Los Angeles County Metropolitan Transportation Authority

### **Draft Environmental Impact Report Appendix 3.6-C: Vibration Detail Maps**

### C LINE (GREEN) EXTENSION TO TORRANCE





## **Draft Environmental Impact Report**

### **Appendix 3.6-C: Vibration Detail Maps**

January 2023



Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C1 Construction & Operational Vibration Impacts Page 1 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C2
Construction & Operational Vibration Impacts
Page 2 of 75
Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C3 Construction & Operational Vibration Impacts Page 3 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

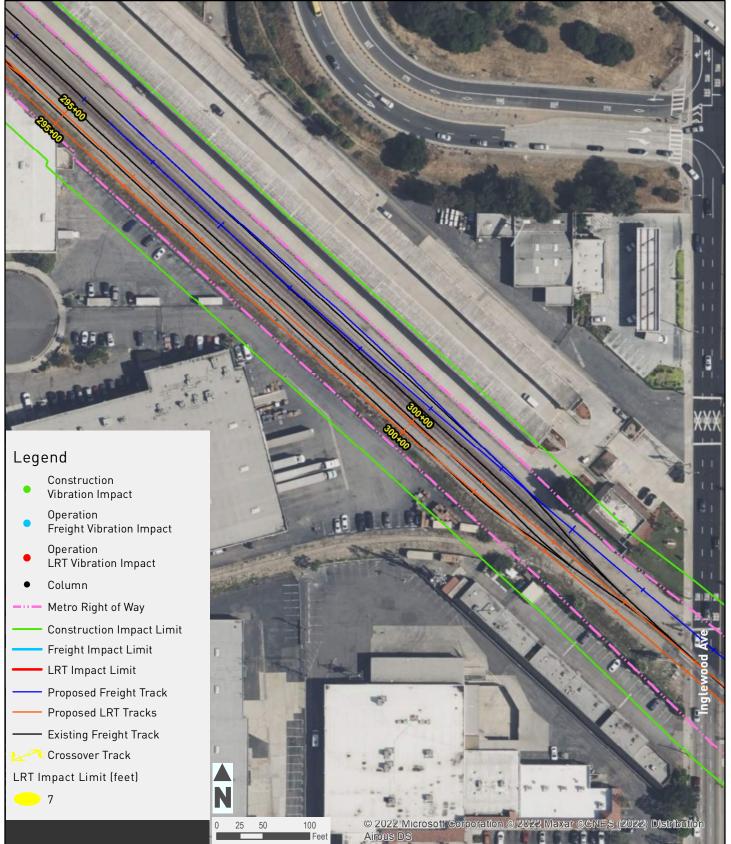




Figure 3.6-C4 Construction & Operational Vibration Impacts Page 4 of 75 Proposed Project

C Line (Green) Extension to Torrance Draft Environmental Impact Report

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C5
Construction & Operational Vibration Impacts
Page 5 of 75
Proposed Project

Appendix 3.9-C: Vibration Detail Maps

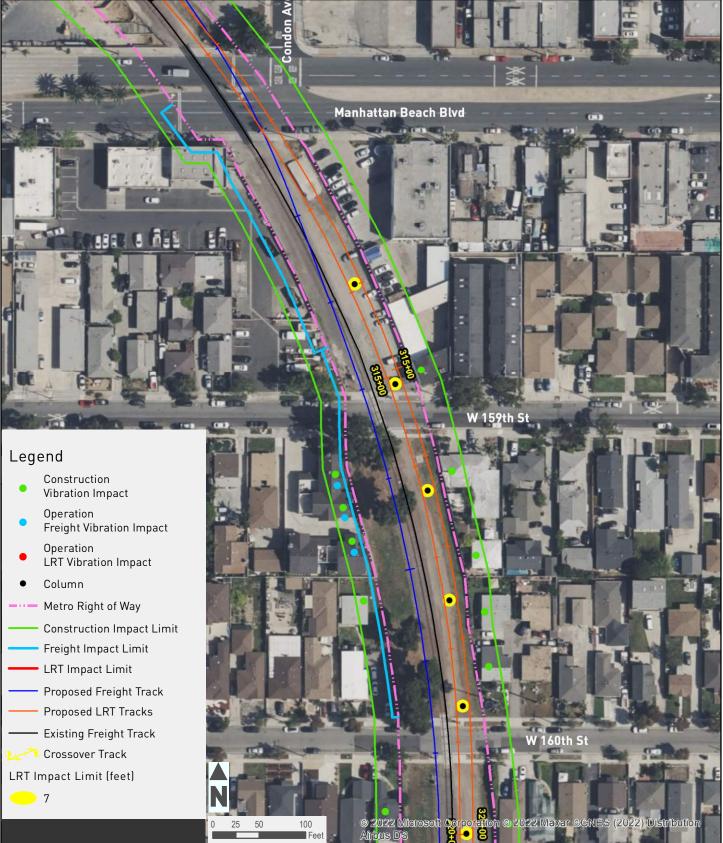




Figure 3.6-C6 Construction & Operational Vibration Impacts Page 6 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C7 Construction & Operational Vibration Impacts Page 7 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C8
Construction & Operational Vibration Impacts
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Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C9
Construction & Operational Vibration Impacts
Page 9 of 75
Proposed Project

Appendix 3.9-C: Vibration Detail Maps

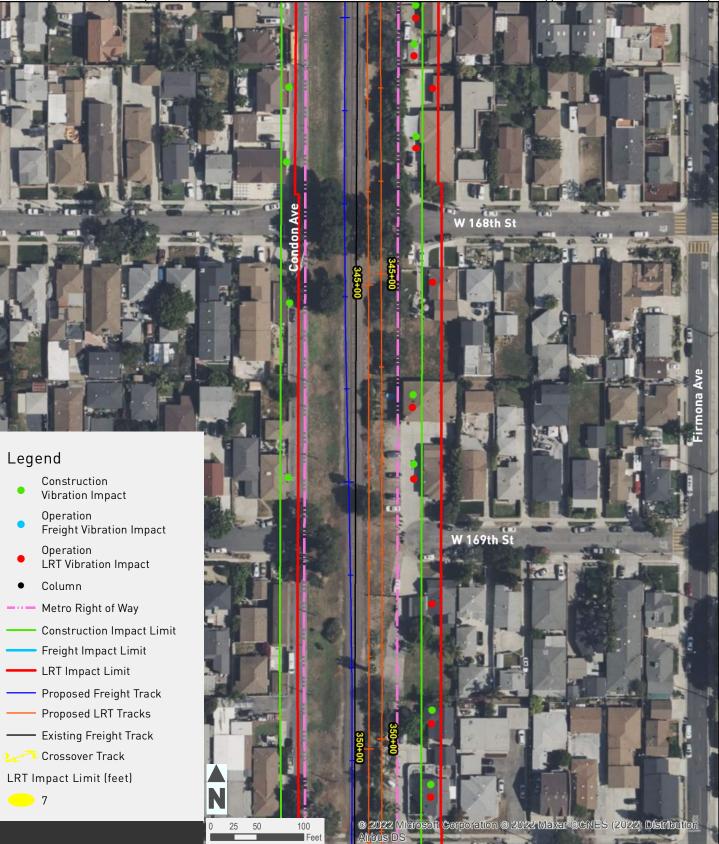




Figure 3.6-C10 Construction & Operational Vibration Impacts Page 10 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

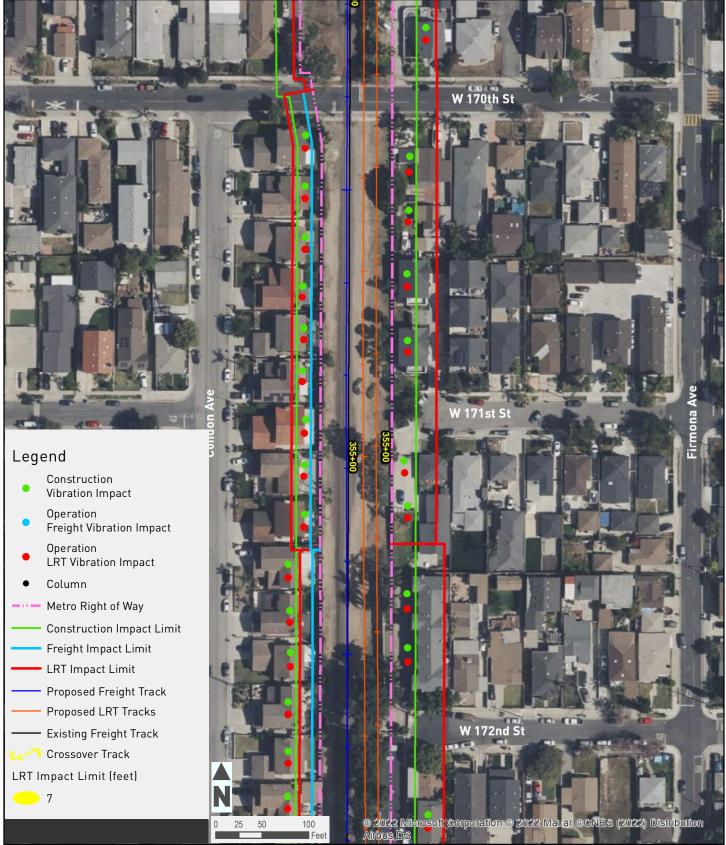




Figure 3.6-C11 Construction & Operational Vibration Impacts Page 11 of 75 Proposed Project

C Line (Green) Extension to Torrance Draft Environmental Impact Report

Appendix 3.9-C: Vibration Detail Maps

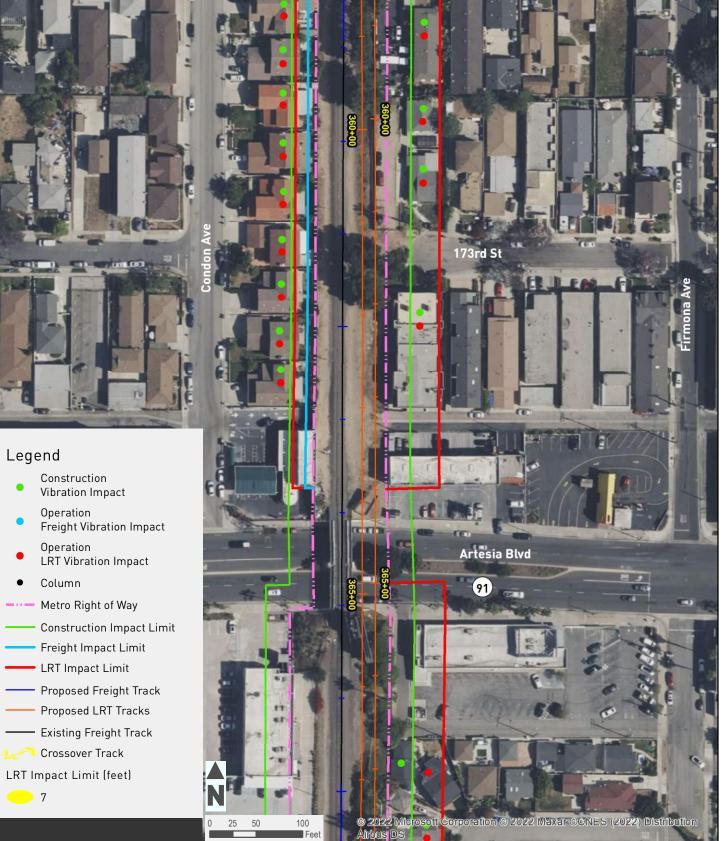




Figure 3.6-C12 Construction & Operational Vibration Impacts Page 12 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-B13A Construction & Operational Vibration Impacts Page 13 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

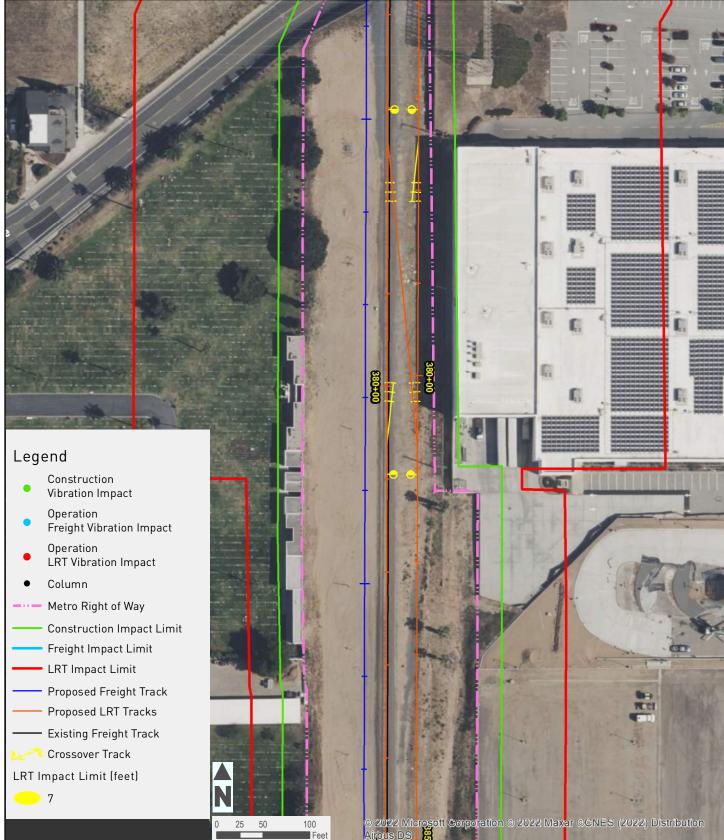




Figure 3.6-C14 Construction & Operational Vibration Impacts Page 14 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

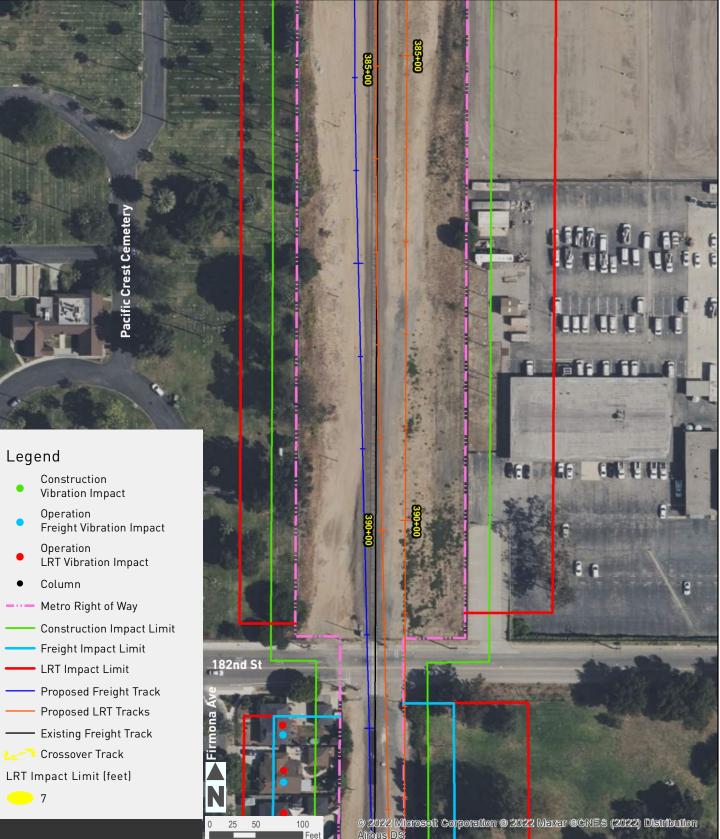




Figure 3.6-C15 Construction & Operational Vibration Impacts Page 15 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

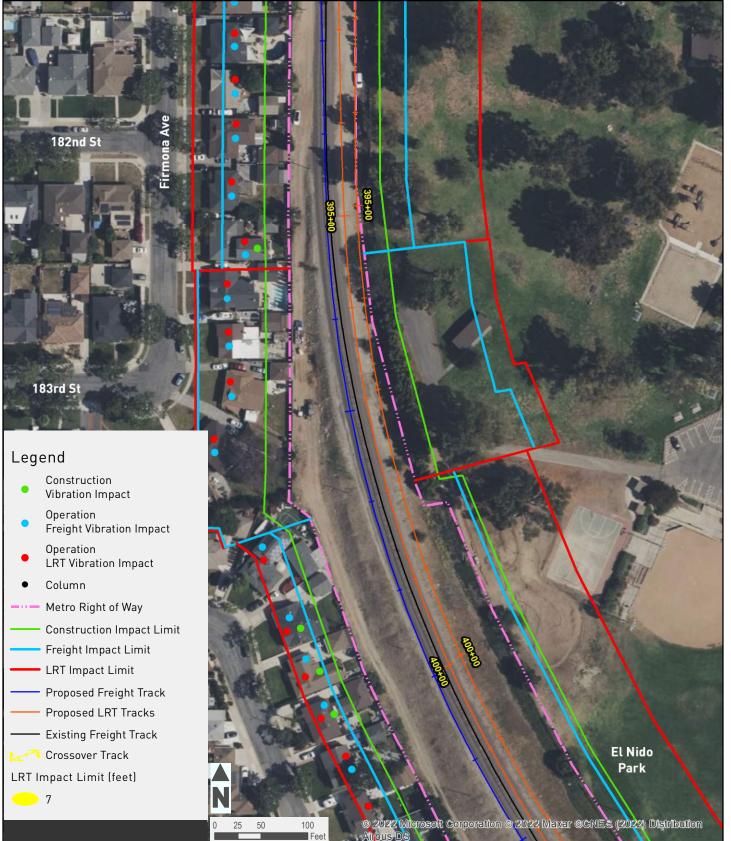




Figure 3.6-C16 Construction & Operational Vibration Impacts Page 16 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

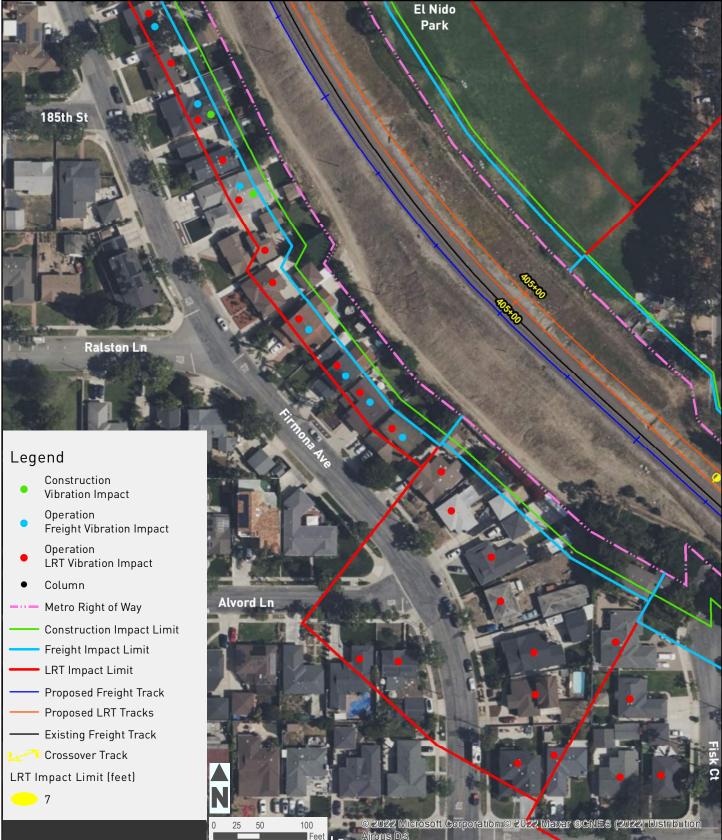




Figure 3.6-C17 Construction & Operational Vibration Impacts Page 17 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

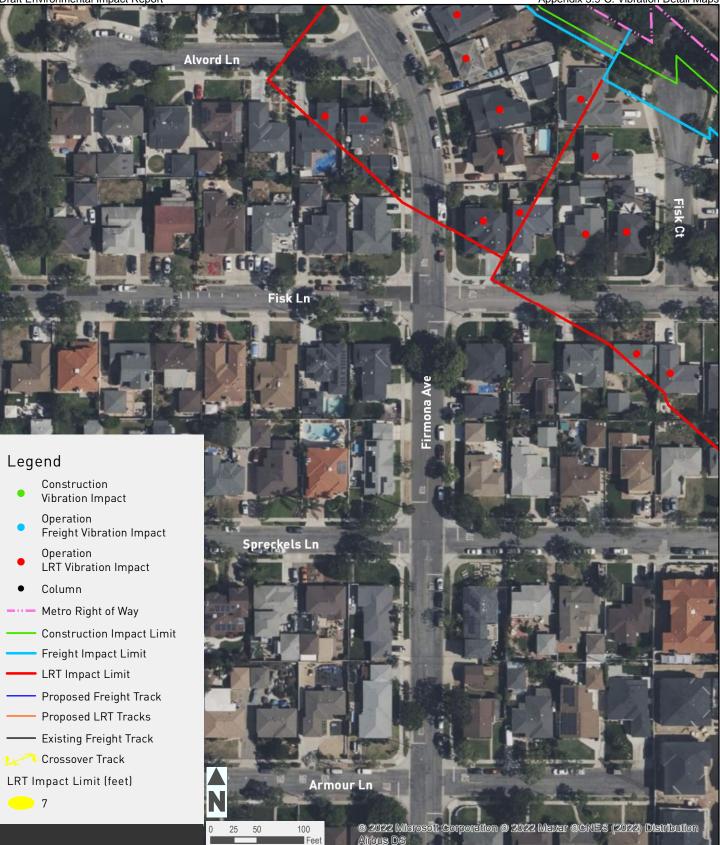




Figure 3.6-C18 Construction & Operational Vibration Impacts Page 18 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

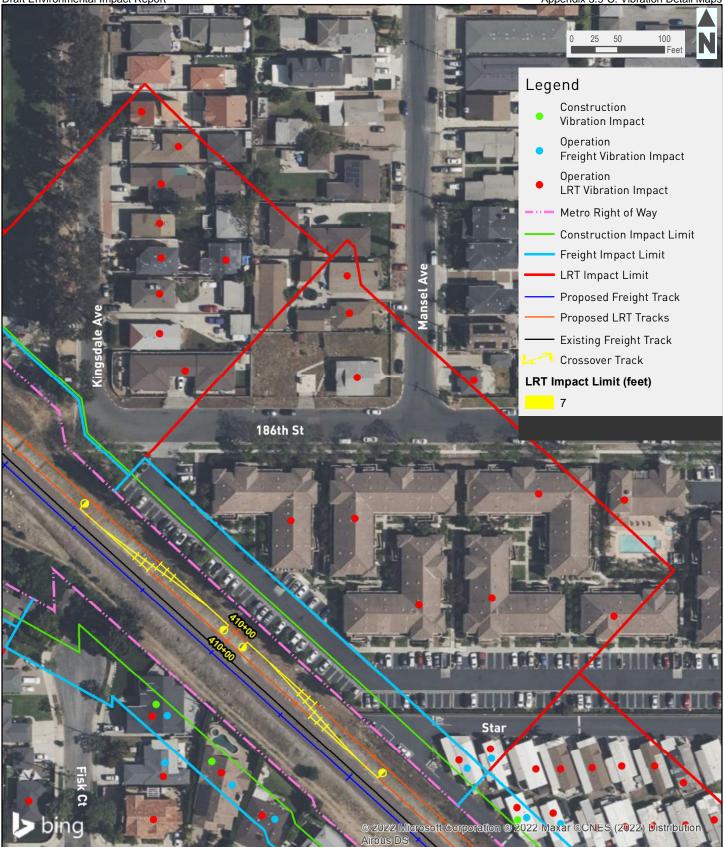




Figure 3.6-C19 Construction & Operational Vibration Impacts Page 19 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

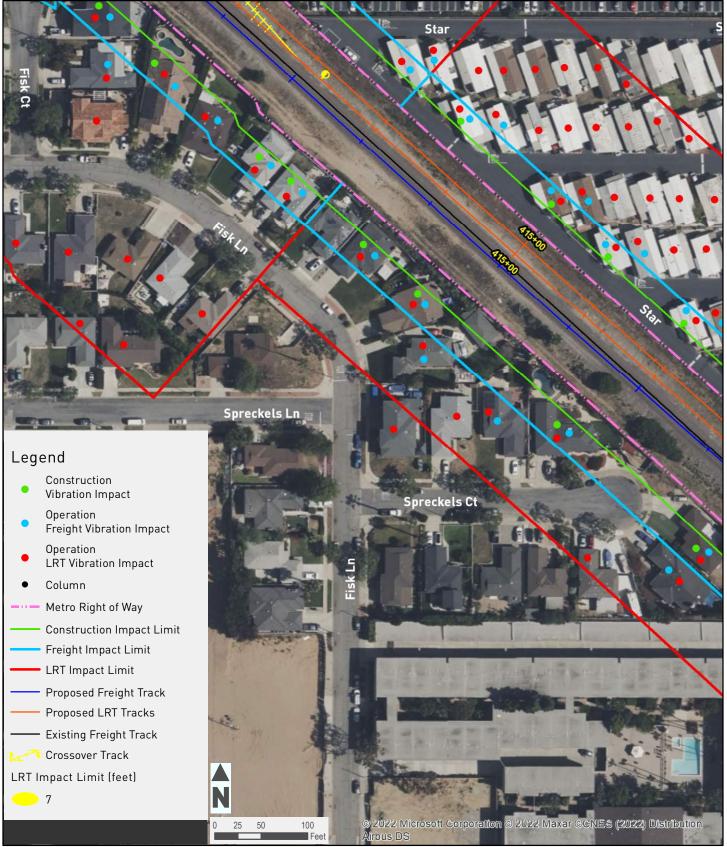


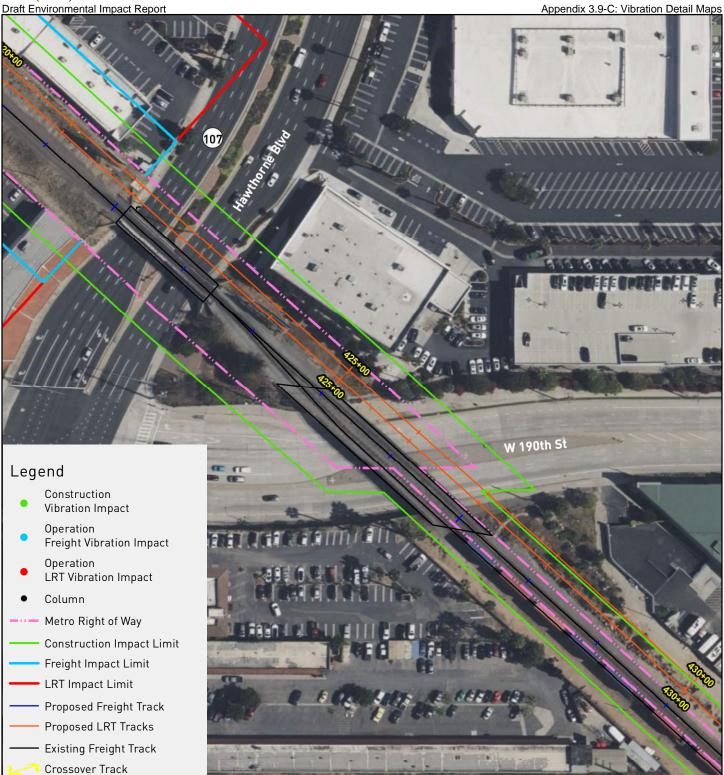


Figure 3.6-C20 Construction & Operational Vibration Impacts Page 20 of 75 Proposed Project

100 25 Feet Legend Construction Vibration Impact Operation Freight Vibration Impact Operation LRT Vibration Impact Metro Right of Way Construction Impact Limit Freight Impact Limit LRT Impact Limit Star Proposed Freight Track Proposed LRT Tracks **Existing Freight Track** Crossover Track LRT Impact Limit (feet) 7 107 9 2022 Microsoft Corporation 9 2022 Maxar CCNES Airbus D.S. oina (2022) Distribution



Figure 3.6-C21 Construction & Operational Vibration Impacts Page 21 of 75 Proposed Project C Line (Green) Extension to Torrance



LRT Impact Limit (feet)

Metro

7

M

Figure 3.6-C22 **Construction & Operational Vibration Impacts Proposed Project** Page 22 of 75

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25 50 100 Feet

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C23 Construction & Operational Vibration Impacts Page 23 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

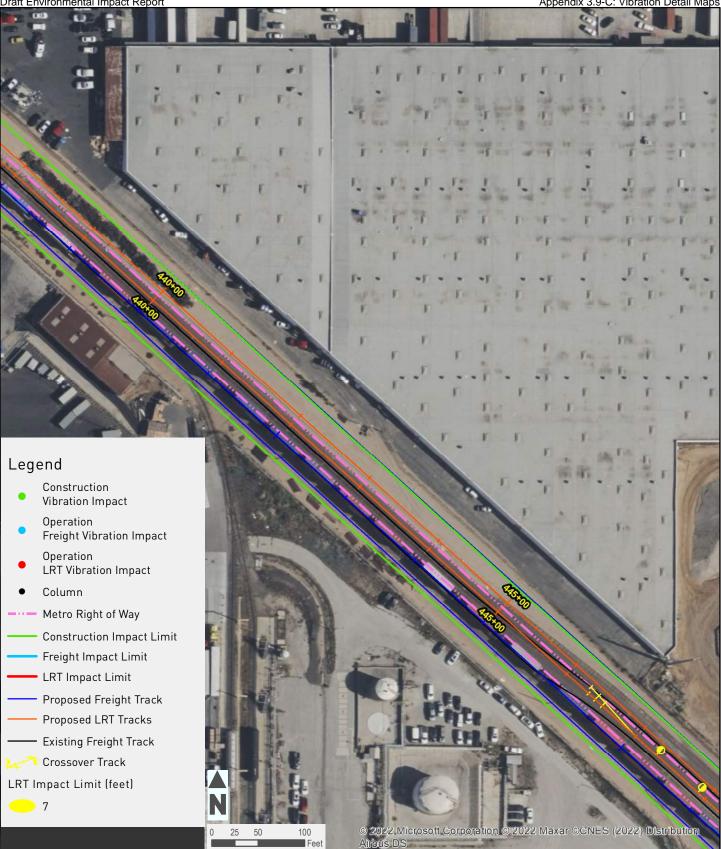




Figure 3.6-C24 **Construction & Operational Vibration Impacts Proposed Project** Page 24 of 75

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C25 Construction & Operational Vibration Impacts Page 25 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

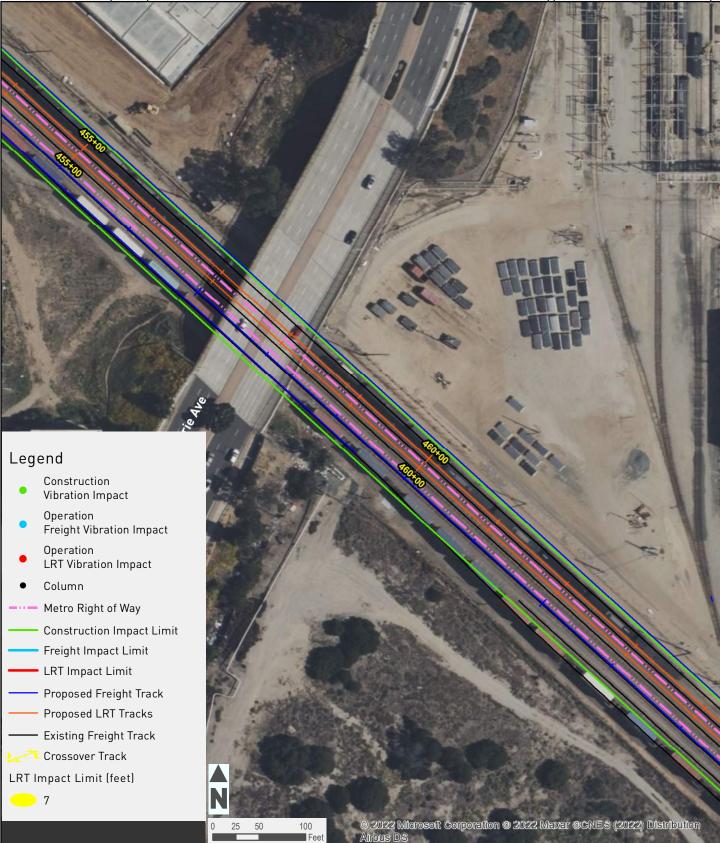




Figure 3.6-C26 Construction & Operational Vibration Impacts Page 26 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

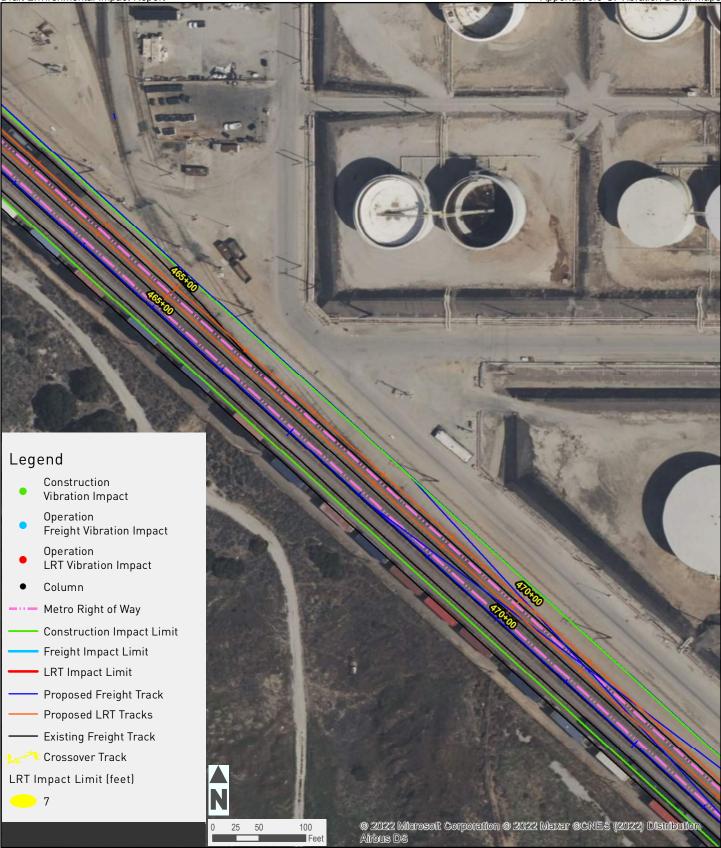




Figure 3.6-C27 Construction & Operational Vibration Impacts Page 27 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps

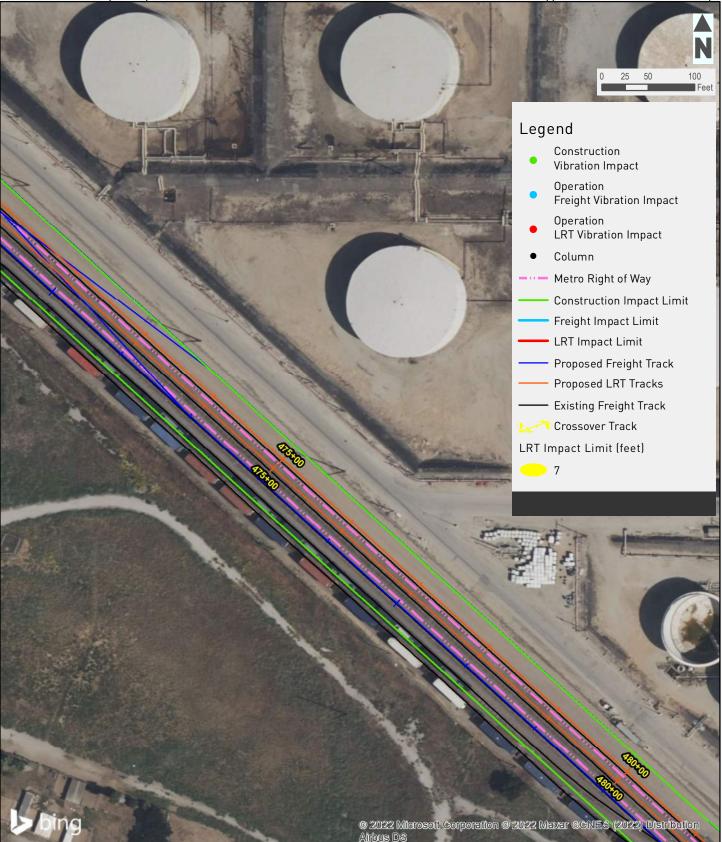




Figure 3.6-C28 Construction & Operational Vibration Impacts Page 28 of 75 Proposed Project

#### Appendix 3.9-C: Vibration Detail Maps



### Legend

# Construction Vibration Impact Operation

- Freight Vibration Impact
   Operation
- LRT Vibration Impact

• Column

Metro Right of Way

- ----- Construction Impact Limit
- Freight Impact Limit
- LRT Impact Limit
- Proposed Freight Track
- Proposed LRT Tracks
- Existing Freight Track
- Crossover Track
- LRT Impact Limit (feet)
  - 7





Figure 3.6-C29
Construction & Operational Vibration Impacts
Page 29 of 75
Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C30 Construction & Operational Vibration Impacts Page 30 of 75 Proposed Project



- Proposed Freight Track
   Proposed LRT Tracks
   Existing Freight Track
- Crossover Track
- LRT Impact Limit (feet)
  - 7

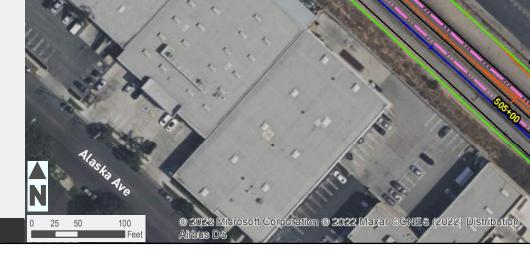




Figure 3.6-C31 Construction & Operational Vibration Impacts Page 31 of 75 Proposed Project

#### Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C32 Construction & Operational Vibration Impacts Page 32 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C33 Construction & Operational Vibration Impacts Page 33 of 75 Proposed Project

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C34 Construction & Operational Vibration Impacts Page 34 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C35 Construction & Operational Vibration Impacts Page 35 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C36 Construction & Operational Vibration Impacts Page 36 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

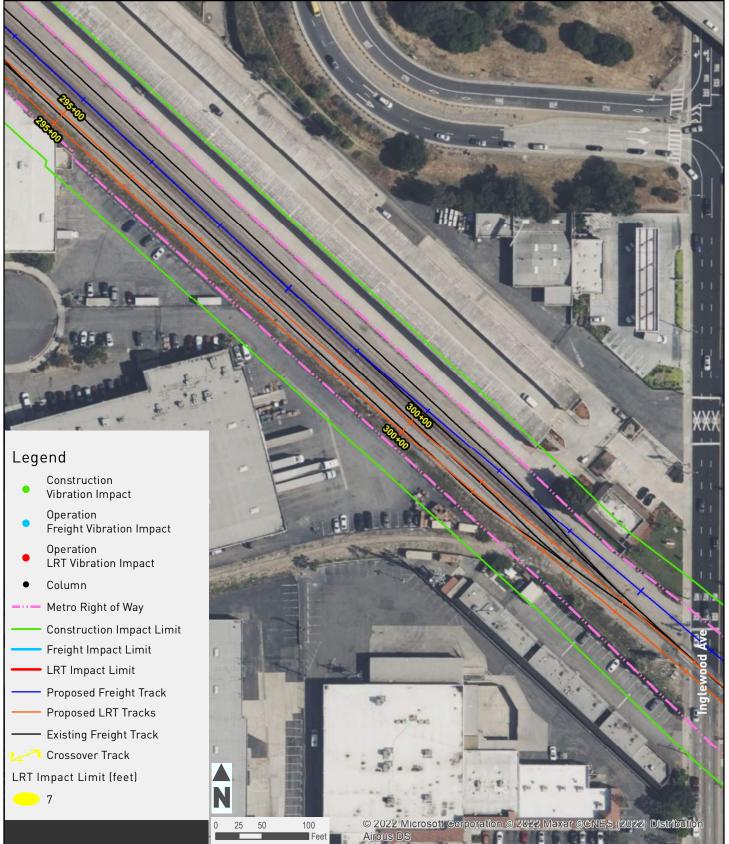




Figure 3.6-C37 Construction & Operational Vibration Impacts Page 37 of 75 Trench Option

C Line (Green) Extension to Torrance Draft Environmental Impact Report

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C38 Construction & Operational Vibration Impacts Page 38 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C39 Construction & Operational Vibration Impacts Page 39 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C40 Construction & Operational Vibration Impacts Page 40 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C41 Construction & Operational Vibration Impacts Page 41 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C42 Construction & Operational Vibration Impacts Page 42 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

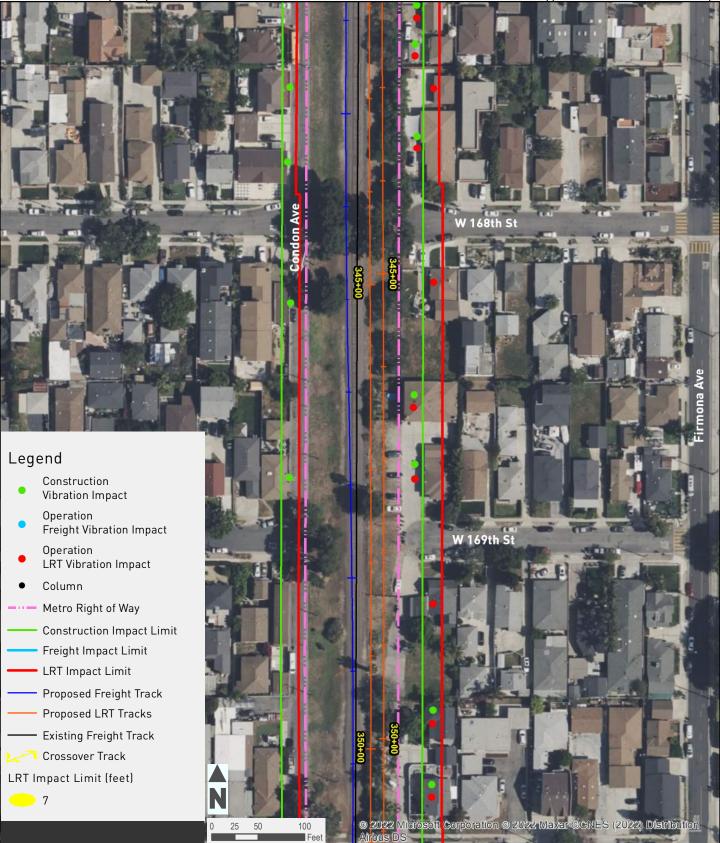




Figure 3.6-C43 Construction & Operational Vibration Impacts Page 43 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

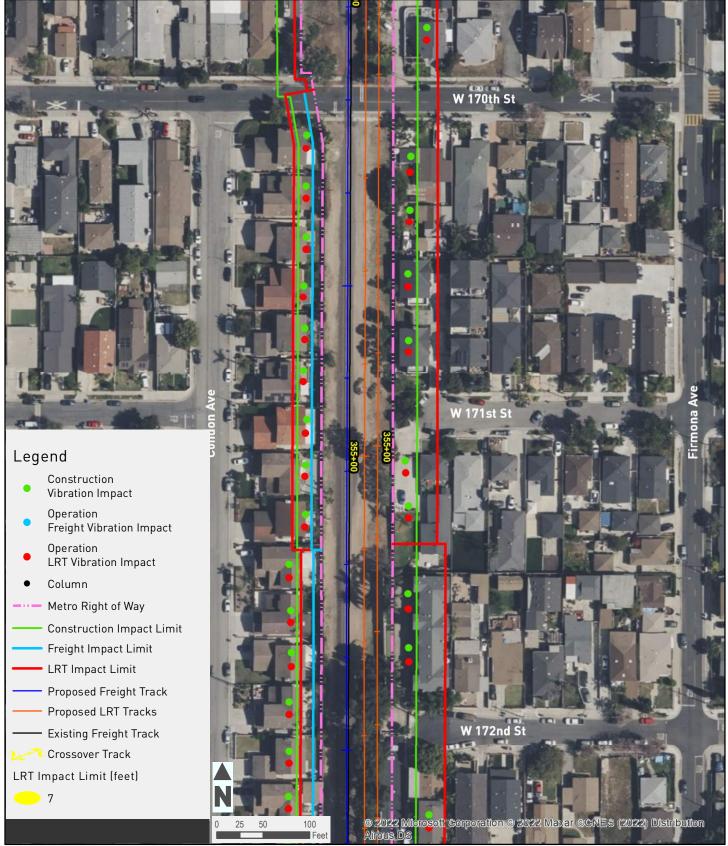




Figure 3.6-C44 Construction & Operational Vibration Impacts Page 44 of 75 Trench Option

C Line (Green) Extension to Torrance Draft Environmental Impact Report

Appendix 3.9-C: Vibration Detail Maps

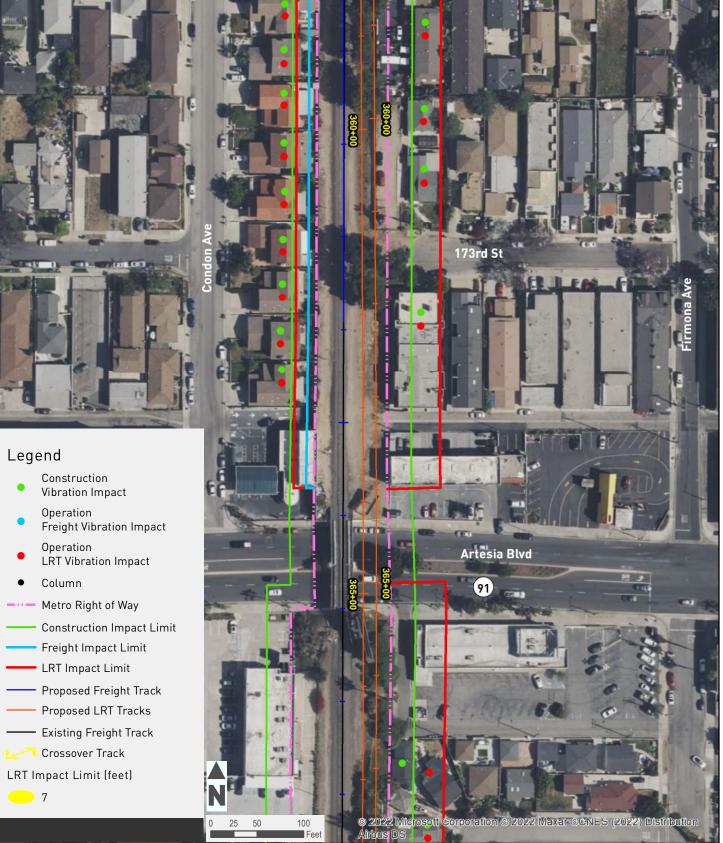




Figure 3.6-C45 Construction & Operational Vibration Impacts Page 45 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C46 Construction & Operational Vibration Impacts Page 46 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

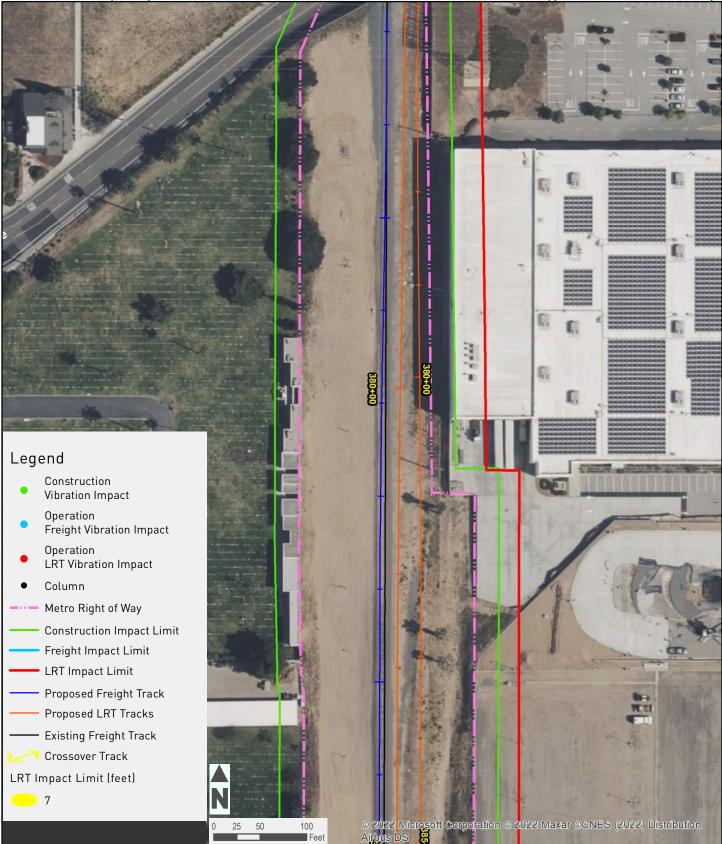




Figure 3.6-C47 Construction & Operational Vibration Impacts Page 47 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C48 Construction & Operational Vibration Impacts Page 48 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

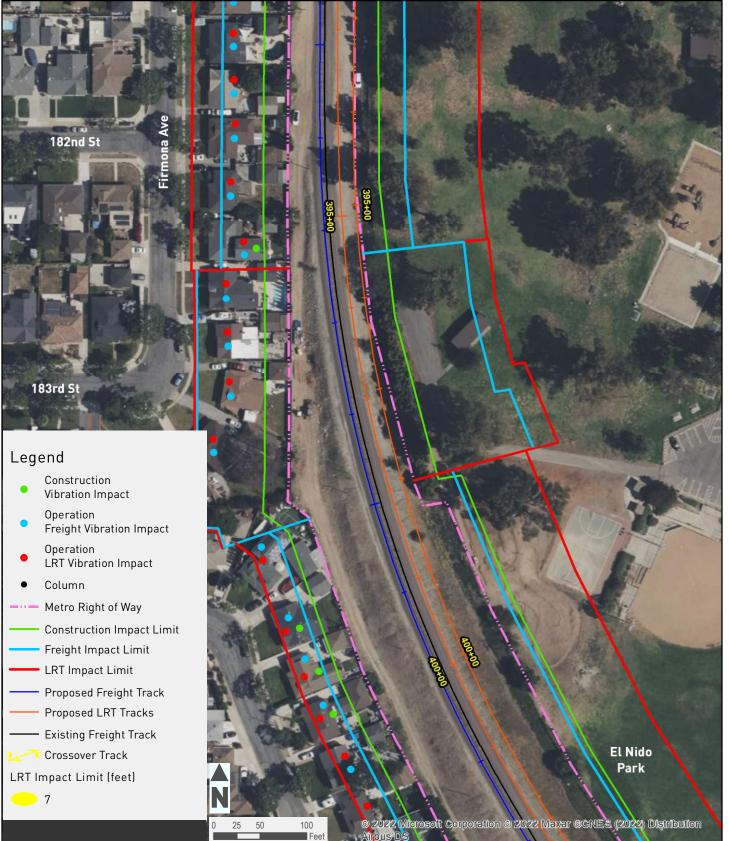




Figure 3.6-C49 Construction & Operational Vibration Impacts Page 49 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

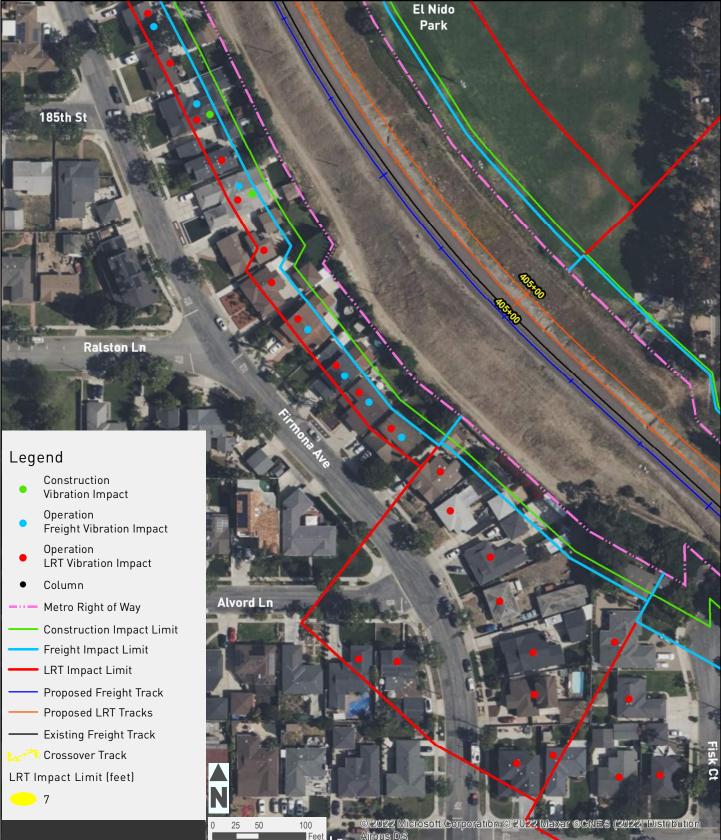




Figure 3.6-C50 Construction & Operational Vibration Impacts Page 50 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

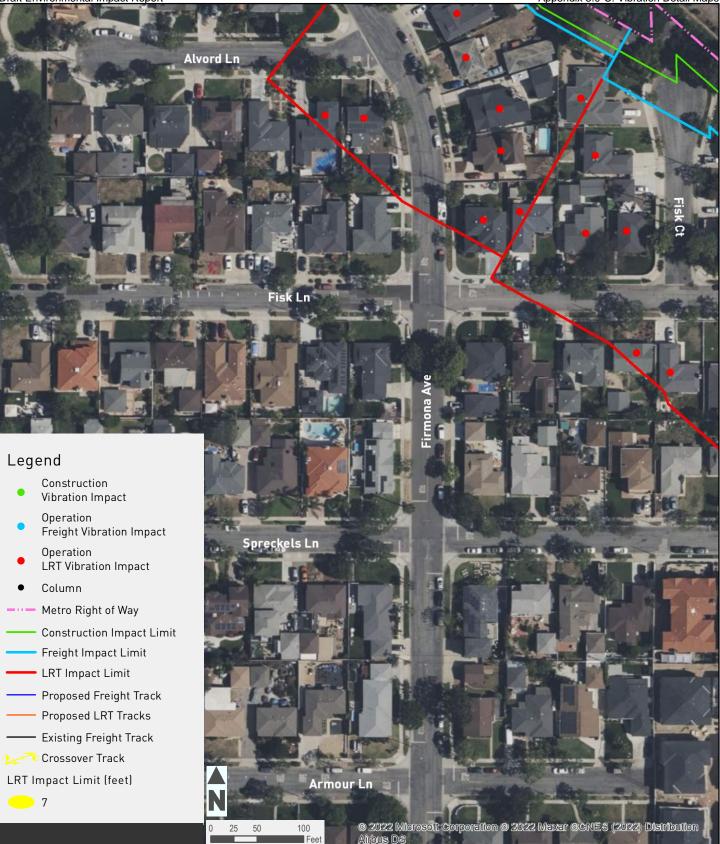




Figure 3.6-C51 Construction & Operational Vibration Impacts Page 51 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

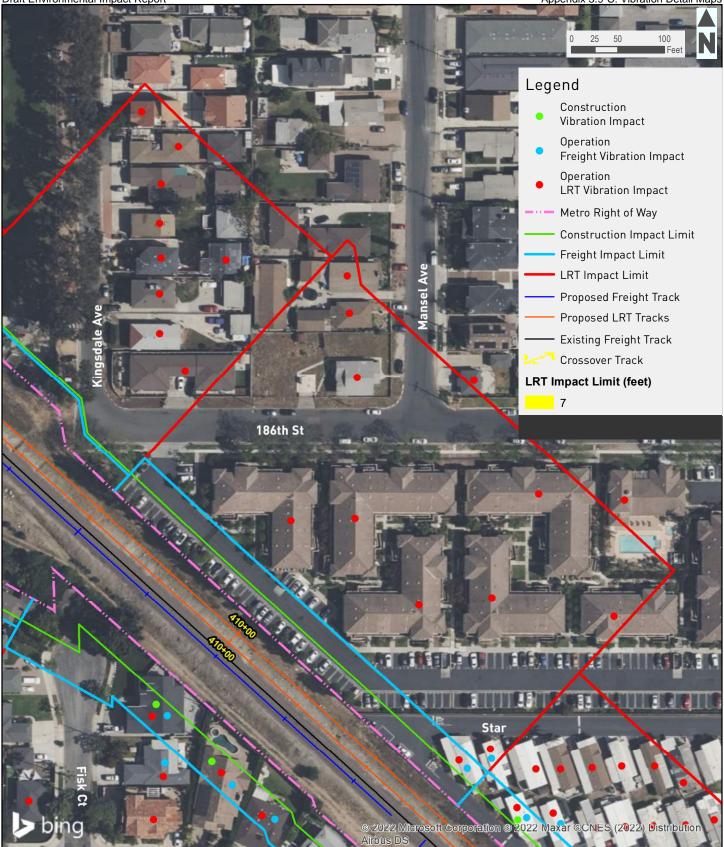




Figure 3.6-C52 Construction & Operational Vibration Impacts Page 52 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C53 Construction & Operational Vibration Impacts Page 53 of 75 Trench Option

Appendix 3.9-C: Vibration Detail Maps

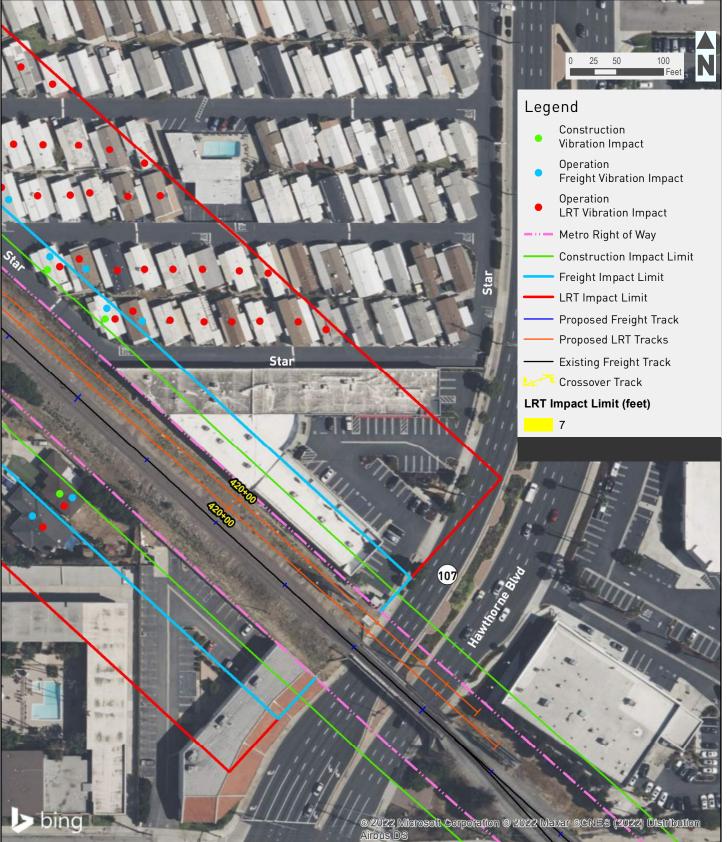




Figure 3.6-C54 Construction & Operational Vibration Impacts Page 54 of 75 Trench Option C Line (Green) Extension to Torrance





25 50 100 Feet

> Figure 3.6-C55 **Construction & Operational Vibration Impacts Trench Option** Page 55 of 75

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Appendix 3.9-C: Vibration Detail Maps





# Figure 3.6-C56 Construction & Operational Vibration Impacts Page 56 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

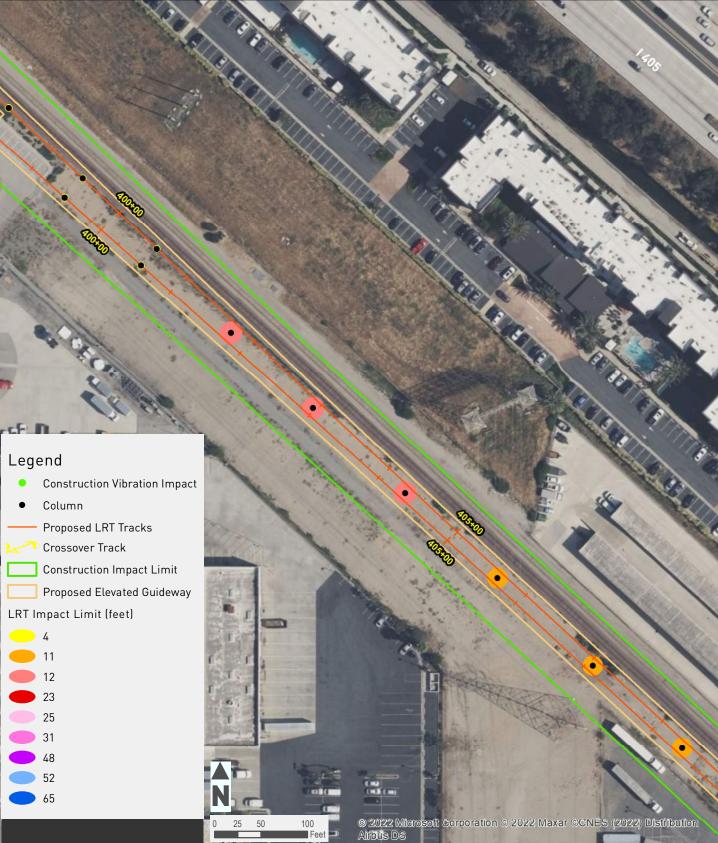




Figure 3.6-C57 Construction & Operational Vibration Impacts Page 57 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C58 Construction & Operational Vibration Impacts Page 58 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

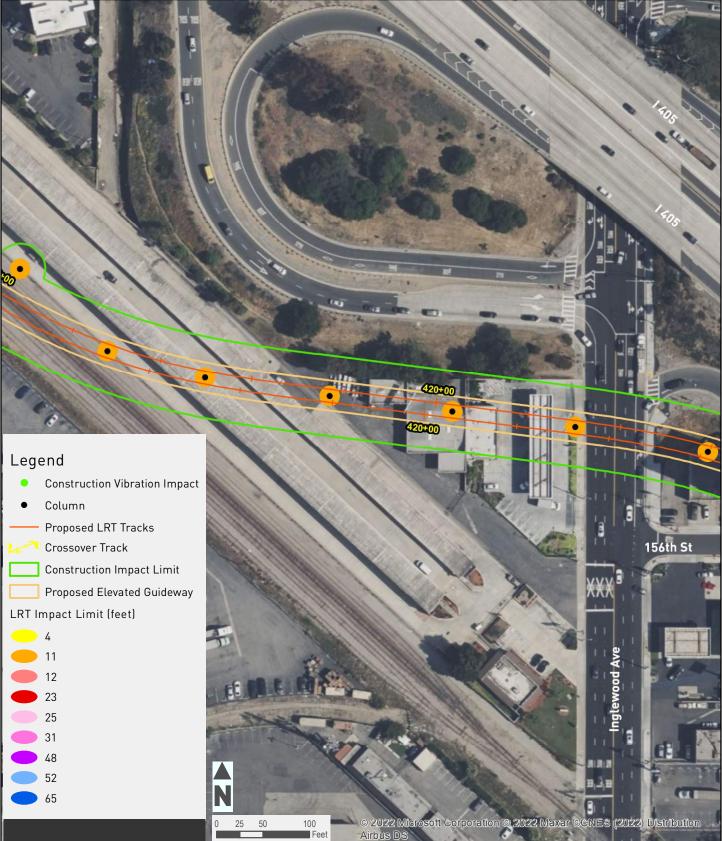




Figure 3.6-C59 Construction & Operational Vibration Impacts Page 59 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

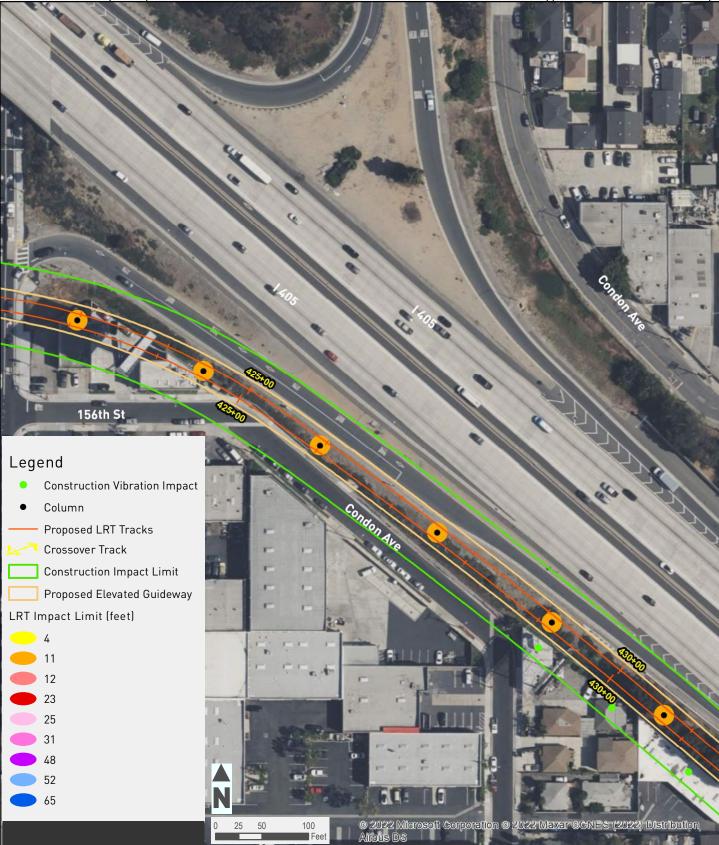




Figure 3.6-C60 Construction & Operational Vibration Impacts Page 60 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C61 Construction & Operational Vibration Impacts Page 61 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

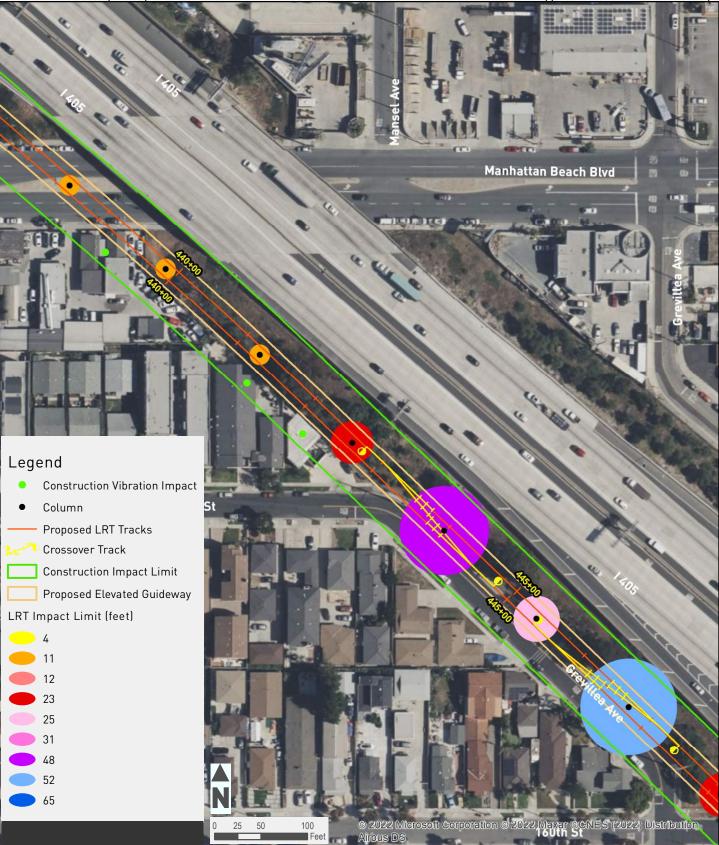




Figure 3.6-C62 Construction & Operational Vibration Impacts Page 62 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C63 Construction & Operational Vibration Impacts Page 63 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

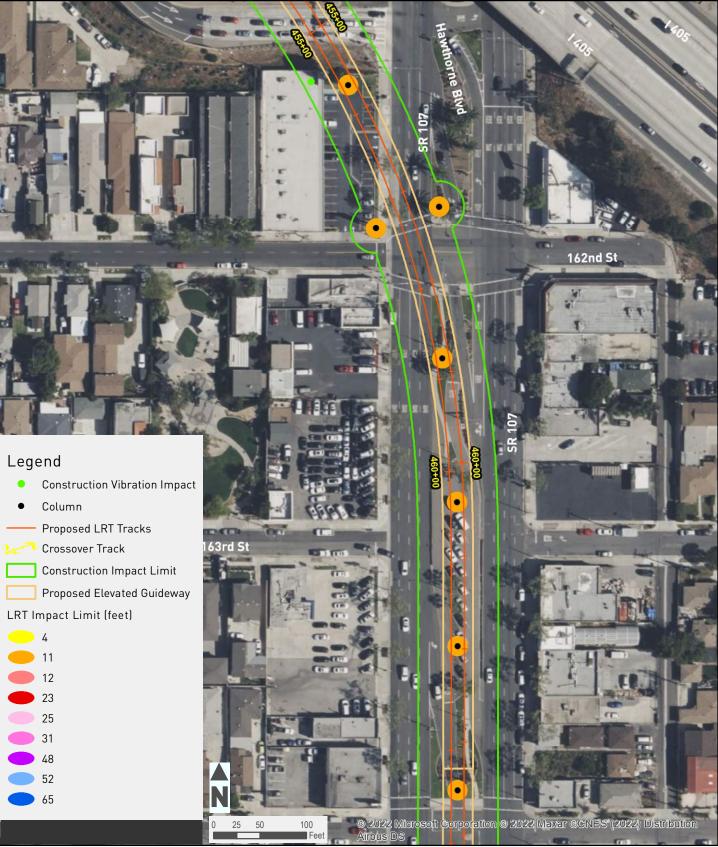




Figure 3.6-C64 Construction & Operational Vibration Impacts Page 64 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

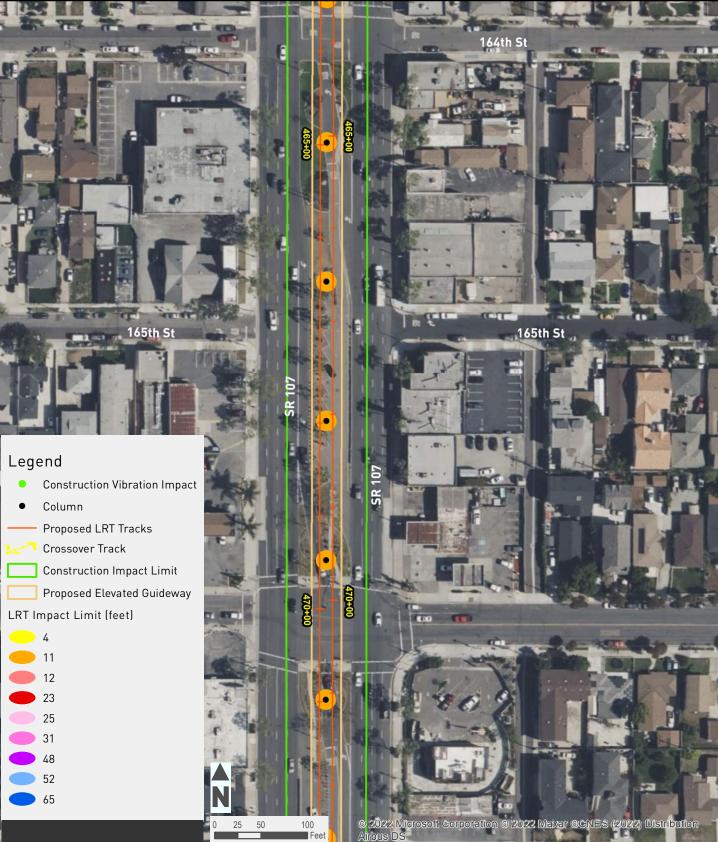




Figure 3.6-C65 Construction & Operational Vibration Impacts Page 65 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

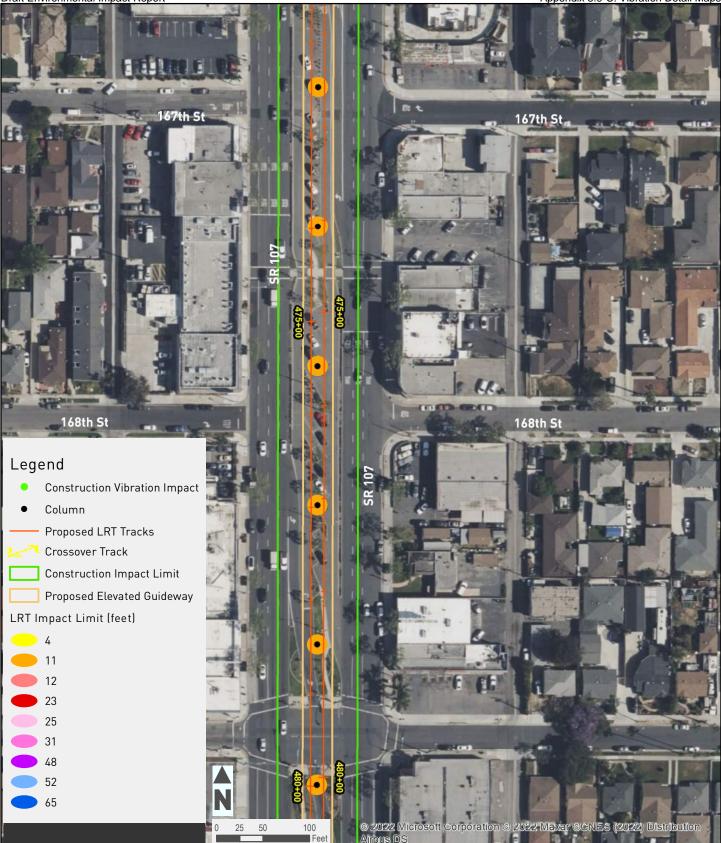




Figure 3.6-C66 Construction & Operational Vibration Impacts Page 66 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C67 Construction & Operational Vibration Impacts Page 67 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C68 Construction & Operational Vibration Impacts Page 68 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C69 Construction & Operational Vibration Impacts Page 69 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C70 Construction & Operational Vibration Impacts Page 70 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

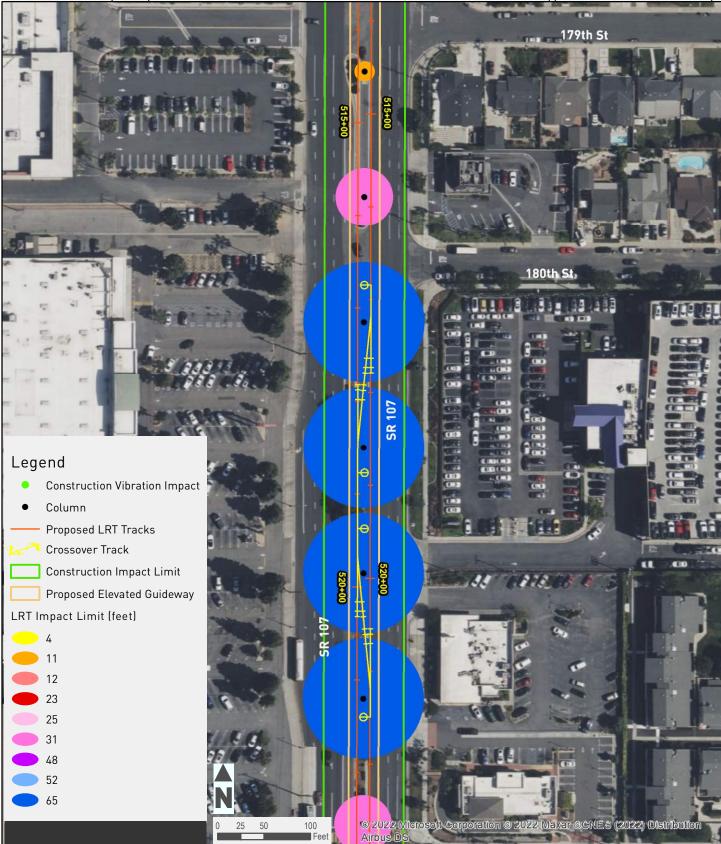




Figure 3.6-C71 Construction & Operational Vibration Impacts Page 71 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps

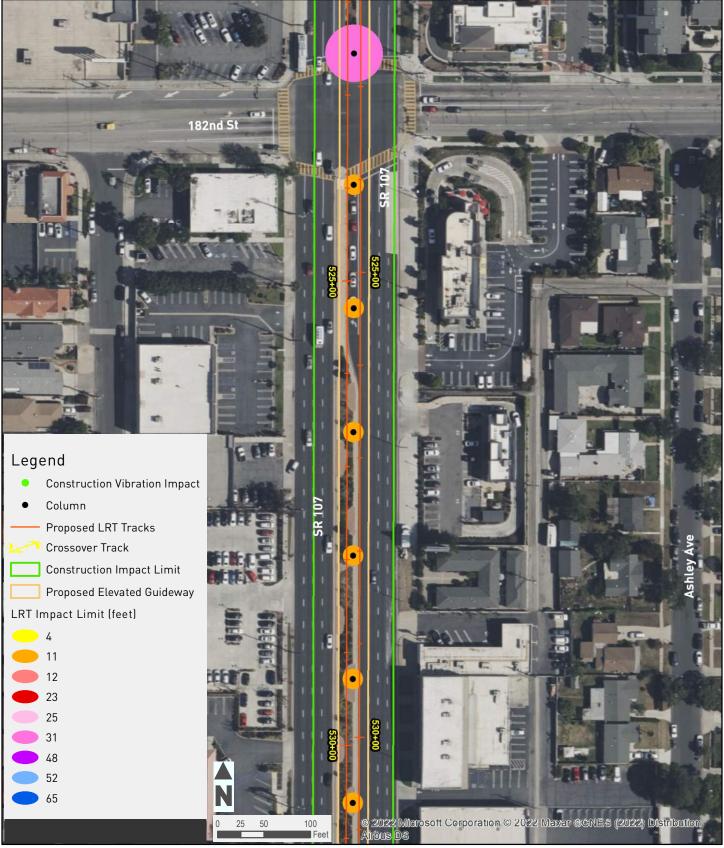




Figure 3.6-C72 Construction & Operational Vibration Impacts Page 72 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C73 Construction & Operational Vibration Impacts Page 73 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C74 Construction & Operational Vibration Impacts Page 74 of 75 Hawthorne Option

Appendix 3.9-C: Vibration Detail Maps





Figure 3.6-C75 Construction & Operational Vibration Impacts Page 75 of 75 Hawthorne Option