Virginia Avenue Tunnel Reconstruction Noise Analysis

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A study was undertaken to assess noise impacts from the four alternatives under consideration for the Virginia Avenue Tunnel Project. The reconstruction of the Virginia Avenue Tunnel has the potential to increase noise levels at sensitive land uses near the area where construction will take place. The study evaluated three sources of noise for the four Project alternatives under consideration: (1) noise from train operations (2) noise from construction, and (3) noise from traffic reconfiguration. The noise analysis was conducted in accordance with the methodology, procedures and guidelines outlined in the CREATE Noise and Vibration Assessment Methodology (December 2007). For noise analyses associated with traffic detours and street closures during construction, the Federal Highway Administration's Traffic Noise Model (FHWA TNM) was used. Construction noise evaluations were conducted for the major construction activities using FHWA Roadway Construction Noise Model (RCNM). Measurements were taken at a number of locations to establish existing noise levels. The neighborhood in the vicinity of the Project Area currently has high levels of noise and is classified as a "very noisy urban residential area" under the CREATE manual. Noise levels were predicted for each of the three 'build' alternatives to determine whether the project would cause any noise impacts. In addition, an innovative public involvement tool "Sound of Transit" was used to explain the different sound levels and simulate the sound related to the construction alternatives. The presentation will provide a summary of three noise component that were analyzed as well as a small graphic demo of the tool used during community meetings.