

## **APPENDIX E**

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### Noise Modeling Results and Vibration Calculations





## Caltrans Transportation and Construction Vibration Guidance Manual

**Project Name:** PG&E R-687 L-215 San Joaquin River Crossing Replacement  
**Scenario:** HDD operations  
**Receptor:** Nearest residence (Prune Ave/Paradise Ave intersection)

### Select Input Values

<b>Source Levels (PPV)</b>	
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Crack & seat operations	2.4

<b>Soil Material Values</b>	
Weak, soft, loose soil	1.4
Competent soils	1.3
Hard compacted soils	1.1
Hard competent bedrock	1.0

<b>Project Data</b>	
<b>Source Level</b>	0.089
<b>Soil material (n):</b>	1.3
<b>Distance to receptor(feet)</b>	1100

<b>Results</b>	
<b>PPV at receptor</b>	0.00065

<b>Damage Criteria (Lv)</b>	
<u>Human: continous, frequent intermittent sources</u>	
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.1
Severe	0.4
<u>Structures: continous, frequent intermittent sources</u>	
Fragile buildings	0.1
Historic & some old buildings	0.25
Older residential	0.3
New residential	0.5
Modern commecial & industrial	0.5

## Caltrans Transportation and Construction Vibration Guidance Manual

**Project Name:** PG&E R-687 L-215 San Joaquin River Crossing Replacement  
**Scenario:** Pipe removal at West Landing Segment  
**Receptor:** Nearest residence (near west ACOE levee)

### Select Input Values

<b>Source Levels (PPV)</b>	
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Crack & seat operations	2.4

<b>Soil Material Values</b>	
Weak, soft, loose soil	1.4
Competent soils	1.3
Hard compacted soils	1.1
Hard competent bedrock	1.0

<b>Project Data</b>	
<b>Source Level</b>	0.089
<b>Soil material (n):</b>	1.3
<b>Distance to receptor(feet)</b>	200

<b>Results</b>	
<b>PPV at receptor</b>	0.00596

<b>Damage Criteria (Lv)</b>	
<u>Human: continous, frequent intermittent sources</u>	
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.1
Severe	0.4
<u>Structures: continous, frequent intermittent sources</u>	
Fragile buildings	0.1
Historic & some old buildings	0.25
Older residential	0.3
New residential	0.5
Modern commecial & industrial	0.5