



February 19, 2021
Wise Project # 21-002

**Tectonics Design Group
730 Sandhill Road, Suite 250
Reno, NV 89521**

Attn: Matt Rasmussen, P.E.

**Re: NOISE ANALYSIS REPORT
APN 082-092-11, N. Virginia St.,
Reno NV 89506**

Wise Consulting and Training (WISE) was contracted to conduct a Noise Analysis related to the noise at the above referenced site (Property) and its future possible impact on the residences along the western property line boundary. An environmental consultant from WISE conducted noise level analysis' on January 6 and 13, 2021.

The site is located on North Virginia Street within the City of Reno; a 19.92-acre parcel, APN 082-092-11. The site is currently undeveloped with single family residences to the west at the property boundary, warehouse operations to the north on the western side of North Virginia St., warehouse, and commercial operations to the east across North Virginia St. and vacant land to the south along the western side of North Virginia St., and across Seneca Drive which abuts the properties southern boundary line.

INTRODUCTION

A noise analysis has been conducted using an Extech SL400 Noise Dosimeter and Sound Level Meter with a wind screen. The meter was set to Slow Time Weighting and A Frequency Weighting. The SL400 was set to record every five seconds, with a low-end threshold of 30 decibels.

BACKGROUND INFORMATION

Noise is normally measured by means of a “decibel” (db) which is defined as a logarithmic measure used in describing the amplitude of sound. In addition, noise levels are usually divided into day-night average sound levels (Ldn). The time period from 10 p.m. to 6 a.m. represents the “quiet time” normally associated with sleep, and most noise ordinances take this into account for the various land uses. Land use categories (residential, commercial, industrial) have different maximum allowable levels that represent the various human activities in a given zoning designation. The City of Reno Municipal Code, Title 8, Section 18.12.304(g) (Residential

Adjacency Standards) states that noise levels at residential property lines should not exceed 49 db leq between 10 p.m. and 6 a.m. and should not exceed 65 db leq during the daytime. Noise measurements are normally taken with the “A-weighted, slow response” scale to represent human hearing most closely. Sound levels vary continuously from moment to moment depending upon all of the various human activities occurring in a given area. For example, an 80-dB level may be recorded during the few seconds of a passing motorcycle near a roadway, and that level will drop to 60 dB or less once that event has ceased.

Noise levels also increase or decrease depending upon the distance to the source. Temperature, wind direction and humidity also play a part in actual noise levels on a given day and time, as well as physical features such as vegetation barriers, walls or fences that block the path of sound travel, and elevation differences.

In addition, outside noise levels from a source will be lower inside a home or business. Factors that determine the amount of decrease include the amount of wall and ceiling insulation, window type (single vs. double pane, open or closed), and proximity to a given noise source.

SITE and PROJECT INFORMATION

This site is located on the north-west corner of N. Virginia St. and Seneca Drive. It is currently undeveloped with proposed plans for a single warehouse building. The building is proposed to have one truck bay with 40 dock doors where loading and unloading of cargo will occur.

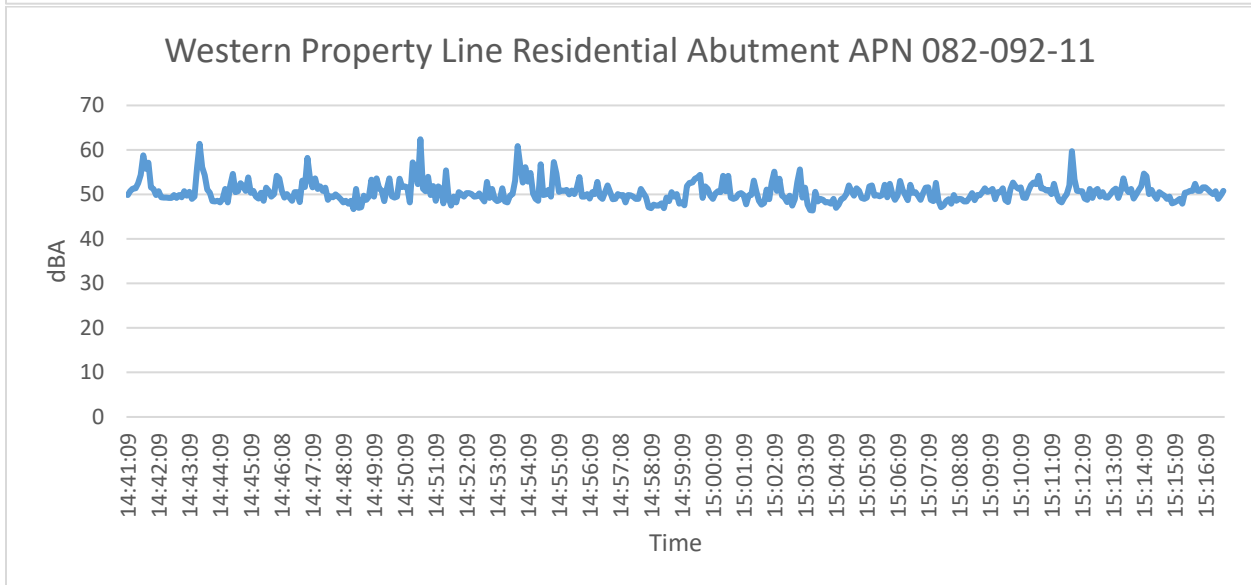
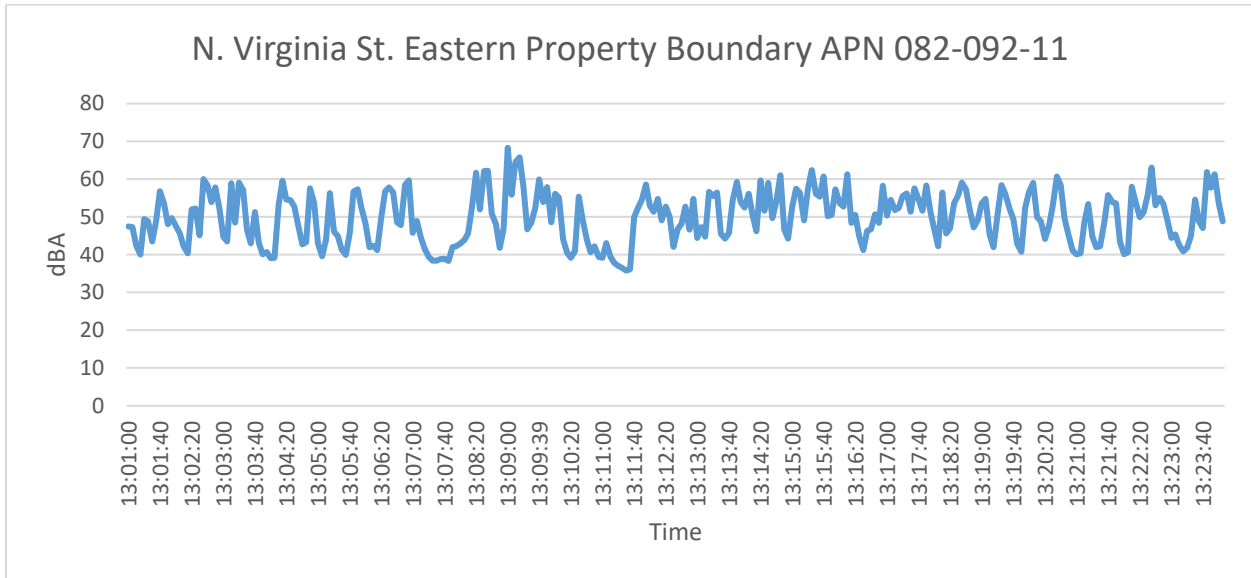
The current layout of the buildings has the truck bay located on the N. Virginia Street side of the facility. In addition, the ingress and egress for truck traffic will also be from N. Virginia Street and the northern portion of the property boundary. The site is fairly level from east to west and the design and location of the building will create a sound buffer from truck traffic to the residential abutment along the western property line.

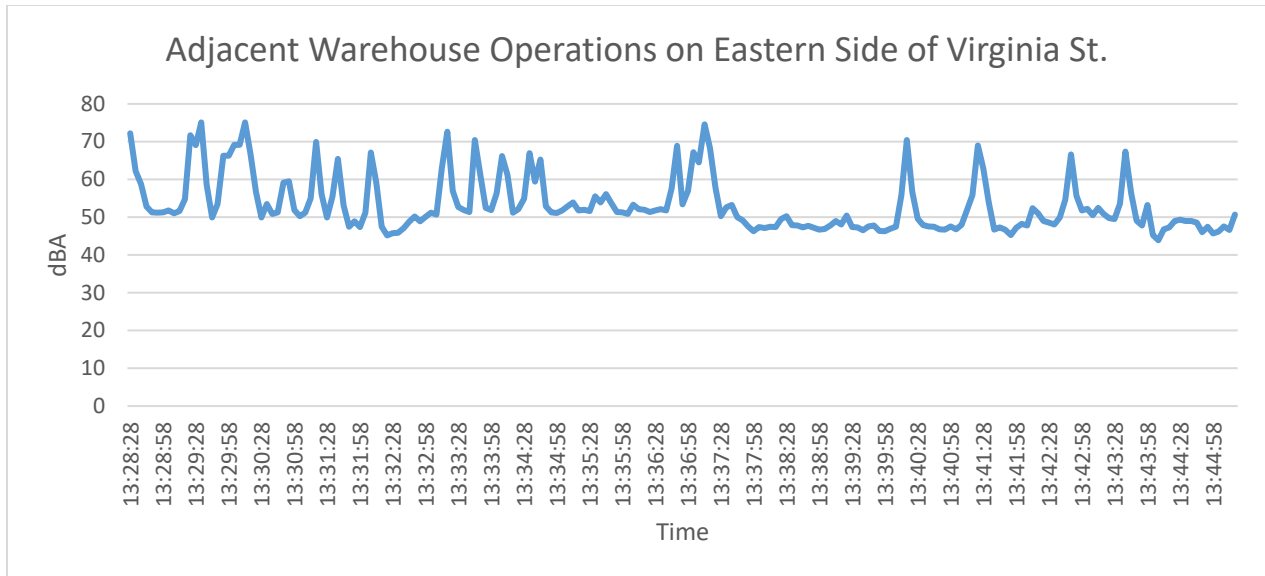
Access for employees and visitors is proposed to be from Seneca Drive and the associated parking will be located along the western and southern property lines. There was no current information available regarding any proposed or required barriers on the subject property.

DATA COLLECTION

Averages and peaks from the SL400 Meter data are included below. A full graph of the data for each site is also enclosed below. It is noted that peak noise levels at all three measurement sites were the result of truck traffic in the immediate vicinity.

	Average (dBA)	Peak (dBA)
N. Virginia St. Eastern Property Boundary	49.8	68.3
Residential Abutment along Western Property Line	50.5	62.4
Adjacent Warehouse Operation East side of N. Virginia St.	53.3	75.1





ANALYSIS

Noise from the site affecting the surrounding residences

Noise level averages at the western property boundary which abuts the existing residences were below the daytime municipal code standards. The peaks observed did not emanate from the property in question but from adjacent traffic noise.

A specific traffic survey report was not available at the time of this report; however, it was anticipated that the site would be operated as a traditional warehouse with primarily day hours of operation and standard levels of vehicle trips for similar properties. As such, the peak hour trip generation is anticipated to be 57 trips. As the truck traffic that will be generated will be entering and exiting from the eastern side of the property, on N. Virginia Street, and the docking operations will also take place on that side of the property, the existing residential abutment will be shielded by the building itself from direct noise distribution from truck operations, as well as preexisting traffic noise which is currently unobstructed from N. Virginia Street. Only employee and visitor traffic will be unobstructed to the residential abutment along the western property boundary.

SUMMARY/CONCLUSION

Based upon the monitoring results and review of pertinent noise literature, the proposed development is projected to be in compliance with City of Reno Municipal Code Section 18.12.304.

CLOSURE

Our services and this report have been performed using a degree of skill and care ordinarily exercised under similar circumstances by consultants practicing on similar projects, in a similar timeframe, and in this or similar localities. Any conclusions presented are strictly our professional opinion and expressly do not constitute a certification, warranty, or guarantee of any type.

The observations, results, findings, and conclusions expressed in this report were based on conditions present during our inspection and sound readings. No other claims or guarantees are implied or expressed.

Thank you for the opportunity to be of service on this project.

Prepared By:



J. Tom Wise, President / Professional Industrial Hygienist
CEM, NAC, CAC, CEI, CMI, NLC

Enclosure – Noise Level Data