



KANSAS CITY STREETCAR

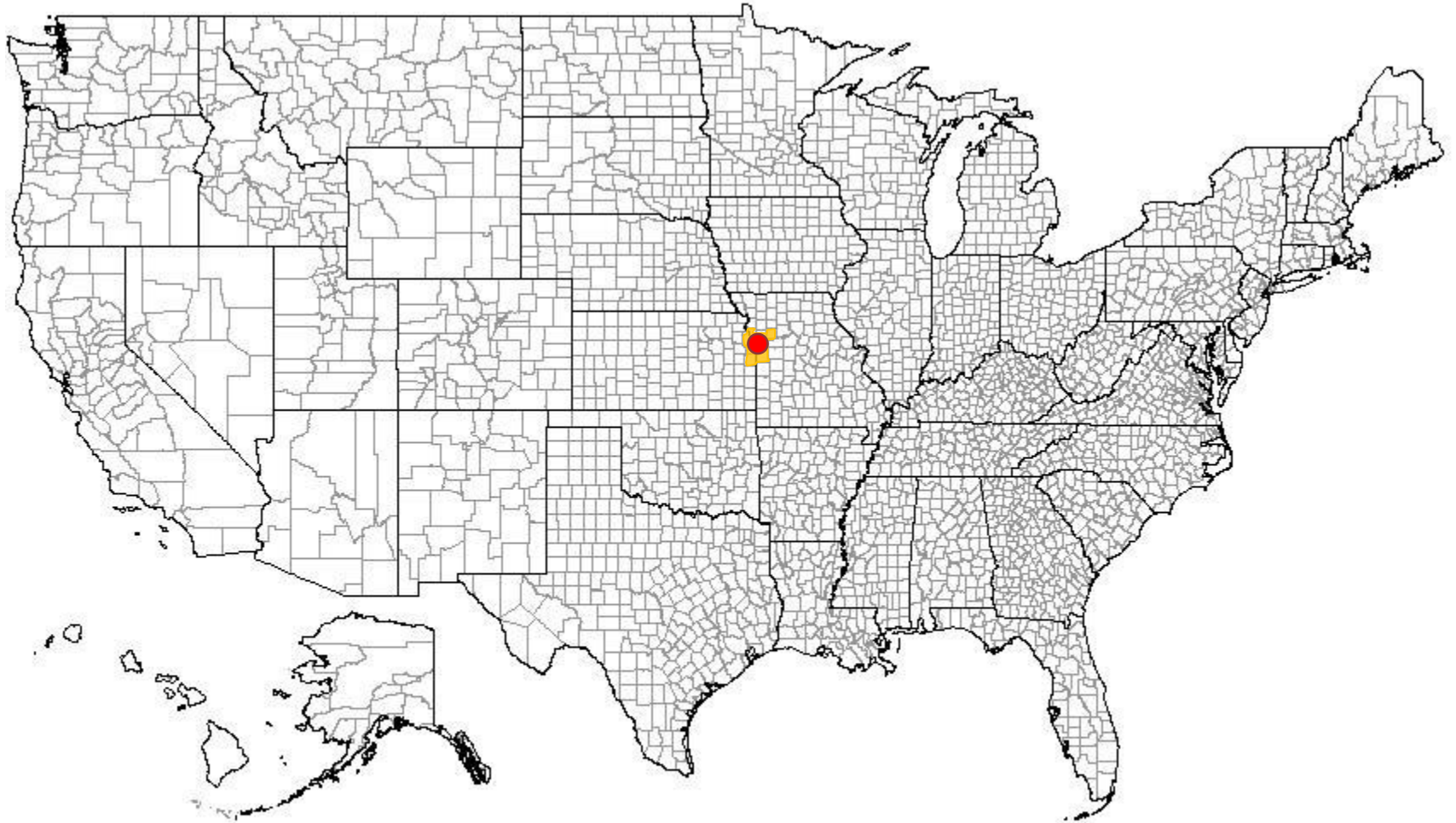
KAREN CLAWSON

MID-AMERICA REGIONAL COUNCIL

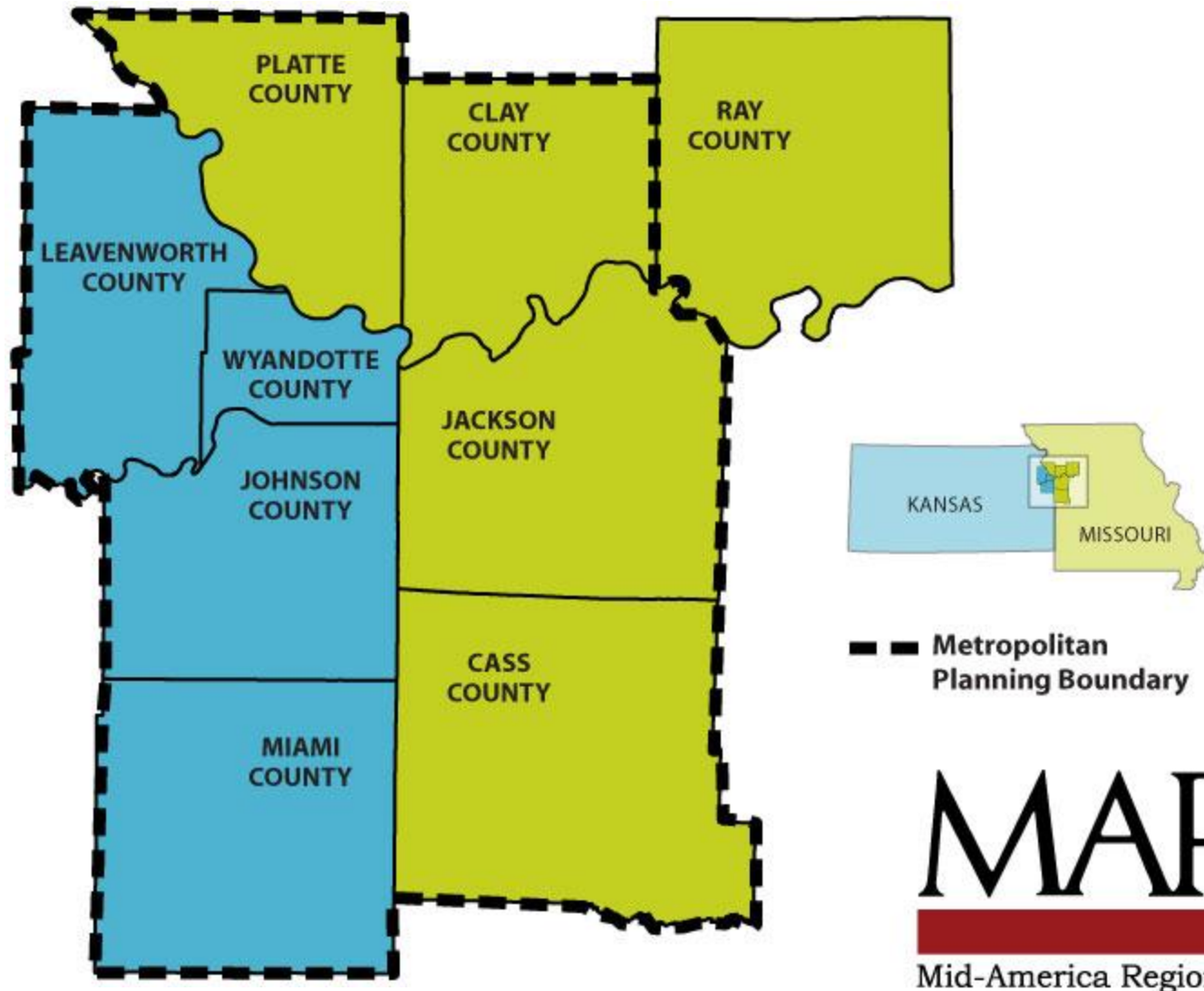
KANSAS CITY STREETCAR

- Regional Context
- Alternatives Analysis
- Kansas City Streetcar Project

KANSAS CITY REGION

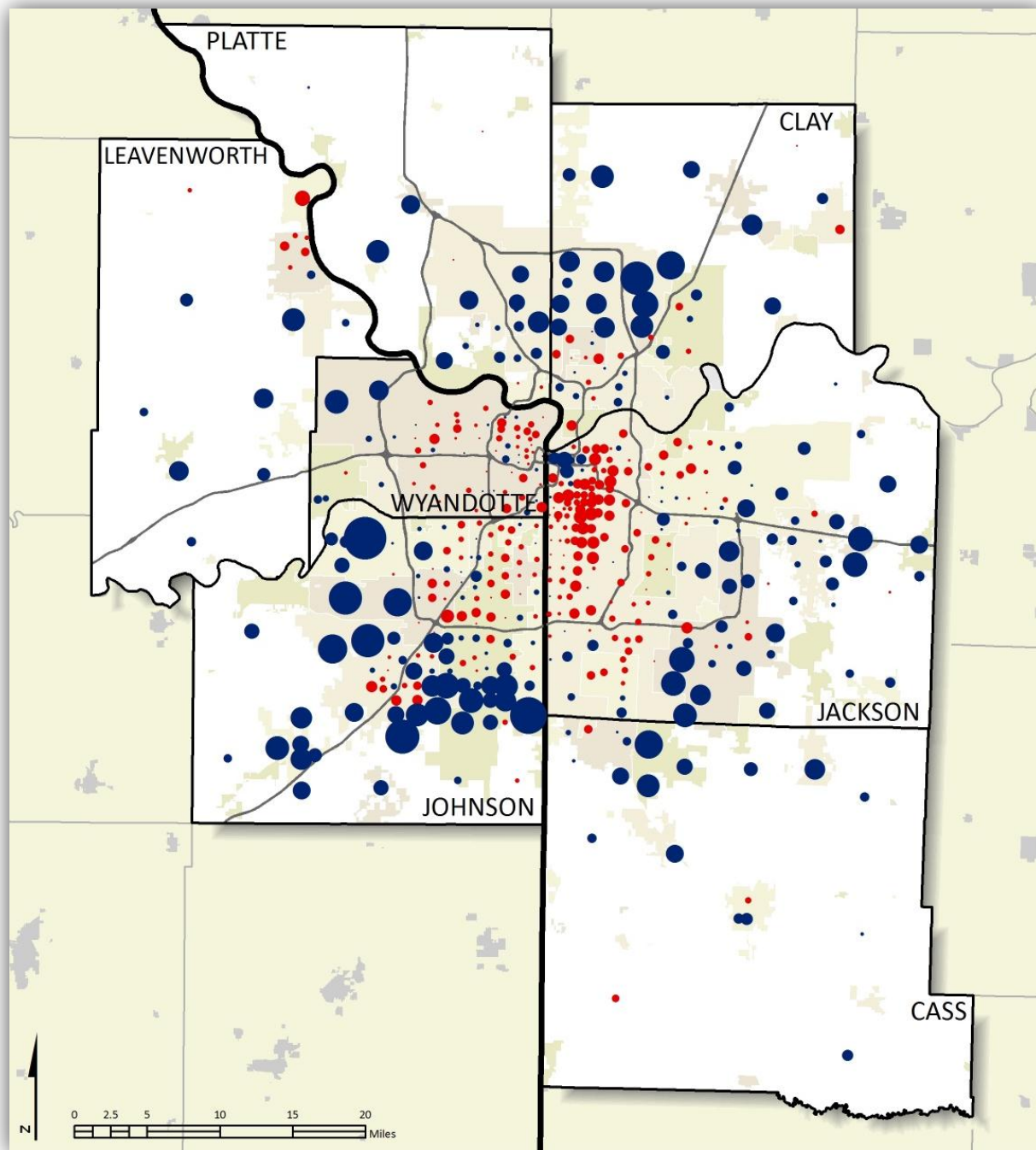


KANSAS CITY REGION

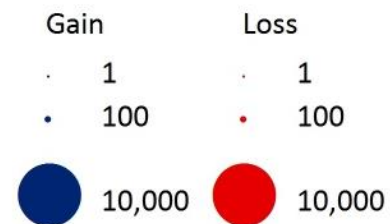


KANSAS CITY REGION

- Trends and Challenges
- Growing older
- Getting more diverse
- Household size is shrinking
- Less desire by younger generations to be dependent on personal automobiles
- Desire for more transportation choices
- Economy not terrible but not great either

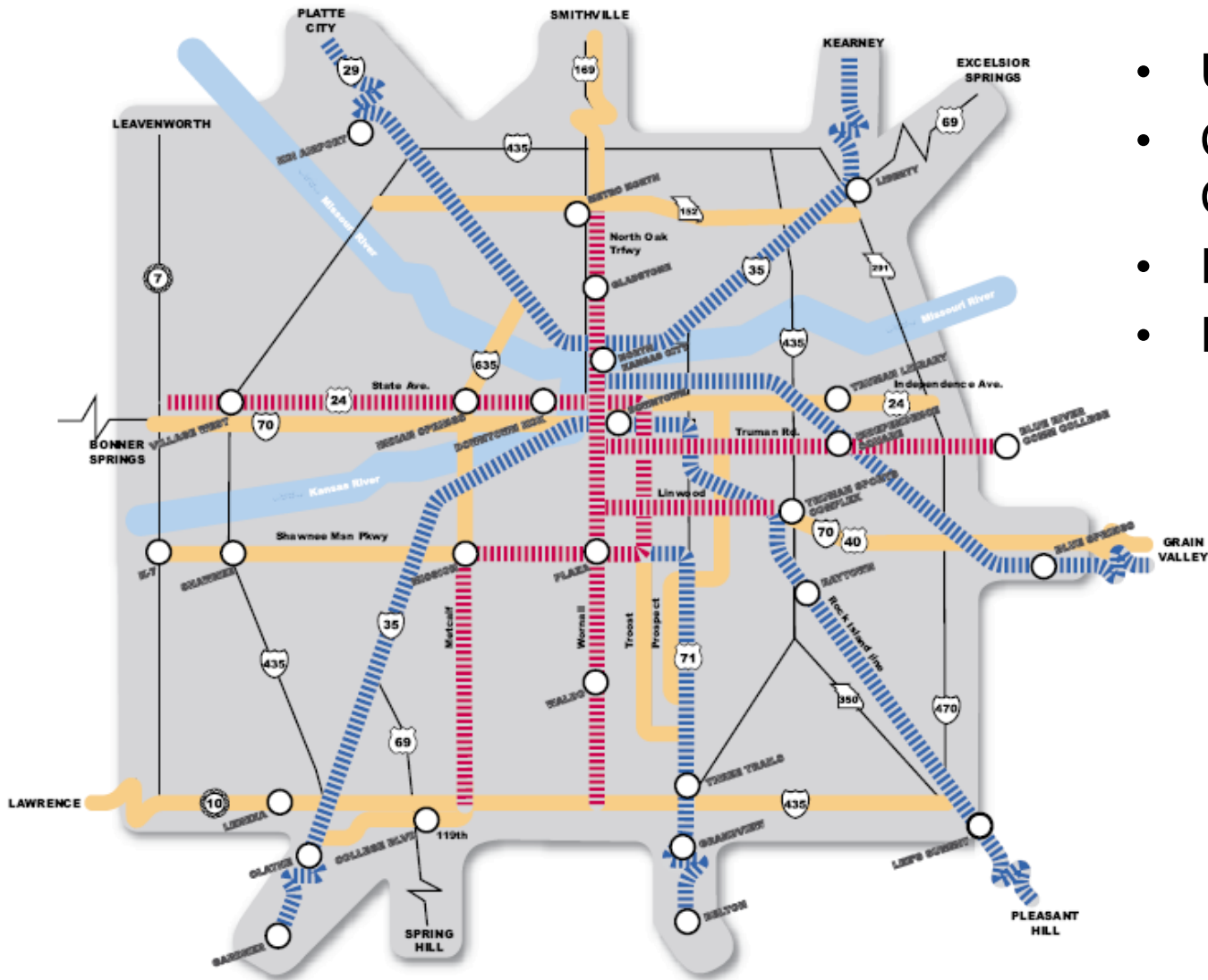


2000-2010 Population Change



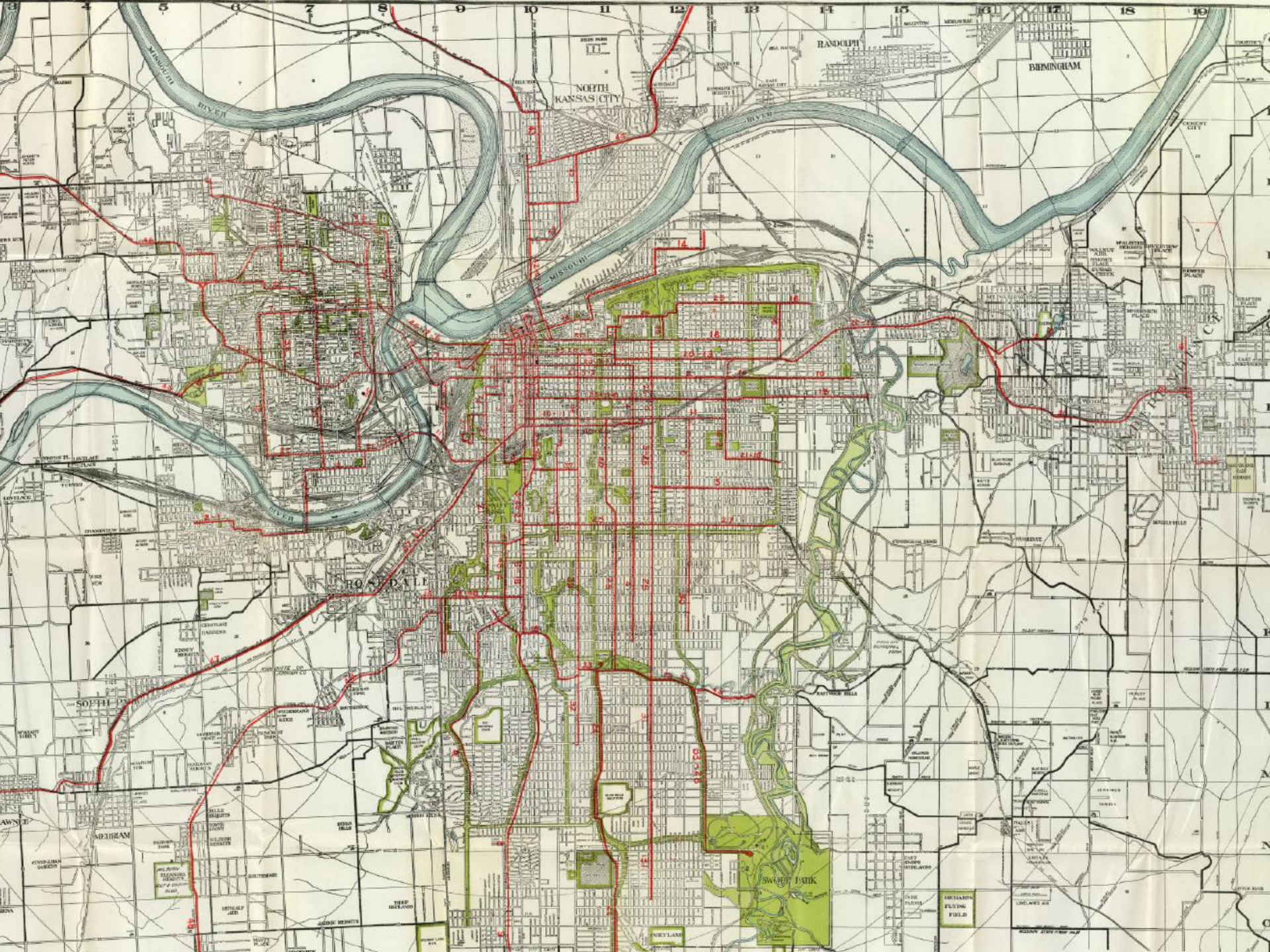
smartmoves

REGIONAL TRANSIT VISION



- Urban Corridors
- Commuter Corridors
- Major Fixed Routes
- Paratransit

Bus?
Streetcar?
Commuter
Rail?





Kthschild's

CLARK'S

TAYLOR'S

ROTHSCHILD'S

PALACE

HOTEL
CROWNE PLAZA
2

56 75th ST COUNTRY CLUB

766

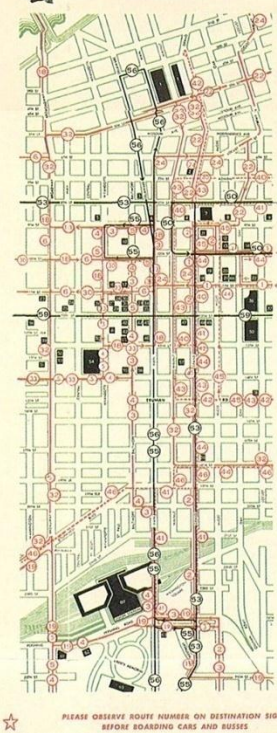
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GO

WALK WITH GREEN LIGHT ONLY

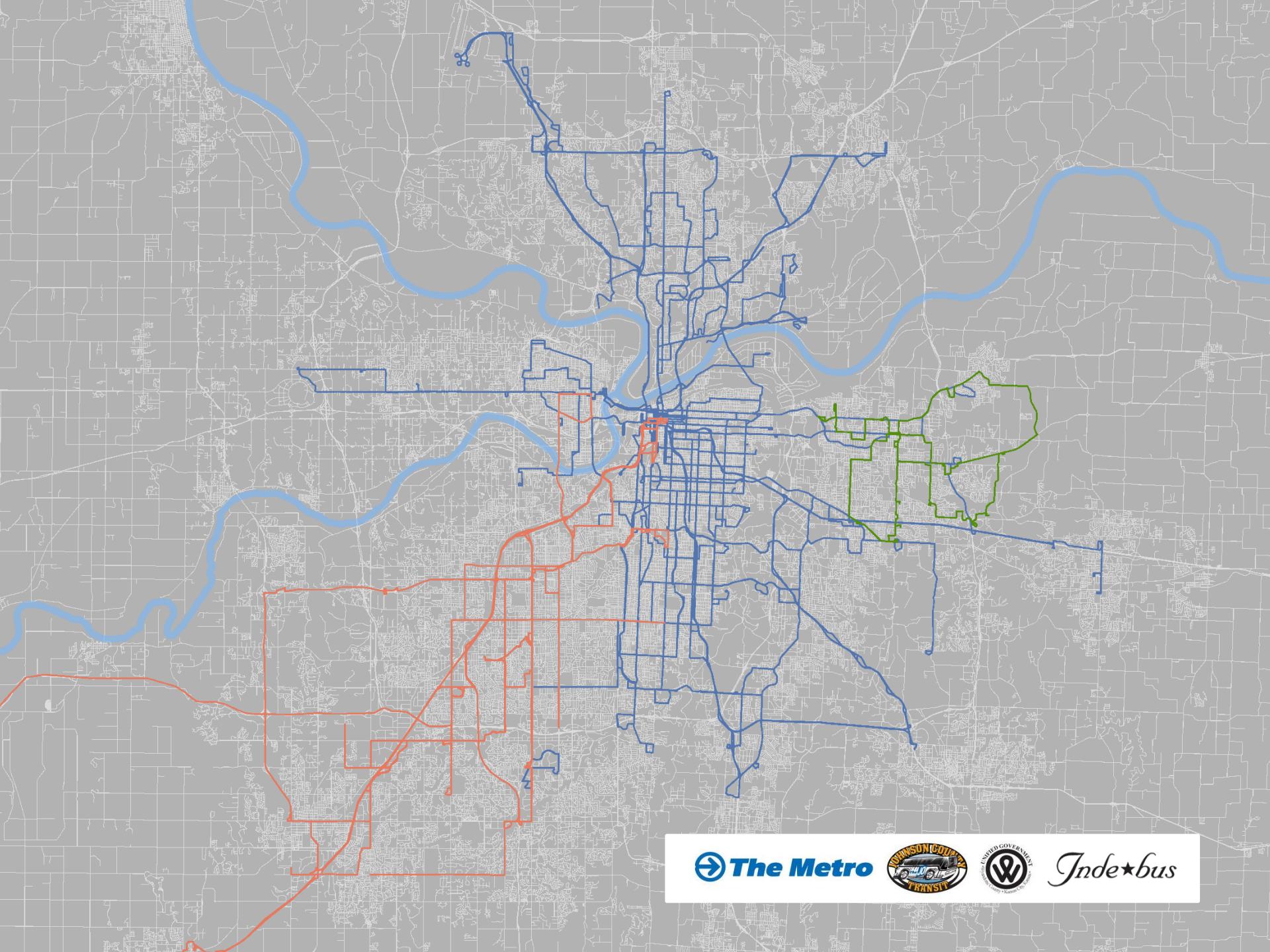


KANSAS CITY PUBLIC SERVICE CO.
728 DELAWARE ST., K.C. MO. ~ TELEPHONE Grand 0050



PLEASE OBSERVE ROUTE NUMBER ON DESTINATION SIGN
BEFORE BOARDING CARS AND BUSES

APRIL, 1951



Inde★bus

BRINGING STREETCAR BACK

WHY IT MATTERS:

- Historic core population decline
- Continued movement of jobs to areas not served by transit
- Shifting demographics
- Regional/national competitiveness
- 30 years of failed efforts
- **Strong core = strong region**
- **Long-term regional sustainability**

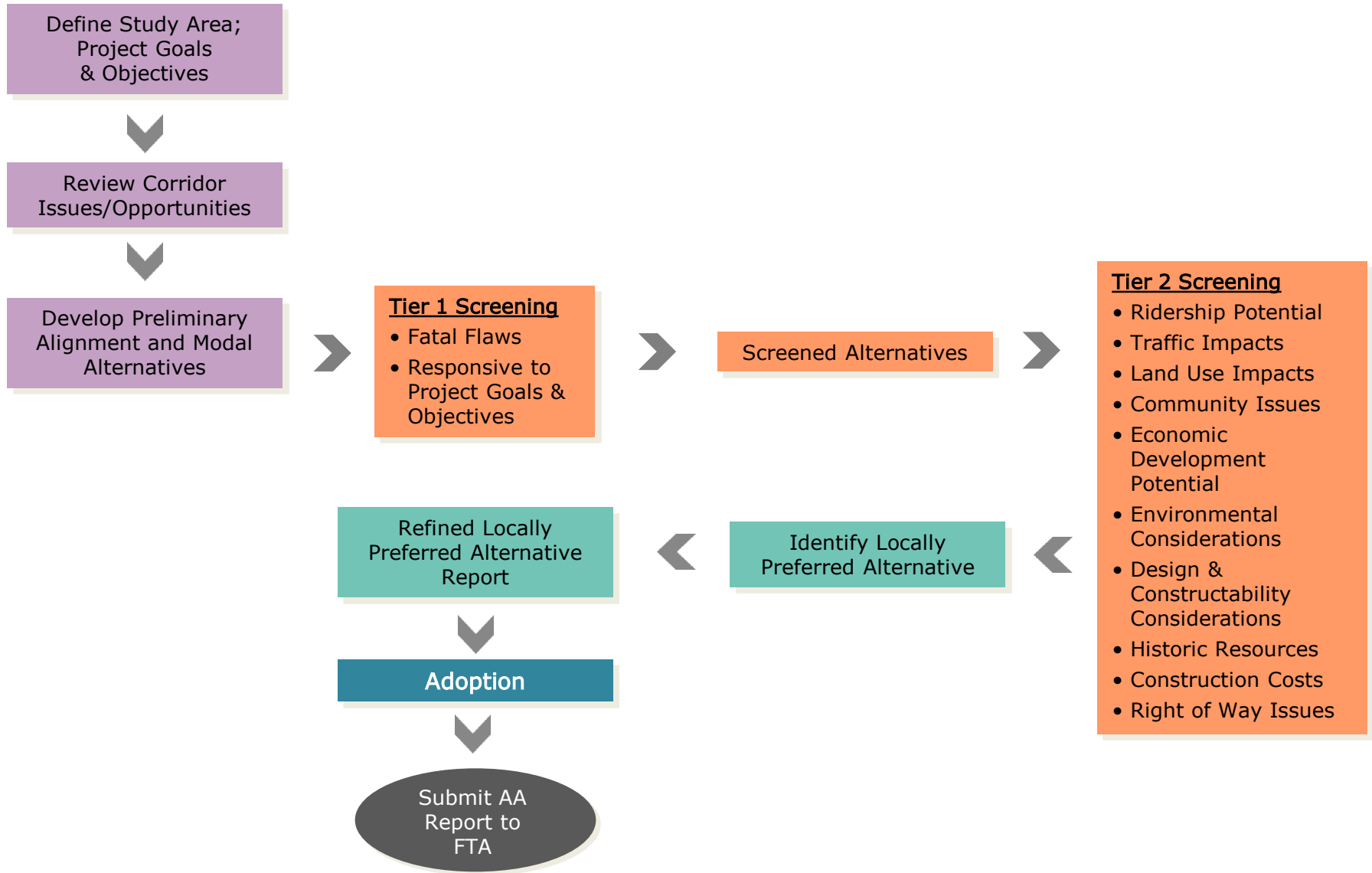
DOWNTOWN CORRIDOR AA

- Collaborative study :



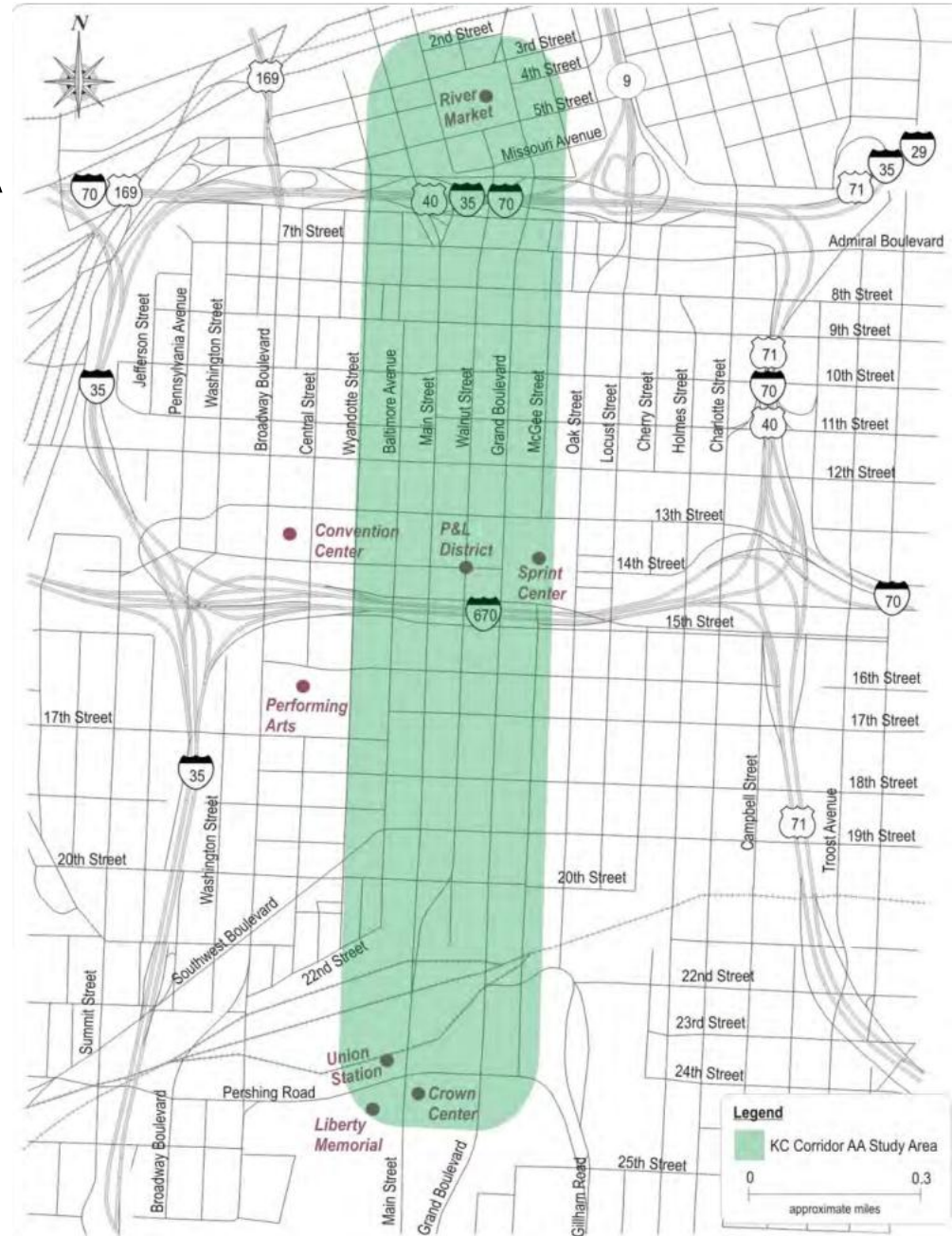
- Funded by FTA grant and local matching funds
- 8-month process, completed in Dec. 2011
- Identify a Locally Preferred Alternative (LPA)
 - Alignment for downtown transit circulator
 - Mode (bus or streetcar)
 - Financial strategy for the construction, operation and maintenance of the line

AA PROCESS



COORDIDOR STUDY AREA

- 2+ miles
- Encompasses CBD
- River Market to Crown Center
- Population:
4,600
- Employment:
65,600



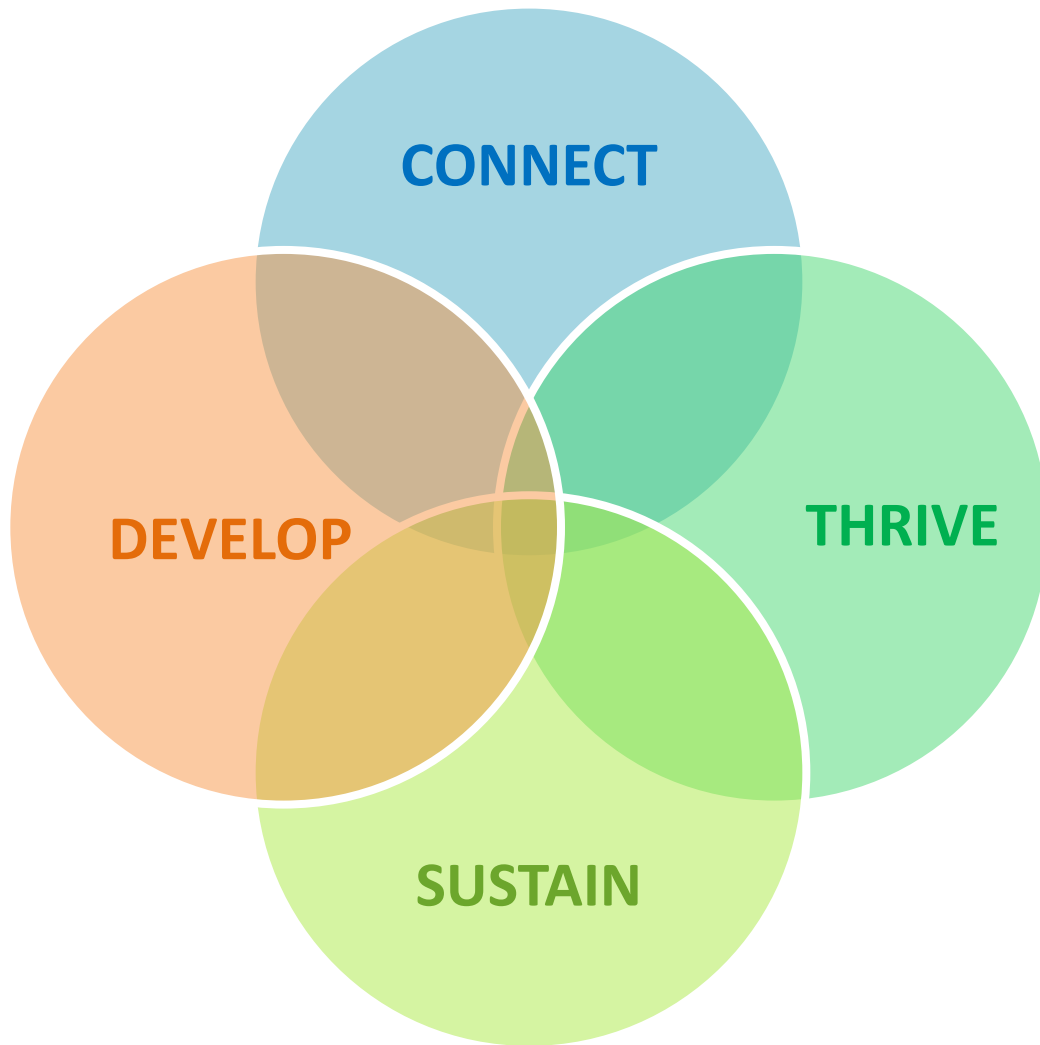
TRANSPORTATION ISSUES

- Poor connectivity between downtown activity centers
- Lack of a strong downtown circulation is a major deficiency in the existing system
- Pedestrian safety, auto-oriented downtown
- Parking
- Future congestion

LAND USE ISSUES

- Keeping businesses downtown
- Support new downtown activity centers
- Encourage development and redevelopment
- Attracting new housing and residents
- Improve service for transit-dependent populations

Statement of Need / Goals



Connect: Enhance linkages in downtown Kansas City and improve local circulation.

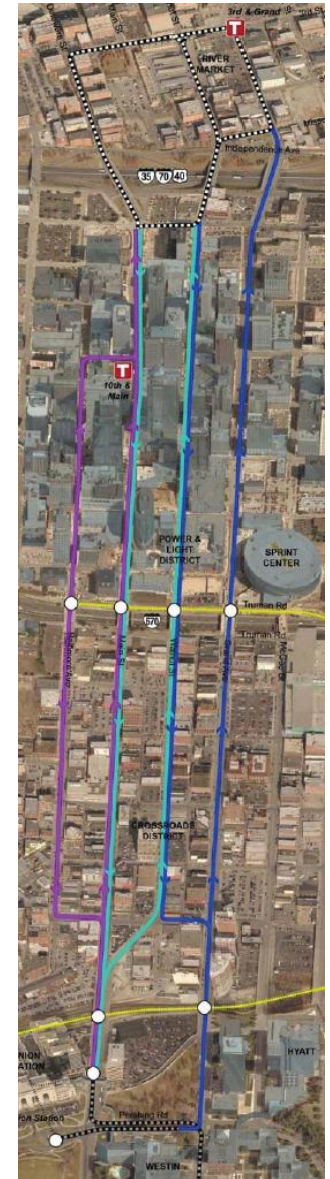
Develop: Support local and regional economic development goals .

Thrive: Strengthen downtown districts and urban centers.

Sustain: Create an environment that will be sustainable over the long term.

TIER 1 ALIGNMENTS

- 4 bi-directional
 - Main St.
 - Grand Blvd.
 - Baltimore Ave.
 - Walnut St.
- 3 couplets
 - Grand Blvd./Walnut St.
 - Main St./Walnut St.
 - Main St./Baltimore St.



EVALUATION CRITERIA

CONNECT: Enhance Linkages in Downtown Kansas City and Improve Local Circulation

Objective	Evaluation Criteria	Presentation
<ul style="list-style-type: none"> •Improve circulation within the downtown Corridor •Improve transportation options 	<ul style="list-style-type: none"> •Ability to provide “last mile connectivity” •Connections with existing transit system •Potential connections to future services (regional rail) 	Tier 1 <ul style="list-style-type: none"> •Discussion of connections with other existing transit services •Discussion of intermodal connections •Discussion of potential connections with future services such as regional rail
<ul style="list-style-type: none"> •Improve connections between existing downtown activity centers 	<ul style="list-style-type: none"> •Number of activity centers served •Quality of transit connections between activity centers and alignment 	Tier 1 <ul style="list-style-type: none"> •Number of activity centers within ¼ mile of proposed alignment and stations Tier 2 <ul style="list-style-type: none"> •Number of activity centers within ¼ mile of proposed alignment and stations •Walking times to/from major activity centers
<ul style="list-style-type: none"> •Improve pedestrian and bicycle environment 	<ul style="list-style-type: none"> •Quality of pedestrian and bicycle connections •Potential for improvements to pedestrian and bicycle infrastructure 	Tier 1 <ul style="list-style-type: none"> •Current primary road configuration •Discussion of quality of bicycle and pedestrian connections •Qualitative assessment of potential for future improvements Tier 2 <ul style="list-style-type: none"> •Quality of bicycle and pedestrian environment and facilities

EVALUATION CRITERIA

DEVELOP: Support Local and Regional Economic Development Goals

Objective	Evaluation Criteria	Presentation
<ul style="list-style-type: none"> • Support development and redevelopment • Provide catalyst for new development and redevelopment 	<ul style="list-style-type: none"> • Comparisons of existing economic conditions and current growth trends • Capacity for future growth • Economic development potential 	<p>Tier 1</p> <ul style="list-style-type: none"> • Existing conditions and current growth trends: • Square feet of vacant land within ¼ mile of alignment • Current value of developed and vacant land within ¼ mile of alignment • Improvement potential of vacant parcels within ¼ mile, including large parcels <p>Tier 2</p> <ul style="list-style-type: none"> • Existing conditions and current growth trends: • Employee, population, and housing growth • Projection of medium term development capacity of alternative • Comparison of maximum projected increases in market value in next 15 years • Qualitative assessment of downtown real estate market and economic development potential
<ul style="list-style-type: none"> • Increase number of downtown residents 	<ul style="list-style-type: none"> • Vacant land suitable for residential redevelopment 	<p>Tier 2</p> <ul style="list-style-type: none"> • Qualitative assessment of downtown real estate market and economic development potential
<ul style="list-style-type: none"> • Support larger "catalyst" development projects 	<ul style="list-style-type: none"> • Significant concentrations of vacant and re-developable parcels 	<p>Tier 1</p> <ul style="list-style-type: none"> • Number and acres of large parcels (>1 acre) within ¼ mile of alignment <p>Tier 2</p> <ul style="list-style-type: none"> • Qualitative assessment of downtown real estate market and economic development potential

EVALUATION CRITERIA

THRIVE: Strengthen Downtown Districts and Urban Centers

Objective	Evaluation Criteria	Presentation
<ul style="list-style-type: none"> Support existing residential and employment centers 	<ul style="list-style-type: none"> Connections with residential and employment centers 	<p>Tier 1</p> <ul style="list-style-type: none"> Population and employment within ¼ mile of alignment <p>Tier 2</p> <ul style="list-style-type: none"> Population, employment, and households within ¼ mile of stations
<ul style="list-style-type: none"> Support visitor and special event activities 	<ul style="list-style-type: none"> Proximity to visitor and special event venues 	<p>Tier 1</p> <ul style="list-style-type: none"> Major hotels, hotels room, special event venues, and attendance within ¼ mile of alignment <p>Tier 2</p> <ul style="list-style-type: none"> Major hotels, hotels room, special event venues, and attendance within ¼ mile of stations
<ul style="list-style-type: none"> Improve service to transit dependent populations 	<ul style="list-style-type: none"> Number of low income and zero-vehicle households, and the minority, elderly, and disabled population with access to high capacity transit 	<p>Tier 1</p> <ul style="list-style-type: none"> Number of low-income and zero-vehicle households within ¼ mile of alignment Minority, elderly, and disabled population within ¼ mile of alignment <p>Tier 2</p> <ul style="list-style-type: none"> (This criterion was not carried forward as Tier 1 indicated few differences)
<ul style="list-style-type: none"> Incorporate public and stakeholder input 	<ul style="list-style-type: none"> Strong support/opposition from affected populations 	<p>Tier 1</p> <ul style="list-style-type: none"> Inventory and summary of public comment about individual alignments <p>Tier 2</p> <p>Same as Tier 1</p>

EVALUATION CRITERIA

SUSTAIN: Create an Environment that Will be Sustainable Over the Long Term

Objective	Evaluation Criteria	Presentation
<ul style="list-style-type: none"> • Develop cost effective transit solutions • Improve effectiveness and efficiency of existing transit service • Optimize return on public investment 	<ul style="list-style-type: none"> • Potential to improve effectiveness and efficiency of existing transit service • Ridership • Operating costs • Capital Costs • User benefits • Cost-effectiveness 	<p>Tier 1</p> <ul style="list-style-type: none"> • Ability to provide strong transit spine <p>Tier 2</p> <ul style="list-style-type: none"> • Ridership • Operating costs • Capital costs • User benefits • Cost effectiveness: <ul style="list-style-type: none"> - Cost per new corridor transit rider - Cost per hour of user benefits
<ul style="list-style-type: none"> • Provide reliable transit service 	<ul style="list-style-type: none"> • Ability to provide dependable service without gaps 	<p>Tier 1</p> <ul style="list-style-type: none"> • Number of partial and full day street closures <p>Tier 2</p> <ul style="list-style-type: none"> • Same as Tier 1
<ul style="list-style-type: none"> • Convert surface parking to higher value uses 	<ul style="list-style-type: none"> • Surface and structured parking available 	<p>Tier 2</p> <ul style="list-style-type: none"> • Acres of surface and structured parking within ¼ mile of alignment • Qualitative assessment of redevelopment potential
<ul style="list-style-type: none"> • Impact on utilities and their potential need for modification or relocation 	<ul style="list-style-type: none"> • Location, size, and number of utility lines • Negative impacts on communication lines 	<ul style="list-style-type: none"> • Utility impact score • Alignment ranking from major communication companies
<ul style="list-style-type: none"> • Provide sustainable funding for corridor improvements and operations 	<ul style="list-style-type: none"> • Potential to attract diverse set of private and public sector funding 	<p>Tier 2</p> <ul style="list-style-type: none"> • Description of funding strategies
<ul style="list-style-type: none"> • Minimize/mitigate impacts on natural and historic resources • Improve air quality 	<ul style="list-style-type: none"> • Impacts on natural resources • Impacts on air quality • Impacts on historic resources 	<p>Tier 2</p> <ul style="list-style-type: none"> • Assessment of traffic impacts (positive and negative) on corridor vehicular travel • Inventory and assessment of impacts on natural resources within ¼ mile of each alignment • Inventory and assessment of impact on historic resources within ¼ mile of each alignment

TIER 1 Summary

Alternative	C1. Downtown Circulation	C2. Activity Center Connections	C3. Bicycle & Pedestrian Connections	D1. Development & Re- development	D2. Downtown Residents	D3. New Catalyst Projects	T1. Residential & Employment Support	T2. Visitor & Special Events	T3. Public & Stakeholder Input	S1A. Transit Efficiency & Effectiveness	S1B. Reliable Service	S2. Surface Parking Reduction	S3. Utility Impacts	Best	Good	Fair
1 Grand	Good	Best	Good	Fair	Good	Fair	Best	Fair	Good	Good	Fair	Best	Best	4	5	4
2 Main	Best	Best	Good	Best	Good	Good	Good	Best	Best	Good	Good	Fair	Good	5	8	1
3 Walnut	Fair	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Fair	Good	Fair	0	8	5
4 Baltimore	Good	Good	Fair	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Good	0	11	2
5 Grand Walnut	Fair	Fair	Good	Best	Good	Good	Good	Fair	Fair	Fair	Fair	Best	Fair	2	4	7
6 Main Walnut	Fair	Fair	Good	Best	Good	Good	Fair	Good	Fair	Fair	Fair	Good	Fair	1	5	7
7 Main Baltimore	Fair	Fair	Fair	Best	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair	1	6	6

TIER 2 ALTERNATIVES

- Build
 - Main St. Streetcar
 - Grand Blvd. Streetcar
- TSM (Trans. System Mgmt.)
 - Main St. Enhanced Bus
 - Grand Blvd. Enhanced Bus
- No Build/ Base Case
 - Existing transit services plus those improvements that are currently planned for future implementation



TIER 2 TECHNOLOGY

	No-Build	Build: Streetcar	TSM: Enhanced Bus
Vehicle Technology	Existing mix of MAX and local bus service	Modern streetcar	MAX-style buses
Stations	Existing MAX stations and local bus stops	Similar to enhanced bus but with longer shelter and platform lengths, and on-vehicle ticketing	MAX-like stations and amenities plus off-vehicle ticketing
Operations	Continuation of existing bus routes with CSA improvements	Operation on existing streets, primarily in mixed traffic	Operation on existing streets, primarily in mixed traffic
Station Locations	Existing locations only	Approximately every two blocks	Approximately every two blocks
Transit Priority	Peak period bus lanes in some areas along Main Street MAX	<ul style="list-style-type: none"> ◆ Bulb outs at some side station locations ◆ Limited sections of streetcar only operation ◆ Traffic signal priority at some intersections ◆ Separate streetcar signal phases at some intersections 	<ul style="list-style-type: none"> ◆ Queue jump lanes at signalized intersections ◆ Limited areas with bus only lanes ◆ Traffic signal priority at some intersections
Roadway and Traffic Changes	Existing traffic configurations maintained (which includes peak period bus lanes in some areas)	<ul style="list-style-type: none"> ◆ For the Main Street alternative, Main Street converted to 2 lanes in each direction ◆ On both Main and Grand, left turns prohibited at some intersections 	For the Main Street alternative, Main Street converted to 2 lanes in each direction with center left-turn lane south of the Loop

Modern Streetcar



Enhanced Bus



TIER 2 SCREENING

- More detailed than Tier 1:
 - Station Locations
 - Operating Plans and Costs
 - Conceptual Engineering
 - Capital Costs
 - Ridership, Transit System User Benefits, & Cost Effectiveness
 - Transportation Impacts
 - Utility Coordination
 - NEPA Compliance
 - Funding Potential

TIER 2 EVALUATION

Primary Criteria	Strongest Alignment	Strongest Mode
Activity Center Connections	Main Street	None
Activity Levels	None	None
Pedestrian and Bicycle Connections	None	None
Economic Development Activity	None	None
Economic Development Potential	Main Street	Streetcar
Residential and Employment Activity	Main Street	Streetcar
Transit Reliability	Main Street	None
Public and Stakeholder Input	Main Street	Streetcar
Ridership	Main Street	Streetcar
Capital Costs	None	Enhanced Bus
Service Effectiveness	Main Street	Streetcar
Environmental and Natural Resources	None	None
Note: this table shows a summary of the Tier 2 evaluation. Refer to the text of section 4.3 for additional details.		

Locally Preferred Alternative



Cost to Build = \$102 M

Cost to Operate =

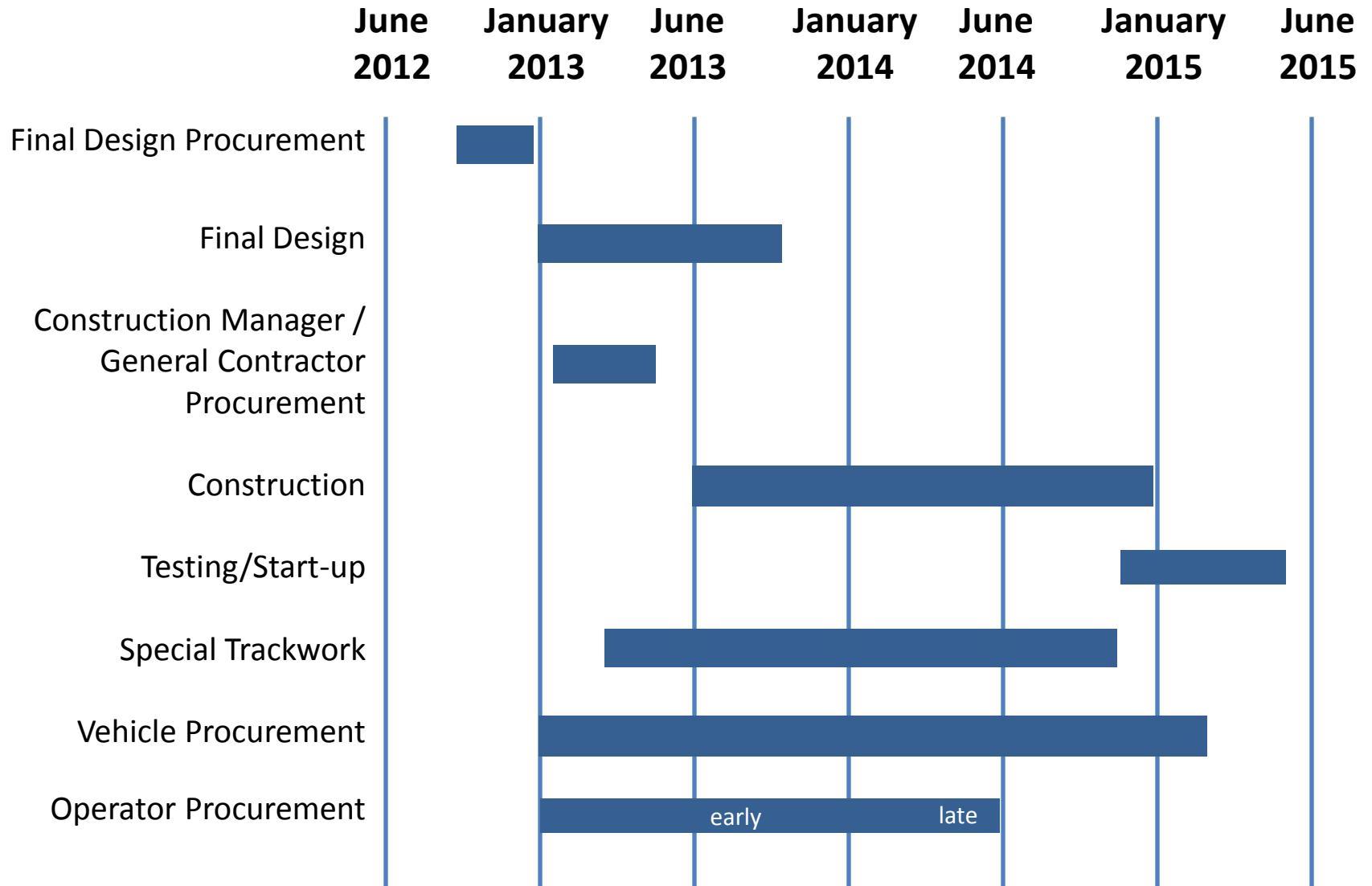
Approx. \$2.6 M

NOT JUST ANOTHER “PLAN FOR THE SHELF”

Great plans are only great plans.
Implementation requires leadership....



Project Schedule



Major Milestones

- Completed Environmental Assessment (EA) and received a FONSI from FTA.
- TIGER grant award rounds out needed funding to begin vehicle procurement and construction.
- Law suits dismissed.
- General contractor procured
 - Kansas City Streetcar Constructors: Joint venture partnership of Herzog Construction Corp. of St. Joseph, Missouri and Stacy and Witbeck, Inc. of Alameda, California
- Streetcar manufacturers selected/vehicles ordered

URBOS 3 BY CAF



Low floor, 45 mph, supercapacitors, 148 passenger capacity, bike storage, \$4 million per vehicle



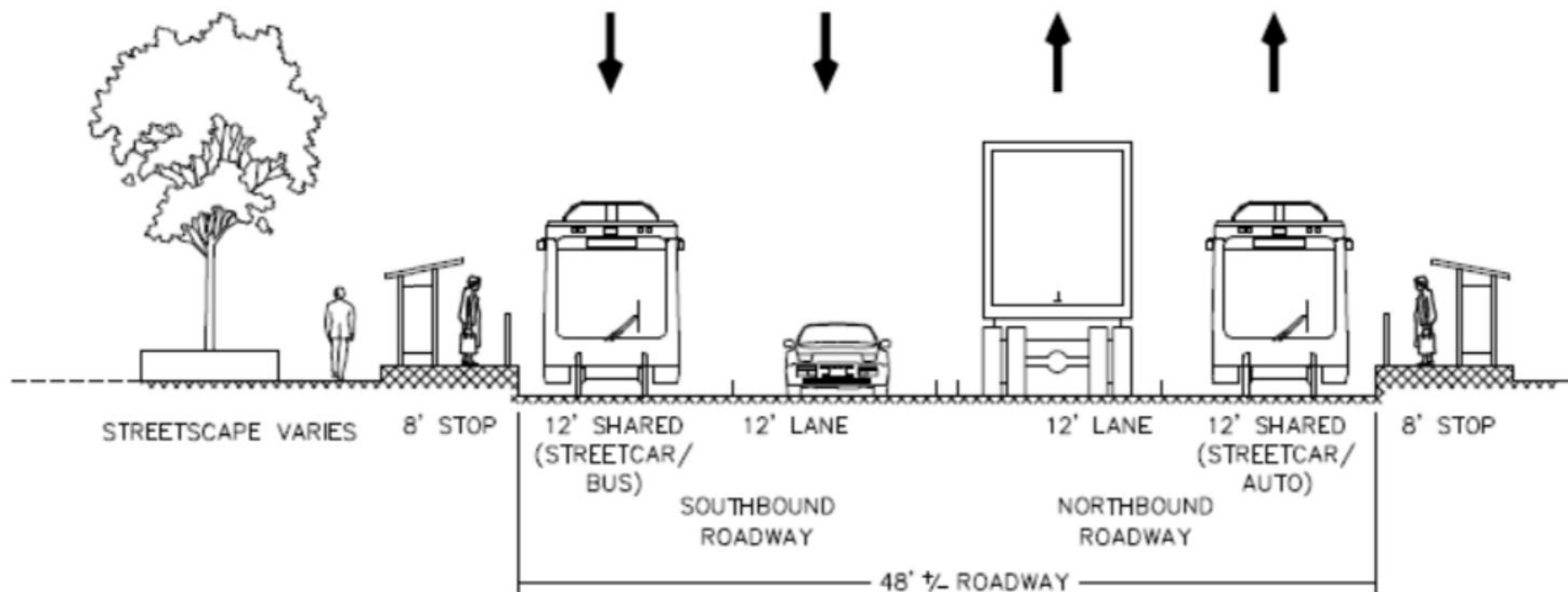
Operating Authority

- Kansas City Streetcar Authority
 - Incorporated in August 2012 after voters approved creation of TDD
 - 13-member board
 - Modeled after Portland Streetcar authority
 - Charged with operating the streetcar service once constructed

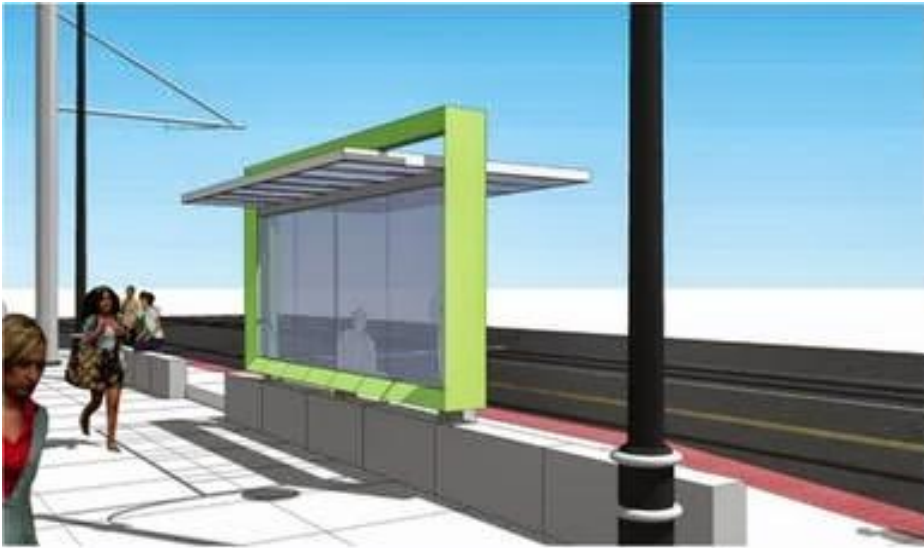
Operations



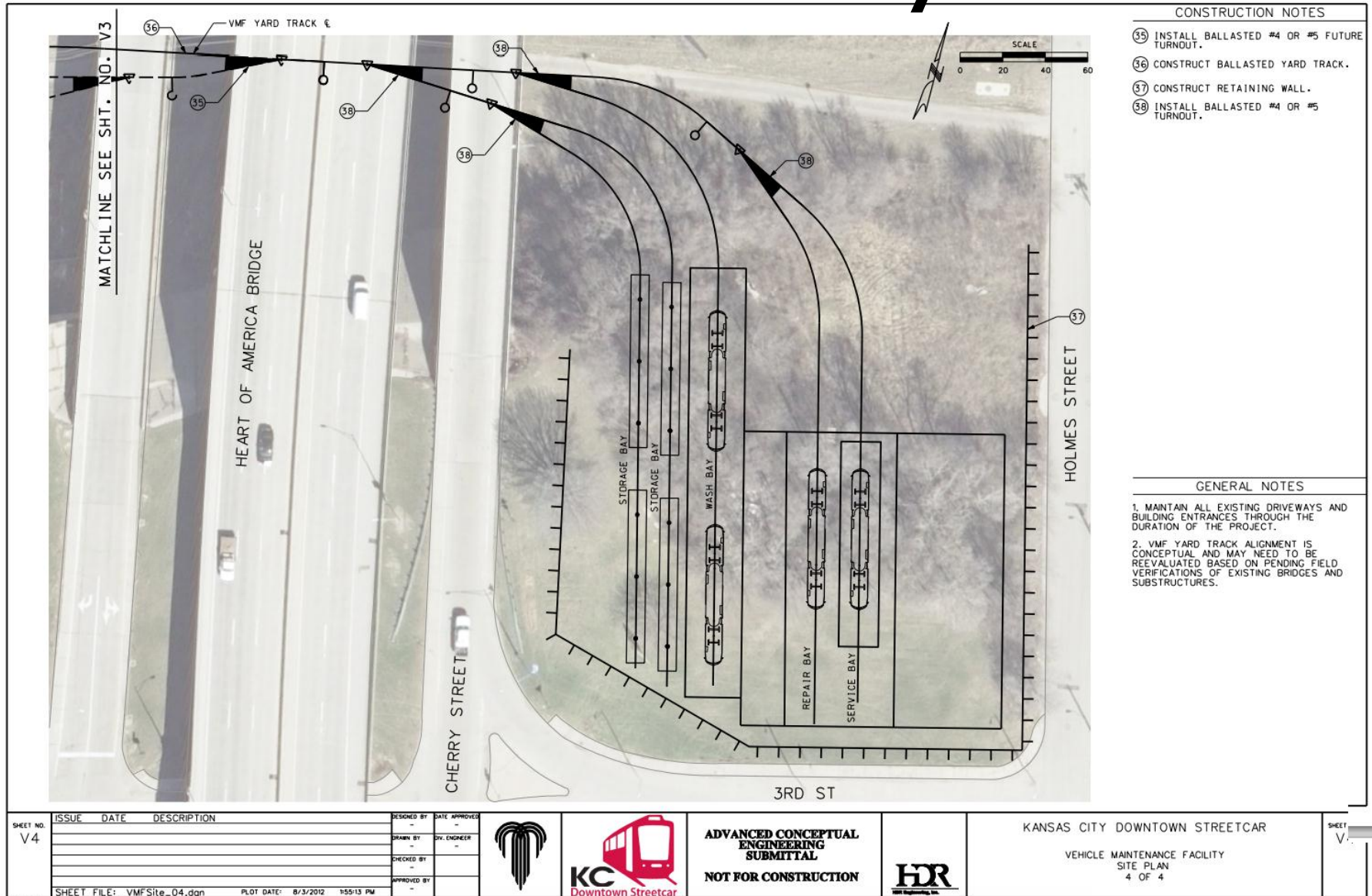
- 18 curbside stations (2 blocks apart)
- 7 days/week
- 11 minutes headways through PM peak, then 22
- Extended hours of operation on Friday & Saturday
- One-way running time: 14 minutes
- Fare free! (for now)



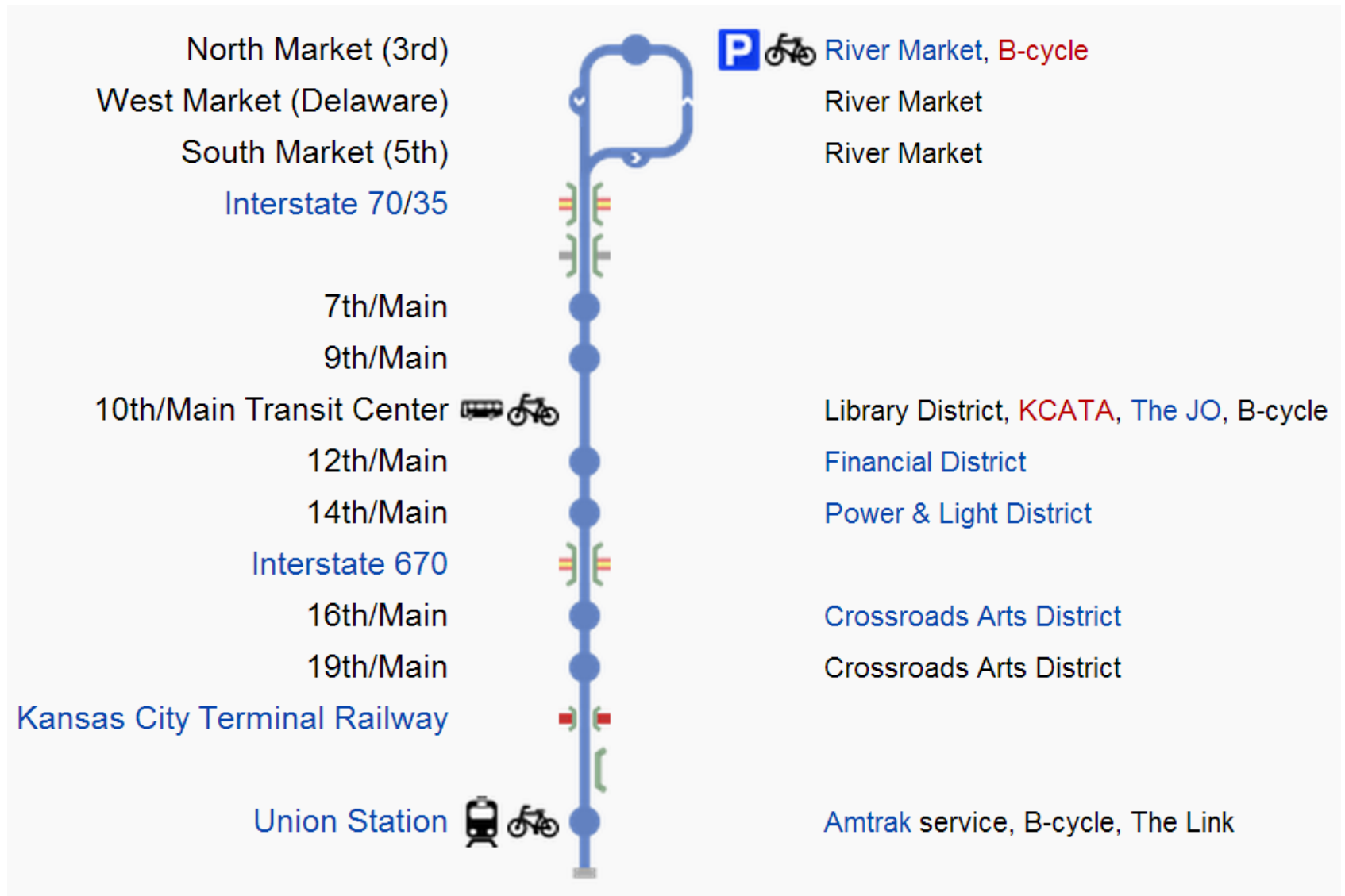
Station Design



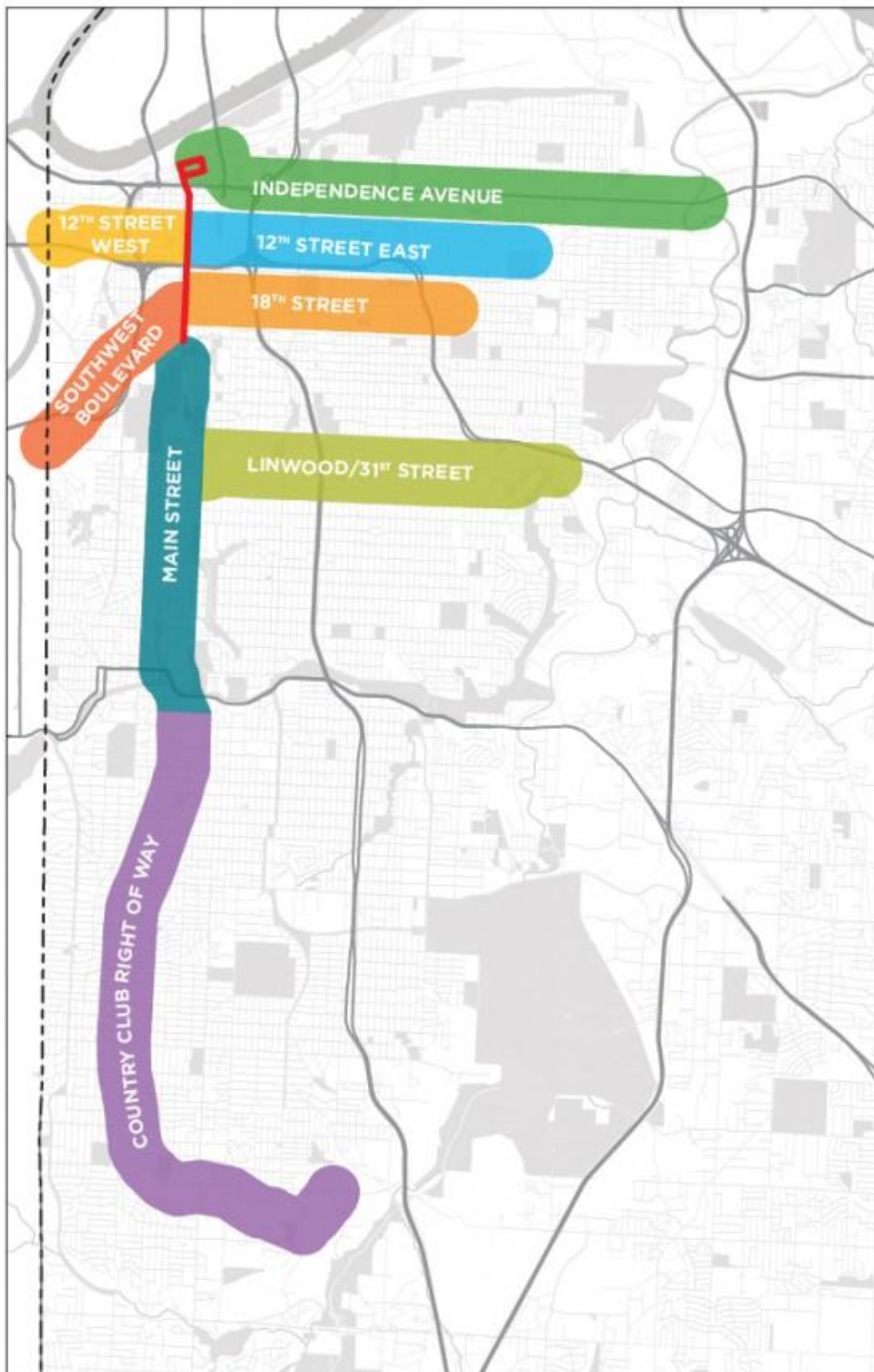
Maintenance Facility



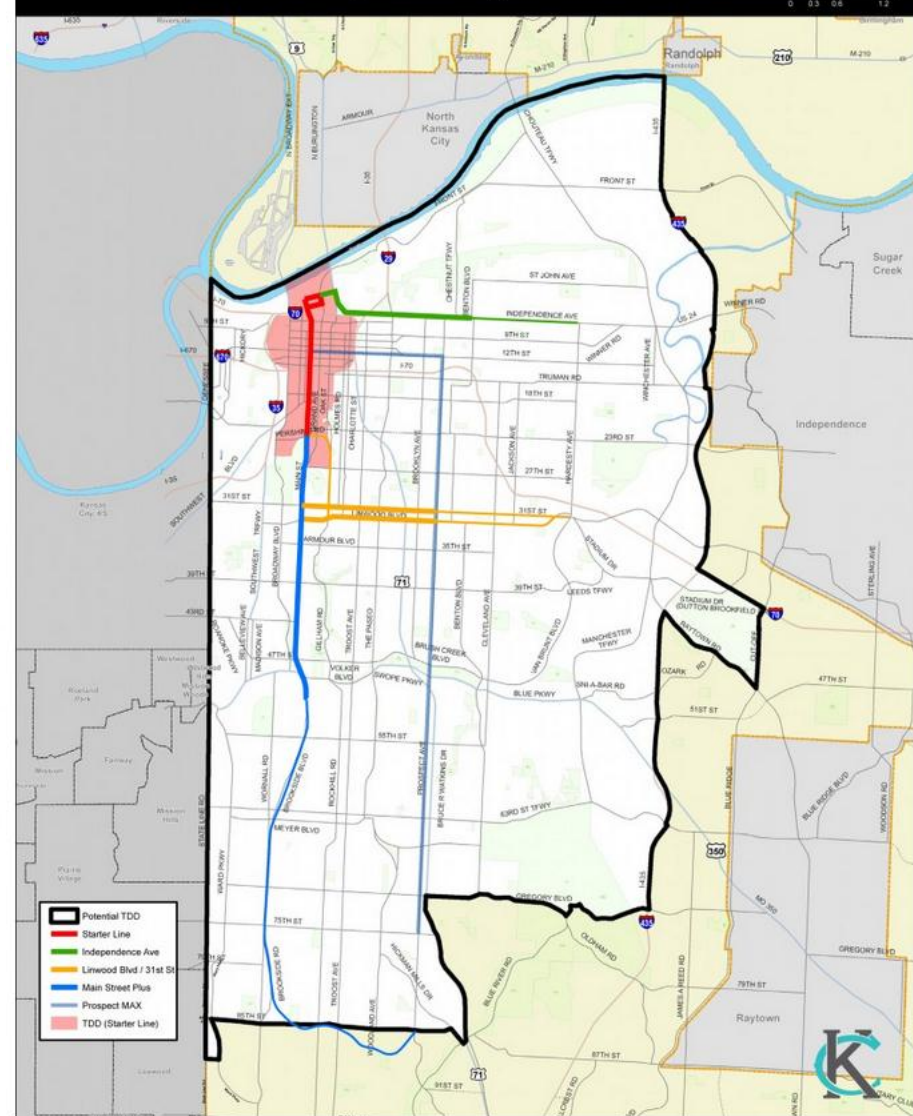
CONNECTIONS







Potential TDD Boundary - January 2014



Questions?

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