

MEMORANDUM

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Copies: MovingAhead Project Files

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Subject: Addendum to MovingAhead Alternatives Analysis Technical Reports

This document is an addendum to the MovingAhead Project's Alternatives Analysis (AA) Draft Final Technical Reports, dated May 2017. This addendum serves to provide new options for mitigating potential adverse effects as related to the information gathered by the AA Technical Reports.

1. BACKGROUND

The purpose of MovingAhead is to determine which high-capacity transit corridors identified in the adopted *Emerald Express (EmX) System Plan* (Lane Transit District [LTD], 2014) and the Frequent Transit Network (FTN) are ready to advance to capital improvements programming in the near term. The City of Eugene (City) and LTD initiated the MovingAhead Project in 2014 to identify and examine alternatives for improving multimodal safety, mobility, and accessibility in key transit corridors in the City. A main theme of the City's vision is to concentrate new growth along and near the City's key transit corridors and within core commercial areas while protecting neighborhoods and increasing access to services for everyone. The City and LTD are jointly conducting the project to facilitate a more streamlined and cost-efficient process through concurrent planning, environmental review, and design and construction of multiple corridors.

The City and LTD examined multimodal transit alternatives in the following five key transit corridors identified in the Draft *Envision Eugene Comprehensive Plan* (City, 2016) and the *Eugene 2035 Transportation System Plan* (Central Lane Metropolitan Planning Organization, 2016):

- Highway 99 Corridor
- River Road Corridor
- 30th Avenue to Lane Community College Corridor
- Coburg Road Corridor
- Martin Luther King, Jr. Boulevard Corridor

No-Build, Enhanced Corridor, and EmX Alternatives were developed for each corridor except the Martin Luther King, Jr. Boulevard Corridor, for which only No-Build and Enhanced Corridor Alternatives were developed.

In fall 2016 and winter 2017, LTD and the City evaluated the potential effects of proposed alternatives being studied in the MovingAhead Project; these evaluations and potential effects were documented in discipline-specific technical reports. After review of the technical report findings, LTD and the City determined that additional mitigation options should be considered by policy makers when selecting preferred alternatives for each of the project corridors.

This addendum describes the new information and how this new information differs from the findings of the technical reports.

2. NEW MITIGATION OPTIONS

The following technical reports identified locations along corridor alternatives where additional mitigation options may be necessary to mitigate potential adverse effects:

- Transportation Technical Report
- Street and Landscape Trees Technical Report
- Acquisitions and Displacements Technical Report

The project team classified proposed mitigation options into the following two categories:

- Corridor-based mitigation options: As proposed in the design studied by the technical reports, lineal
 change to the cross section of a given roadway would result in potentially adverse impacts to
 multiple properties. Examples of design in areas requiring a corridor-based mitigation option include
 widening a roadway to construct exclusive or semi-exclusive bus lanes or re-allocating space on an
 existing facility for different modes than the existing cross section of that facility. Mitigation options
 for these cases often suggest changes to the overall proposed cross section of a large portion of the
 corridor.
- Localized mitigation options: As proposed in the design studied by the technical reports, small-scale "spot" changes to an existing site often related to a proposed enhanced bus stop or EmX station placement, improvements to bicycle or pedestrian infrastructure, or limited widening for intersection improvements would result in impacts to a single property or a small number of properties. Mitigation options in these locations suggest relocation of discrete portions of the proposed improvements in a given area such as relocation of proposed stops or stations.

Table 2.1-1 identifies corridor-based mitigation options by corridor alternative, describes the conflict(s) identified by the technical reports, describes the proposed mitigation option to alleviate the identified conflict(s), and summarizes the changes to the conflict(s) as a result of implementing the proposed mitigation option.

Table 2.1-2 identifies localized mitigation options by corridor alternative, describes the conflict(s) identified by the technical reports, describes the proposed mitigation option to alleviate the identified conflict(s), and summarizes the changes to the conflict(s) as a result of implementing the proposed mitigation option.

Figures referenced in the tables are found in the appendix to this addendum. The figures identify the conceptual design elements resulting in potential impacts which drive the need for a mitigation option and visually explain potential mitigation.

Table 2.1-1. Corridor-Based Mitigation Options Summary

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
Highway 99 Corridor Enhanced	Corridor Alternative			
No corridor-based mitigation options identified for this alternative.	N/A	N/A	N/A	N/A
Highway 99 Corridor EmX Altern	native			
No corridor-based mitigation options identified for this alternative.	N/A	N/A	N/A	N/A
River Road Corridor Enhanced C	Corridor Alternative			<u>. </u>
Randy Papè Beltline Interchange with River Road; 300 feet south of the intersection of River Road and Silver Lane to 150 feet north of the intersection of River Road and Division Avenue.	Proposed widening of River Road in the interchange area to provide semi-exclusive Business Access and Transit (BAT) lanes on approach to congested ramp terminal intersections would result in strip acquisitions from abutting properties that would impact the drive- thru circulation of four businesses and off-street parking from other businesses in the area.	Eliminate the BAT lanes proposed in this section of the corridor, and focus efforts on efficient stop placement and siting, with a particular focus on finding a safer and more efficient stop to replace the existing northbound bus stop at the south ramp terminal intersection of River Road and the Randy Papè Beltline.	 Elimination of the proposed BAT lanes in this area would avoid the need to widen and acquire property from adjacent businesses. Some minor right-ofway acquisitions may be required depending on the selection of stop locations, but their scope would be smaller than the currently proposed acquisitions under this alternative. The bus would travel in a congested segment of mixed traffic in the interchange area. Further study of bus travel delay 	A-1a - A-1b

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
			 due to selection of this mitigation option is needed. Pedestrian improvements proposed under the Enhanced Corridor Alternative would not be provided by this mitigation option. 	
River Road Corridor EmX Alterna Randy Papè Beltline Interchange with River Road; Corliss Lane to Division Avenue.	Proposed widening of River Road in the interchange area to provide semi-exclusive BAT lanes and exclusive bus-only lanes would result in strip acquisitions from abutting properties that would impact the drive-thru circulation of six businesses and off- street parking from other businesses in the area.	Option 1: Eliminate the BAT and EmX-exclusive lanes proposed in this area, and focus efforts on station placement and siting, with a particular focus on finding a safer and more efficient station to replace the existing northbound bus stop at the south ramp terminal intersection of River Road and the Randy Papè Beltline.	 Eliminating the proposed BAT and exclusive lanes in this area would avoid the need to widen and reduce property acquisition from adjacent businesses. Some minor acquisitions may be required depending on the selection of proposed station locations, but their scale would be smaller than the currently proposed acquisitions. The EmX would travel in a congested segment of mixed traffic in the interchange area. Further study of the amount of delay incurred by the EmX due to selection of this mitigation option is required. 	A-2a, A-2b

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
		Option 2: Alternatively, reduce the level of investment in this location to match the proposed Enhanced Corridor Alternative (non-mitigation option) in this area to gain some exclusivity for the EmX.	 Choosing to construct the Enhanced Corridor Alternative in this area as it is currently proposed, while less impactful than the proposed EmX Alternative, is still impactful to business circulation and parking. Some travel time savings for the EmX would be preserved by selecting this option. 	N/A
Oak Street between E. 11th Avenue and E. 19th Avenue	 Proposed addition of a buffered bicycle lane on Oak Street would require removal of up to 60 on-street parking spaces on Oak Street. The City has indicated that construction of the High Street cycletrack facility may mitigate the need for a buffered bicycle facility on Oak Street. Construction of parking pullouts and stops in this location may also impact mature street trees 	Eliminate the buffered bicycle facility on Oak Street. Eliminate the proposed construction of parking pullouts. Construction activities on Oak Street under the Enhanced Corridor Alternative would focus on enhanced stop construction and transit signal priority only.	 Eliminating the proposed buffered bicycle facility on Oak Street would avoid impacts to onstreet parking. The existing condition with no continuous bicycle facility on Oak Street would be maintained. Enhanced stop construction would remain as proposed. Impacts to mature street trees would be avoided. 	A-3a

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	Tree boundary of the City.			
Pearl Street between E. 11th Avenue and E. 19th Avenue	 Proposed addition of a striped buffer for the existing bicycle lane on Pearl Street would require removal of up to 13 on-street parking spaces on Pearl Street. Construction of parking pullouts and stops in this location may also impact mature street trees within the Charter Tree boundary of the City. 	Eliminate the proposed buffer for the existing bicycle lane on Pearl Street. Eliminate the proposed construction of parking pullouts. Construction activities on Pearl Street under the Enhanced Corridor Alternative would focus on enhanced stop construction and transit signal priority only.	 Eliminating the proposed buffered bicycle facility on Oak Street and the proposed buffer on Pearl Street would avoid impacts to on-street parking. The existing condition with an existing non-buffered bicycle facility on Pearl Street would be maintained. Enhanced stop construction would remain as proposed. Impacts to mature street trees would be avoided. 	A-b
30th/Lane Community College (Corridor EmX Alternative			
Oak Street between E. 11th Avenue and E. 19th Avenue	 Proposed addition of a BAT lane on Oak Street would result in removal of up to 76 on-street parking spaces on Oak Street. Proposed EmX stations at Oak Street and E. 13th Avenue and at E. 14th Avenue are too close together for efficient transit operations 	 Reduce the length of or eliminate the BAT lane proposed on Oak Street. Relocate the redundant station at E. 13th Avenue to Oak Street and E. 16th Avenue. Combine the sidewalk and station area of the proposed stations. 	 While this option would retain 76 on-street parking spaces, eliminating or reducing the length of the BAT lane on Oak Street would result in the EmX traveling in mixed traffic on Oak Street. Travel time savings due to proposed BAT lane would be reduced or eliminated. Relocating the station at Oak Street and E. 13th Avenue to Oak Street and E. 16th Avenue would avoid blocking access to the 	A-4a

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	The proposed station at Oak Street and E. 13th Avenue potentially blocks access to a residential property and impacts mature street trees within the City's Charter Tree boundary.		residential property and avoid potential impacts to mature street trees within the Charter Tree boundary of the City. Transit performance would potentially improve due to increased stop spacing. Combining the sidewalk and station area of the proposed station would reduce its overall width and reduce or avoid impacts to private property.	
Pearl Street between E. 11th Avenue and E. 19th Avenue.	Proposed EmX stations at Pearl Street and E. 13 th Avenue and at E. 15 th Avenue are too close together for efficient operations	 Relocate the station at E. 13th Avenue to Pearl Street and E. 12th Avenue. Relocate the station at E. 15th Avenue to Pearl Street and E. 16th Avenue. Relocate the station at E. 18th Avenue to Pearl Street and E. 19th Avenue. Combine the sidewalk and station area of the proposed stations. 	 Transit performance would potentially improve due to increased stop spacing. Combining the sidewalk and station area of the proposed station would reduce its overall width and reduce or avoid impacts to private property that may occur as a result of relocating the stations listed. 	A-4b
Coburg Road Corridor Enhanced	Corridor Alternative			
No corridor-based mitigation options are identified for this alternative.	N/A	N/A	N/A	N/A

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
Coburg Road Corridor EmX Alter	rnative			
Randy Papé Beltline interchange with Coburg Road; Elysium Avenue to Crescent Avenue.	Proposed widening of Coburg Road in the interchange area to provide exclusive bus- only lanes would result in strip acquisitions from abutting properties including residences. Strip acquisitions would potentially impact drive- thru circulation of two businesses and off-street parking from other businesses. Left turns across Coburg Road would be heavily restricted compared to the existing condition.	 Provide more refined design in the mitigation option area, including reducing or eliminating the proposed exclusive bus-only lanes. Refine the taper of general purpose lanes north of Crescent Avenue on Coburg Road so that the required right-of-way width roadway returns to existing conditions in less distance than currently designed. Eliminating or reducing the proposed exclusive bus-only lanes would reduce or avoid strip acquisitions and impacts to businesses and residences. Some minor property acquisitions for right-of-way may still be required to construct station improvements. The EmX would travel in a congested segment of mixed traffic through the interchange area where the exclusive lanes are removed. This would result in a reduction in transit travel times and would require additional analysis to more fully understand the extent of the reduction. 	A-5a, A-5b	
		Revise the design in this area to match the proposed Enhanced Corridor Alternative design.	 Constructing the Enhanced Corridor Alternative in this area, while less impactful than the EmX Alternative, would still impact business circulation and parking. Some travel time savings for the EmX would be preserved by selecting this option. 	N/A
Martin Luther King, Jr. Boulevar	d Corridor Enhanced Corrido	r Alternative		
No corridor-based mitigation options are identified for this alternative.	N/A	N/A	N/A	N/A

Table 2.1-2. Localized Mitigation Options Summary

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
Highway 99 Corridor Enhanced (Corridor Alternative			
Previous location of Porky's Palace – business on Highway 99 at the southwest corner of intersection with Royal Avenue (796 State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in removal of up to 12 off-street parking spaces and would impact circulation through the business parking lot.	Option 1: Utilize the existing bus stop and pullout near this location without constructing pedestrian zone improvements or widening the stop area.	 Utilizing the existing bus stop and pullout with no construction would avoid the circulation and parking impacts to the property. This mitigation option design change would eliminate the enhanced bus stop and the pedestrian improvements. A 60-foot articulated bus may not be able to fully pull out of traffic to serve the short existing stop. 	A-6
		Option 2: In final design, work with the business owner to balance length of stop design with a driveway in the taper of the pullout.	A 60-foot articulated bus may not be able to fully pull out of traffic to serve a shortened stop. Final design detailing of a slightly longer than existing stop negotiated with the access needs of the property owner would balance operational and safety impacts with potential parking and circulation impacts.	
Battery X-Change – business on the east side of Highway 99, 1,500 feet north of Roosevelt Boulevard (539 State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in removal of up to	Utilize the existing bus stop and pullout near this location without constructing pedestrian zone improvements or widening the stop area.	Utilizing the existing bus stop and pullout with no construction would avoid the parking impacts to the property.	A-7

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	six off-street parking spaces.		 A 60-foot articulated bus may not be able to fully pull out of traffic to service the short existing stop. 	
			 This mitigation option design change would eliminate the enhanced bus stop and the pedestrian improvements. 	
Wheeler Dealer – business on the east side of Highway 99, 1,000 feet south of Fairfield Avenue (1041 State Hwy 99 N, Eugene, OR 97402). Proposed construction of an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in removal of up to six off-street parking spaces.	an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would	Utilize the existing bus stop and pullout near this location without constructing pedestrian zone improvements or widening the stop area.	 Utilizing the existing bus stop and pullout with no construction would avoid the circulation and off-street parking impacts to the property. 	A-8
		 A 60-foot articulated bus may not be able to fully pull out of traffic to serve the short existing stop. Final design detailing of a slightly longer than existing stop negotiated with the access needs of the property owner would balance operational and safety impacts with potential off-street parking impacts. 		
		 This mitigation option design change would eliminate the enhanced bus stop and the pedestrian improvements. 		
Northwest Self Storage – business on the west side of Highway 99, 1,000 feet south of Fairfield Avenue (3150 Hawthorne Ave, Eugene, OR 97402)	Proposed construction of an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in impacts to	Shift the pullout to a new location on the site and reduce its overall length and width and the length and width of pedestrian zone improvements	Utilizing the existing bus stop and pullout with no construction would avoid the circulation and off-street parking impacts to the property.	A-8

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	circulation around rows of storage units on the site.	as necessary to maintain existing circulation on the site.	A 60-foot articulated bus may not be able to fully pull out of traffic to serve a shortened existing stop. Final design detailing of a slightly longer than existing stop negotiated with the access needs of the property owner would balance operational and safety impacts with potential site circulation impacts.	
			 This mitigation option design change would reduce the scope of the enhanced bus stop and the pedestrian improvements. 	
Gilbert Shopping Center on the southwest corner of the intersection of Highway 99 and Fairfield Avenue (1156-1171 State Hwy 99 N, Eugene, OR 97402). Proposed construction of an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in removal of up to 10 off-street parking spaces.	an enhanced bus stop, a bus pullout, and pedestrian improvements in this location would result in removal of up to 10 off-street parking	Utilize the existing bus stop and pullout near this location without constructing pedestrian zone improvements or widening the stop area.	 Utilizing the existing bus stop and pullout with no construction would avoid the circulation and off-street parking impacts to the property. A 60-foot articulated bus may not be able to fully pull out of traffic to serve the short existing stop. Final design detailing of a slightly longer than existing stop negotiated with the access needs of the property owner would balance operational and safety impacts with potential off-street parking impacts. 	A-9
		 This mitigation option design change would eliminate the enhanced bus stop and the pedestrian improvements. 		

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
Winco Foods – business at the intersection of Barger Drive and Cubit Street (4275 Barger Drive, Eugene, OR 97402).	Construction of a proposed on-street terminus facility would result in widening of Cubit Street that would remove approximately 12 off-street parking spaces.	Final design mitigation and negotiation with this property owner would include narrowing or reducing the number of lanes on Cubit Street. Other scaling of or movement of design elements in this area would include the operator restroom and boarding platforms.	 Narrowing the travel lanes on Cubit Street to bring all terminus improvements inside of the existing right-of-way would potentially avoid impacts to Winco Foods' off-street parking. Traffic impacts due to potential removal of or reduction in width of vehicular travel lanes would require further study to understand traffic operational trade-offs. 	A-10
Highway 99 Corridor EmX Alterr	native			
Patty's – business at the intersection of Highway 99 and Roosevelt Boulevard (241 State Hwy 99 N, Eugene, OR 97402).	Construction of EmX station and intersection improvements at Roosevelt Boulevard to provide BAT lane and pullout for northbound EmX vehicles would remove approximately two off-street parking spaces.	Final design mitigation and negotiation with this property owner would include narrowing of the pedestrian environment, station area, or travel lanes and coordination with the property owner to optimize existing site parking.	Mitigation alternatives would result in minimizing potential off-street parking impacts to the business, but would not completely avoid impacts to this property.	A-11
Previous location of Porky's Palace – business on Highway 99 at the southwest corner of intersection with Royal Avenue (796 State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an EmX station in this location would result in removal of up to 12 off- street parking spaces and closure of driveway access to Highway 99.	Final design mitigation and negotiation with this property owner would include constructing a station with a smaller overall civil design footprint and/or combining the sidewalk and station area to	 Narrowing of station dimensions and/or length may result in operational impacts including the EmX vehicle being unable to completely pull out of traffic to serve the station. 	A-12

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
		reduce the overall width of the impact.	 Some, but not all, of the off- street parking impacts would be avoided. 	
			 The impacted driveway would remain closed. 	
Battery X-Change – business on the east side of Highway 99, 1,500 feet north of Roosevelt Boulevard (539 State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an EmX station in this location would result in removal of up to six off- street parking spaces.	Option 1: Final design mitigation and negotiation with this property owner would include constructing a station with a smaller overall civil design footprint and/or combining the sidewalk and station area to reduce the overall width of the impact.	 Narrowing of station dimensions and/or length may result in operational impacts including the EmX vehicle being unable to completely pull out of traffic to serve the station. Some, but not all, of the offstreet parking impacts would be avoided. 	A-13
		Option 2: Relocation of the station from its proposed location to adjacent parcels.	 Negotiation with and outreach to other potentially impacted properties would be required if the station were relocated. 	•
			 Some, but not all, of the off- street parking impacts would be avoided. Off-street parking impacts may be incurred by other parcels if the station would be relocated. 	
Ace Buyers – business at the northeast corner of the intersection of Highway 99 and Royal Avenue (823B State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an EmX station in this location would result in removal of up to 12 off- street parking spaces.	Final design mitigation and negotiation with this property owner would include constructing a station with a smaller overall civil construction footprint and/or combining the	Narrowing of station dimensions and/or length may result in operational impacts including the EmX vehicle being unable to completely pull out of traffic to serve the station.	A-14

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
		sidewalk and station area to reduce the overall impact width.	 Some, but not all, of the off- street parking impacts would be avoided. 	
Gilbert Shopping Center on the southwest corner of the intersection of Highway 99 and Fairfield Avenue (1156-1171 State Hwy 99 N, Eugene, OR 97402).	Proposed construction of an EmX station in this location would result in removal of up to nine off- street parking spaces.	Final design mitigation and negotiation with this property owner would include constructing a station with a smaller overall civil design footprint and/or combining the sidewalk and station area to reduce the overall width of the impact.	The proposed mitigation option would minimize the number of offstreet parking impacts, but would not entirely avoid the proposed impact.	A-15
Winco Foods – business at the intersection of Barger Drive and Cubit Street (4275 Barger Drive, Eugene, OR 97402).	Construction of a proposed on-street terminus facility would result in a widening of Cubit Street that would remove approximately 12 off-street parking spaces.	Final design mitigation and negotiation with this property owner would include narrowing or reducing the number of lanes on Cubit Street to reduce the number of parking spaces impacted on the property. Other scaling of or movement of design elements in this area would include the operator restroom and boarding platforms.	 Narrowing the travel lanes on Cubit Street to bring all terminus improvements inside of the existing right-of-way would potentially avoid impacts to Winco Foods' off-street parking. Traffic impacts due to potential removal of or reduction of vehicular travel lane widths would require further study to understand traffic operational trade-offs. 	A-16
River Road Corridor Enhanced C	orridor Alternative			
Proposed southbound stop location at W. 1st Avenue and Chambers Street (approximately 100 Chambers Street, Eugene, OR 97402).	City staff comment on this stop located inside of the City's Charter Tree boundary indicates that an existing stop location at W. 2nd Avenue and	Relocate proposed enhanced stop to existing stop location at W. 2nd Avenue and Chambers Street.	 Avoids impacts to trees within the Charter Tree boundary of the City. The at-grade stop location would better serve existing development and would be more 	A-17

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	Chambers would better serve land uses, be at grade, and potentially avoid impacts to trees.		accessible for mobility device users.	
River Road Corridor EmX Altern	ative			
Crescent Automotive – business at the northwest corner of the intersection of W. 6th Avenue and Chambers Street (1705 W. 6th Avenue, Eugene, OR 97402).	Constructing a proposed EmX station at this location would result in the removal of approximately 10 offstreet parking spaces from this business.	Relocate station to the north, and shorten the platform so that it fits within the existing sidewalk and landscape and minimizes potential impacts to off-street parking. Maintain proposed bicycle circulation behind the station.	Shifting and narrowing the station in this location would avoid some or all impacts to the off-street parking at Crescent Automotive, but may result in partial property acquisitions from other businesses in the area.	A-18
of River Road and Hansen Lane (480 River Road, Eugene, OR 97404).	Constructing a proposed EmX station at this location would result in blocking access to the lot by cutting off vehicular access to the property.	Relocate the station two properties to the north.	Shifting the station two properties to the north would avoid the driveway impact, but would potentially result in property acquisitions from a different property.	A-19
			 Potential impacts to medium and large trees in the landscape strip along River Road would require further assessment by an International Society of Arboriculture-certified arborist prior to approval of tree removal. 	
			 Additional final design refinement of the station length, width, and cross section would be required. 	
			 The EmX station would be located at the near side of a 	

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
			proposed pedestrian crossing which is less ideal for bus operations and pedestrian safety than placement at the far side of the crossing.	
30 th /Lane Community College C	orridor Enhanced Corridor A	lternative		
No localized mitigation options are identified for this corridor alternative.	N/A	N/A	N/A	N/A
30th/Lane Community College (Corridor EmX Alternative			
KeyBank and alleyway at the intersection of Amazon Parkway and Hilyard Street (2995 Hilyard Street, Eugene OR 97405).	The proposed station with bicycle storage at this location would close an alley to residences.	Trim the overall platform length and shift station slightly in final design to avoid closure.	Trimming and shifting the station would avoid closing the public alley but it would also reduce station improvements and available bicycle storage at this location.	A-20
Coburg Road Corridor Enhanced	l Corridor Alternative			-
Kendall Subaru—business in the southwest quadrant of the intersection of Coburg Road and Cedarwood Drive (20 Coburg Road, Eugene, OR 97401).	Proposed construction of a new southbound BAT lane and reconstruction of existing shared use path and landscape strip in this area would result in right-of-way widening and removal of approximately eight offstreet parking spaces in this location plus potential reconstruction	Several mitigation options could be used alone or in combination: Reduce the width of the landscape buffer between the BAT lane and shared use path Reduce the width of the reconstructed shared use path, and/or	 Reducing the scale of proposed improvements by employing any combination of the techniques described would minimize or potentially avoid the number of off-street parking spaces potentially impacted at this business. Reducing or eliminating the length of the BAT lane through this area requires further study to determine whether there are any reductions in travel time 	A-21

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
	of the business' parking lot lighting.	Reduce or eliminate the length of the proposed southbound BAT lane.	savings in a highly congested part of the Coburg Road corridor. Reducing the width of the proposed landscape buffer and reconstructed shared use path would result in a pedestrian and bicycle area that is more constrained than the existing condition.	
The Hamptons Apartments—multi-family residential property in the southeast quadrant of the intersection of Harlow Road and Coburg Road (601 Coburg Road, Eugene, OR 97401).	Proposed construction of an extended right-turn lane for the northbound to eastbound turning movement and a wider pedestrian environment at the intersection of Harlow Road and Coburg Road would result in removal of approximately 15 off-street parking spaces and some potential removal of mature street and landscape trees.	 Reduce the overall length of the proposed right-turn lane, and reduce the width of the proposed pedestrian environment. Work with the property owner to reconfigure the existing parking lot and landscaping to take advantage of open space and provide adequate off-street parking at The Hamptons. 	 Some or all of the parking loss induced by proposed construction would be avoided by reducing the construction proposed in the area, by reconfiguring the existing lot at The Hamptons, or by some combination of the two strategies. Reducing the length of the proposed right-turn lane at this intersection would reduce or eliminate travel time improvements and general traffic operational efficiency through the intersection at Harlow Road because right-turning vehicles would potentially block the through lane where the bus would travel. 	A-22
			 Reducing the width of the proposed pedestrian environment would result in a 	

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
			less desirable sidewalk and/or landscape buffer width.	
northeast corner of the an intersection of Coburg Road on and Frontier Drive (485 Coburg Road, Eugene, OR 97401).	Proposed construction of a new enhanced bus stop on the northeast corner of this intersection would	Coordinate and negotiate with the property owner during final design and construction to ensure that business operations and structure are not impacted.	 Coordination would ensure that impacts to business operations and structure at this location would be avoided. 	A-23
	result in the stop and pedestrian environment constructed directly adjacent to the building at this strip mall complex.		 May result in narrowing of pedestrian environment or stop relocation within the same parcel during final design. 	
Papa's Pizza—business on the east side of Coburg Road, 400 feet south of the intersection of Willakenzie Road and Coburg Road (1577 Coburg	Proposed construction of an extended right-turn lane for the northbound to eastbound turning movement at the	Reduce the overall length of the proposed right-turn lane.	 Parking loss induced by proposed construction would be avoided or minimized by reducing the overall length of the right-turn lane proposed in the area. 	A-24
Road, Eugene, OR 97401).	intersection of Willakenzie Road and Coburg Road would result in removal of approximately 12 off- street parking spaces in this location.		 Reducing the length of the proposed right-turn lane at this intersection would reduce or eliminate travel time improvements and general traffic operational efficiency through the intersection at Willakenzie Road because right-turning vehicles would potentially block the through lane where the bus would travel. 	
Coburg Road Corridor EmX Alter	rnative			
Kendall Subaru—business in the southwest quadrant of the intersection of Coburg Road	Construction of new exclusive EmX-only lane and reconstruction of	Several mitigation options could be used alone or in combination:	 Reducing the scale of proposed improvements by employing any combination of the techniques 	A-25

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
and Cedarwood Drive (20 Coburg Road, Eugene OR 97401).	existing shared use path and landscape strip in this area would result in right-of-way widening and removal of approximately eight off-street parking spaces in this location as well as potential reconstruction of the business' parking lot lighting.	 Reduce the width of the landscape buffer between the general traffic lanes and shared use path, Reduce the width of the reconstructed shared use path, and/or Reduce or eliminate the length of the proposed southbound exclusive busonly lane. 	described would minimize or potentially avoid the number of off-street parking spaces potentially impacted at this business. Reducing or eliminating the length of the exclusive lanes for buses through this area requires further study to determine whether there are any reductions in travel time savings in a highly congested part of the Coburg Road corridor. Reducing the width of the proposed landscape buffer and reconstructed shared use path would potentially result in a pedestrian and bicycle area that is less wide than the existing environment.	
ntersection of Oakmont Way and Coburg Road mpacted businesses: MetroPCS (315 Coburg Road, Eugene, OR 97401). Jiffy Lube (340 Coburg Road, Eugene, OR 97401). H&R Block (390 Coburg Road, Eugene, OR 97401). Hawaiian Time (333 Coburg Road, Eugene, OR 97401).	Construction of center- running exclusive EmX- only lane and reconstruction of existing roadway and bicycle and pedestrian environment to accommodate right-of- way widening would result in strip acquisition of property from these businesses as well as removal of off-street parking spaces.	Final design mitigation would include reduction of proposed lane widths, reduction of the width of the pedestrian environment, or proposed station width reduction. Coordination with the property owner would occur during final design to determine most appropriate methods to mitigate proposed impacts.	 Reducing the width and/or scope of proposed improvements would in turn avoid or minimize the number of parking spaces potentially impacted at these businesses. Refined final design would determine the exact combination of the suggested mitigations required to achieve the desired avoidance or minimization of impacts. Reducing or eliminating the length of the exclusive lanes for 	A-26

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
 Reliable Credit Association (365 Coburg Road, Eugene, OR 97401). Farmers' Insurance (377 Coburg Road, Eugene, OR 97401). 			buses through this area would result in a reduction in transit travel times and would require additional analysis to more fully understand the extent of the reduction. This mitigation option would reduce the quality of the proposed pedestrian, bicycle, and/or station environment compared to what is proposed under the EmX Alternative.	
The Hamptons Apartments—multi-family residential property in the southeast quadrant of the intersection of Harlow Road and Coburg Road (601 Coburg Road, Eugene, OR 97401).	Construction of center- running exclusive EmX- only lane and station in this location requires widening of the intersection of Coburg Road and Harlow Road that would result in removal of approximately 15 off-street parking spaces in this location and some potential removal of mature street and landscape trees.	 Eliminate the proposed exclusive lane for EmX vehicles and let the northbound EmX travel in mixed traffic. Construct right side station. Reduce proposed width of pedestrian environment. Work with the property owner to reconfigure the existing parking lot and landscaping to take advantage of open space and provide adequate off-street parking at The Hamptons. 	 Some or all of the parking loss induced by proposed construction would be avoided either by reducing the construction proposed in the area, by reconfiguring the existing lot at The Hamptons, or by some combination of the two strategies. Eliminating the proposed exclusive bus-only lane at this intersection would eliminate travel time improvements for the EmX through the intersection at Harlow Road. This mitigation option would reduce the quality of the proposed pedestrian, bicycle, and/or station environment 	A-27

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
			compared to what is proposed under the EmX Alternative.	
Westminster Presbyterian Church—church at the Intersection of Harlow Road and Coburg Road (777 Coburg Road, Eugene, OR 97401).	Construction of center- running exclusive EmX- only lane and station in this location requires widening of the intersection of Coburg Road and Harlow Road that would result in potential removal of mature landscape trees.	Eliminate the proposed exclusive lane for EmX vehicles and let the northbound EmX travel in mixed traffic. Construct right side station. Reduce proposed width of pedestrian environment.	 Impacts to mature landscape trees would be avoided by eliminating the proposed exclusive lane for EmX vehicles and associated widening in this location. Eliminating the proposed exclusive bus-only lane at this intersection would eliminate travel time improvements for the EmX through the intersection at Harlow Road. This mitigation option would reduce the quality of the proposed pedestrian, bicycle, and/or station environment compared to what is proposed under the EmX Alternative. 	A-28
Fountain Villa Apartments—multi-family residential property on the east side of Coburg Road 550 feet north of Cal Young Road (1555 Coburg Road, Eugene, OR 97401).	Proposed construction of an EmX station with bicycle storage at this location would result in removal of approximately 10 off-street parking spaces.	 Shift this station, its southbound counterpart, and the associated pedestrian crossing of Coburg Road to the north, and shorten overall platform length. Coordinate with the owner of this property during final design to reconfigure their parking lot layout and 	 Parking loss induced by proposed construction would be avoided or minimized by reducing the overall platform length and shifting the platform farther to the north on the same property. Reducing the overall length of the platform would reduce the quality of the station environment and room for bicycle storage. 	A-29

Location of Mitigation Option	Technical Report and Review Findings	Proposed Mitigation	Summary of Changes	Reference Figure(s)
		circulation to minimize impacts.	 Shifting the station to the north may result in additional impacts to landscaping at the Fountain Villa Apartments. 	
Papa's Pizza—business on the east side of Coburg Road, 400 feet south of the intersection of Willakenzie Road and Coburg Road (1577 Coburg Road, Eugene, OR 97401).	Proposed construction of an extended right-turn lane for the northbound to eastbound turning movement at the intersection of Willakenzie Road and Coburg Road would result in removal of approximately 12 offstreet parking spaces in this location.	Reduce the overall length of the proposed right-turn lane.	 Parking loss induced by proposed construction would be avoided or minimized by reducing the overall length of the right-turn lane proposed in the area. Reducing the length of the proposed right-turn lane at this intersection would reduce or eliminate travel time improvements and general traffic operational efficiency through the intersection at Willakenzie Road because right-turning vehicles would potentially block the through lane in which the bus would travel. 	A-30
Martin Luther King, Jr. Boulevar	d Corridor Enhanced Corrido	r Alternative		
No localized mitigation options are identified for this corridor alternative.	N/A	N/A	N/A	N/A

3. CONCLUSIONS

As demonstrated in this memo, there are additional mitigation options available to reduce impacts on potentially affected property and business owners. These mitigation options will be reviewed during the Locally Preferred Alternative (LPA) selection process. If an LPA is advanced in conjunction with one or more of the mitigation options outlined in this addendum memo, then additional analysis of potential impacts and benefits caused by the mitigation option(s) would need to occur during the next phase of the MovingAhead Project. For example, eliminating proposed construction of a new travel lane could avoid previously identified noise impacts or eliminating a proposed turn lane could increase congestion and transit travel times.

4. REFERENCES

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