

APPENDIX C: FATAL FLAW TECHNICAL MEMORANDUM





Moving Ahead

STREETS AND PLACES REIMAGINED

Fatal Flaw Screening Technical Memorandum

Lane Transit District
City of Eugene

In cooperation with
City of Springfield
Lane Council of Governments

June 2015

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Fatal Flaw Screening Technical Memorandum

MovingAhead Project

June 2015

Prepared for
Federal Transit Administration
Lane Transit District
City of Eugene

Prepared by
Sasha Luftig, Lane Transit District
Chris Henry, City of Eugene

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Introduction

This technical memorandum describes the Fatal Flaw Screening conducted by the Lane Transit District (LTD) and the City of Eugene for the MovingAhead project. The MovingAhead project will determine which of the high capacity transit corridors identified in the adopted EmX System Plan and the Frequent Transit Network (FTN) are ready to advance to capital improvements programming in the near term. The study is being conducted jointly with local agencies to facilitate a more streamlined and cost-efficient process through concurrent planning, environmental review, and design and construction of multiple corridors.

Overview

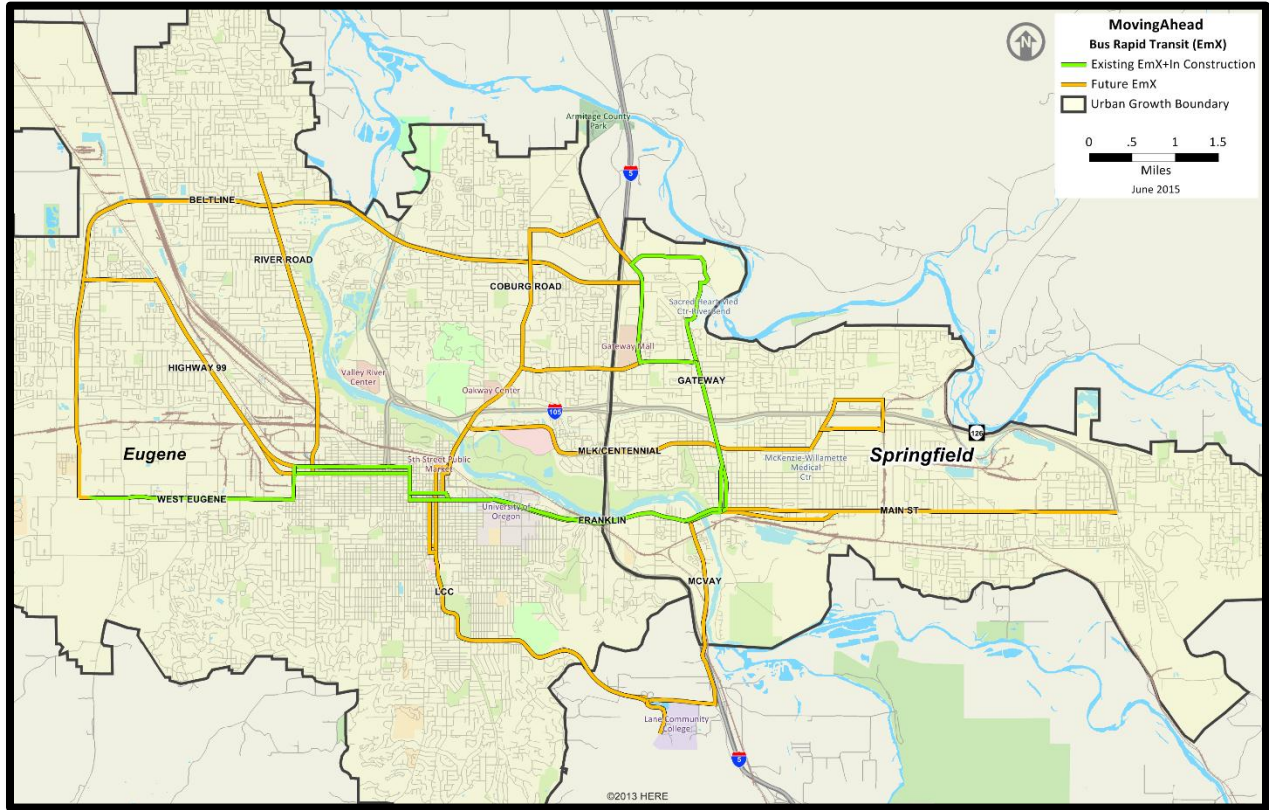
The prioritization of capital investments in multi-modal transit corridors is a powerful tool for implementing local and regional comprehensive land use and transportation plans, agency strategic plans, and other community planning documents. Capital investments in multi-modal transit corridors can have a substantial impact on patterns of growth and development. By coordinating the timing and prioritizing the funding for strategic multi-modal capital investments, the multi-modal transit corridor capital improvements program helps ensure that development occurs consistent with the region's plans and vision.

In February 2015, LTD and the City of Eugene began the first step in determining which multi-modal transit corridors should be advanced to near-term capital improvements programming. They conducted a screening level evaluation of the 10 future corridors identified in the region's adopted EmX System Plan (Figure 1) and the Frequent Transit Network (FTN) (Figure 2). The goal of the Fatal Flaw Screening was to identify which of the 10 future corridors *should not* move forward to the next level of evaluation by determining which corridors will not be ready for any level of capital investment in bus rapid transit or multimodal infrastructure in the next 10 years.

This quick and high level screening was based on the project's preliminary Purpose and Need and Goals and Objectives (PNGO) and data that already existed. The initial set of 10 corridors are listed below and are shown in Figure 3.

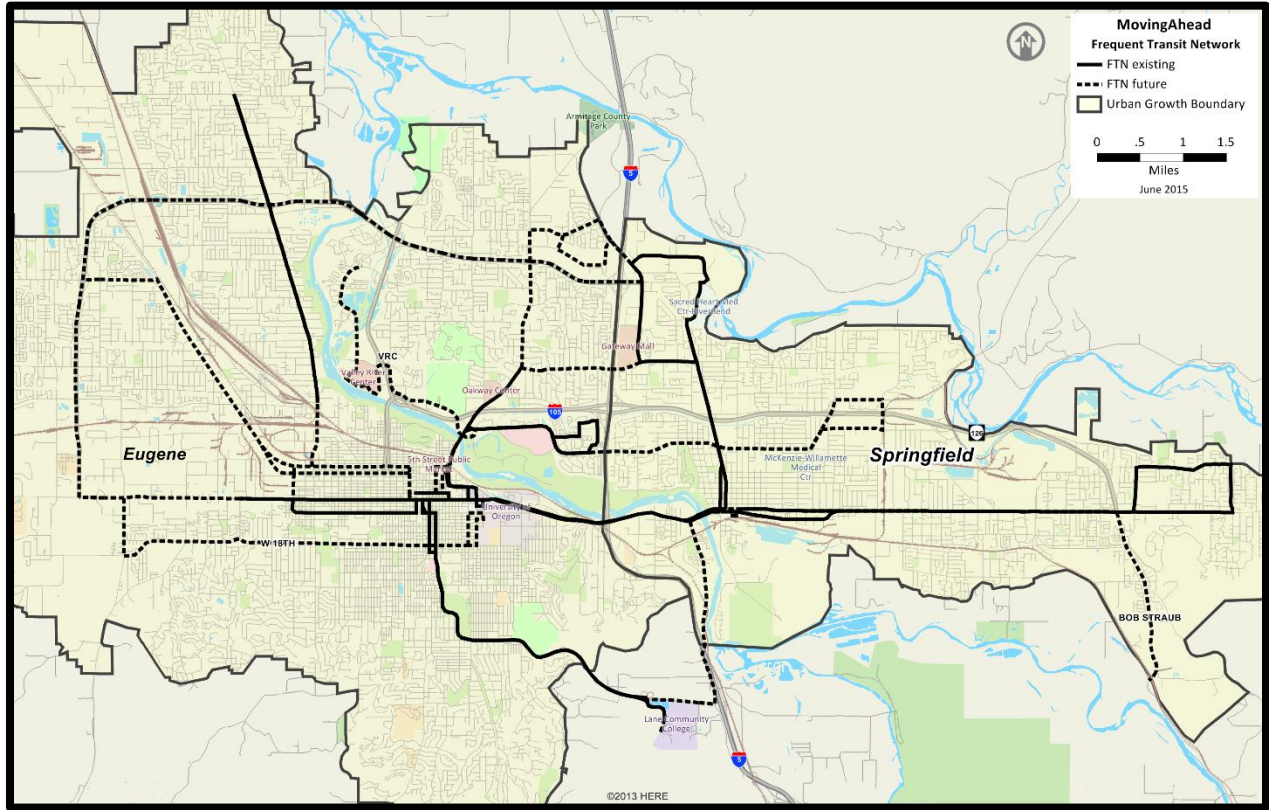
- Highway 99
- River Road
- Randy Papé Beltline
- 18th Avenue
- Coburg Road
- Martin Luther King Jr. Boulevard/Centennial Boulevard
- 30th Avenue/Lane Community College
- Main Street - McVay Highway
- Valley River Center
- Bob Straub Parkway

Figure 1. EmX System Plan



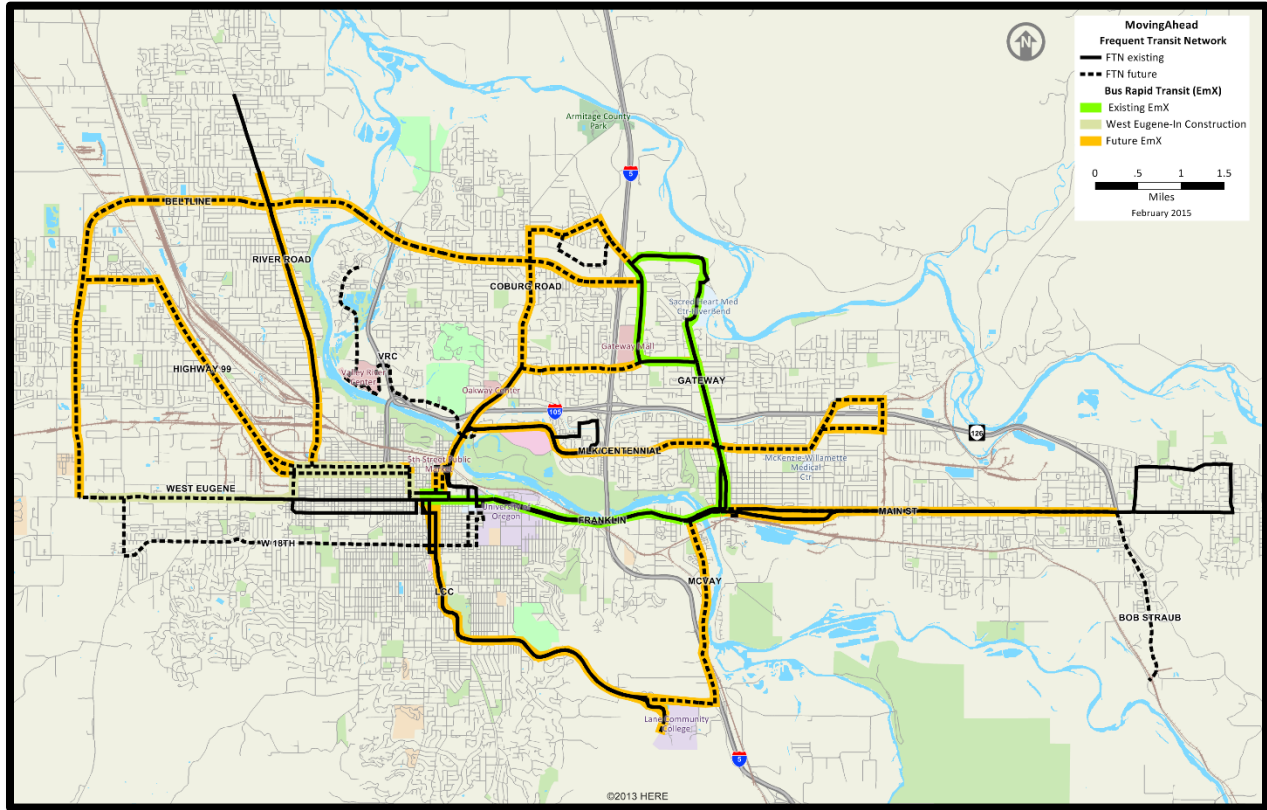
Source: Lane Transit District. 2015.

Figure 2. Frequent Transit Network



Source: Lane Transit District. 2015.

Figure 3. 10 Corridors Considered in Fatal Flaw Screening



Source: Lane Transit District. 2015.

Findings

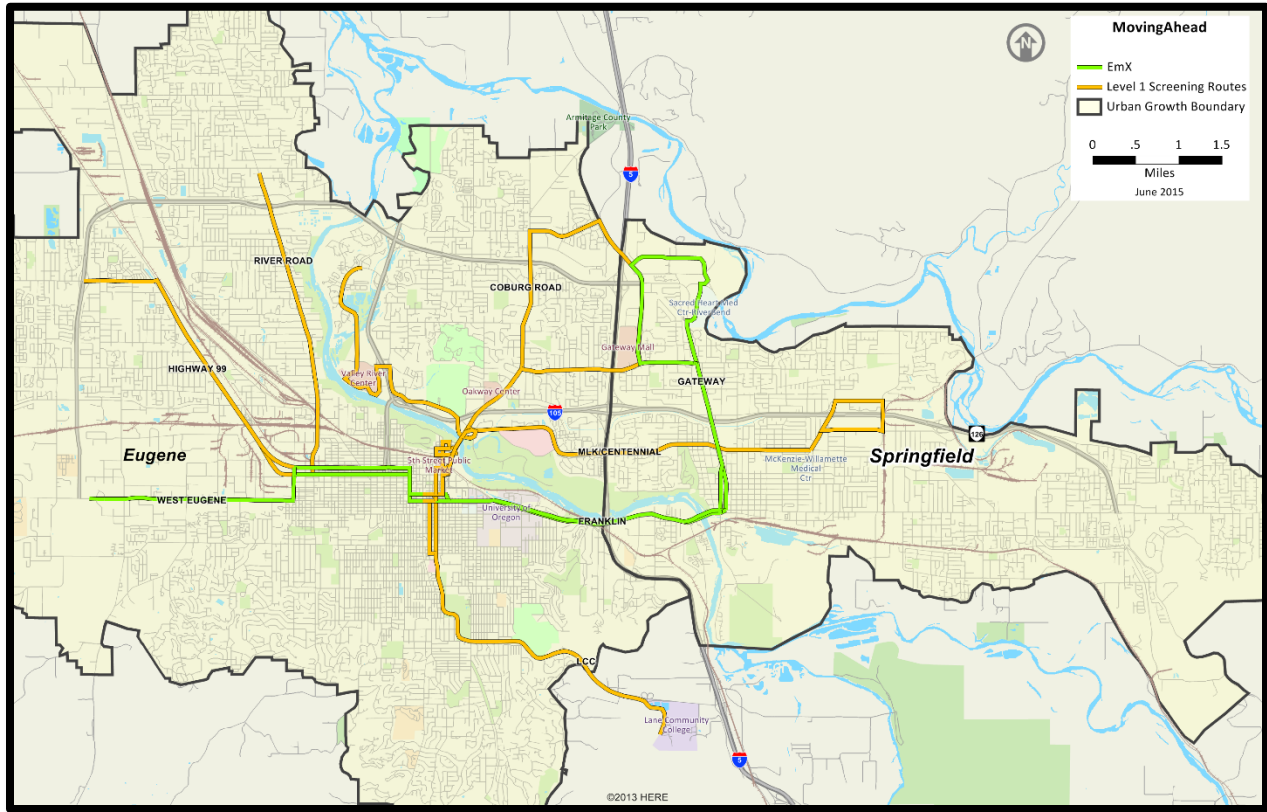
At the conclusion of the Fatal Flaw Screening, the team of agency participants identified three (3) corridors that should not be advanced to the Level 1 Screening Evaluation and seven (7) corridors that were ready to advance to the Level 1 Screening, listed below in Table 1 and shown in Figure 4.

Table 1. Summary of Fatal Flaw Screening Findings

Corridor	Fatal Flaw Screening Determination
Highway 99 Corridor	Advance to Level 1 Screening
River Road Corridor	Advance to Level 1 Screening
Randy Papé Beltline Corridor	Not advanced to Level 1 Screening – will be considered for frequent service as an east-west system connector

18 th Avenue Corridor	Not ready for capital investment in bus rapid transit or multimodal infrastructure in the next 10 years
Coburg Road Corridor	Advance to Level 1 Screening
Martin Luther King, Jr. Boulevard / Centennial Boulevard Corridor	Advance to Level 1 Screening
30 th Avenue – Lane Community College Corridor	Advance to Level 1 Screening
Main Street – McVay Highway Corridor	<p>Advance the Main Street segment of this corridor to Level 1 Screening.</p> <p>The McVay Highway segment of this corridor is not ready for capital investment in bus rapid transit or multimodal infrastructure in the next 10 years.</p> <p><i>Note: Although originally advanced to the Level 1 Screening in this study, this corridor was removed from consideration after the Fatal Flaw Screening was conducted because it was advanced by Springfield City Council (on May 18, 2015) and the LTD Board (on May 20, 2015) into a study to select a locally preferred transit solution. This corridor is on a schedule that is ahead of the MovingAhead project schedule.</i></p>
Valley River Center Corridor	Advance to Level 1 Screening
Bob Straub Parkway	Not ready for capital investment in bus rapid transit or multimodal infrastructure in the next 10 years

Figure 4. Corridors Advanced for Further Consideration



Source: Lane Transit District. 2015.

The corridors advanced to the Level 1 Screening will have cross section concepts developed and will be studied in more detail to determine which corridors are most ready to advance to capital improvements programming. For those corridors advanced into the Level 2 Alternatives Analysis, concepts will be refined, alternatives and design options will be developed, and the corridors will be studied in much more detail to determine which concepts best meet the community's vision and are ready to advance into project development.

Screening Process

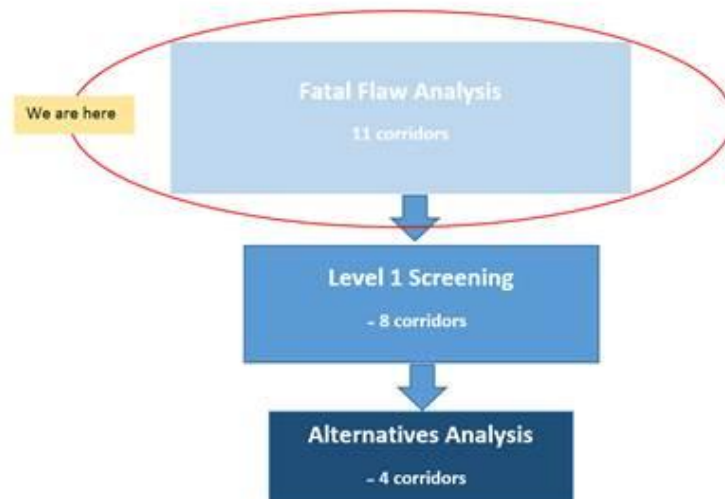
During two workshops, the screening was conducted by staff from Lane County, the cities of Eugene, Springfield, and Coburg, ODOT, the Central Lane MPO, and LTD (Table 2). The group reached their final recommendation at a meeting on February 19, 2015. Figure 5 shows how the Fatal Flaw Screening relates to the steps in the MovingAhead evaluation process.

Table 2. Agency Staff Conducting Fatal Flaw Screening

City of Coburg Petra Schuetz	Lane Council of Governments Susan Payne Mary McGowan, Paul Thompson
City of Eugene Will Dowdy, Planning Terri Harding, Planning Chris Henry, Public Works Rob Inerfeld, Public Works	Lane County Lydia McKinney
City of Springfield Tom Boyatt	Lane Transit District Dan Tutt Tom Schwetz Sasha Luftig
Oregon Department of Transportation Frannie Brindle Dave Reesor	

Source: Lane Transit District. 2015.

Figure 5. MovingAhead Evaluation Steps



Source: Lane Transit District. 2015.

Evaluation Criteria

Evaluation criteria were developed from the project's preliminary PNGO (Appendix). Evaluation criteria were used during the screening process to aid in determining how well each of the corridor alternatives would meet the project's PNGO. The evaluation on criteria used in the Fatal Flaw Screening required a mix of quantitative data and qualitative assessment. The resulting data was used to compare and contrast the corridors and measure the readiness of each corridor for advancing to capital investment.

The Fatal Flaw Screening used the following seven criteria:

- Employment within 1/2 mile of the corridor
- Population within 1/2 mile of the corridor
- Average weekday transit boardings on corridor routes
- Communities of concern
- Consistency with the BRT System Plan and the FTN concept
- Consistency with the Regional Transportation Plan (RTP)
- Consistency with local comprehensive land use plans

The agency team reviewed the data and rated each corridor as high, moderate, or low in terms of how effectively it could meet each criterion. The corridors were then ranked based on their overall effectiveness in meeting the criteria. The highest ranked corridors were advanced to the Level 1 Screening.

Each of the criteria is described in more detail below.

Employment within 1/2 Mile of Corridor

Employment data was derived from the 2012 employment point shape file from Lane Council of Governments. This annual file is created using Oregon's Quarterly Census of Employment and Wages data for 2012. "Number of Employees" data is from the Average Annual Employment field in the shape file. Employers inside the 1/2 mile buffer corridor were identified and the total number of employees was tabulated. "Average # of Employees per Mile" was calculated by dividing total employees by corridor length. The rankings for high, moderate, and low were determined by averaging the number of employees along all corridors, rounding, and selecting that rounded average as the middle point for the moderate rating.

Criteria Evaluation	Average # of Employees per Mile
High	>4000
Moderate	2000-4000
Low	<2000

Population within 1/2 Mile of Corridor

Population was determined using the 2010 US Census block point shape file. Block points inside the 1/2-mile corridor buffer were identified and population was totaled. "Average population per mile" was

calculated by dividing the total corridor population within 1/2 mile by corridor length. The rankings for high, moderate, and low were the same as the ratings for employment due to the similarity in range between the two data sets.

Criteria Evaluation	Average Population per Mile
High	>4000
Moderate	2000-4000
Low	<2000

Average Weekday Transit Boardings on Corridor Routes

Passenger boarding data was collected by Lane Transit District’s Automatic Passenger Counting (APC) system. Individual stops are GPS based and passengers are counted as they pass an infrared beam located at the bus doors. Bus stop data is from October 2014 weekdays (10/06-10/10, 10/13-10/17, 10/20-10/24, and 10/27-10/31). Bus stops on routes within the 1/2 mile corridor were selected and average weekday boardings were totaled. “Average Weekday Boardings per Mile” were calculated by dividing corridor length by average weekday boardings within the 1/2 mile corridor. The rankings for high, moderate, and low were determined by taking the average of the highest and lowest boardings, rounding, and selecting that number as the middle point for the moderate rating.

Criteria Evaluation	Average Weekday Boardings per Mile
High	>2000
Moderate	1000-2000
Low	<1000

Communities of Concern

The Lane Council of Governments (LCOG) has tabulated data and prepared a 2008-2012 Communities of Concern in Central Lane Metropolitan Planning Organization (MPO) map, which displays, by census block group, concentrated areas of minority, elderly and disabled populations and low income households. The data source is the 2008-2012 American Community Survey and Lane Council of Governments (LCOG).

For the Central Lane MPO area, concentrations are defined as areas above the regional averages in which: minorities are greater than 17.5 percent of total population, and elderly persons are greater than 13.1 percent of total population.

The Lane Council of Governments (LCOG) has tabulated data and prepared a 2008-2012 Households with No Cars in Central Lane Metropolitan Planning Organization (MPO) map, which displays, by census block group, the percentage of households with no vehicles. The data source is the 2008-2012 American Community Survey and Lane Council of Governments.

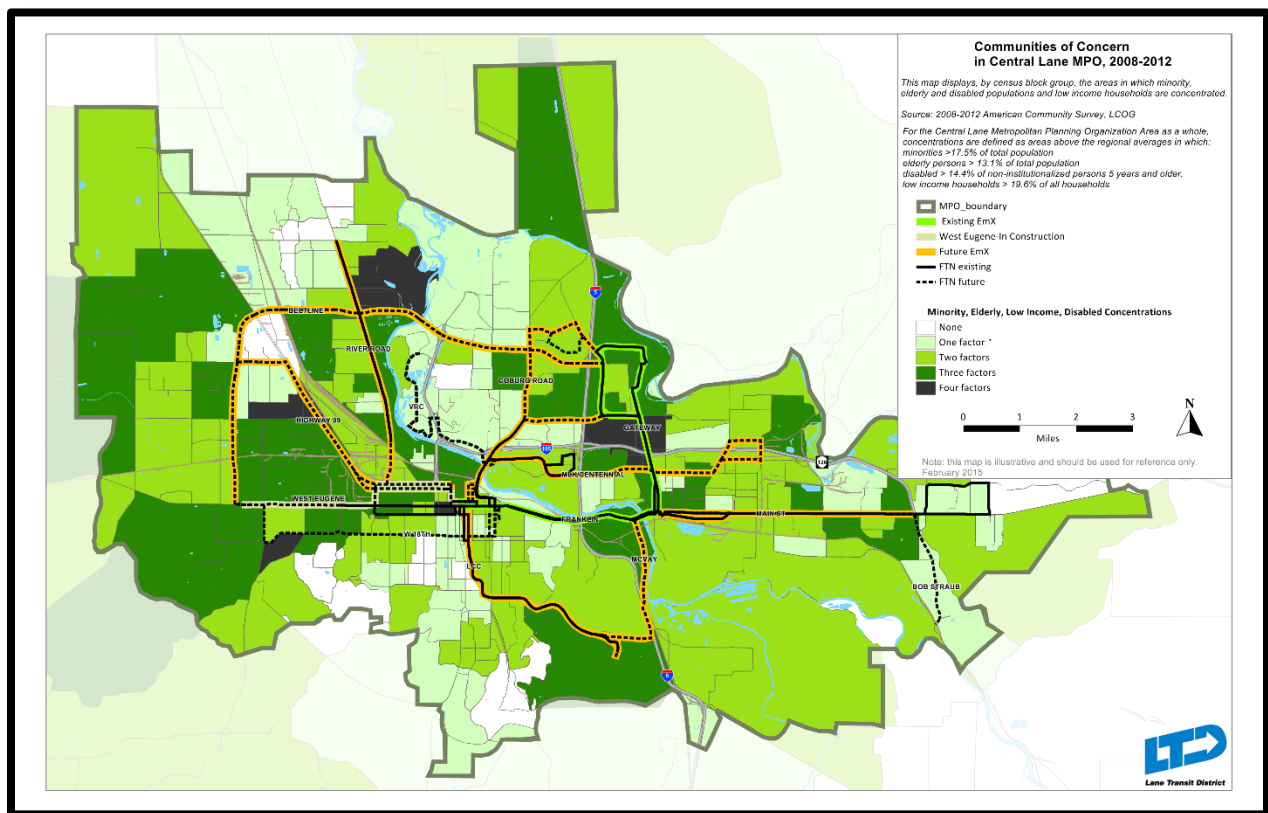
For the Central MPO area as a whole, this percentage was 9.9 percent for the surveyed period. There are an estimated 10,270 households with no vehicles.

In Figure 6, each color represents approximately 12,260 of the MPO households. The number in each block group area shows the approximate number of no vehicle households in each area. No Car concentrations of 15.3 percent or greater is a factor in Communities of Concern.

All corridors were overlaid on the Communities of Concern map to determine which corridors could serve communities of concern. Evaluation criteria are shown in the table below. The ratings for high, moderate, and low were based on visual analysis of the maps for Communities of Concern (Figure 5) and Households with No Car (Figure 6).

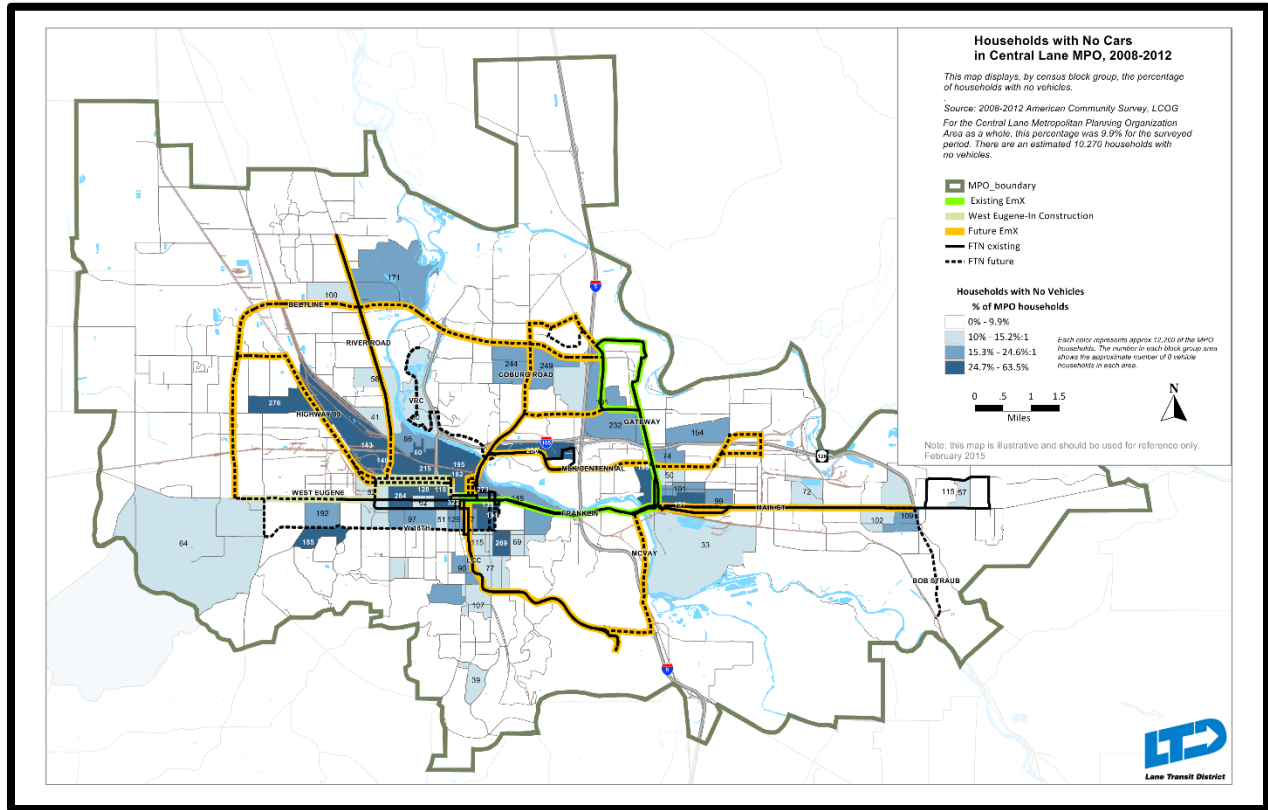
Criteria Evaluation	Minority, Elderly, Low Income, Disabled, No Car Concentrations
High	3 or more factors for 50% or more of corridor
Moderate	2 factors for 50% or more of corridor
Low	1 or fewer factors for 50% or more of corridor

Figure 5. 2008-2012 Communities of Concern



Source: Lane Transit District, Lane Council of Governments. 2015.

Figure 6. 2008-2012 Households with No Cars



Source: Lane Transit District, Lane Council of Governments. 2015.

Consistency with BRT System Plan and FTN Concept

Lane Transit District’s (March 2014) Long-Range Transit Plan (LRTP) was examined to determine which corridors are consistent with the Bus Rapid Transit (BRT) System Plan and the Frequent Transit Network (FTN) concept. If the corridor was highlighted as a current or future FTN it received a high ranking for consistency. If the corridor was not highlighted as a current or future FTN it received a low ranking.

Consistency with Regional Transportation Plan (RTP)

The Regional Transportation Plan 2007-2031 (adopted November 2007) for the Central Lane Metropolitan Planning Organization was examined to determine which BRT transit corridors are identified in the RTP. If the corridor was highlighted in the RTP, it received a high ranking for consistency. If the corridor was not highlighted in the RTP it received a low ranking.

Consistency with Local Comprehensive Land Use Plans

The growth plans for the City of Eugene (Envision Eugene) and the City of Springfield (Springfield 2030 Preliminary Draft (2010)) were reviewed. Additionally, staff from both agencies familiar with the growth plans, were consulted during the Fatal Flaw Screening workshop. If an area adjacent to the corridor was identified as a development/redevelopment opportunity area for employment and/or residential, it received a high ranking. If it was not identified as a development/redevelopment

opportunity area for employment and/or residential, it received a low ranking. In some cases a corridor received a moderate ranking where a portion of the corridor was identified as a development/redevelopment opportunity area, but the majority of the corridor was not adjacent to the opportunity area.

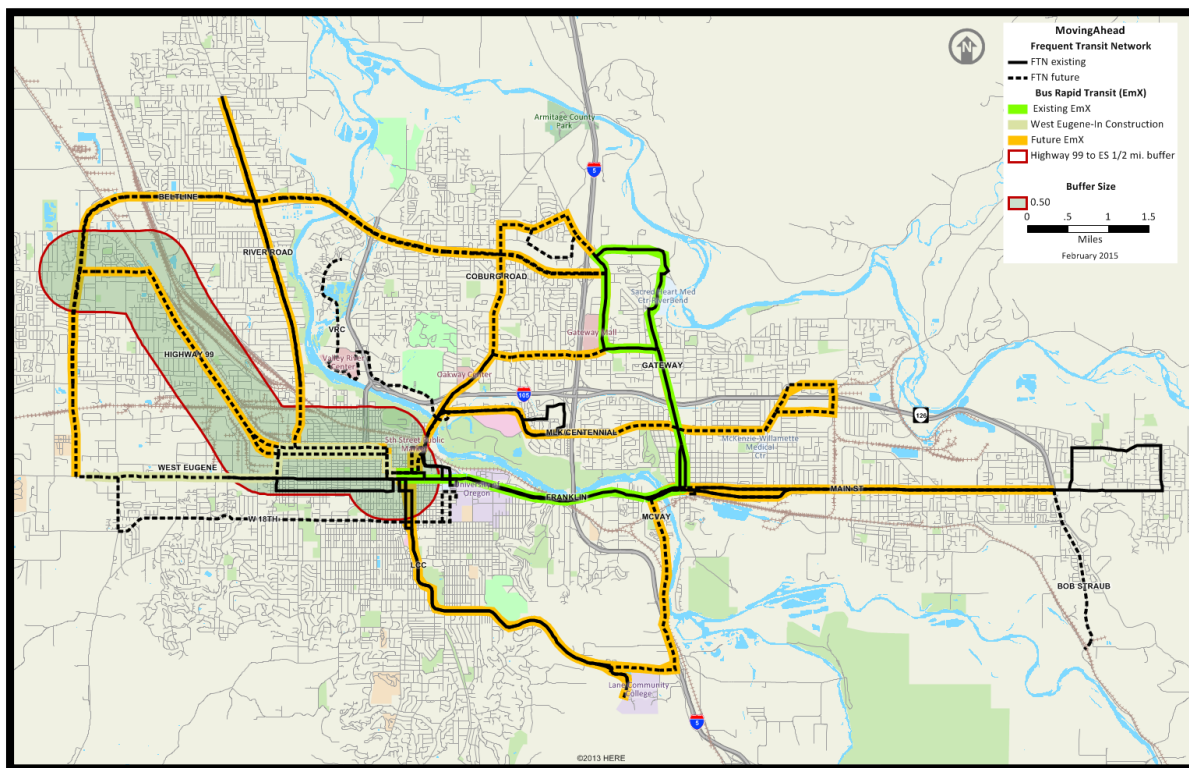
Corridors Evaluated

This section includes a brief description of the 11 corridors evaluated in the Fatal Flaw Screening.

Highway 99 Corridor

This corridor begins at the Eugene Station, uses West 6th Avenue (outbound) and West 7th Avenue (inbound) to Garfield Street, then Highway 99 to Barger Drive, and Barger Drive to a terminus in the area of the Randy Papé Beltline (Figure 7). This corridor is approximately 5.45 miles one way and is currently served by Routes #40, #41, #43, and #95. The average number of boardings per weekday is 15,012 boardings

Figure 7. Highway 99 Corridor



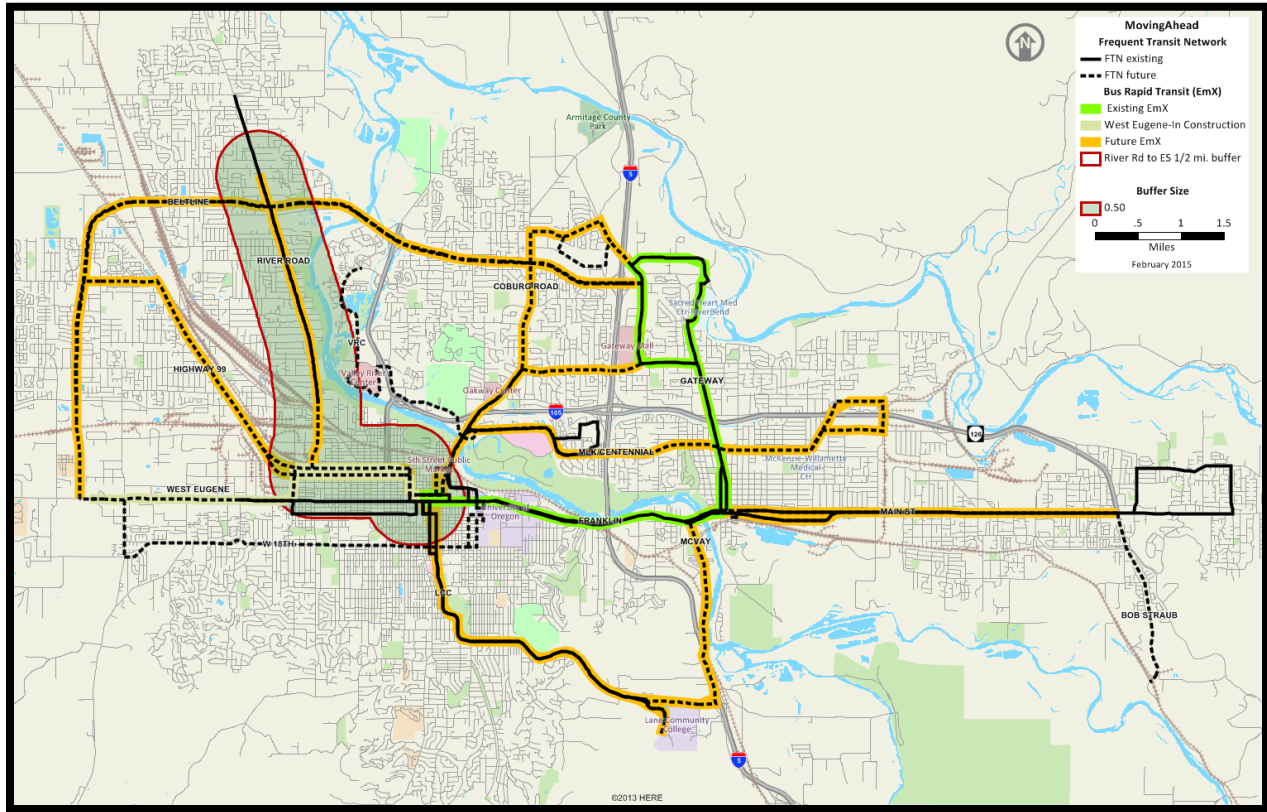
Source: Lane Transit District. 2015.

Within 1/2 mile of Highway 99, there are approximately 2,269 employers with 26,278 employees and 13,429 housing units with a population of 27,312 people. The area along the corridor is characterized primarily by industrial and commercial development with some residential uses.

River Road Corridor

This corridor begins at the Eugene Station, uses West 6th Avenue (outbound) and West 7th Avenue (inbound) to Chambers Street, then River Road to approximately Irving Road (Figure 8). This corridor is approximately 5.16 miles one way and is currently served by Routes #51, #52, and #55. The average number of boardings per weekday is 14,874 boardings.

Figure 8. River Road Corridor



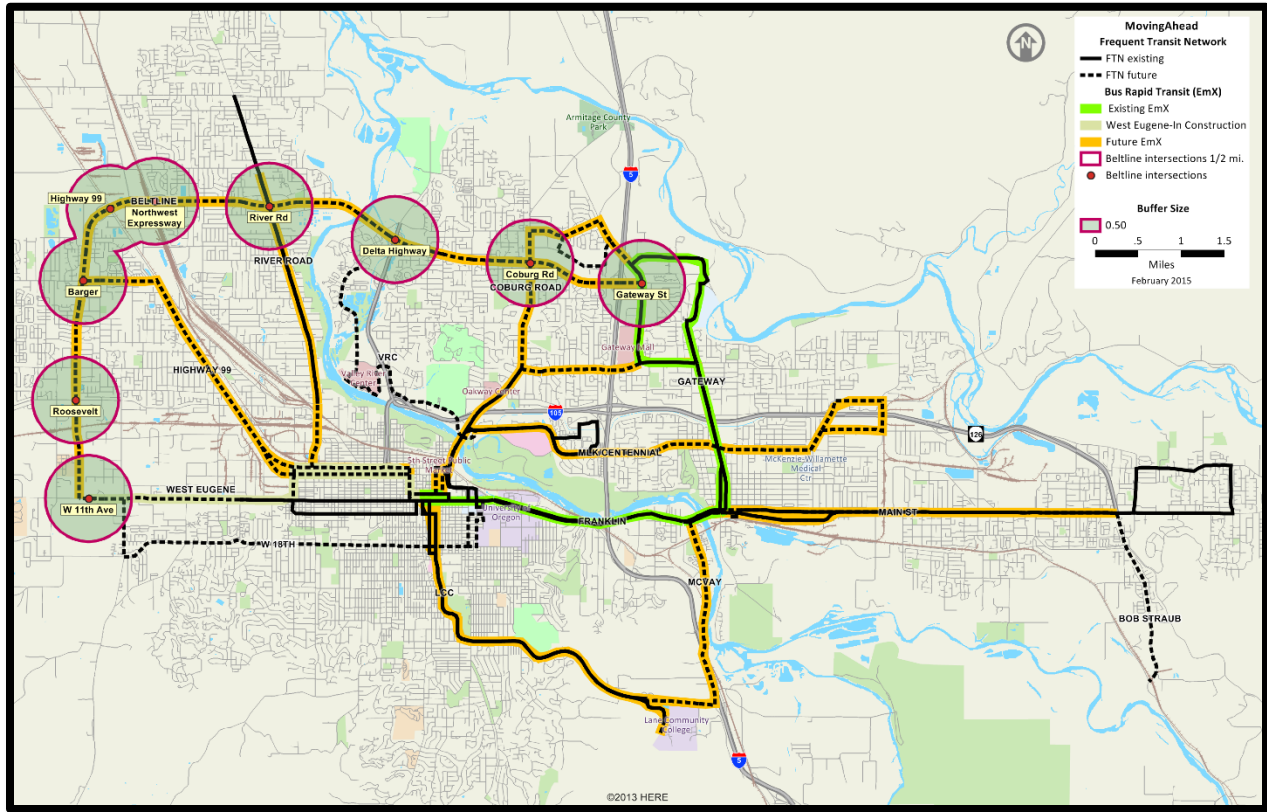
Source: Lane Transit District. 2015.

Within 1/2 mile of River Road, there are approximately 2,230 employers with 25,047 employees and 13,465 housing units with a population of 26,840 people. The area along the corridor is characterized primarily by industrial and commercial development and residential uses.

Randy Papé Beltline Corridor

This corridor follows Randy Papé Beltline beginning at West 11th Avenue in West Eugene (Figure 9). The route goes north, then east to Gateway Street in Springfield. Randy Papé Beltline is a limited access expressway. The corridor buffer was established by selecting the accessible intersections and creating a 1/2 mile buffer around them. The intersections include West 11th Avenue, Roosevelt Boulevard, Barger Drive, Highway 99, Northwest Expressway, River Road, Delta Highway, Coburg Road, and Gateway Street. The corridor is approximately 10.1 miles one way and is not currently served by LTD routes. The average boarding per day on routes within 1/2 mile of the selected intersections is 2,445 boardings.

Figure 9. Randy Papé Beltline Corridor



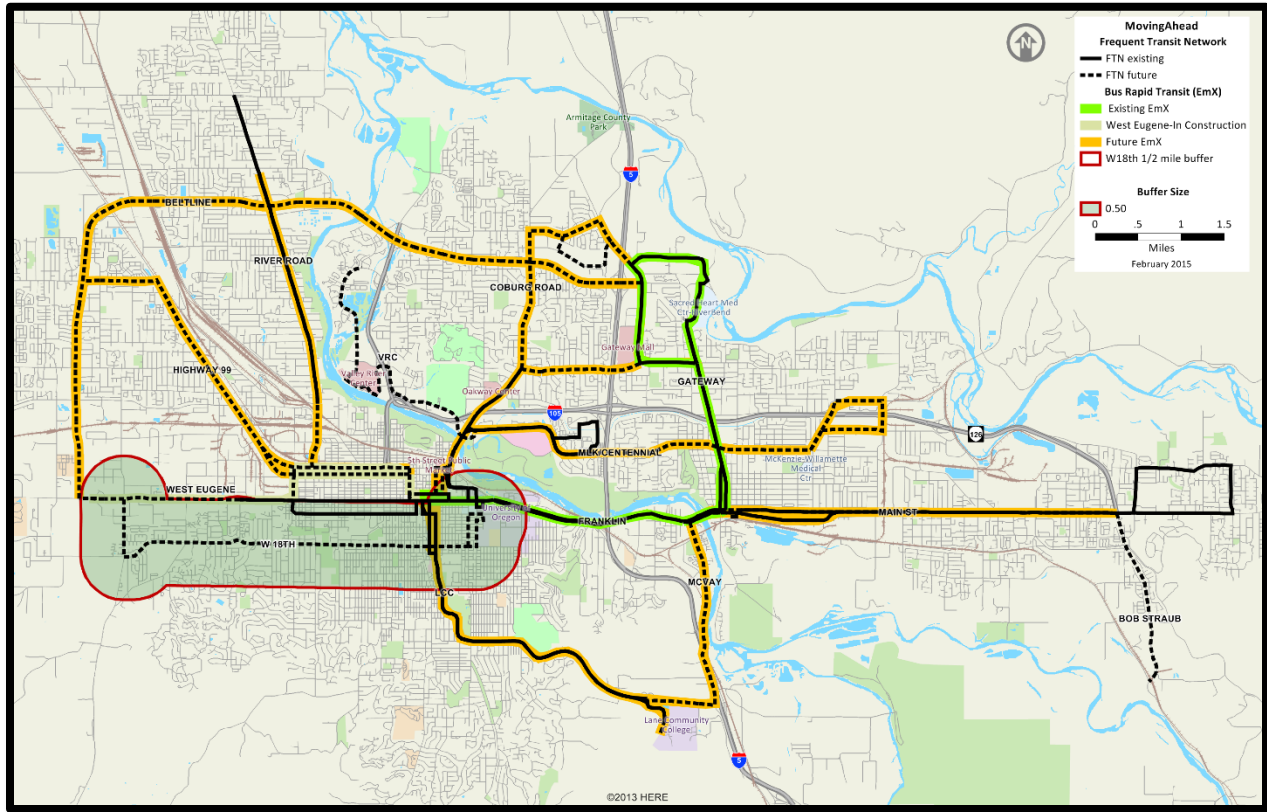
Source: Lane Transit District. 2015.

Within 1/2 mile of the Randy Papé intersections there are approximately 970 employers with 15,626 employees and 9,257 housing units with a population of 20,742 people. The area along the corridor is characterized primarily by residential and commercial development with some industrial use.

18th Avenue Corridor

This corridor begins at LTD’s University Station on the west side of the University of Oregon (Figure 10). The route uses Alder Street (outbound) and Hilyard Street (inbound) to East 18th Avenue, East 18th Avenue to Bertelsen Road, then Bertelsen Road to West 11th Avenue. The corridor is approximately 5.3 miles one way and is currently served by Routes #36 and #78. The average number of weekday boardings is 8,515 boardings.

Figure 10. 18th Avenue Corridor



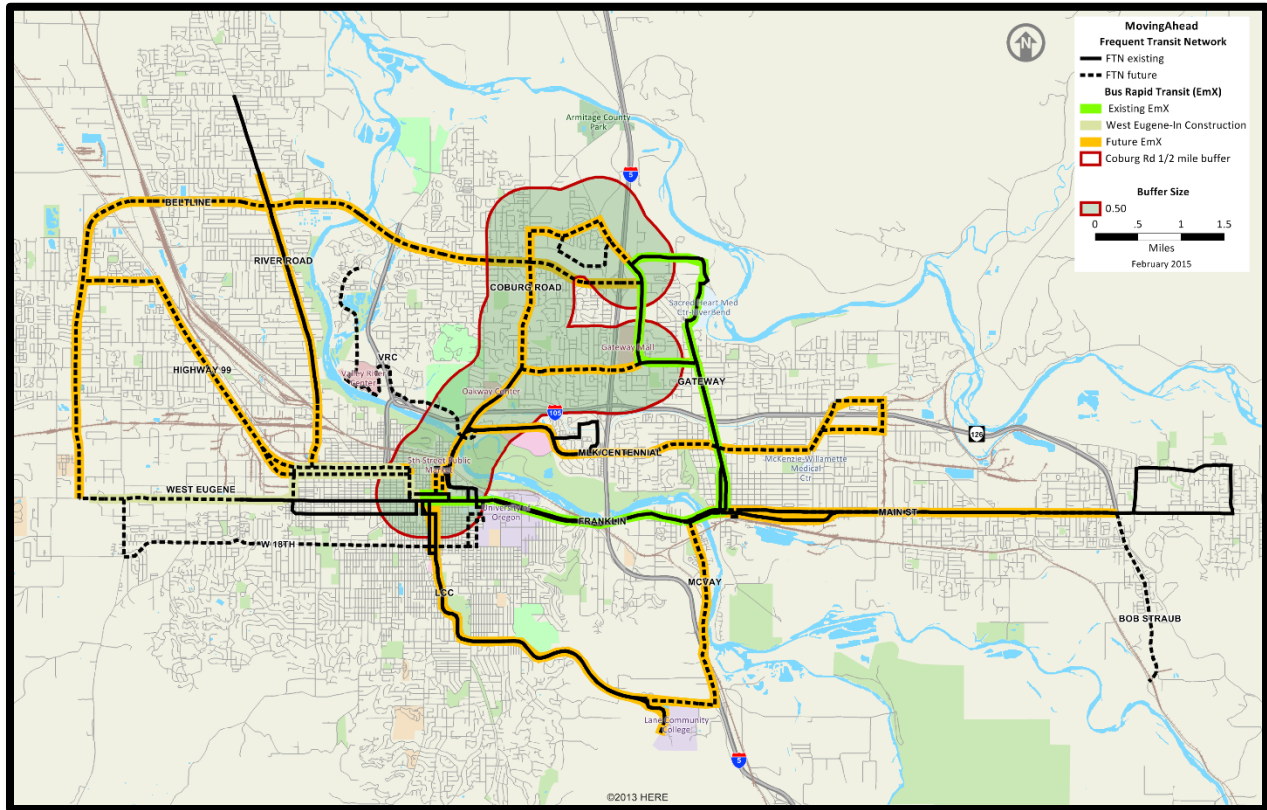
Source: Lane Transit District. 2015.

Within 1/2 mile of the 18th Avenue corridor there are approximately 1,458 employers with 19,685 employees and 15,172 housing units with a population of 32,590 people. The area along the corridor is characterized primarily by residential and commercial development.

Coburg Road Corridor

The corridor begins at the Eugene Station and uses the Ferry Street Bridge to Coburg Road (Figure 11). The corridor splits at the intersection of Coburg Road and Harlow Road. One segment follows Harlow Road east to Gateway Street, the other segment continues north on Coburg Road to Crescent Avenue, then east on Crescent Avenue to North Game Farm Road, then south on North Game Farm Road to Gateway Street. The corridor is approximately 6.6 miles one way, 5.21 miles for Coburg road and 1.40 mile for Harlow Road. The corridor is served by the #66 and #67. Route #12 runs on Coburg Road to Harlow Road and #96 partially serves the corridor. The average number of weekday boardings is 16,842 boardings.

Figure 11. Coburg Road Corridor



Source: Lane Transit District. 2015.

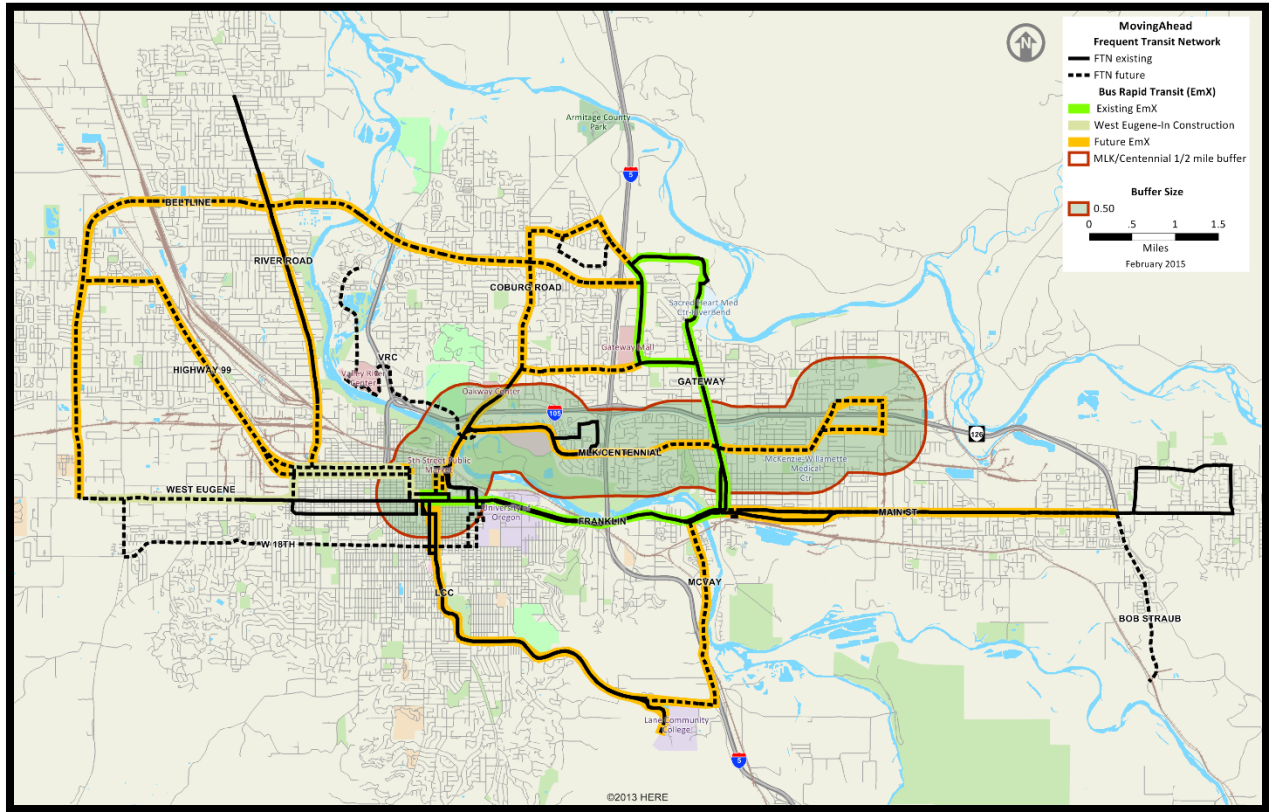
Within 1/2 mile of the Coburg Road corridor there are approximately 2,360 employers with 34,088 employees and 13,977 housing units with a population of 29,040 people. The area along the corridor is characterized primarily by residential and commercial development.

Martin Luther King, Jr. Boulevard/Centennial Boulevard Corridor

The corridor begins at the Eugene Station and uses the Ferry Street Bridge to reach Martin Luther King, Jr. Boulevard (Figure 12). It continues east on Martin Luther King, Jr. Boulevard to Interstate 5, where the street name changes to Centennial Boulevard. It continues east on Centennial Boulevard to Mohawk Boulevard. From Mohawk Boulevard, the corridor follows a one-way loop on Marcola Road, 28th Street and Olympic Street, returning to Mohawk Boulevard.

The corridor is approximately 7.6 miles one way and is served by route #13. Other routes operate within the corridor. West of Interstate 5 within Eugene, the #79x is a direct route from student housing to the University of Oregon. East of Interstate 5 within Springfield, EmX, #17 and #18 serve parts of the corridor. The average number of weekday boardings is 18,049 boardings.

Figure 12. Martin Luther King, Jr. Boulevard/Centennial Boulevard Corridor



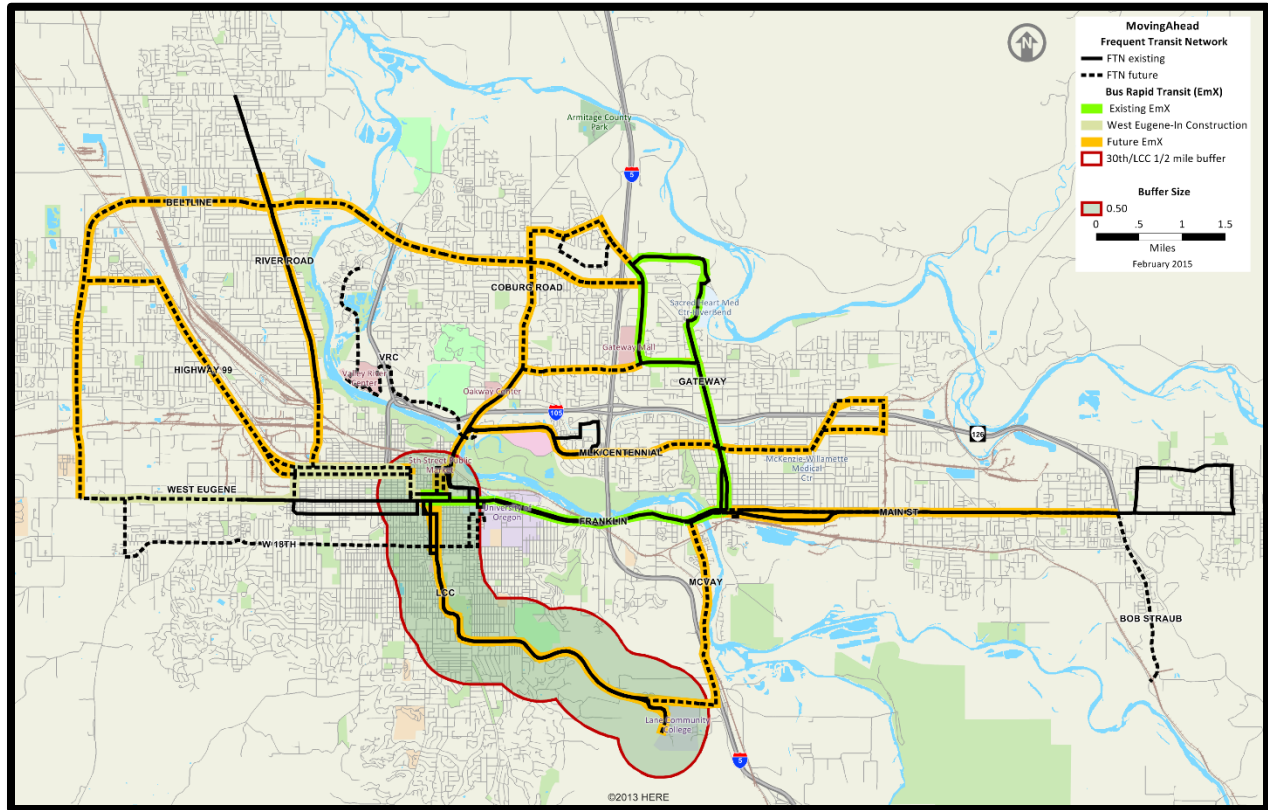
Source: Lane Transit District. 2015.

Within 1/2 mile of the corridor there are 2,217 employers with 29,999 employees and 15,713 housing units with a population of 33,632 people. The area along the corridor is characterized primarily by residential and commercial development.

30th Avenue – Lane Community College Corridor

The corridor begins at the Eugene Station and travels south to East 30th Avenue, then on East 30th Avenue to Lane Community College (Figure 13). The corridor is approximately 5.0 miles one way and is served by routes #81, #82, and #92. Other routes operating within the corridor include #24, #28, and #73. The average number of weekday boardings is 16,797 boardings.

Figure 13. 30th Avenue/Lane Community College Corridor



Source: Lane Transit District. 2015.

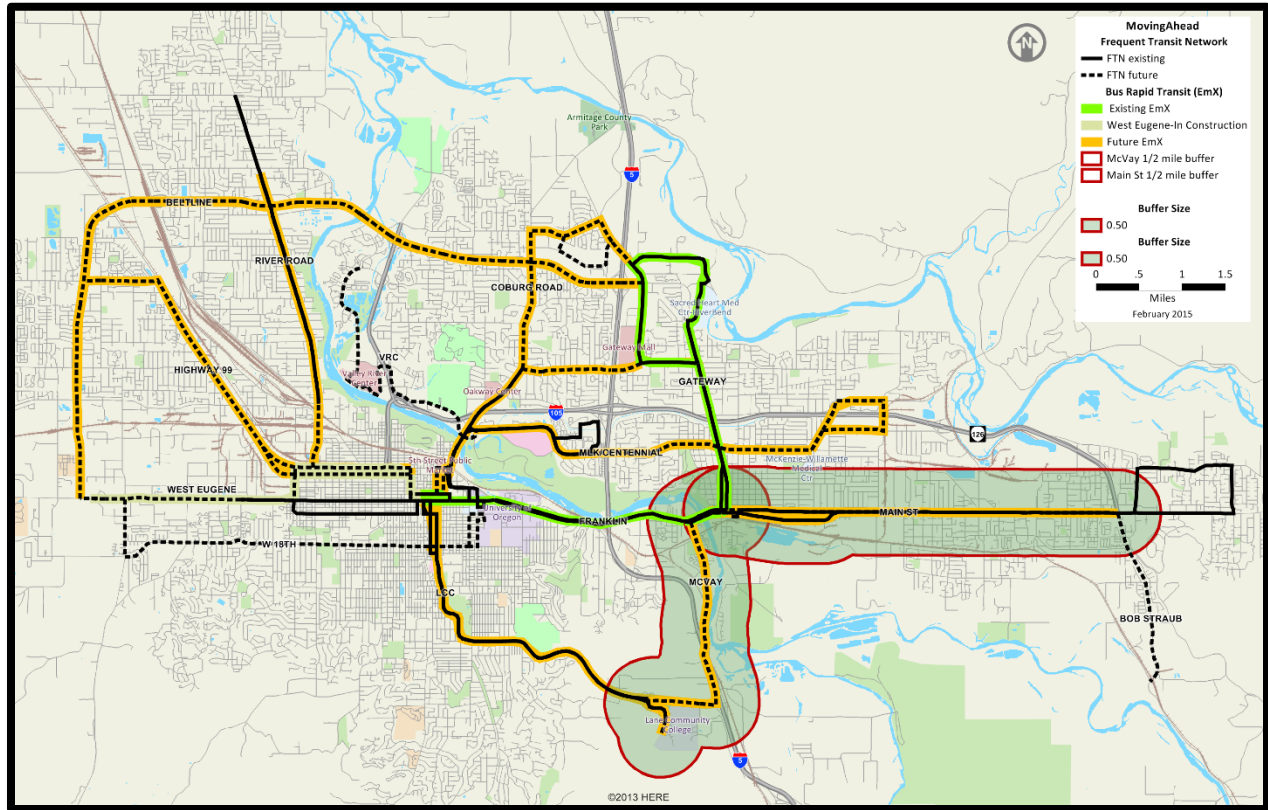
Within 1/2 mile of the corridor there are 1,707 employers with 23,611 employees and 11,241 housing units with 22,458 people. The area along the corridor is characterized primarily by residential and commercial development. Part of the corridor is adjacent to parkland.

Main Street –McVay Highway Corridor

The corridor starts at the Springfield Station and would provide east-west service along Main Street and north-south service along McVay Highway (Figure 14). The Main Street segment of this corridor runs east from Springfield Station and terminates at Bob Straub Parkway (Thurston Station). The Main Street segment is approximately 4.59 miles one way and is served by route #11. The average number of weekday boardings is 6,247 boardings.

From Springfield Station, the McVay Highway segment of this corridor runs west and then south on Franklin Boulevard and McVay Highway to Lane Community College. The McVay Highway segment is approximately 3.97 mile one way and is served by route #85. The average number of weekday boardings is 6,268 boardings.

Figure 14. Main Street-McVay Highway Corridor



Source: Lane Transit District. 2015.

Within 1/2 mile of the Main Street corridor segment are 666 employers with 7,199 employees and 9,586 housing units with a population 22,708 people. Within 1/2 mile of McVay Highway corridor segment are 255 employers with 5,866 employees and 2,348 housing units with 4,641 people. The area along Main Street corridor segment is a mix of residential, commercial and industrial development. The area along the McVay Highway corridor segment is a mix of commercial, industrial, undeveloped land, and mobile home parks.

A transit study of Main Street/McVay has been completed as part of a larger Springfield study named "Our Main Street Springfield."

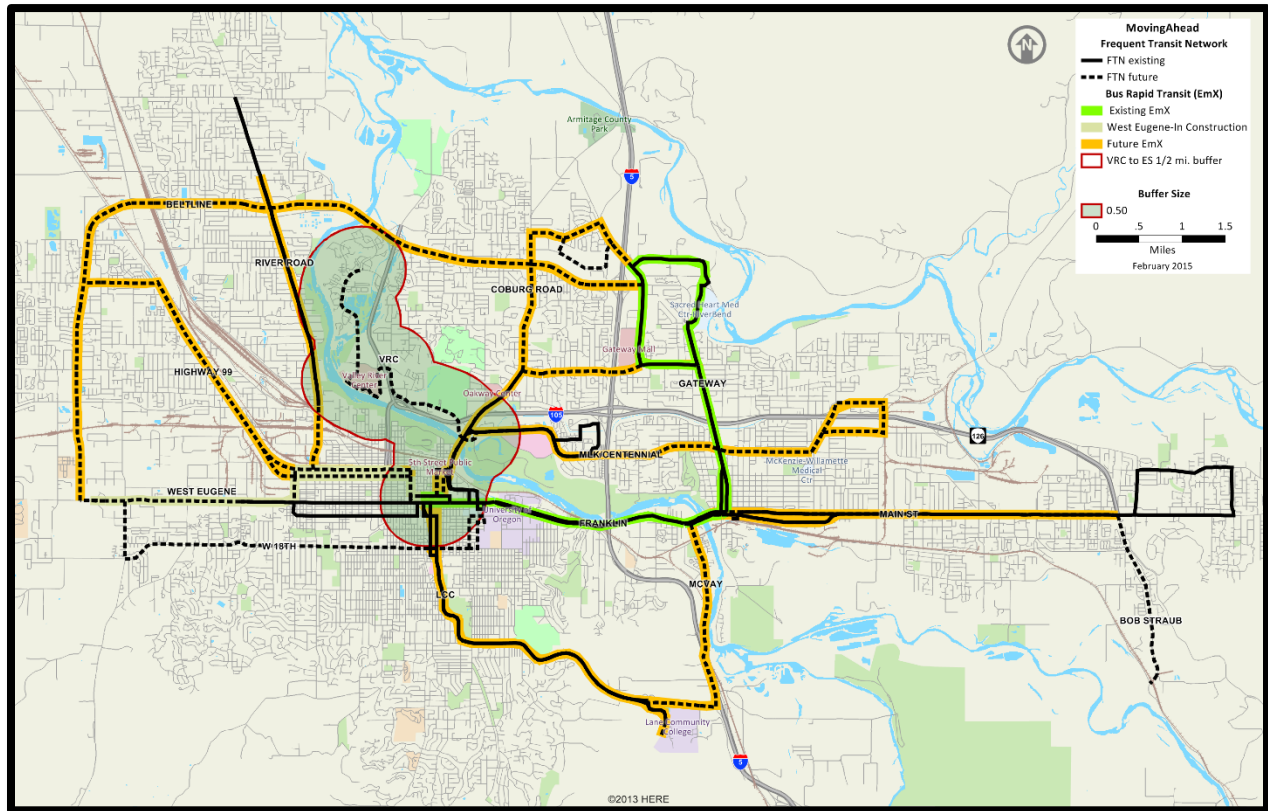
Our Main Street Springfield project overview is available online: <http://ourmainstreetspringfield.org/>

The Main-McVay transit study report is also available online: <http://ourmainstreetspringfield.org/main-mcvay-final-report/>

Valley River Center Corridor

The corridor begins at the Eugene Station and runs northeast over the Ferry Street Bridge to Martin Luther King, Jr. Boulevard, then northwest on Country Club Road, west on Valley River Drive, and north on Goodpasture Island Road to Goodpasture Loop (Figure 15). The corridor is approximately 5.44 miles one way and is served by routes #66 and #67. The average number of weekday boardings is 15,696 boardings.

Figure 15. Valley River Center Corridor



Source: Lane Transit District. 2015.

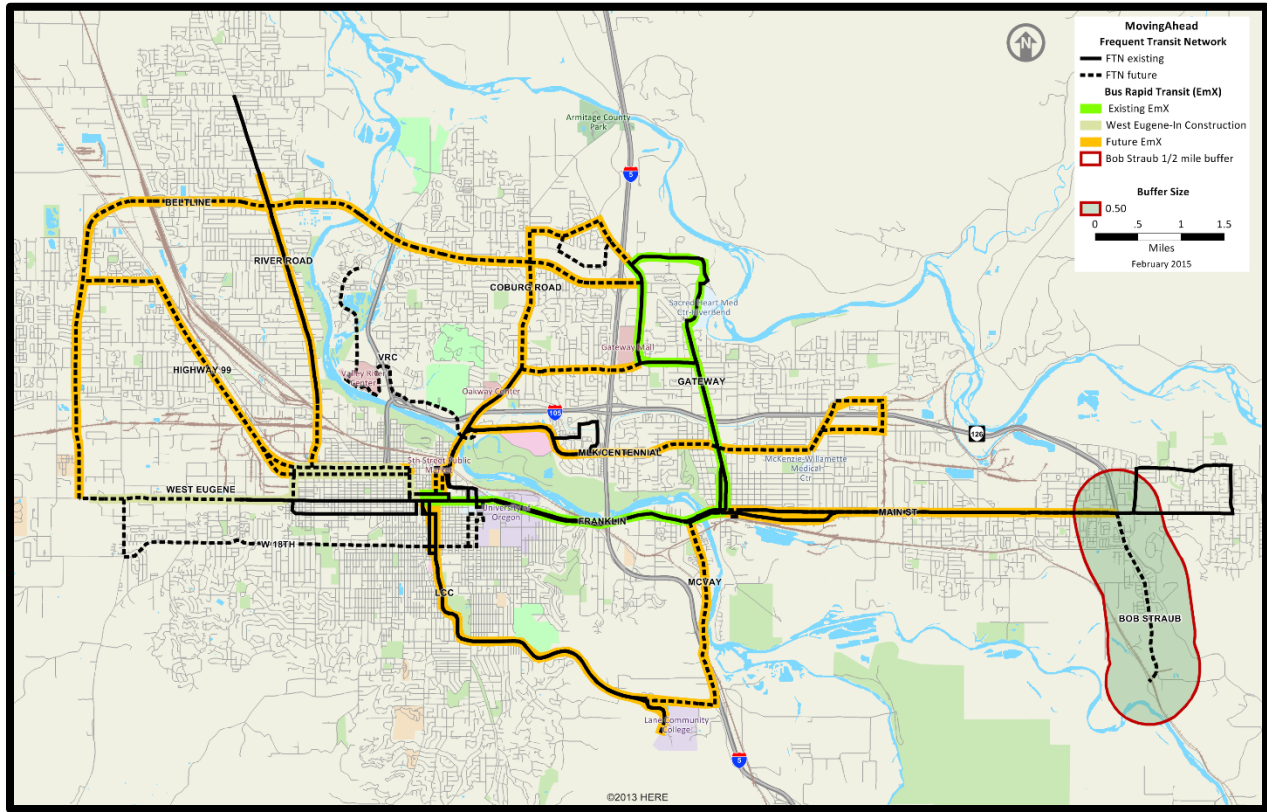
Within 1/2 mile of the Valley River Center corridor are 2,242 employers with 30,440 employees and 10,269 housing units with a population of 19,022 people.

The area along the corridor is characterized primarily by commercial and residential development.

Bob Straub Parkway Corridor

The corridor runs south from Main Street and Highway 126 to Jasper Road (Figure 16). The corridor is approximately 2.1 miles one way and is not currently served by LTD routes. The average number of weekday boardings is 563 boardings at bus stops at the north end of the corridor.

Figure 16. Bob Straub Parkway Corridor



Source: Lane Transit District. 2015.

Within 1/2 mile of the Bob Straub Parkway Corridor are 104 employers with 1,153 employees and 2,108 housing units with a population of 4,879 people. The corridor is characterized with commercial development on Main Street, residential development and vacant land to the south.

Fatal Flaw Screening Findings

Based on the Fatal Flaw Screening, regional staff agreed that three corridors were not ready to advance to capital improvements programming at this time, one corridor should be removed from consideration as an independent corridor, and seven corridors should advance to the next level of evaluation. The results of the Fatal Flaw Screening and the rationale for setting aside three corridors are described below.

Corridor Screening

Table 3 shows the ratings for all corridors.

Table 3. MovingAhead Fatal Flaw Screening Ratings Summary

BRT/FTN Corridor	Employment within 1/2 mile of corridor	Population within 1/2 mile of corridor	Average weekday boardings on corridor routes	Communities of Concern	Consistent with BRT System Plan and FTN concept	Consistent with regional TSP	Consistent with local comprehensive land use plans	Ranking (High/Moderate/Low)	Advance to Level 1 Screening (Yes/No)
Highway 99	High	High	Moderate	High	High	High	High	High	Yes
River Road	High	High	Moderate	High	High	High	High	High	Yes
Randy Papé Beltline Highway	Low	Moderate	Low	Moderate	High	High	Moderate	Moderate	Yes
18 th Street	Moderate	High	Moderate	Moderate	High	High	Low	Moderate	No
Coburg Road	High	High	High	Moderate	High	High	High	High	Yes
MLK/ Centennial Boulevard	Moderate	Moderate	High	Moderate	High	High	Moderate	Moderate	Yes
30th Avenue -- LCC	High	Moderate	High	Moderate	High	High	Moderate	Moderate	Yes
McVay Highway	Low	Low	Moderate	Moderate	High	High	Moderate	Moderate	No
Main Street	Low	Moderate	High	High	High	High	High	High	Yes
Valley River Center	Moderate	Low	Low	Low	Low	Low	High	Moderate	Yes
Bob Straub Parkway	Low	Low	Low	Low	High	High	Moderate	Low	No

Corridors Delayed for Near Term Investment

The agency team determined that three corridors were not ready for capital improvements programming in the near term. These corridors will be considered again at a future date. The key reasons for not advancing each of these corridors are described below.

18th Avenue Corridor

The 18th Avenue Corridor was not advanced to the Level 1 Screening for several reasons. The existing residential and commercial developments along the corridor leave few opportunities for new development or redevelopment. The exception to this is the west end of the corridor where the existing population density does not warrant frequent transit service. Additionally, the existing right of way is constrained primarily by residential properties, leaving little opportunity for capital transit investments without facing multiple impacts to residential properties. Lastly, due to the lack of development opportunities, it is not likely that this corridor will experience as much densification as other corridors in the region, allowing transit service to continue to operate in a cost-effective and sustainable manner without major capital transit investments over the next ten-year period.

McVay Highway Segment of the Main Street–McVay Highway Corridor

The McVay Highway segment of the Corridor was not advanced to the Level 1 Screening for two reasons. First, ridership demand to Lane Community College is seasonal, peak demand is limited to specific times of day, and there is almost no demand for weekend service. Second, low population and employment densities along the corridor, excluding Lane Community College, make bus rapid transit investments unlikely at this time. If there are significant changes in land use along the corridor that lead to increased employment or population levels, investigation into more significant transit investments would be warranted.

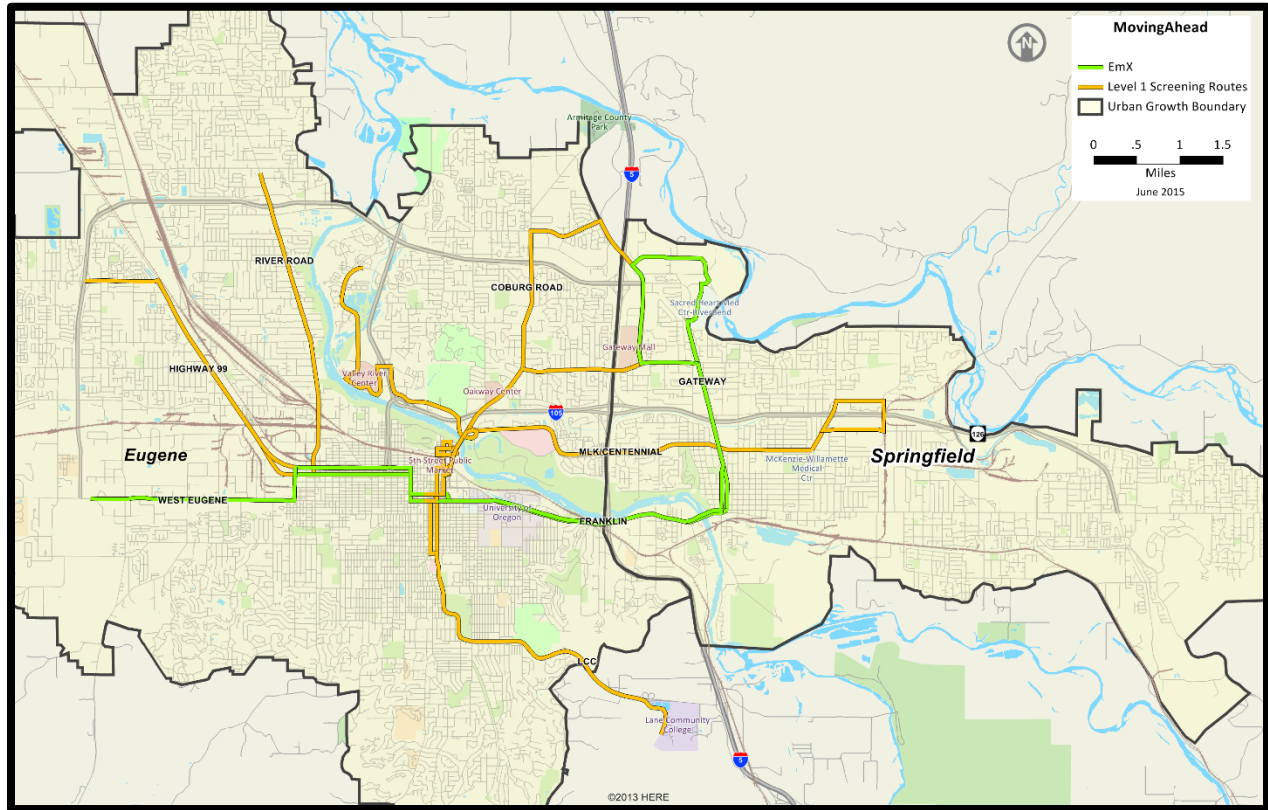
Bob Straub Parkway Corridor

The Bob Straub Parkway Corridor was not advanced to the Level 1 Screening because there is neither a population nor employment density that would support transit service along the corridor at this time or in the near term. Currently the corridor is not served by transit. Significant development would need to occur to warrant transit capital investments along the corridor.

Corridors Advanced for Further Consideration

The agency team determined that seven (7) corridors were potentially ready for near term capital improvements programming and should be advanced to the Level 1 Screening (Figure 17). The key reasons for advancing each of these corridors is described below.

Figure 17. Corridors Advanced for Further Consideration



Source: Lane Transit District. 2015.

Highway 99 Corridor

The Highway 99 Corridor was advanced to the Level 1 Screening for several reasons. In particular, the high concentration of minority, elderly, low income, disabled, or no car populations warrant further evaluation of the corridor. Additionally, the employment and population densities along the corridor are high. The Highway 99 Corridor is also identified as a key transit corridor in Envision Eugene, and is consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

River Road Corridor

The River Road Corridor was advanced to the Level 1 Screening for several reasons. The high concentration of minority, elderly, low income, disabled, or no car populations warrant further evaluation of the corridor. Additionally, the employment and population densities along the corridor are high. The River Road Corridor is also identified as a key transit corridor in Envision Eugene, and is consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

Coburg Road Corridor

The Coburg Road Corridor was advanced to the Level 1 Screening for several reasons. The employment and population densities along the corridor are high. Additionally, average weekday boardings on transit routes that travel the corridor are high. The Coburg Road Corridor is also identified as a key

transit corridor in Envision Eugene, and is consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

Martin Luther King, Jr. Boulevard/Centennial Boulevard Corridor

The Martin Luther King Jr. Boulevard/Centennial Boulevard corridor was advanced to the Level 1 Screening for several reasons. While the employment and population levels within a half mile of the corridor are moderate, the average weekday boardings on transit routes that serve the corridor are high. The Martin Luther King, Jr. Boulevard/Centennial Boulevard Corridor is also consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

30th Avenue – Lane Community College Corridor

The 30th Avenue – Lane Community College Corridor was advanced to the Level 1 Screening for several reasons. Employment within a half mile of the corridor is high and the population within a half mile of the corridor is moderate. The average weekday boardings on transit routes that travel the corridor are high. The 30th Avenue – Lane Community College Corridor is also consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

Main Street Segment of Main Street – McVay Highway Corridor

The Main Street segment of the Main Street – McVay Highway Corridor was advanced to the Level 1 Screening. The average weekday boardings on transit routes that travel the corridor are high. The Main Street segment is also consistent with the Bus Rapid Transit System Plan and the Regional Transportation Plan.

The corridor will continue to be studied through the Main-McVay Transit Study process, which is separate from the MovingAhead project. The other corridors advanced for further consideration will be studied in the MovingAhead project.

Valley River Center Corridor

The Valley River Center Corridor was advanced to the Level 1 Screening for several reasons. Employment within a half mile of the corridor is high. The average weekday boardings on transit routes that serve the corridor are high. Additionally, City of Eugene staff noted that there are significant multi-family developments being constructed adjacent to the corridor. While this corridor is not currently consistent with the FTN concept, the City of Eugene's draft Transportation System Plan (anticipated adopting of fall 2015) lists this corridor as a FTN corridor. It is anticipated, that the Valley River Center Corridor will also be added to the Regional Transportation Plan and LTD's Long-Range Transit Plan in order to maintain consistency within the multiple regional plans.

Corridors Advanced as Connector

The agency team determined that one corridor should not be advanced as an independent corridor but instead should be considered as an east-west connector for other routes. The reasoning is described below.

Randy Papé Beltline Corridor

The Randy Papé Beltline Corridor was not advanced to the Level 1 Screening as an independent BRT corridor but instead determined to better serve the transit system as an east-west connector. The reasoning behind this decision was primarily because BRT would not operate on the Beltline highway in the near term but it could provide significant regional connectivity to the transit network. As the

MovingAhead study advances, the Randy Papé Beltline facility will be considered as an east-west connector between any advanced BRT corridors.

Appendix A. Preliminary Purpose and Need and Goals and Objectives

The following preliminary Purpose and Need, Goals and Objectives (PNGO) were the basis for the Fatal Flaw Screening. Subsequent to the Fatal Flaw Screening but prior to the completion of this technical memo, the preliminary Purpose and Need, Goals and Objectives were modified by the MovingAhead Oversight Committee. Please see the study's website (www.movingahead.org) for the most current version of the PNGO.

Multi-Modal Transit Corridor System Programmatic Study Preliminary Purpose and Need, Goals and Objectives (November 2014)

The prioritization of capital investments in multi-modal transit corridors will be a powerful tool for implementing local and regional comprehensive land use and transportation plans, agency strategic plans, and other community planning documents. Capital investments in multi-modal transit corridors can have a substantial impact on patterns of growth and development. By coordinating the timing and prioritizing the funding for strategic multi-modal capital investments, the multi-modal transit corridor capital improvements program helps ensure that development occurs consistent with our region's plans and vision.

Purpose

The purpose of the Multi-Modal Transit Corridor System Programmatic Study is to:

- Develop a Capital Investment Program that forecasts and matches projected revenues and capital needs over a 10-year period.
 - Balance desired multi-modal transit corridor improvements with the community's financial resources.
 - Ensure the timely and coordinated construction of multi-modal transit corridor infrastructure.
 - Eliminate unanticipated, poorly planned, or unnecessary capital expenditures.
- Identify the most economical means of financing multi-modal transit corridor capital improvements.
- Establish partnerships between LTD and local agencies that prioritize multi-modal transit infrastructure needs and promote interagency cooperation.
- Ensure that multi-modal transit corridor investments are consistent with patterns of growth and development anticipated by local comprehensive land use and transportation plans.

Need

The need for the Multi-Modal Corridor System Programmatic Study is based on the following factors:

- LTD's and the region's commitment to implementing five BRT lines in the next 20 years consistent with the RTP that provide the best level of transit service in a cost effective and sustainable.
- Need for streamlined environmental reviews so that they leverage system-wide analysis.
- Need to build public support for implementation of the system-wide vision.
- Selection of the next EmX/FTN corridors is based on long-range operational and financial planning for LTD's service.

Goals and Objectives

Goal 1: Improve multi-modal transit corridor service

Objective 1.1: Improve transit travel time and reliability

- Objective 1.2: Provide convenient transit connections that minimize the need to transfer
- Objective 1.3: Increase transit ridership and mode share in the corridor
- Objective 1.4: Improve access for walking and bicycling, and to transit
- Objective 1.5: Improve the safety of pedestrians and bicyclists accessing transit, traveling in and along the corridor, and crossing the corridor

Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner

- Objective 2.1: Control the increase in transit operating cost to serve the corridor
- Objective 2.2: Increase transit capacity to meet current and projected ridership demand
- Objective 2.3: Implement corridor improvements that provide an acceptable return on investment
- Objective 2.4: Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment
- Objective 2.5: Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars

Goal 3: Support economic development, revitalization and land use redevelopment opportunities for the corridor

- Objective 3.1: Support development and redevelopment as planned in other adopted documents
- Objective 3.2: Coordinate transit improvements with other planned and programmed pedestrian and bicycle projects
- Objective 3.4: Coordinate transit improvements with other planned and programmed roadway projects
- Objective 3.5: Minimize adverse impacts to existing businesses and industry
- Objective 3.6: Supports community vision for high capacity transit in corridor

Evaluation Criteria

Goals and Objectives		Evaluation Criteria
Goal 1: Improve multi-modal transit corridor service		
Objective 1.1:	Improve transit travel time and reliability	<ul style="list-style-type: none"> • Round trip pm peak transit travel time between select origins and destinations • On-time performance (no more than 4 minutes late) of transit service
Objective 1.2:	Provide convenient transit connections that minimizes the need to transfer	<ul style="list-style-type: none"> • Number of transfers required between heavily used origin-destination pairs
Objective 1.3:	Increase transit ridership and mode share in the corridor	<ul style="list-style-type: none"> • Average weekday boardings on corridor routes • Transit mode share along the corridor

Goals and Objectives		Evaluation Criteria
		<ul style="list-style-type: none"> Population within ½ mile of transit stop Employment within ½ mile of transit stop
Objective 1.4:	Improve access for walking and bicycling, and to transit	<ul style="list-style-type: none"> Connectivity to existing pedestrian facilities Connectivity to existing bicycle facilities
Objective 1.5:	Improve the safety of pedestrians and bicyclists accessing transit and crossing, and traveling along the corridor	<ul style="list-style-type: none"> Opportunity to provide a safe and comfortable environment for pedestrians and bicyclists in the corridor
Goal 2: Meet current and future transit demand in a cost-effective and sustainable manner		
Objective 2.1:	Control the increase in transit operating cost to serve the corridor	<ul style="list-style-type: none"> Cost per trip Impact on LTD operating Cost to local taxpayers
Objective 2.2:	Increase transit capacity to meet current and projected ridership demand	<ul style="list-style-type: none"> Capacity of transit service relative to the current and projected ridership
Objective 2.3:	Implement corridor improvements that provide an acceptable return on investment	<ul style="list-style-type: none"> Benefit/cost assessment of planned improvements
Objective 2.4:	Implement corridor improvements that minimize impacts to the environment and, where possible, enhance the environment	<ul style="list-style-type: none"> Results of screening-level assessment of environmental impacts of transit solutions
Objective 2.4:	Leverage funding opportunities to extend the amount of infrastructure to be constructed for the least amount of dollars	<ul style="list-style-type: none"> Number and dollar amount of funding opportunities that could be leveraged Meet FTA's Small Starts funding requirements
Goal 3: Support economic development, revitalization and land use redevelopment opportunities for the corridor		
Objective 3.1:	Support development and redevelopment as planned in other adopted documents	<ul style="list-style-type: none"> Consistent with the BRT System Plan and Frequent Transit Network (FTN) concept Consistent with the regional Transportation System Plan Consistent with local comprehensive land use plans
Objective 3.2:	Coordinate transit improvements with other planned and programmed pedestrian and bicycle projects	<ul style="list-style-type: none"> Capability of transit improvement to coordinate with other planned and programmed pedestrian and bicycle projects identified in adopted plans and CIPs
Objective 3.3:	Coordinate transit improvements with other planned and programmed roadway projects	<ul style="list-style-type: none"> Capability of transit improvement to coordinate with other planned and programmed roadway projects identified in adopted plans and CIPs
Objective 3.4:	Minimize adverse impacts to existing businesses and industry	<ul style="list-style-type: none"> Impacts to businesses along the Corridor measured in number and total acres of

Goals and Objectives	Evaluation Criteria
Objective 3.6: Supports community vision for high capacity transit in corridor	<p>properties acquired, parking displacements, and access impacts.</p> <ul style="list-style-type: none"> • Impact on freight and delivery operations for Corridor businesses • Community vision includes high capacity transit in corridor