases would be temporary and intermittent in nature and are not anticipated to generate excessive noise that exceeds applicable standards. However, because locations of new noise sources are unknown and could expose existing or new receptors to disturbing noise levels, this impact would be **significant**.

#### **WVE Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources.**

Implement 2018 LRDP Mitigation Measure 3.12-2.

#### **Significance after Mitigation**

Implementation of WVE Mitigation Measure 3.12-2 would require that all stationary noise sources are oriented, located, and designed in such a way that reduces noise exposure to ensure that stationary noise sources would comply with acceptable noise standards for sensitive receptors, reducing this impact to a **less-than-significant** level.

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### **Impact 3.12-3: Exposure of sensitive receptors to existing noise levels.**

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Implementation of the West Village Expansion component would result in the siting of new sensitive receptors which could potentially be exposed to existing noise sources, including the University Airport. However, based on a review of existing noise sources and noise levels that could be experienced at the West Village Expansion site, noise levels occurring at the site would be below applicable significance thresholds. This impact would be **less than significant**.

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Implementation of the West Village Expansion component would result in the siting of a noise sensitive land use (i.e. residential) in a location that could potentially expose new sensitive receptors to existing noise sources surrounding the project location. As discussed in Section 3.12, “Noise,” in Volume 1 of this EIR, a Union Pacific Railroad (UPRR) line is located to the south of the UC Davis campus and is currently in operation for both passenger rail and freight rail services. The West

Village Expansion site is located approximately 7,500 feet away from the UPRR line. The significance threshold for railroad noise established in Table 3.12-12 in Volume 1 of this EIR applies a screening distance of 750 feet from the railroad centerline and is used to assess whether further noise analysis is required. Based on this screening analysis, the West Village Expansion site would be well beyond the 750-foot screening distance; therefore, new student housing would not be exposed to excessive noise levels from the existing UPRR.

The UC Davis Airport is located 0.4 mile southwest of the West Village Expansion site. The airport is operated as a general aviation airport including airport shuttle services for University employees. The airport includes one paved runway which runs north-south with a length of 3,160 feet. Based on airport noise-contour modeling conducted for the airport (Appendix G), the aircraft noise contour for 55 CNEL would not overlap with the West Village Expansion site and would be located no less than 1,500 feet to the west of the nearest proposed residence. Based on the limited height of the proposed on-site structures, construction of the West Village Expansion would not result in changes in approach/take offs at the airport such that noise contours would need to be updated or adjusted. Therefore, noise from the on-site airport would not expose the project to excessive noise levels, and the project would not alter existing noise contours such that off-site receptors could be affected by airport-related noise beyond existing conditions.

Aggie Stadium is located over 3,000 feet from the proposed location of the West Village Expansion site and, therefore would not expose new receptors to excessive noise levels in excess of any applicable threshold. In summary, new receptors would not be located in close proximity to existing noise sources (e.g., Aggie stadium, UPRR, airports) and thus would not be exposed to excessive noise levels from these sources. Impacts would be **less than significant**.

### Mitigation Measures

No mitigation measures are necessary.

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### Impact 3.12-4: Exposure of new and existing sensitive receptors to operational project-generated traffic noise.

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Implementation of the 2018 LRDP would result in new vehicle trips generated from increases in the student, faculty, and staff population on the UC Davis campus. As a result of these new trips, traffic-related noise levels would increase along roadways near the West Village Expansion site, specifically along Russell Boulevard directly north of the site. Based on traffic noise modeling conducted for the 2018 LRDP, traffic-related noise increases would remain below established roadway noise thresholds. This impact would be **less than significant**.

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Implementation of the West Village Expansion component would result in increases in total student housing. This increase in the campus population would also result in the generation of new vehicle trips associated with commutes to and from the UC Davis campus, as well as non-commute trips associated with increases in the on-campus student population. A portion of the additional vehicle trips would occur on roadways near/adjacent to the West Village Expansion site and remote parking area and could result in increases in traffic-related noise perceivable by residents in the area.

Along Hutchison Drive near the West Village Expansion site, daily vehicle trips current generate a roadway noise level of 61.3 dBA CNEL. With implementation of the 2018 LRDP, including the West Village Expansion component, this roadway segment would experience a noise level of 65.4 dBA CNEL.

Based on modeling conducted for the 2018 LRDP, this would result in a projected increase of 4.1 dBA along this roadway segment, which would not be considered substantial and is below the significance threshold of 5 dBA. Existing and future projected noise levels currently exceed City of Davis normally acceptable levels of 60 dBA CNEL, but would not result in readily perceivable increase in noise.

Along Old Davis Road near the remote parking area, daily vehicle trips current generate a roadway noise level of 53.5 dBA CNEL. With implementation of the 2018 LRDP, including the West Village Expansion component, this roadway segment would experience a noise level of 56.2 dBA CNEL. Thus, the West Village Expansion component, as well as other LRDP-related development, would result in a projected increase of less than 3 dBA along this roadway segment, which would not be considered substantial and is below the significance threshold of 5 dBA.

Therefore, based on noise modeling of future roadway conditions conducted for the 2018 LRDP, of which the West Village Expansion component is a part, traffic-related noise would increase under future year conditions. However, projected increases along roadways near the site would remain below the established significance threshold (i.e., 5 dBA), and there would be no significant impact on the new sensitive receptors to be located on the site or adjacent existing sensitive receptors. This impact would be **less than significant**.

### **Mitigation Measures**

No mitigation measures are necessary.

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