

ATTACHMENT 31:

U.S. Department of Housing and Urban Development (HUD) Website. 2019. *Site DNL Calculator*. Available at: <https://www.hudexchange.info/environmental-review/dnl-calculator/>.
Accessed on: 05/21/19.

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DNL Calculator

WARNING: HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Isackson's Affordable Housing Project
Record Date	05/21/2019
User's Name	SHN
Road # 1 Name:	Samoa Blvd (Highway 255)

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	720	720	720
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	15600	708	275
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	48.8633	45.4324	51.7582
Calculate Road #1 DNL	54.1685	Reset	

Road # 2 Name:

Highway 101

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	1510	1510	1510
Distance to Stop Sign			
Average Speed	65	65	65
Average Daily Trips (ADT)	43200	2203	491
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	53.8391	50.9144	51.7093
Calculate Road #2 DNL	57.176	Reset	

Road # 3 Name:

K Street

Road # 3 Name:

R Street

Road #3

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input type="checkbox"/>
Effective Distance	<input type="text" value="320"/>	<input type="text" value="320"/>	<input type="text"/>
Distance to Stop Sign	<input type="text" value="300"/>	<input type="text" value="300"/>	<input type="text"/>
Average Speed	<input type="text" value="25"/>	<input type="text" value="25"/>	<input type="text"/>
Average Daily Trips (ADT)	<input type="text" value="4320"/>	<input type="text" value="480"/>	<input type="text"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Vehicle DNL	<input type="text" value="43.0507"/>	<input type="text" value="53.5083"/>	<input type="text"/>
Calculate Road #3 DNL	<input type="text" value="53.8854"/>	<input type="text" value="Reset"/>	

Airport Noise Level

Loud Impulse Sounds?

 Yes NoCombined 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

[Day/Night Noise Level Assessment Tool User Guide](/resource/3822/day-night-noise-level-assessment-tool-user-guide/) (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

[Day/Night Noise Level Assessment Tool Flowcharts](/resource/3823/day-night-noise-level-assessment-tool-flowcharts/) (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)