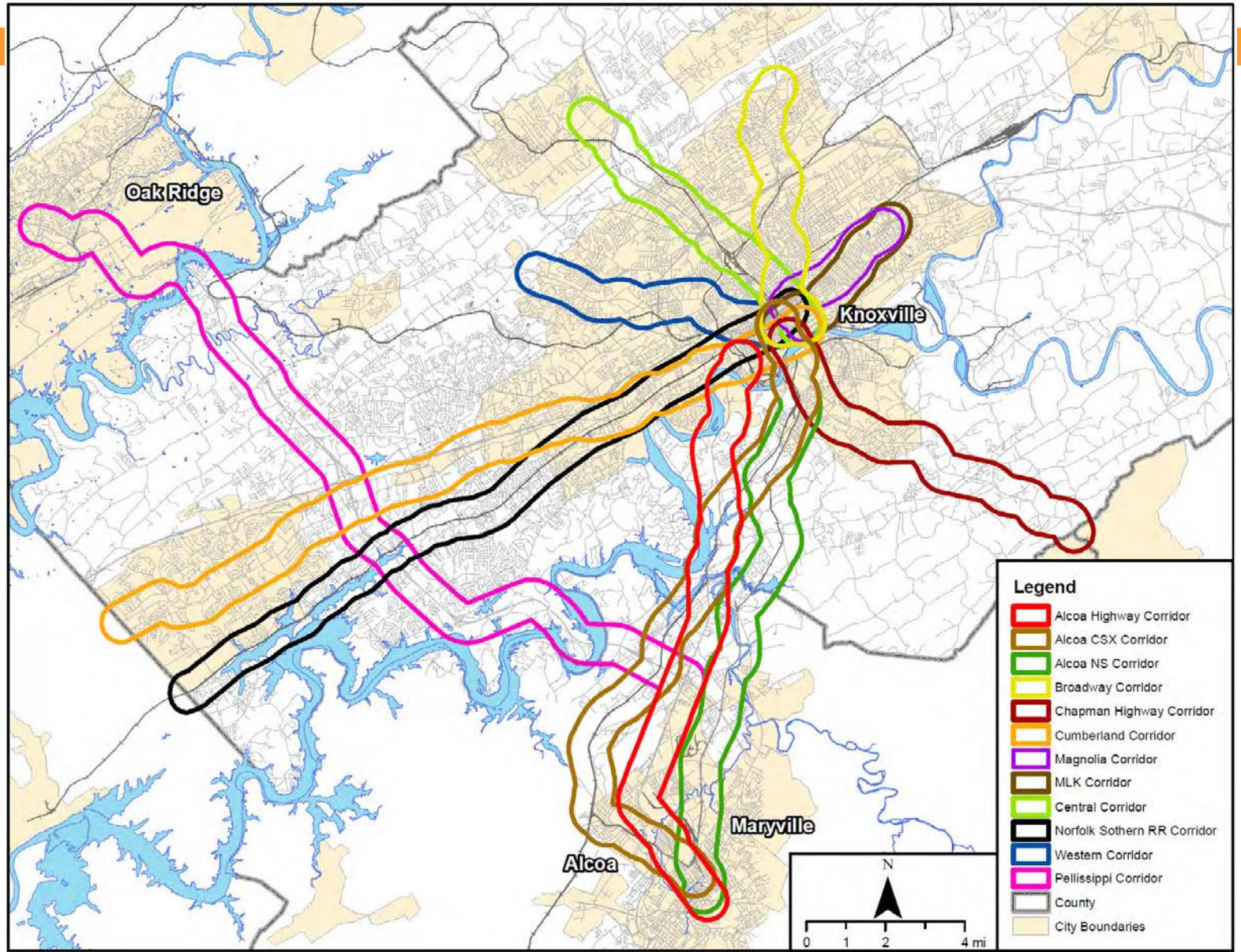
KNOXVILLE REGIONAL TRANSIT CORRIDOR STUDY

April 2013

Alignments


Oak Ridge
Knoxville
Maryville
Alcoa
N
0
1
2
4 mi
Legend
Alcoa Highway Corridor
Alcoa CSX Corridor
Alcoa NS Corridor
Broadway Corridor
Chapman Highway Corridor
Cumberland Corridor
Magnolia Corridor
MLK Corridor
Central Corridor
Norfolk Sothern RR Corridor
Western Corridor
Pellissippi Corridor
County
City Boundaries

Alignments

Magnolia Ave – Northeast corridor
Knoxville Transit Center – Hall of Fame Dr – Magnolia Ave – Prosser Rd.

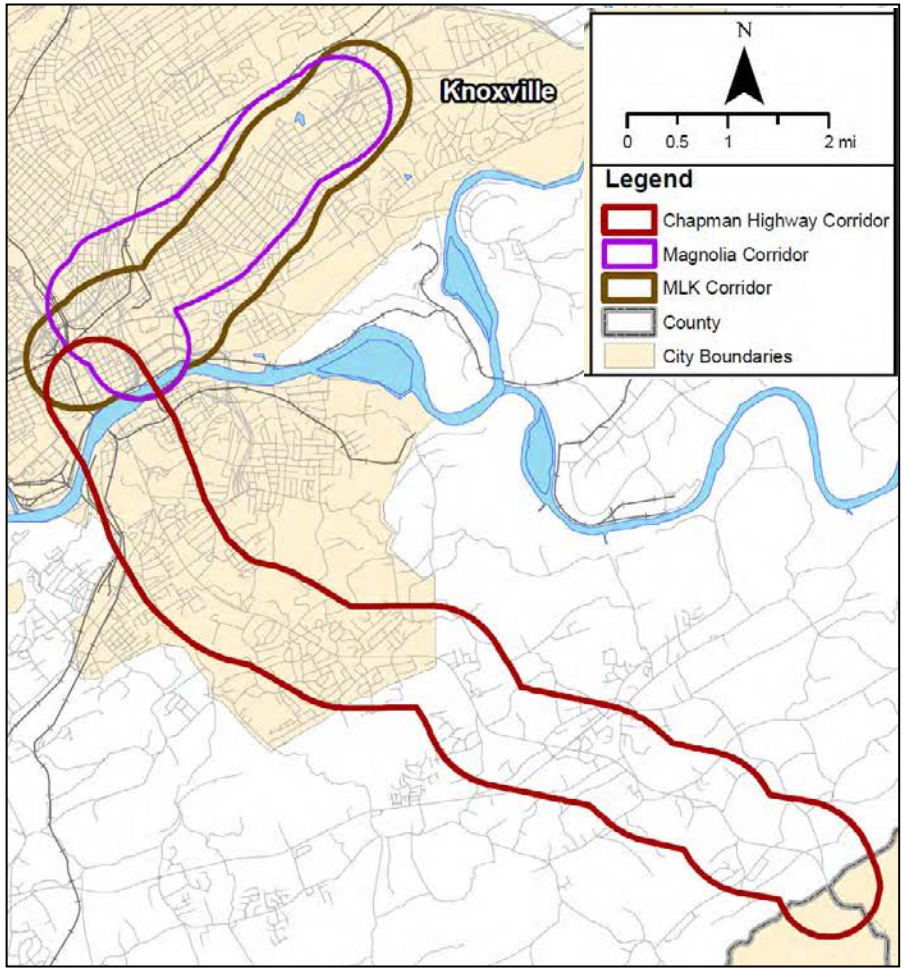
Corridor contains commercial, office and residential uses.

Martin Luther King Jr. Ave – Northeast corridor
Knoxville Transit Center – Hall of Fame Dr – Summit Hill Dr – Martin Luther King Jr. Ave – Asheville Hwy.

Corridor contains institutional, commercial, residential and some light commercial uses.

Chapman Hwy – South-east corridor
Knoxville Transit Center – Cumberland Ave – Chapman Hwy – Sevierville Pk.

Corridor contains commercial, residential, institutional, and agricultural uses.



Alignments

North Broadway – North-south corridor
Knoxville Transit Center – Summit Hill Dr – North Broadway – Black Oak Ridge Ln.

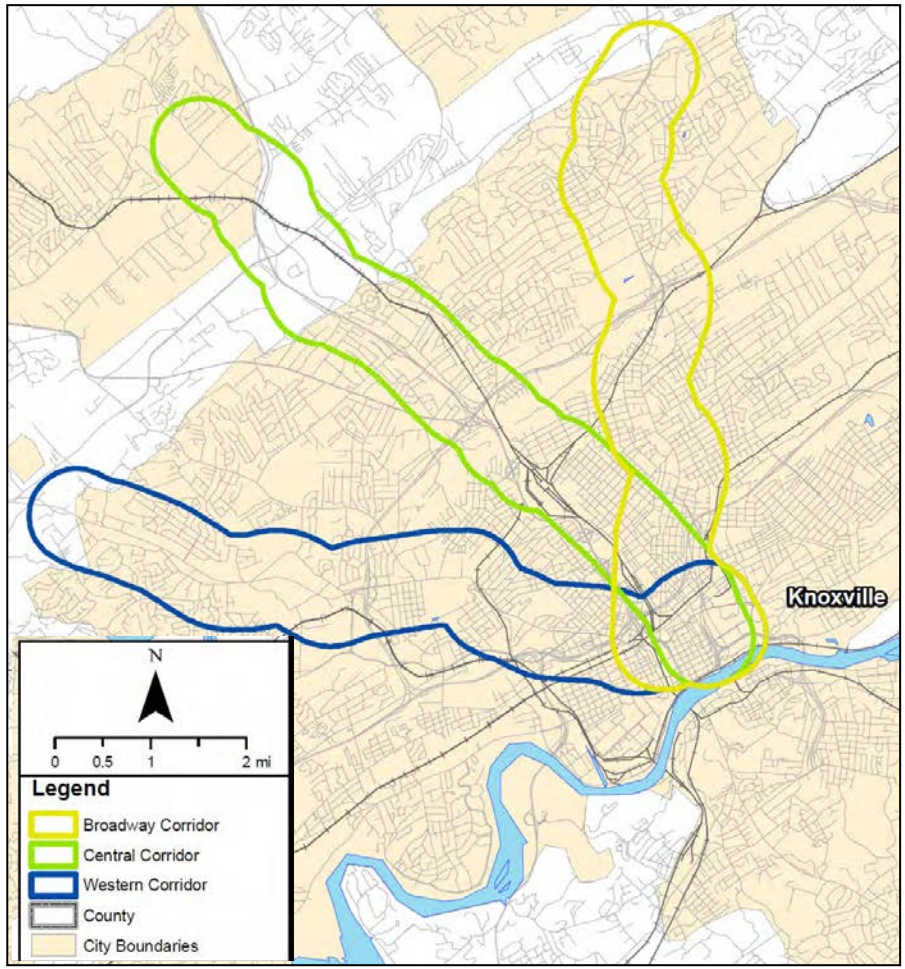
Corridor contains commercial, residential, light office and industrial land uses.

Central Ave – Northwest corridor
Knoxville Transit Center – Hall of Fame Dr – Summit Hill Dr – Central Ave – Emory Rd.

Corridor contains commercial, light industrial, office, agricultural and residential uses.

Western Ave – East-west corridor
Knoxville Transit Center – Hall of Fame Dr – Summit Hill Dr – Western Ave – Woods-Smith Rd.

Corridor contains commercial, light industrial, office uses, residential, and open space.



Alignments

Cumberland/Kingston Pike – East-west corridor
Knoxville Transit Center – Cumberland Ave – Kingston Pike – Watt Rd.

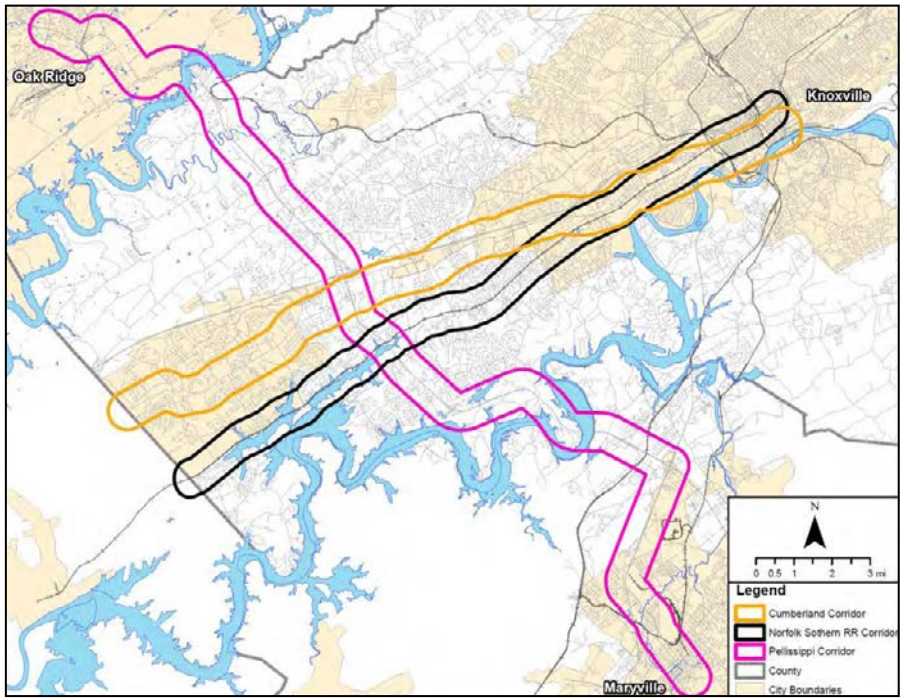
Corridor contains commercial, office, light industrial, institutional, agricultural, and residential uses.

Pellissippi Pkwy - North-south corridor
Oak Ridge Turnpike – Oak Ridge Hwy – Pellissippi Pkwy – Lamar Alexander Pkwy.

Corridor contains agricultural, residential, commercial, office and industrial land uses.

NS "A" Rail Line – Southwest corridor
Central St – NS "A" Rail Line – Morton Rd.

Corridor contains commercial, industrial, office, residential and agricultural uses.



Alignments

Alcoa Hwy – South corridor
Knoxville Transit Center – Cumberland Ave – Alcoa Hwy – Lamar Alexander Pkwy.

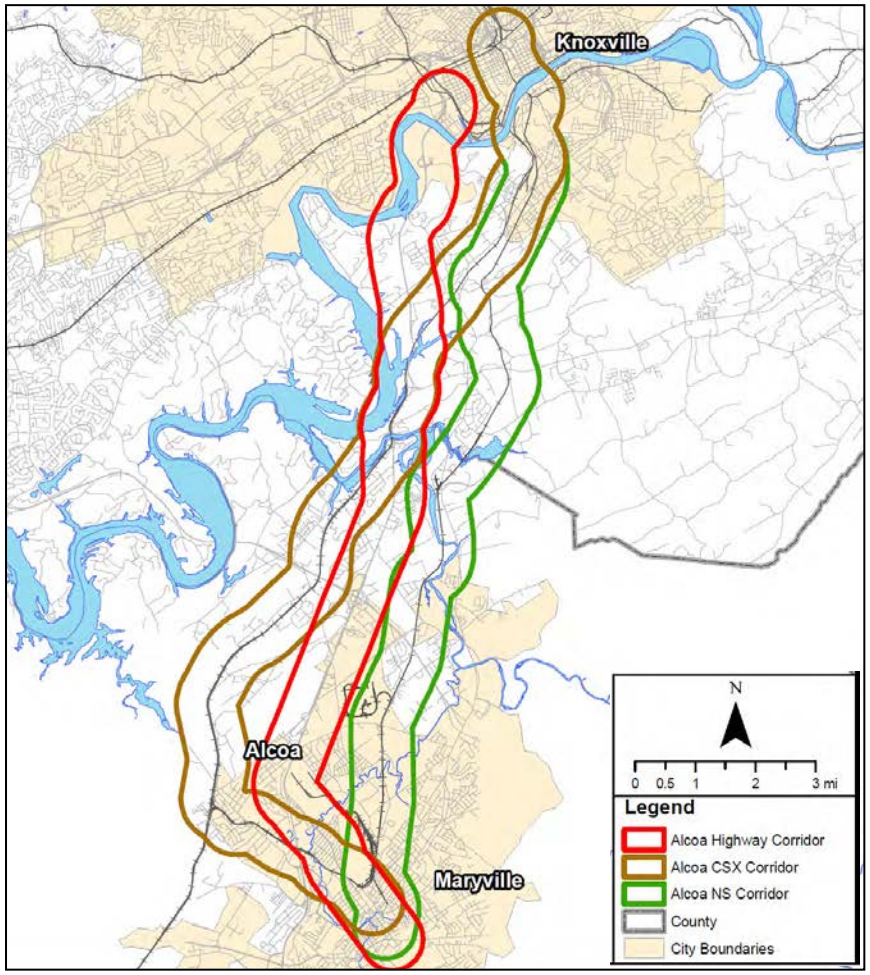
Corridor contains residential, commercial uses, agricultural, open space, and industrial.

Alcoa NS Rail Line – Southwest corridor
Oak Ave – Alcoa NS Rail Line – Washington St.

Corridor contains agricultural, open space, and residential uses.

Alcoa CSX Rail Line – Southwest corridor. Oak Ave – Alcoa CSX Rail Line – Bessie Harvey Ave.

Corridor contains residential, industrial and agricultural uses.



Technology

Express Bus

- Diesel / Hybrid skip-stop urban and regional service
- Operates on roadways within mixed traffic with signal priority and/or queue jumps
- Stations can be existing bus shelters, posted stops or park-n-ride lots
- Capacity up to 85 passengers per bus
- Average speed between 10 - 20 mph depending on traffic conditions
- Limited station stops along normal bus route
- Alignment length between 5 and 30 miles
- Headways range form 10 to 30 minutes
- Cost range between $1 to $2 million per mile

Bus Rapid Transit

- Diesel / Hybrid limited stop urban and regional service
- Operates in dedicated ROW or HOV lanes to by-pass congestion
- Modern low-floor buses with multiple doors for easy boarding
- Stations can be shelters, simple platforms, or park-n-ride lots
- Capacity up to 100 passengers per bus
- Average speed between 20 - 40 mph
- Stations spaced every 0.25 to 2 miles
- Alignment length between 5 and 30 miles
- Headways range from 3 to 20 minutes
- Cost range between $4 to $50 million per mile

Technology

Streetcar

- Electrically-powered urban circulator
- Operates on roadways within mixed traffic with signal priority
- Stations can be platforms integrated into surrounding streetscape
- Capacity for 100 to 200 passengers
- Average speed between 8 - 12 mph
- Station spaced every 0.25 mile
- Alignment length between 5 and 15 miles
- Headways range from 8 to 15 minutes
- Cost range between $2 to $25 million per mile

Light Rail

- Electric or diesel powered urban and regional service
- Operates in dedicated ROW or within mixed traffic
- Low-floor vehicle with multiple doors for easy boarding
- Stations can be platforms integrated into surrounding streetscape
- Capacity up to 300 passengers
- Travel speeds range from 20 to 60 miles per hour
- Stations spaced approximately one mile apart
- Alignments can range between 10 and 30 miles.
- Headways range from 5 to 30 minutes
- cost per mile varies from $40 to $120 million per mile

Technology

Commuter Rail

- Electric, diesel or diesel/hybrid powered interurban and regional service
- Operates in dedicated ROW or can share track with freight
- Conventional railroad equipment with high level boarding
- Stations are large high level platforms with large parking lots
- Capacity up to 800 passengers
- Average speed between 30 - 60 mph
- Stations spaced 2 to 5 miles apart
- Alignment length between 10 and 125 miles
- Headways range from 20 to 30 minutes
- Cost range between $3 to $20 million per mile

Heavy Rail

- Electric powered urban and regional service
- Operates in exclusive grade separated railroad ROW
- Third rail powered equipment with high level boarding
- Stations are multi-level with controlled access and large high level platforms
- Capacity up to 800 passengers
- Average speed between 30 - 80 mph
- Stations spaced every 1 to 5 miles
- Alignment length between 10 and 125 miles
- Headways range from 5 to 10 minutes
- Cost range between $100 to $250 million per mile

Land use (Toolkit)

Comprehensive document that compiles & summarizes the following:

- Current Knoxville planning studies
- Transit characteristics, station types, land use, economic development opportunities, and implementation
- Applicable project case studies
- Funding case studies
- Knoxville corridors

Major Activity Centers

Downtown Knoxville

UT Medical Center

University of Tennessee

Pellissippi State Community College

McGhee Tyson Airport

West Town Mall

Oak Ridge National Laboratory (ORNL) &
Department of Energy Facilities

Turkey Creek

Tier 1 Analysis Criteria

Transit Technology Characteristics

- Topography
- Vehicle performance capabilities
- Service characteristics
- Corridor length
- Compatibility with existing rail

Existing Ridership Estimates Parallel to Proposed Corridors

- Existing KAT bus ridership parallel to proposed corridors
- Overall attractiveness of corridor

Community Benefits

- Population within ¼ and ½ mile of alignment
- Employment within ¼ and ½ mile of alignment

Regional Connectivity

- Direct & efficient connections to markets

Preliminary Environmental Criteria

- Direct or indirect impact on natural features

Physical Footprint

- Physical scale & complexity of project components

Acceptability

- Stakeholder polling of alignments compatible with communities, meets travel needs, and serves public's best interest.

Tier 1 Analysis Results

Alternative	Transit Technology Characteristics	Ridership	Population within 1/4 and 1/2 mile of Corridor*	Employment within 1/4 and 1/2 mile of Corridor*	Regional Connectivity	Preliminary Environmental Issues	Physical Footprint	Acceptability	Advancement into Tier 2 Analysis
Cumberland/Kingston Pike	Accommodates various transit modes	192,274	High population adjacent to corridor	High number of employment centers	High Connectivity	High environmental issues	Major property impacts	High level of stakeholder support	✓
Rating	●	●	●	●	●	●	●	●	
Magnolia Avenue	Accommodates various transit modes	117,881	Low population adjacent to corridor	Low number of employment centers	Low Connectivity	High environmental issues	Minimal property impacts	High level of stakeholder support	✓
Rating	●	●	○	○	○	●	○	●	
Western Avenue	Accommodates very few transit modes	107,788	Moderate population adjacent to corridor	Moderate number of employment centers	Low Connectivity	Low environmental issues	Minimal property impacts	Moderate level of stakeholder support	✓
Rating	○	●	◒	◒	○	○	○	◒	
Martin Luther King Jr. Avenue	Accommodates various transit modes	30,268	Low population adjacent to corridor	Moderate number of employment centers	Low Connectivity	Moderate environmental issues	Moderate property impacts	Low level of stakeholder support	
Rating	●	○	○	◒	○	◒	◒	○	
Central Avenue	Accommodates various transit modes	66,847	Moderate population adjacent to corridor	Moderate number of employment centers	Low Connectivity	Low environmental issues	Major property impacts	Moderate level of stakeholder support	✓
Rating	●	◒	◒	◒	○	○	●	◒	
North Broadway NE	Accommodates various transit modes	138,790	Moderate population adjacent to corridor	High number of employment centers	Moderate Connectivity	High environmental issues	Major property impacts	High level of stakeholder support	✓
Rating	●	●	◒	●	◒	●	●	●	
Chapman Highway	Accommodates very few transit modes	59,992	Low population adjacent to corridor	Moderate number of employment centers	Low Connectivity	Low environmental issues	Minimal property impacts	Low level of stakeholder support	
Rating	○	◒	○	◒	○	○	○	○	
Alcoa Highway	Accommodates very few transit modes	N/A	Low population adjacent to corridor	Low number of employment centers	Moderate Connectivity	Moderate environmental issues	Minimal property impacts	Moderate level of stakeholder support	
Rating	○		○	○	◒	◒	○	◒	
Pellissippi Parkway	Accommodates very few transit modes	N/A	High population adjacent to corridor	Low number of employment centers	High Connectivity	Moderate environmental issues	Minimal property impacts	High level of stakeholder support	✓
Rating	○		●	○	●	◒	○	●	
Alcoa NS Rail Line	Accommodates some transit modes	N/A	Moderate population adjacent to corridor	Moderate number of employment centers	High Connectivity	Moderate environmental issues	Minimal property impacts	Moderate level of stakeholder support	
Rating	◒		◒	◒	●	◒	○	◒	
Alcoa NS Rail Line	Accommodates some transit modes	N/A	Moderate population adjacent to corridor	Moderate number of employment centers	High Connectivity	Moderate environmental issues	Minimal property impacts	High level of stakeholder support	✓
Rating	◒		◒	◒	●	◒	○	●	
NS "A" Rail Line	Accommodates some transit modes	183,629	High population adjacent to corridor	High number of employment centers	Moderate Connectivity	High environmental issues	Major property impacts	Low level of stakeholder support	
Rating	◒	●	●	●	◒	●	●	○	

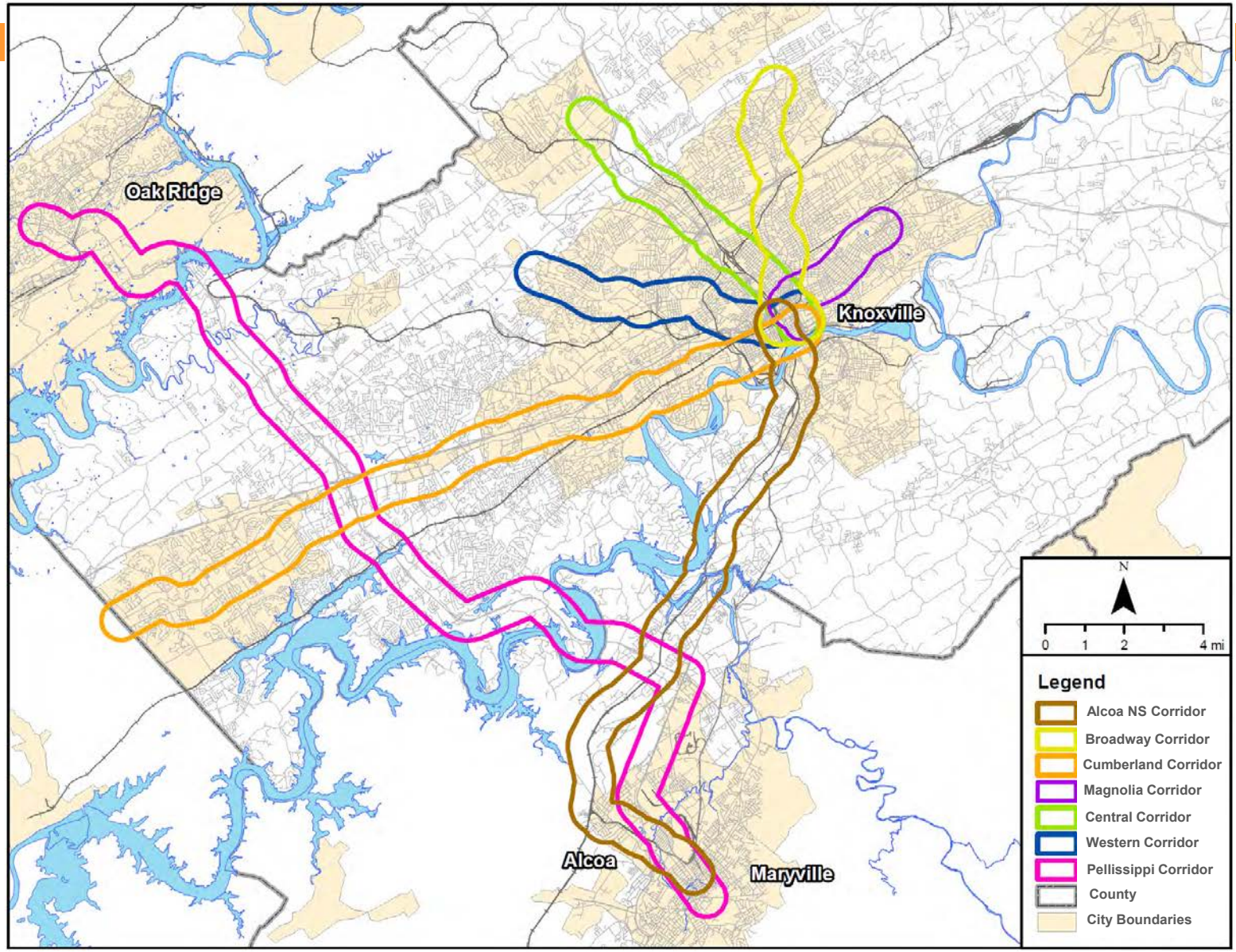
Legend	High ●	Medium ◒	Low ○

* Does not factor in physical accessibility

7 Corridors Advanced

- ✓ Cumberland/Kingston Pike
- ✓ Magnolia Avenue
- ✓ Western Avenue
- ✓ Central Avenue
- ✓ North Broadway
- ✓ Pellissippi Parkway
- ✓ Alcoa NS Rail Line

Tier 2 Alignments



Tier 2 Analysis Criteria

Consistency with Local Plans supporting Goals and Objectives

- Consistency between alignment and future build plans

System Integration

- Alignment enhances existing transit service
  - Provides more efficient service
  - Connects missing links

Financial Criteria

- Capital Cost - cost to implement the project
- O&M Cost - annual net cost of operating new service

Note: this also includes Tier I Analysis Criteria

Transportation/Engineering Criteria

- Evaluates the constructability of the system
  - Grade of corridor
  - At grade crossings
  - 90 degree turns

Community Benefits

- Evaluates the demographic breakdown living near the proposed alignment
  - Low income pop within a ½ mile of alignment
  - Zero auto households within a ½ mile of alignment
  - Potential parcel takings
  - Major Trip Generators

Land Use/Development & Redevelopment Opportunities

- Consistency of adjacent land use with transit oriented development principles

Tier 2 Analysis Results

Technology Evaluation:

	Transit Technology					
Alternative	Express bus	Bus Rapid Transit (BRT)	Streetcar	Light Rail	Commuter Rail	Heavy Rail
Cumberland/Kingston Pike Topography 6%>[1] - Moderate Corridor Length - 19.25 miles	No	Yes	Yes	No	No	No
Magnolia Avenue Topography 6%>[1] - Minimal Corridor Length - 11 miles	No	Yes	Yes	No	No	No
Western Avenue Topography 6%>[1] - Severe Corridor Length - 7.5 miles	Yes	Yes	No	No	No	No
Central Avenue Topography 6%>[1] - Moderate Corridor Length - 8 miles	No	Yes	Yes	No	No	No
North Broadway NE Topography 6%>[1] - Moderate Corridor Length - 7.5 miles	No	Yes	Yes	No	No	No
Pellissippi Parkway Topography 6%>[1] - Severe Corridor Length - 29 miles	Yes	Yes	No	No	No	No
Alcoa NS Rail Line Topography 6%>[1] - N/A Corridor Length - 18.5 miles	No	No	No	Yes	Yes	Yes

Notes:

1. A grade of 6% was used as the maximum preferred grade for a new transit service within the corridors. Minimal, Moderate and Severe ratings were to classify the slope of each alignment.

Tier 2 Analysis Results

Alternative	Consistant with Local Plans	System Integration	Financial Criteria	Preliminary Enviromental Screen	Transportation / Engineering	Community Benefits	Land Use / (Re) Development Opportunities	Recommended Corridors
Cumberland/Kingston Pike	Consistant with local plans	High level of integration opportunities	Low financial cost	Moderate environmental issues	Low engineering issues	High amount of benefits	High level of (re)development opportunities	✓
Rating	●	●	●	◒	●	●	●	
Magnolia Avenue	Consistant with local plans	High level of integration opportunities	Low financial cost	Low environmental issues	Low engineering issues	Low amount of benefits	High level of (re)development opportunities	✓
Rating	●	●	●	●	●	○	●	
Western Avenue	Consistant with local plans	Moderate level of integration opportunities	High financial cost	Low environmental issues	High engineering issues	Moderate amount of benefits	Moderate level of (re)development opportunities	
Rating	●	◒	○	●	○	◒	◒	
Central Avenue	Not consistant with local plans	Moderate level of integration opportunities	Moderate financial cost	Moderate environmental issues	High engineering issues	Low amount of benefits	Moderate level of (re)development opportunities	
Rating	○	◒	◒	◒	○	○	◒	
North Broadway NE	Consistant with local plans	High level of integration opportunities	Low financial cost	High environmental issues	Low engineering issues	High amount of benefits	High level of (re)development opportunities	✓
Rating	●	●	●	○	●	●	●	
Pellissippi Parkway	Not consistant with local plans	Low level of integration opportunities	Moderate financial cost	Moderate environmental issues	Moderate engineering issues	High amount of benefits	Low level of (re)development opportunities	
Rating	○	○	◒	◒	◒	●	○	
Alcoa NS Rail Line	Consistant with local plans	Low level of integration opportunities	High financial cost	High environmental issues	High engineering issues	Moderate amount of benefits	Low level of (re)development opportunities	
Rating	●	○	○	○	○	◒	○	

Legend	High ●	Medium ◒	Low ○

Recommended Corridors

- ✓ Cumberland / Kingston Pike
- ✓ Magnolia Avenue
- ✓ North Broadway

Recommendations

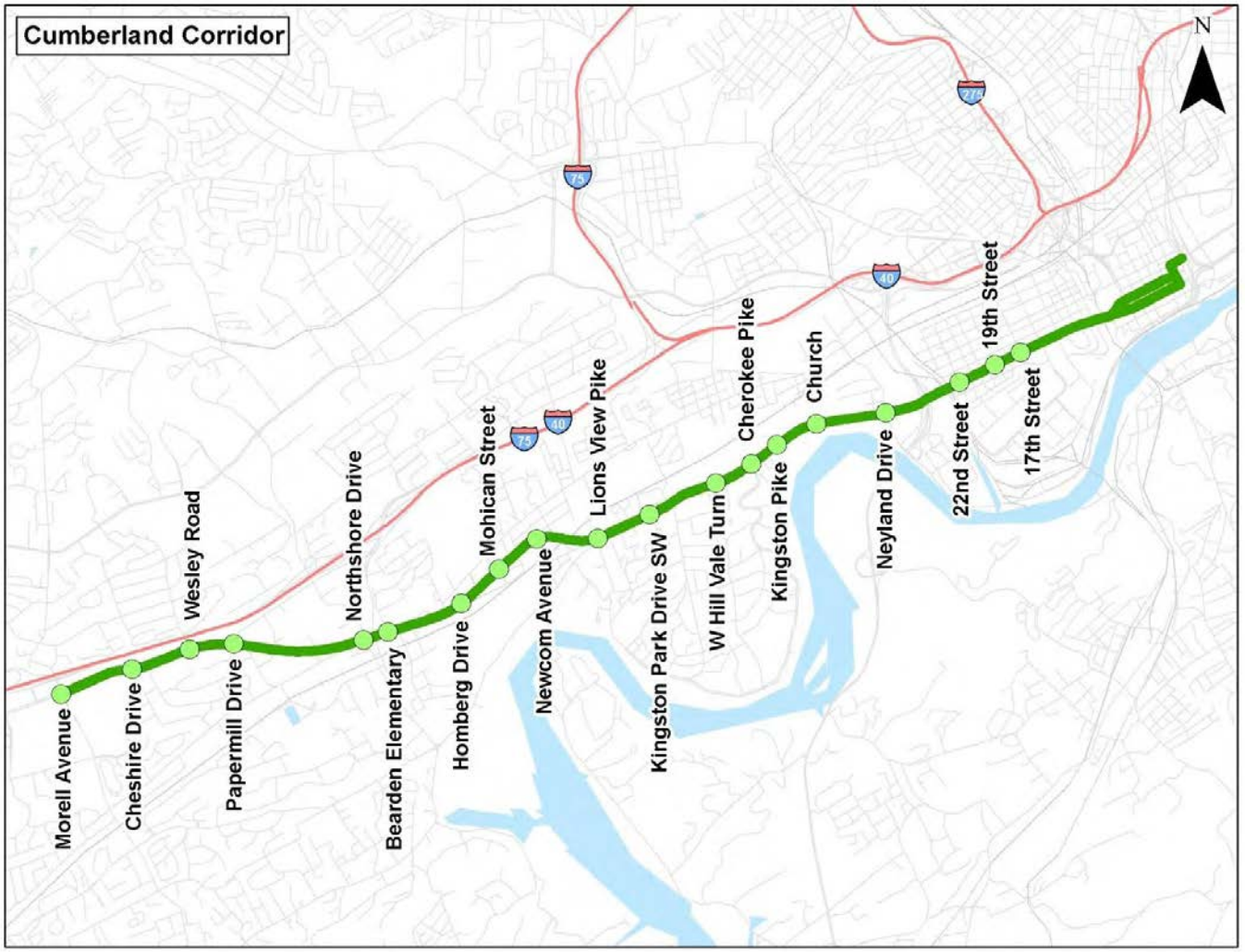
- Intermediate
  - Recommended Corridors
  - Signal Timing/Queue Jump Lanes/Transit Signal Priority
  - Designated/Dedicated Bus Lanes
  - Real Time Traveler Information
  - Increase Frequency/Decrease Headways
- Short Term
  - Regional Transit Authority
  - Express Bus Service
  - Urban Circulator
  - Corridor Investment
- Long Term
  - Transit Alliance/Transit Citizens Leadership Academy
  - Transit Overlay Districts
  - Federal Funding

Intermediate Recommendations

- Intermediate
  - **Recommended Corridors**
  - Signal Timing/Queue Jump Lanes/Transit Signal Priority
  - Designated/Dedicated Bus Lanes
  - Real Time Traveler Information
  - Increase Frequency/Decrease Headways

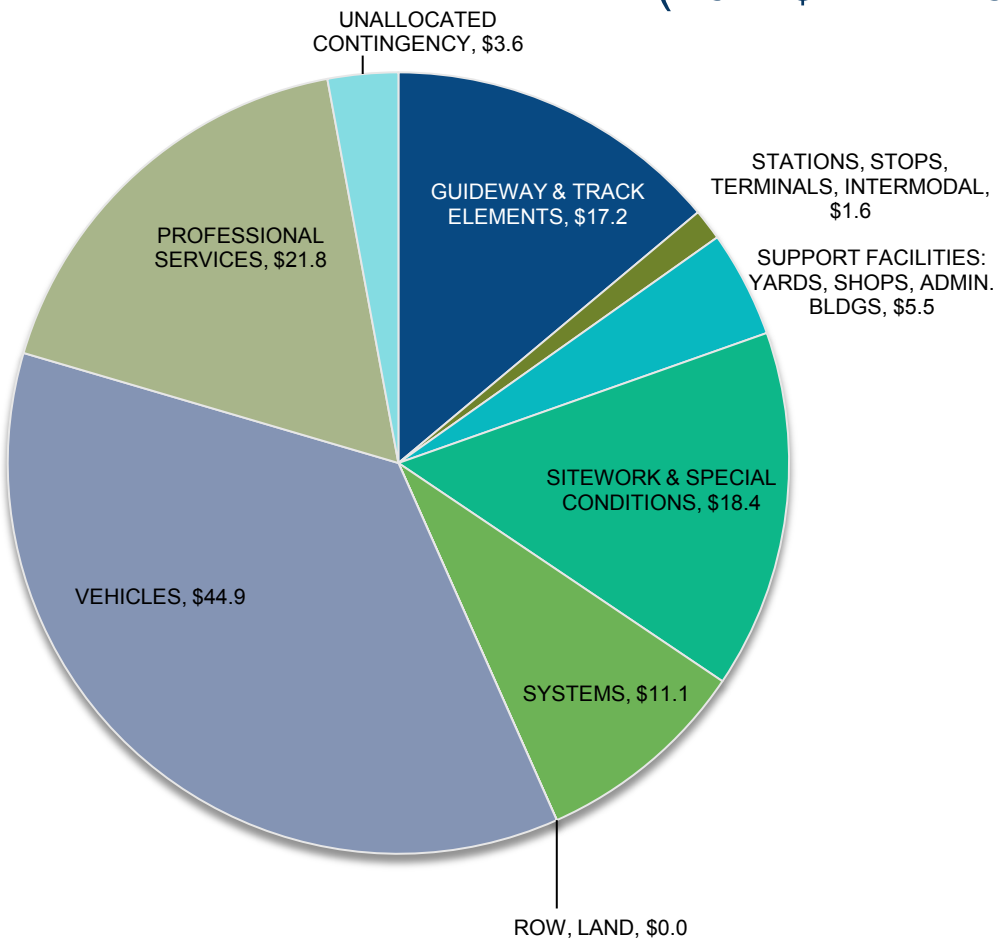
Intermediate Recommendations: Cumberland/Kingston Pike

Preliminary Station Locations



Cumberland/Kingston Pike

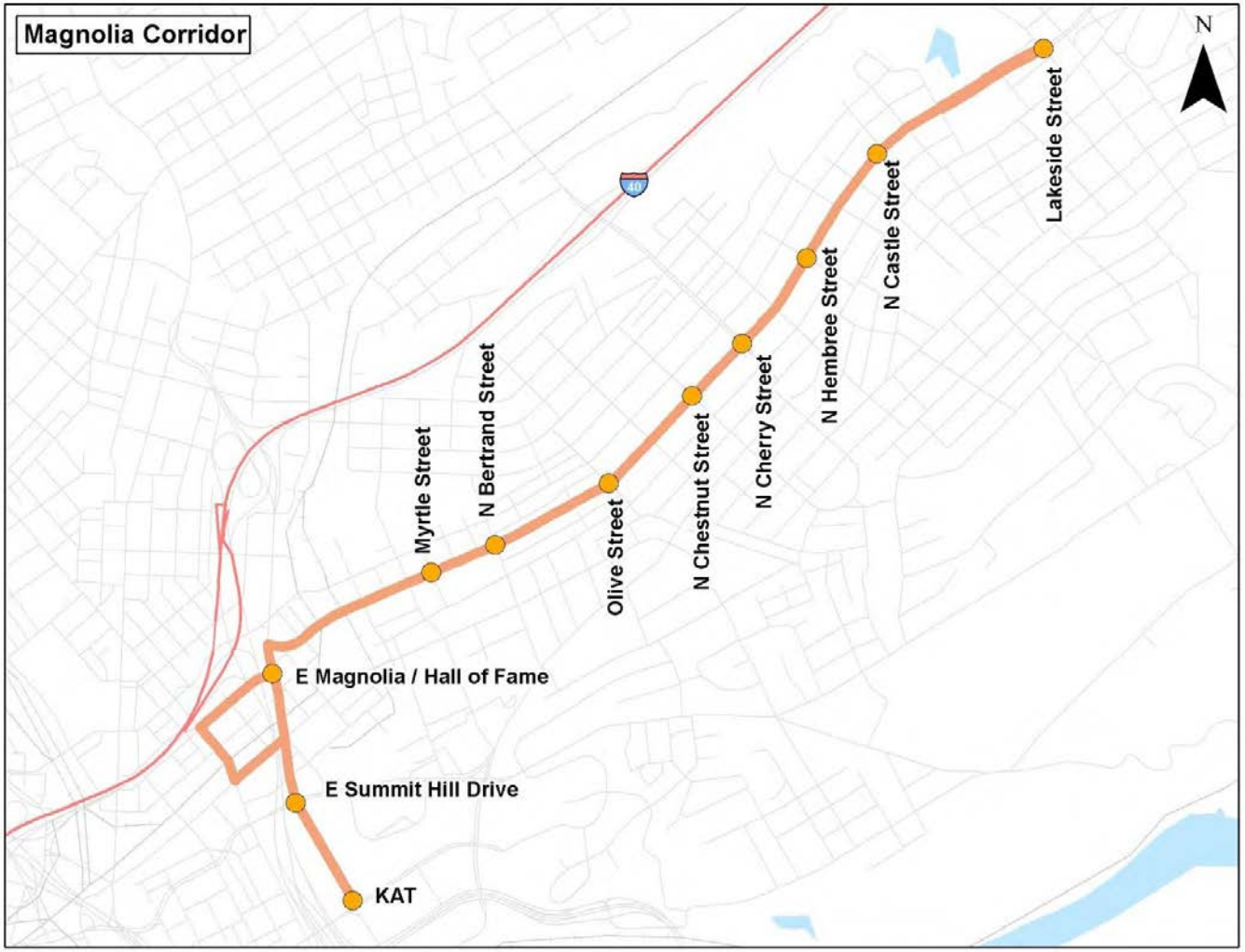
Preliminary Capital Costs
(2011$ in millions)



Length in Miles:	7.9
Number of Stations:	20
Number of Vehicles:	2
Total Construction Cost:	$124M - $184M
Cost per Mile:	$16M to $23M

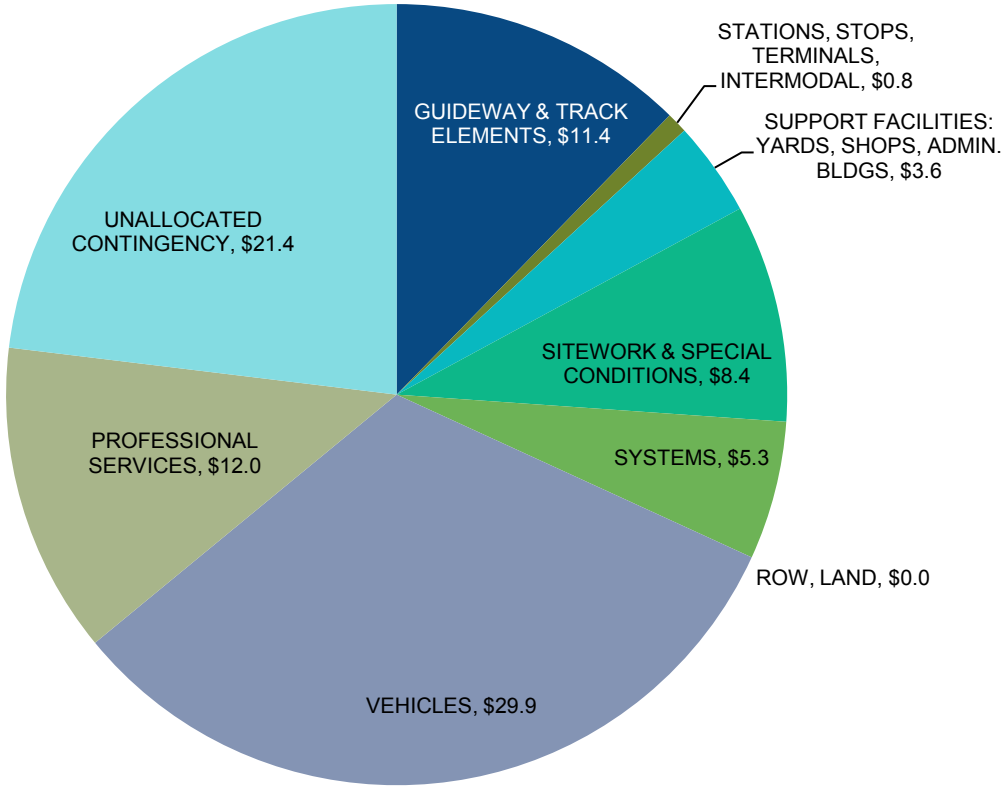
Intermediate Recommendations: Magnolia Avenue

Preliminary Station Locations



Magnolia Avenue

Preliminary Capital Costs
(2011$ in millions)



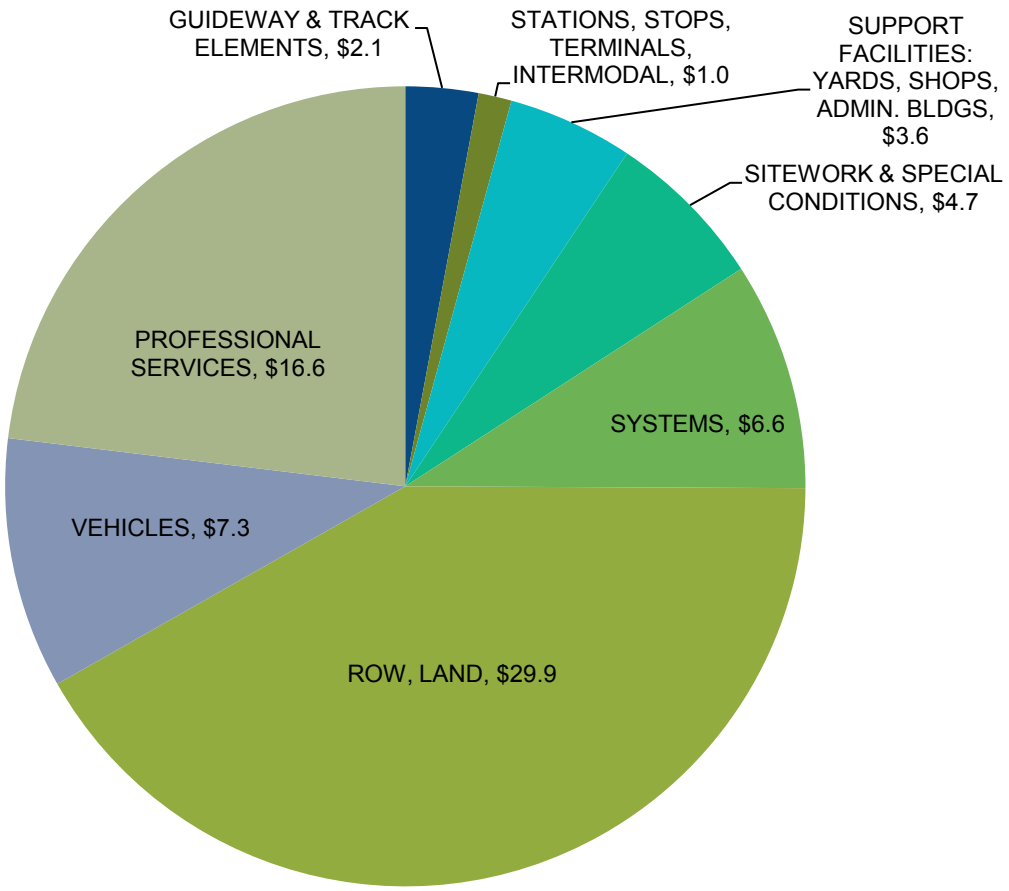
Length in Miles:	3.6
Number of Stations:	10
Number of Vehicles:	8
Total Construction Cost:	$93M - $113M
Cost per Mile:	$26M to $31M

Intermediate Recommendations: North Broadway

Preliminary Station Locations

North Broadway

Preliminary Capital Costs
(2011 Dollars in millions)

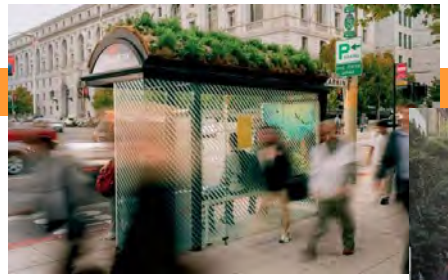


Length in Miles:	4.7
Number of Stations:	12
Number of Vehicles:	8
Total Construction Cost:	$72M - $87M
Cost per Mile:	$15M to $18M

Station Types

Urban Stations

- Walk-up only station located in dense area. High TOD opportunities.



Community Stations

- Walk-up and park-and-ride facility located in urban/suburban area. Medium TOD opportunities.

Regional Stations

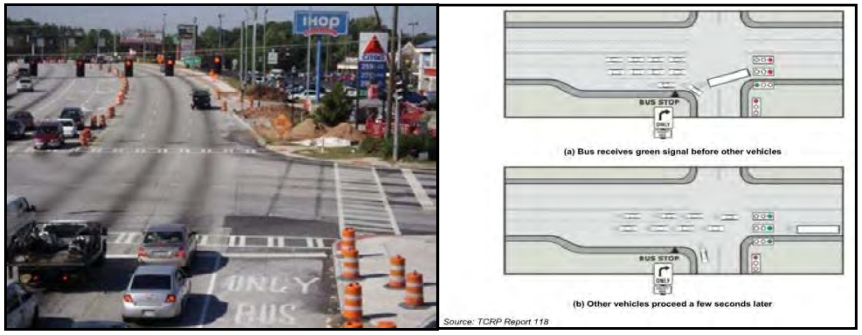
- Major park-and-ride with transit hub capabilities located in suburban areas. Low TOD opportunities.

Intermediate Recommendations

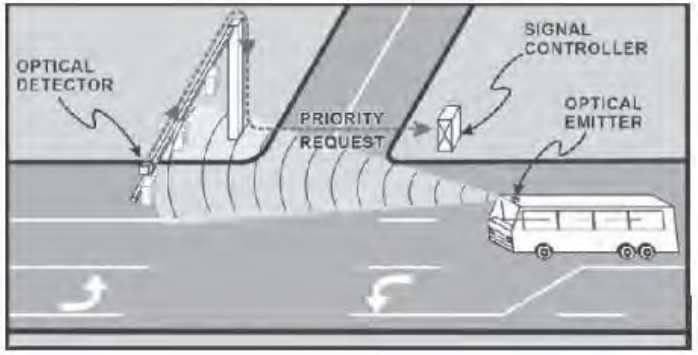
- Intermediate
  - Recommended Corridors
  - **Signal Timing/Queue Jump Lanes/Transit Signal Priority**
  - Designated/Dedicated Bus Lanes
  - Real Time Traveler Information
  - Increase Frequency/Decrease Headways

Intermediate Recommendations

- **Signal Timing/Queue Jump Lanes/Transit Signal Priority**
  - Modifying the signal timing can add 10 – 20% more capacity along the roadway and also decrease the amount of travel time for existing buses
  - Queue Jump Lanes allow buses the ability to jump in front of automobiles queued at an intersection and cross that intersection before automobiles can proceed



  - Transit Signal Priority gives an advantage to transit vehicles operating along a roadway



Intermediate Recommendations

- Intermediate
  - Recommended Corridors
  - Signal Timing/Queue Jump Lanes/Transit Signal Priority
  - **Designated/Dedicated Bus Lanes**
  - Real Time Traveler Information
  - Increase Frequency/Decrease Headways

Intermediate Recommendations

- **Designated/Dedicated Bus Lanes**
  - Evaluate each of the corridors to see if a dedicated or designated bus lane would be appropriate.
  - Dedicated on-street lanes would be for bus use only and are appropriate for corridors that have a medium to high volume of buses with a solid ridership base and a roadway level of service (LOS) of A through C. This could be as simple as striping the lane and putting up signs or as complex as making the lane a different color and adding a raised curb barrier.
  - Designated bus lanes would be for intermixed bus and vehicle traffic appropriate for corridors that have a low to high volume of buses with a roadway LOS of A through D. These designated areas could be easily striped and signed. Other forms of designated bus lanes include high occupancy vehicles (HOV) lanes or high occupancy transit (HOT) lanes.
  - Either scenario could restrict the use of the lane for peak periods only, or during off-peak periods.

Intermediate Recommendations

- Intermediate
  - Recommended Corridors
  - Signal Timing/Queue Jump Lanes/Transit Signal Priority
  - Designated/Dedicated Bus Lanes
  - **Real Time Traveler Information**
  - Increase Frequency/Decrease Headways

Intermediate Recommendations

- **Real Time Traveler Information**
  - Providing riders with the most up to date schedule information and next bus arrival times would help attract additional ridership. This can be achieved through various forms of communication including Tennessee's 511 program, variable message signs, twitter alerts, email, etc. With the increasing use of smart phones, smart tablets and other media devices riders could access the most up-to-date arrival times without waiting for periods of time at stops.
  - Providing passengers with real time information has proven to increase the acceptance of transit as a viable transportation option resulting in an increase in ridership.

Intermediate Recommendations

- Intermediate
  - Recommended Corridors
  - Signal Timing/Queue Jump Lanes/Transit Signal Priority
  - Designated/Dedicated Bus Lanes
  - Real Time Traveler Information
  - **Increase Frequency/Decrease Headways**

Intermediate Recommendations

- **Increase Frequency/Decrease Headways**
  - Some of KAT's existing bus service has headways anywhere from an hour to half hour service. Decreasing the headways may net new riders, increasing the ridership along that corridor.

Short Term Recommendations

- Short Term
  - **Regional Transit Authority**
  - Express Bus Service
  - Urban Circulator
  - Corridor Investment

Short Term Recommendations

- **Regional Transit Authority**
  - A Regional Transit Authority will need to be formed in order to provide inter-county transit service, especially for transit investments along the Pellissippi Parkway and Alcoa Highway.
  - In 2009 Tennessee Senate Bill 1471 was signed into law establishing the ability to form a regional transit authority as way to stay competitive with other US regions.
  - A regional transit authority will provide the opportunity to propose dedicated regional revenue sources that can be pulled from various funding sources. It also allows bonds to be issued by the authority so that they can act fast on travel demand and development opportunities.

Short Term Recommendations

- Short Term
  - Regional Transit Authority
  - **Express Bus Service**
  - Urban Circulator
  - Corridor Investment

Short Term Recommendations

- **Express Bus Service**
  - The study determined it was evident that express bus service could be implemented along the Pellissippi Parkway and Alcoa Highway. These two corridors have pockets of growth that could support a limited stop bus service. Both of these corridors could benefit from designated bus lanes with transit oriented development around station areas. The mix of land uses around the station areas will help support the growth of transit and the implementation of transit overlay districts.
  - An express service along Pellissippi Parkway would provide connections to/from the Maryville, McGhee Tyson Airport, Pellissippi State Technical Community College, Oak Ridge National Laboratories, Department of Energy Facilities and Oak Ridge.
  - An express service along Alcoa Highway would provide connections to/from the Alcoa, Maryville, McGhee Tyson Airport, University of Tennessee Medical Center, the University of Tennessee, and downtown Knoxville.

Short Term Recommendations

- Short Term
  - Regional Transit Authority
  - Express Bus Service
  - **Urban Circulator**
  - Corridor Investment

Short Term Recommendations

- **Urban Circulator**
- As a result of the screening process two additional alignments were analyzed.
  - Circulator Alignment (Super Loop)
    - First Loop: Large outer loop – Magnolia – Cherry St – Cecil Ave – North Broadway – Western Ave – Keith Ave – Liberty St – Division St – Sutherland Ave – Concord St – Cumberland Ave.
    - Second Loop: Magnolia – Cherry St – Cecil Ave – North Broadway – Henley St – Magnolia.
    - Third Loop: Cumberland Ave – Concord St – Sutherland Ave – Division St – Liberty St – Keith Ave – Western Ave – 17th St – Cumberland .
    - Fourth loop: Downtown circulator – Western Ave – 17th St – Cumberland Ave – Henley St – Western Ave.
  - Magnolia Ave / Cumberland Alignment

Short Term Recommendations

- Short Term
  - Regional Transit Authority
  - Express Bus Service
  - Urban Circulator
  - **Corridor Investment**

Short Term Recommendations

- **Corridor Investment**
  - Investigate the opportunity to implement a portion of either of the three recommended corridor investments. Moving a portion of either the Cumberland/Kingston Pike, North Broadway, or Magnolia Avenue corridor through the New Starts/Small Starts process could provide a short term investment; such as moving the Magnolia Avenue corridor recommendations forward for a portion of the corridor would provide short term success in not only implementing a BRT system, but revitalizing the corridor.

Long Term Recommendations

- Long Term
  - **Transit Alliance/Transit Citizens Leadership Academy**
  - Transit Overlay Districts
  - Federal Funding

Long Term Recommendations

- **Transit Alliance/Transit Citizens Leadership Academy**
  - The formation of transit alliance or citizen leadership group helps educate the greater masses about the benefits of mass transit.
  - Education is a key component for gaining momentum and public support for implementing new transit services and substantial transit improvements.
  - Educational programs help people of all ages understand how public transit works and why it is important at a local, regional and state level.
  - The American Public Transportation Association (APTA) could be a good tool for starting an education program. They current conduct a national “Public Transportation: Takes Us There” education and outreach campaign that could be used as a starting point for forming the leadership academy.

Long Term Recommendations

- Long Term
  - Transit Alliance/Transit Citizens Leadership Academy
  - **Transit Overlay Districts**
  - Federal Funding

Long Term Recommendations

- **Transit Overlay Districts**
  - Should be applied to all of the corridors to enhance the need for transit and encourage transit supportive land uses.
  - These districts help “focus” sustainable growth in areas that could benefit from transit and transit type enhancements such as mixed use developments and pedestrian/bicycle friendly neighborhoods.
  - It is important to note that transit overlay districts can only be implemented in corridors that include a sustainable mass transit system.

Long Term Recommendations

- Long Term
  - Transit Alliance/Transit Citizens Leadership Academy
  - Transit Overlay Districts
  - **Federal Funding**

Long Term Recommendations

- **Federal Funding**
  - Apply to the FTA for Very Small Starts or Small Starts funding to evaluate the recommended corridors. Funding for the top most viable corridors should be sought to advance these corridors through the newly adopted MAP-21 process.
  - In addition some of the immediate recommendation improvements should be advanced through the Very Small Starts or Small Starts programs. The New Starts program has been streamlined through the MAP-21 program.

Next Steps

- Implement transit within the following locations:
  - Express bus along Pellissippi Parkway
  - Express bus along Alcoa Highway
  - Urban Circulator Route
    - Downtown to Old Baptist Hospital to UT Medical Center to downtown
- Develop Regional Transit Authority
- Develop Transit Alliance / Transit Citizen Leadership Academy
- Develop Transit Overlay Districts
- Conduct Project Development phase for selected corridor (or portion of corridor)
- Apply for funding – Complete Very Small Starts or Small Starts Application for the selected corridor (or portion of corridor)