



MEMO

TO: Sasha Luftig, Lane Transit District
FROM: Jennifer Rabby, AICP and Stefano Viggiano, AICP
SUBJECT: MovingAhead – Construction Impacts of New and Removed Pedestrian Bridges
DATE: February 21, 2018

The MovingAhead project includes the addition of a pedestrian/bicycle bridge in the Highway 99 Corridor and the removal of an existing pedestrian bridge in the 30th Avenue to Lane Community College (LCC) Corridor. Both actions would occur under both build alternatives, the Enhanced Corridor Alternative and the EmX Alternative, but would not occur under the No-Build Alternative.

The purpose of this memorandum is to supplement the project's technical reports (dated July 2017; some with additional edits made by LTD as provided to WSP in December 2017) with a description of the temporary construction impacts that would likely be associated with these actions. This memorandum does not include any analysis of long-term impacts of these actions beyond a brief discussion of the long-term coordination with the BNSF Railway for the bridge in the Highway 99 Corridor and long-term impacts on access resulting from the removal of the bridge in the 30th Avenue to LCC Corridor.

HIGHWAY 99 CORRIDOR: TRAINSONG BRIDGE CONSTRUCTION

Both build alternatives would include construction of a new pedestrian bridge and pathway that would connect the residential area near Trainsong Park to Highway 99. This new bridge, referred to as the Trainsong Bridge, would cross over two existing railroad tracks with a pathway connecting to the existing sidewalk at the terminus of Edison Street on the east end and to the existing sidewalk on Highway 99 at the west end.

Based on the conceptual plans (dated July 2017), this bridge would likely be a single-span bridge that could be prebuilt offsite and then lifted into place using a crane on each side; rail operations below the bridge would need to be shut down for a few hours while the bridge is lifted into place. Bridge abutments would likely consist of a series of walls with granular backfill constructed just beyond the railroad right-of-way on each side, requiring excavation for the wall foundations. With this approach the construction window would be approximately 3 months. Heavy construction vehicles needed for construction of the Trainsong Bridge and pathway would likely include: excavators, dump trucks, concrete trucks and or concrete pump trucks, vibratory rollers, and cranes. If elevators were included at either or both ends of the bridge, pile driving would likely be needed, requiring additional equipment, and the construction window would be longer (approximately 6 months).

Impacts associated with construction of the Trainsong Bridge and pathway would all be short-term and temporary in nature. These construction impacts could include the following:



Acquisitions and Displacements: Temporary construction easements (TCEs) beyond the permanent acquisitions and easements for the new pathway and bridge would likely be needed during the construction window (approximately 3 months). Areas in the TCEs would revert to their previous use(s) following construction.

In coordination with the BNSF Railway, LTD would need to acquire a long-term (permanent) easement or acquisition of air rights over the BNSF Railway corridor for the use and maintenance of the Trainsong Bridge. This acquisition would need to occur prior to construction of the new pedestrian bridge.

Air Quality: Construction impacts on air quality resulting from construction of the Trainsong Bridge would be the same as those noted for systemwide short-term construction-related impacts in the Air Quality Technical Report, although traffic flow is less likely to be affected by this bridge since it does not span a roadway. Air quality would be temporarily affected by the generation of dust from site clearing, excavation, and grading, and direct emissions from construction vehicles, resulting in temporarily increased levels of carbon monoxide and particulate matter during construction.

Community, Neighborhood, and Environmental Justice: Construction impacts from the Trainsong Bridge would be similar to those short-term systemwide construction impacts described in the project's Community, Neighborhood, and Environmental Justice Technical Report, as well as those described under other resources (e.g., air quality, noise, and visual) in this memorandum. Short-term impacts occurring during construction of the Trainsong Bridge would primarily be realized by residents that live on Edison Street, recreational users of Trainsong Park, and businesses near the private roadway extending east from Highway 99 (identified as Side Street in Google Maps). Such impacts would include temporary changes in air quality, noise and vibration levels, traffic, and visual quality.

Cultural Resources: The project's Cultural Resources Technical Report lists two historic properties along Highway 99 (one at 595 Highway 99 and one at 605 Highway 99) near the western terminus of the proposed pathway that could experience temporary effects during construction of the pathway and bridge. These effects could include changes in the visual setting, air quality, noise, and vibration due to construction activities and the presence of construction equipment. Such effects could temporarily alter the historic setting of the historic properties, if that is a contributing element. The Cultural Resources Technical Report does not clarify whether the construction footprint for the Trainsong Bridge and pathway was included in the surface survey for archaeological materials, but since construction would primarily take place in areas that have been urbanized, the likelihood of disturbing archaeological materials during construction would be low.

Ecosystems: Urban wildlife near the Trainsong Bridge and pathway could be temporarily disturbed by construction noise, vibration, and dust; however, it is likely they would return to the area following construction. There are no water features near this bridge, so no fish would be disturbed during construction. As noted in the Ecosystems Technical Report, no federal or state-listed species are known to occur in the project's area of potential impacts, so none would experience construction impacts.

Vegetation near the Trainsong Bridge and pathway primarily consists of grass, shrubs, and some trees. Vegetation within the project's construction footprint would be cleared during construction, which could result in short-term changes to wildlife habitat. As noted in the project's Ecosystems Technical Report, if



any trees require removal, measures would be taken to ensure no impacts to nesting migratory bird species would occur during construction, and disturbed areas would be revegetated with mitigation plantings, thus reestablishing wildlife habitat areas.

The Ecosystems Technical Report notes that although construction is not proposed near any documented wetlands in the Highway 99 Corridor, detailed onsite wetland determination and delineation work would occur prior to construction. It is possible that there are wetlands that may be identified within the construction footprint, such as along the ditches adjacent to the rail corridor that could be temporarily disturbed during construction.

Energy and Sustainability: The Energy and Sustainability Technical Report notes that the estimate of energy usage during construction only includes construction of new lanes, new stations and terminals, sitework, and new traffic signals, thus indicating that it does not include energy needed to construct new pathways or bridges included in the conceptual plans. Operation of the construction equipment and vehicles needed for bridge and pathway construction would require energy use, resulting in the emissions of greenhouse gases. Further, production of the materials used in the bridge and pathway (such as steel, rebar, and concrete) would also require energy.

Geology and Seismic: Short-term construction impacts for the Trainsong Bridge and pathway related to geology would be similar to those described for the rest of the Highway 99 Corridor in the project's Geology and Seismic Technical Report. As described earlier, earthwork would be necessary for construction of the bridge abutments.

Hazardous Materials: Based on the data presented in the project's Hazardous Materials Technical Report, construction of the Trainsong Bridge and pathway would not disturb any of the listed hazardous materials sites. In addition, the railroad right-of-way that the Trainsong Bridge would cross over could contain hazardous materials if there was a spill in the past, but construction activities would likely stay outside of the rail right-of-way except when lifting the bridge deck into place.

Other short-term construction impacts related to hazardous materials would be similar to the short-term systemwide construction impacts described in the Hazardous Materials Technical Report, such as accidental release of hazardous materials during construction.

Land Use and Prime Farmlands: The tax lots in which the Trainsong Bridge and pathway would be constructed are zoned as low-density residential on the east side of the rail corridor and community commercial on the west side; the portion of Trainsong Park adjacent to the rail corridor also has a site review overlay zone. Temporary construction impacts on these land uses would be anticipated to be minimal, with the land being able to continue as its existing use during construction except for the areas in TCEs, which would be unavailable for those uses during the construction window. There are no lands used for farming near the Trainsong Bridge and pathway.

Noise and Vibration: Construction of the Trainsong Bridge and pathway is likely to result in short-term noise and vibration impacts similar to the rest of the Highway 99 Corridor, as described in the Noise and Vibration Technical Report. If piles are needed for bridge construction, there would be additional noise



and vibration impacts during construction due to pile driving, and the duration of overall noise and vibration impacts on adjacent properties would be longer (approximately 6 months versus 3 months).

Parks and Recreation/Section 6(f): The project's Parklands, Recreation Areas, and Section 6(f) Technical Report describes that construction impacts on users of Trainsong Park (not a Section 6(f) resource) would include short-term increases in noise, dust, and visual intrusion as a result of construction equipment and activities. In addition, a small portion of the western edge of the park would likely be closed off during construction, temporarily reducing the size of the park; however, as noted in the report, this would not result in a loss of amenities. Access to the park would likely remain unchanged during construction, although there could be reduced parking along Edison Street to accommodate construction vehicles, and portions of the sidewalk along Edison Street could be temporarily closed off for safety reasons when construction vehicles are entering and exiting the construction area.

Section 4(f): Construction impacts on Trainsong Park, a Section 4(f) property, are documented in the project's Section 4(f) Technical Report in the assessment of temporary occupancy for this park. There are no other Section 4(f) properties that would be affected by construction of the Trainsong Bridge and pathway.

Street and Landscape Trees: The project footprint used in the Street and Landscape Trees Technical Report includes the Trainsong Bridge and pathway and identifies areas with potential impact to medium and large trees for the entire footprint; thus, the assessment of construction impacts in that report should account for any impacts to trees resulting from construction of the bridge and pathway.

Transportation: Construction of the Trainsong Bridge and pathway could result in temporary impacts to Edison Street and Side Street as construction vehicles would need to use both of those roadways to access the construction area from both sides of the rail tracks to minimize disturbances to rail operations. Further, it could be necessary to temporarily close the sidewalk at the terminus of Edison Street to ensure safety when construction equipment is accessing the site. Some of the on-street parking on Edison Street could also be temporarily unavailable if it is needed for parking construction vehicles. Edison Street does not have bike lanes that would be impacted. Side Street does not have sidewalks or bicycle lanes.

As described earlier, rail operations below the bridge would need to be shut down for a few hours while the bridge is lifted into place using cranes placed just outside of the rail right-of-way on both sides. Coordination with BNSF Railway would be needed in advance of construction to ensure that this particular construction activity is scheduled to minimize disruptions to rail service.

Utilities: The area of potential impact assessed in the Utilities Technical Report includes the Trainsong Bridge and pathway, so the assessment of construction impacts in that report should account for any impacts to utilities associated with construction of the bridge and pathway. Coordination with all local utility companies prior to construction would be needed to ensure that the location of those utilities is known and to ensure that construction activities do no impact utility service.

Visual and Aesthetic Resources: During construction, the visual environment of Trainsong Park and the adjacent residential area east of the railroad corridor and the industrial/commercial area west of the railroad corridor would be changed by the presence of brightly-colored heavy construction equipment,



including large cranes to lift the bridge span into place, as well as construction signage, and lighting. Removal of vegetation (as described earlier) would also temporarily alter the visual appearance of the area in which the bridge and pathway would be constructed. These temporary changes would be more noticeable from the Trainsong Park and Edison Street (both publicly accessible) on the east side than from the more industrial/commercial area and Side Street (a private roadway) on the west side of the bridge.

Water Quality, Floodplain, and Hydrology: As described in the project's Water Quality, Floodplain, and Hydrology Technical Report, and similar to the rest of the Highway 99 Corridor, no short-term construction impacts would be expected to result from construction of the Trainsong Bridge and pathway. Impacts to water quality would be minimized through the implementation of best management practices and mitigation measures to control erosion and ensure that any spills of hazardous materials during construction would be prevented to the extent possible and properly cleaned up. The addition of new impervious surface created during construction should be accounted for in the long-term impacts and design of water quality and flow control facilities.

30TH AVENUE TO LANE COMMUNITY COLLEGE CORRIDOR: AMAZON PARKWAY PEDESTRIAN BRIDGE REMOVAL

Both build alternatives would include removal of an existing concrete pedestrian bridge with stairs at either end that spans Amazon Parkway between E 19th Avenue and E 24th Avenue; stairs on the east end of the bridge appear to be made of steel, while the stairs on the west side are concrete. The bridge connects to a pathway and an additional pedestrian/bicycle bridge that spans Amazon Creek and connects to South Eugene High School to the east. That pathway and creek crossing would not be altered by either alternative. Removal of this bridge would likely entail saw cutting the existing bridge from the stairway approaches and then removing the bridge deck using cranes placed on both sides. During this process Amazon Parkway would probably need to be closed to traffic for approximately 12 hours. As part of the bridge removal, the pilings that support the bridge on either side would also likely be removed to approximately 2 feet below the surface, requiring some minor excavation. All removed materials would be hauled offsite and disposed of appropriately. The bridge removal process could likely be completed within 2 days. Heavy construction vehicles needed for this bridge removal would likely include excavators, dump trucks, backhoe with chipping hammer and cranes.

Although the MovingAhead project would remove the Amazon Parkway Pedestrian Bridge, this action would not be expected to decrease long-term access, as this pedestrian bridge would be replaced by a new at-grade crosswalk at the new signalized intersection proposed just north of the existing bridge. The new crosswalk would improve access by accommodating both bicycles and pedestrians, including those with disabilities, while the existing bridge is only accessible for pedestrians without disabilities because of the stairs on both ends. The new crosswalk would connect to new sidewalks on Amazon Parkway and would maintain the connection to the pathway that connects to South Eugene High School and the Amazon Adidas/Rexius Trail via the bridge over Amazon Creek. .

Impacts associated with the construction activities to remove the Amazon Parkway Pedestrian Bridge would be short-term and temporary in nature and do not include impacts associated with construction of the new crosswalk or signalized intersection. These construction impacts could include the following:



Acquisitions and Displacements: If construction activities associated with removal of the Amazon Parkway Pedestrian Bridge extend beyond the public right-of-way and/or area to be permanently acquired for the project, TCEs would be needed for use during construction. Areas in the TCEs would revert to their previous use(s) following construction.

Air Quality: Construction impacts on air quality resulting from removal of the Amazon Parkway Pedestrian Bridge would be the same as those noted for systemwide short-term construction-related impacts in the Air Quality Technical Report, but they would be limited to a very short duration as bridge removal could likely be completed within 2 days. That is, air quality would be temporarily affected by the generation of dust from direct emissions from construction vehicles and excavation activities for the pilings, resulting in increased levels of carbon monoxide and particulate matter during construction.

Community, Neighborhood, and Environmental Justice: Construction impacts from removal of the Amazon Parkway Pedestrian Bridge would be similar to those short-term systemwide construction impacts described in the project's Community, Neighborhood, and Environmental Justice Technical Report, as well as those described under other resources in this memorandum. While there are no residences adjacent to the bridge, the First Place Family Center (homeless shelter and resource center) and South Eugene High School are both located less than 400 feet from the bridge and there are residences located less than 500 feet from the bridge. Residents and students could experience temporary changes in noise, vibration, and air quality, as well as traffic detours if Amazon Parkway is closed to vehicles during bridge removal. Similarly, businesses along Amazon Parkway could be temporarily impacted by traffic detours during construction.

Cultural Resources: The project's Cultural Resources Technical Report does not list any historic resources near the Amazon Parkway Pedestrian Bridge and notes that no prehistoric or demonstrably historical artifacts were observed during the surface survey along Amazon Parkway, so there is a low likelihood of archeological materials being present; therefore, no construction impacts to cultural resources would be anticipated.

Ecosystems: Construction impacts in the Ecosystems Technical Report describe potential impacts to the Amazon Creek channel, which is less than 70 feet from the Amazon Parkway Pedestrian Bridge. The segment of Amazon Creek near the Amazon Parkway Pedestrian Bridge is channelized and is identified as a Category E stream on the City's Goal 5 Inventory Map, meaning that while it is designated for protection, there is no conservation setback that would require additional protection measures. Removal of the bridge (including staircases) would not disturb land within the banks of the creek.

The Ecosystems Technical Report notes that wetlands are mapped adjacent to the 30th Avenue to LCC Corridor, but the City's Goal 5 Inventory Map does not include any mapped wetlands near the Amazon Parkway Bridge. The Ecosystems Technical Report states that detailed onsite wetland determination and delineation work would occur prior to construction. It is possible that wetlands may be identified within the construction footprint that could be temporarily disturbed during construction.

Urban wildlife in the project vicinity could be temporarily disturbed by noise, vibration, and dust generated during bridge removal activities; however, it is likely they would return to the area following construction. While Amazon Creek is located less than 70 feet east of the bridge structure, this segment of



Amazon Creek is very channelized with no riparian buffer, and therefore, it provides minimal habitat, so construction activities are unlikely to disturb wildlife associated with the creek. As noted in the Ecosystems Technical Report, no federal or state-listed species are known to occur in the project's area of potential impacts, and there is no designated critical habitat, so none would experience construction impacts.

Vegetation near the bridge is primarily grass, which could be disturbed during construction activities, but could be replaced following project construction. There are no trees near the Amazon Parkway Pedestrian Bridge, and therefore, none that would be removed. Thus, there are no anticipated impacts to migratory birds.

Energy and Sustainability: The Energy and Sustainability Technical Report notes that the estimate of energy usage during construction only includes construction of new lanes, new stations and terminals, sitework, and new traffic signals, thus indicating that it does not include energy needed to remove the Amazon Parkway Pedestrian Bridge. Operation of the construction equipment and vehicles needed for bridge removal would require energy use, resulting in the emissions of greenhouse gases.

Geology and Seismic: Short-term construction impacts for removal of the Amazon Parkway Pedestrian Bridge would be similar to those described for the rest of the 30th Avenue to LCC Corridor in the project's Geology and Seismic Technical Report. As described earlier, soil disturbance would primarily occur where excavation around the pilings is needed to sawcut the pilings 2 feet below the surface.

Hazardous Materials: Based on the data presented in the project's Hazardous Materials Technical Report, removal of the Amazon Parkway Pedestrian Bridge would not disturb any of the listed hazardous materials sites.

The Amazon Parkway Pedestrian Bridge deck and stairs at the west end are made of concrete and therefore unlikely to contain any hazardous materials that would require special handling during removal of the bridge. The stairs at the east end of the bridge appear to be steel. If they are painted, the paint would need to be sampled for the presence of lead prior to removal. If lead is present, the contractor would need to take precautions to ensure that paint chips are contained and that the staircase materials are properly disposed.

Land Use and Prime Farmlands: The tax lot that encompasses a segment of the Amazon Parkway right-of-way and in which the Amazon Parkway Pedestrian Bridge is located is zoned as public land, with the water resources overlay zone. Other lands near the project area are zoned as public land, general office, and residential. Temporary construction impacts on these land uses would be minimal, with the land being able to continue as its existing use during removal of the bridge except for the areas in TCEs, which would be unavailable for those uses during the construction window. There are no lands used for farming near the Amazon Parkway Pedestrian Bridge.

Noise and Vibration: Construction activities needed to remove the Amazon Parkway Pedestrian Bridge are likely to result in short-term noise and vibration impacts similar to the rest of the 30th Avenue to LCC Corridor, as described in the project's Noise and Vibration Technical Report.



Parks and Recreation/Section 6(f): The project's Parklands, Recreation Areas, and Section 6(f) Technical Report describes that construction impacts on users of Amazon Park (a non-Section 6(f) resource south of the Amazon Parkway Pedestrian Bridge,) would include short-term increases in noise, dust, and visual intrusion as a result of construction equipment and activities. Construction impacts to the Proposed Civic Stadium Park (not a Section 6(f) resource at this time) on the west side of Amazon Parkway would be similar if that park were constructed prior to bridge removal. Users of the Amazon Adidas/Rexius Trail and the recreational facilities at South Eugene High School (both immediately east of Amazon Creek) would also experience similar short-term impacts. In addition, pedestrian and bicycle access from Amazon Parkway to all of these park and recreational facilities could be temporarily changed during the construction activities, as the connecting pathway and Amazon Creek Pedestrian Bridge would likely need to be closed off for safety reasons, requiring detours for pedestrians and bicyclists. The Amazon Adidas/Rexius Trail and other trails within Amazon Park would remain open during the bridge removal process and could serve as an alternative route for bicyclists and pedestrians during the period(s) when Amazon Parkway is temporarily closed.

Section 4(f): The TCEs for removal of the Amazon Parkway Pedestrian Bridge would likely not extend south to Amazon Park (a Section 4(f) property) and removal of the bridge would not result in substantial impairment of the activities, features, or attributes that qualify this park for protection under Section 4(f).

School recreation facilities can also qualify for protection under Section 4(f). While the TCEs for the bridge removal could extend onto land owned by the Eugene 4J School District for South Eugene High School, it would not extend to the portion of the property where the recreation facilities (including the Amazon Adidas/Rexius Trail, another Section 4(f) property) are located on the east side of Amazon Creek, and the construction activities for bridge removal within the TCEs would be very short (approximately 2 days), so there would be no temporary occupancy. Removal of the bridge would not result in substantial impairment of the activities, features, or attributes that qualify the school property and trail for protection under Section 4(f).

Street and Landscape Trees: There are no street or landscape trees near the Amazon Parkway Pedestrian Bridge; therefore, removal of the bridge would not result in any construction impacts to trees.

Transportation: Removal of the Amazon Parkway Pedestrian Bridge would result in temporary impacts to traffic, including passenger vehicles, freight trucks, pedestrians, bicyclists, and LTD bus routes 82 and 92, during the time (approximately 12 hours) when Amazon Parkway would need to be closed to ensure safety while the bridge is removed. During this time, through traffic would need to use alternate routes, such as Willamette Street. Pedestrians and bicyclists would be able to use the Amazon Adidas/Rexius Trail on the east side of Amazon Creek as an alternative route. Additional lane closures could be needed for completion of the construction activities to remove the bridge. There is no on-street parking along Amazon Parkway, so none would be temporarily affected by these construction activities.

Utilities: There are no overhead utilities located near the Amazon Parkway Pedestrian Bridge, however, there could be underground utilities nearby. Coordination with all local utility companies prior to construction would be needed to ensure that the location of those utilities is known and to ensure that construction activities do no impact utility service.



Visual and Aesthetic Resources: During construction, the visual environment of the Amazon Parkway corridor would be changed by the presence of brightly-colored heavy construction equipment, including large cranes to remove the bridge span, as well as construction signage, and lighting. For the time when the roadway is closed, there would be no through traffic on Amazon Parkway (likely between 19th Avenue and 24th Avenue), which would be another visual change from existing conditions. These temporary visual changes would be visible from the South Eugene High School, Amazon Adidas/Rexius Trail, the Proposed Civic Stadium Site, portions of Amazon Park, and some of the residences and businesses nearby.

Water Quality, Floodplain, and Hydrology: Removal of the Amazon Parkway Pedestrian Bridge would not be expected to result in changes to the total impervious surface area, as the bridge is above a paved roadway that would be retained. A portion of this construction work would take place within the mapped floodplain of Amazon Creek, but soil disturbance during construction would generally be limited to the areas where the pilings are removed 2 feet below the surface, and the holes would be filled after removal of the pilings creating a balanced cut/fill in the floodplain. Best management practices and mitigation measures would control erosion and ensure that any spills of hazardous materials during construction would be prevented to the extent possible and properly cleaned up if need be to avoid impacts to water quality.