

Attachment E

HUD DNL Noise Calculations



Site ID	490 S. Van Ness Ave.
Record Date	08/02/2017
User's Name	Rincon Consultants

Road # 1 Name: S. Van Ness Ave. btwn 16th St. and 17th St.

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	45	45	45
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	6969	220	147
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	60.5	45.5	67.1
Calculate Road #1 DNL	68	Reset	

Airport Noise Level

Loud Impulse Sounds? Yes No

Combined DNL for all Road and Rail sources

Combined DNL including Airport

Site DNL with Loud Impulse Sound

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - Contact your Field or Regional Environmental Officer (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Site ID	490 S. Van Ness Ave.
Record Date	mm/dd/yyyy
User's Name	Rincon Consultants

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Road #1

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Tools and Guidance

Site ID	490 S. Van Ness Ave.
Record Date	08/02/2017
User's Name	Rincon Consultants

Road # 1 Name:

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="40"/>	<input type="text" value="40"/>	<input type="text" value="40"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Average Daily Trips (ADT)	<input type="text" value="1241"/>	<input type="text" value="39"/>	<input type="text" value="26"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/>
Vehicle DNL	<input type="text" value="53.8"/>	<input type="text" value="38.7"/>	<input type="text" value="60.3"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="61.2"/>	<input type="button" value="Reset"/>	

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Tools and Guidance

Site ID	490 S. Van Ness Ave.
Record Date	08/02/2017
User's Name	Rincon Consultants

Road # 1 Name: 16th St. btwn S. Van Ness Ave. and Shotwell St.

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	40	40	40
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	1607	51	34
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	54.9	39.9	61.5
Calculate Road #1 DNL	62.4	Reset	

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Site DNL with Loud Impulse Sound

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Tools and Guidance

Site ID	490 South Van Ness Ave.
Record Date	08/09/2017
User's Name	Rincon Consultants

Road # 1 Name:

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="45"/>	<input type="text" value="45"/>	<input type="text" value="45"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text" value="25"/>
Average Daily Trips (ADT)	<input type="text" value="10473"/>	<input type="text" value="331"/>	<input type="text" value="220"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/>
Vehicle DNL	<input type="text" value="62.3"/>	<input type="text" value="47.3"/>	<input type="text" value="68.9"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="69.8"/>	<input type="button" value="Reset"/>	

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Site DNL with Loud Impulse Sound

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Tools and Guidance

		Traffic Counts			
Roadway	Segment	Peak Hour (PM)	24-Hr Total		
South Van	Between Adair St. & 16th St.	872.97	10,669.16	0.03	**Traffic Counts from site visit noise measurement (only cars on Van Ness btwn Adair & 16th:
	Between 16th St. & 17th St.	798.38	7,335.94		252.00 (15 mins @ 2:15 pm)
16th St.	Between Capp St. & S. Van Ness Ave.	171.47	1,306.66		1,008.00 (full hour)
	Between S. Van Ness Ave. & Shotwell St.	208.45	1,691.29		

		HUD DNL - using 24-Hr Total Existing						44.6	
Roadway	Segment	24-Hr Total (ADT)	Auto	Med Truck	Heavy Truck	Speed Limit	Distance	Road DNL	HUD acceptability standards (https://www.law.cornell.edu/cfr/text/24/51.103)
South Van	Between Adair St. & 16th St.	10,669.16	10,136	320	213	25	45	69.6	Normally Unacceptable
	Between 16th St. & 17th St.	7,335.94	6,969	220	147	25	45	68	Normally Unacceptable
16th St.	Between Capp St. & S. Van Ness Ave.	1,306.66	1,241	39	26	25	40	61.2	Acceptable
	Between S. Van Ness Ave. & Shotwell St.	1,691.29	1,607	51	34	25	40	62.4	Acceptable

		Existing + Project						44.6	
Roadway	Segment	24-Hr Total (ADT)	Auto	Med Truck	Heavy Truck	Speed Limit	Distance	Road DNL	HUD acceptability standards (https://www.law.cornell.edu/cfr/text/24/51.103)
South Van	Between Adair St. & 16th St.	11,024.16	10,473	331	220	25	45	69.8	Normally Unacceptable

*PM Peak Hour is for 3:30-6:30

Traffic Count Data from: <https://www.arcgis.com/home/item.html?id=cddbd22f9c7a42aab24d07bf7468315d>

Speed limits: <https://data.sfgov.org/Transportation/Speed-Limits/vksm-bq22>

UMU Zoning Control Table (Sec 834, Table 834)

No.	Zoning Category	UMU District Controls
Building & Siting Standards		
834.01	Height limit	TBD
834.02	Bulk limit	TBD
834.04	Setbacks	Generally required (134, 136, 136.2, 144, 145.1)
834.08	Off-street parking, residential	None required (151.1)
834.11	Usable open space for dwelling units and grc	80 sf/unit; 54 sf/unit if publicly accessible (135)
Residential Uses		
843.2	Dwelling units	Permitted
843.21	Group housing	Permitted
843.22	SRO Units	Not Permitted
843.23	Homeless shelters	Permitted
843.24	Dwelling unit density limit	No density limit # (124, 207.5, 208)
843.25	Dwelling unit mix	At least 40% of all dwelling units must contain 2 or more bedrooms OR 30% of all dwelling units must contain 3 or more bedrooms (207.6)
843.26	Affordability requirements	Varies, see section 319
Vehicle Parking		
843.4	Automobile parking lot	Not Permitted (890.7, 890.9, 890.11)
843.41	Automobile parking garage	Conditional, subject to criteria of Sec. 303
Retail Sales & Services		
843.45	All retail sales and services not listed	Permitted up to 25,000 gross sf/lot; >25,000 gross sf/lot permitted only if the ratio of other permitted uses to retail is at least 3:1. Permitted up to 3,999 gross sf per use, conditional >4,000 sf/use