Kiewit Noise Variance Request Fact Sheet

Transparency and trust are top priorities for the Denver Department of Public Health & Environment (DDPHE). For this reason, the department is providing the following information for the community and stakeholders.

Background on Central 70 Project and Variance Request

- Petitioner, Kiewit Infrastructure Co. (KIC), has submitted for consideration by the Denver Board of Public Health & Environment (BPHE) an amended request for a variance to the City and County of Denver’s Noise Ordinance, Denver Revised Municipal Code Chapter 36, for construction work required for the Central 70 Project.

- The overall scope of this project is to reconstruct a 10-mile stretch of I-70 between I-25 and Chambers Road, add one new express lane in each direction, remove the aging 54-year old viaduct, lower the interstate between Brighton Boulevard and Colorado Boulevard, and place a four-acre park over a portion of the lowered interstate.

- On September 6, 2018, BPHE granted KIC a one-year variance for nighttime construction on the Central 70 Project. DDPHE recommended approval of the variance request. The following factors were considered in the original recommendation:
  - Reduced overall length of project;
  - Reduced air-quality issues;
  - Reduced traffic impacts;
  - Increased worker and public safety
  - Impact on emergency services

The Board of Public Health and Environment’s Role

- The Board will hear the Central 70 variance request on August 8, 2019 at 5:30 p.m. at the Swansea Recreation Center, 2650 E 49th Avenue. DDPHE will provide a written recommendation of approval or denial of the variance request to the Board by Friday, July 26th by close of business. The Department’s recommendation may also contain other specific conditions associated with the variance request.

- The Petitioner has the burden of proof and the Board will make a ruling based on the following evidence that must be demonstrated by the Petitioner:
  - Petitioner will suffer undue hardship if the variance is not granted
  - A variance, if granted, would not adversely affect public health
  - The variance, if granted, would be in harmony with the spirit and purposes of the ordinance, rule, or regulation being appealed
• The Board will allow a public comment period. Members of the public wishing to comment during the hearing may have up to three minutes each. The Board, however, may facilitate the public comment period by limiting repetitive comments.

• The public also may submit comments to the Board Comments for the Board must be submitted by close of business August 7. Written comments can be sent by email to BEH@denvergov.org. Written comments also can be mailed or hand delivered to the Department of Public Health and Environment (DPHE), Office of Administration, Attention Diana Altermatt, 101 West Colfax Ave., Suite 800, Denver CO 80202. People also can leave recorded comments by calling (720) 432-0110. Recorded comments can be left anonymously.

• For more information on hearings before the Board of Public Health & Environment, please view the Board’s Rules Governing Hearings.

Kiewit’s requested changes to their original application

• Changing the defined term, Major Structure Activity, to mean: “any demolition involving a Major Structure,” to clarify the definition of General Construction Activities.

• Approval of the variance to be through the current projected duration of the project

Conditions in current variance relevant to applicant’s requested duration change

• The current noise variance includes the following conditions:
  o Per condition #12 Revocation, the Board may revoke the variance
  o Per condition #11 Suspension, the Board may suspend the variance
  o Per condition #10 Fines and Penalties, the Department may enforce on all 12 conditions in the variance, as well as any or all, of the line items contained within the 12 conditions

Conditions in current variance relevant to applicant’s requested change to the definition of “Major Structure Activity”

• Currently, Major Structure Activity requires more rest periods than General Construction Activity (General Construction Activity requires two days/ nights off per week; Major Structure Activity requires 4 days/ nights off per week).

• Current definition of Major Structure Activity includes all construction on a bridge, viaduct, or certain walls. Under the requested change, Major Structure Activity would only include demolition of a bridge, viaduct, or wall. All other construction activity on a bridge, viaduct or wall would be General Construction Activity.

• Issues related to noise intensive work processes outside of the scope of “General Construction Activity” may be addressed/controlled through alternative variance conditions. An example of this in the current variance is prohibiting “pile driving” as an activity during nighttime hours

• The Requested change may shorten the overall duration of the project and associated public health impacts through the reduction of rest days associated with Major Structure Activity.

Construction Best Practices employed on project
• According to best practices related to construction work identified by the U.S. Department of Transportation, Federal Highway Administration, “High traffic volumes on many highways make it difficult to perform work zone operations in or near travel lanes during much of the day because of the disruption in traffic flow and the risk this introduces for the workers and the traveling public. As a result of these concerns, all kinds of highway work are increasingly scheduled for off-peak periods, particularly at night, to alleviate the problems associated with working in traffic.”

• DDPHE has required the following best management practices (BMPs) to mitigate construction noise impacts to adjacent property owners in existing noise variance:
  o Using reasonable best efforts to complete the construction as quickly as possible.
  o Minimizing nighttime construction duration near areas with residential properties and facilities whenever possible.
  o Quiet-use generators and light-plants shall be utilized for nighttime construction activities
  o Re-routing of truck traffic away from residential streets when possible.
  o The use of compression release engine brakes (jake brakes) on any vehicles and any equipment will not be allowed in the City County of Denver.
  o Conducting truck loading, unloading, and hauling operations so that noise levels are kept to a minimum, such as, but not limited to, eliminating slamming of truck beds, truck tailgates, and equipment buckets.
  o Idle equipment motors down when the equipment is not in immediate use.
  o Configuring equipment on the site to minimize back-up alarm noise, where practical and feasible (for example, by using circular movement of trucks).
  o Shielding equipment, such as but not limited to jackhammers, saws and pavement breakers, through use of an existing sound barrier wall or a temporary barrier where practicable.
  o Maintaining all equipment to meet manufacturer’s specifications.
  o Additional equipment noise mitigation techniques or materials (for example, lining doors of heavy equipment engine compartments and installing engine and compressor mufflers) will be used subject to the manufacturer’s approval.
  o Occupational Safety and Health Administration (OSHA) backup alarms for all project machinery or equipment shall be equipped with either audible self-adjusting ambient-sensitive backup alarms or manually-adjustable alarms. Ambient-sensitive alarms shall automatically adjust to a maximum of 5 dBA over surrounding background-noise levels. Manually-adjustable alarms shall be set at the lowest setting allowable, which assures safe alarm levels (above ambient noise) for equipment operators and other construction workers. Installation and use of alarms shall be consistent with the performance requirements of Society of Automotive Engineers standards and OSHA regulations.
  o Informing employees, contractors and subcontractors performing construction of the general requirements of this variance and exercising best efforts to ensure that such employees, contractors, and subcontractors follow BMPs in mitigating construction noise.
Temporary Sound Barriers (TSB) shall, as practical, be located to reduce noise most effectively.

- Placement of noise wall posts and panels during day hours where possible.
- Maintenance of existing noise-barrier walls for as long as possible (during construction) to mitigate construction and highway-related noise.
- Applicant shall construct permanent sound barriers prior to roadway construction, where possible, from a construction staging standpoint.
- Pile driving will not be performed during nighttime hours in the City and County of Denver.
- Additional best reasonable management practices for project equipment and General Construction Activities, when available, may be implemented upon mutual consent of DDPHE and Applicant.

- Federal Highway Administration (FHWA) – Roadway Construction Noise Model Users Guide – (Exhibit I of KIC’s petition) BMPs are followed for noise modeling and to determine eligibility zones
- FHWA – Manual on Uniform Traffic Devices (MUTCD) dictates horizontal clear zone distances where individuals can physically work for worker safety.
  - The MUTCD also references OSHA worker safety planning – traffic control devices or other barriers/protactions must be placed in order to protect workers and the public, depending on where you’re working within roadways.
  - The placement of traffic control and safety devices requires encroaching on travel lanes to perform work
  - According to information obtained from Kiewit, a condition of CDOT’s contract with Kiewit restricts I-70 lane closures to specific nighttime hours only

**2014 GES Health Impact Assessment**

- The following conditions are described in DDPHE’s Health Impact Assessment entitled “How Neighborhood Planning Affects Health in Globeville and Elyria Swansea” published in September 2014:
  - Existing noise levels from traffic in areas near I-70 from I-25 to Brighton Blvd. ranged from a low of 62.4 decibels to a high of 68.1 decibels
  - Existing noise levels from traffic in areas near I-70 in Elyria Swansea ranged from a low of 56.5 decibels to a high of 74.6 decibels
  - Noise from train horns measured from Swansea Recreation Center were as loud as 90 to 100 decibels. ** Please note that DDPHE does not have regulatory authority over planes, trains and highway traffic noise. These are federally regulated.
  - Recommendations to reduce noise include “sound walls or other noise mitigation measures... along major roadways and highways where sound levels are expected to increase” and “review[ing] truck routes in the neighborhoods to improve environmental quality, safety and connectivity.”
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<thead>
<tr>
<th>Date</th>
<th>Complaint Allegations</th>
<th>Follow-up Notes/Findings</th>
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<tr>
<td>11/1/2018</td>
<td>A noise complaint was not filed through 311 or the hotline however, DDPHE received an</td>
<td>Denver’s Noise Ordinance does not address vibration, traffic or detours, however, the constituent was contacted and given information about the noise ordinance and our enforcement authority. DDPHE followed up with constituent and met them near the source of vibration. Constituent took DDPHE staff to residents’ homes who were experiencing vibrations. The residents that we spoke to felt that the vibrations were being caused by the train passing by and were not sure if it was due to construction activities.</td>
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<td>11/18/19 and</td>
<td>Nighttime construction noise. First call made at 9 p.m., second call made at 12:45 a.m.</td>
<td>Contractor’s Quality Control Inspector arrived at location at 1:05 a.m. and noted no construction activity occurring in the area. There was also no I-70 related construction scheduled to occur in the area where the complaint originated that night. DDPHE followed up with CDOT/Kiewit contacts to find out why there was a delayed response after the first call. CDOT/Kiewit stated that there was an issue with the call center routing the call to the wrong person. This issue has since been addressed and has not occurred since.</td>
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<td>11/19/19 (2)</td>
<td>complaints were called into CDOT hotline by same complainant.</td>
<td>No violations were observed during routine DDPHE monitoring conducted the night of 11/18/2019.</td>
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<td>11/29/19 (1)</td>
<td>Nighttime construction noise</td>
<td>The complainant was informed by contractor that the reported noise source/construction location was not part of the Central 70 project and that it was an xcel project site. It was recommended to the complainant to</td>
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<td>Date</td>
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<td>4/18/19 (1) complaint was filed through the hotline</td>
<td>Nighttime construction noise</td>
<td>The complainant was located over a mile and a half away from I-70. Kiewit explained to complainant that it could not be the I-70 project and asked the complainant to call if it happened again, so they could investigate. (complaint location was 26th and Steele). No violations were observed by DDPHE staff during routine nighttime monitoring that week.</td>
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<td>4/26/19 (1) complaint was filed through 311.</td>
<td>The complaint was called in for noise occurring from 8:30 am - 12:30 pm</td>
<td>DDPHE Investigator tried twice to reach out to complainant with no response. The complaint was called in for noise occurring from 8:30 am - 12:30 pm (during exempted hours), therefore, this is not a violation of the noise ordinance. No violation occurred due to the noise being complained about occurring during exempted hours.</td>
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<td>5/13/19 (1) complaint filed through the hotline</td>
<td>Nighttime construction noise.</td>
<td>The complaint was from near 36th Ave and Holly St. Kiewit contacted the caller to advise they had no work in that area and that the 39th Greenway project was more than likely the culprit. Kiewit provided the project's contact information to complainant. No violations were observed by DDPHE staff during routine nighttime monitoring that week.</td>
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