

NATURAL BRIDGE ROAD | ROUTE 115

Great Streets Assessment

Natural Bridge/Route 115 Great Streets Assessment





Agenda

1. Corridor History
2. What is 'Great Streets'
3. Project Scoping & Construction
4. Post Construction Analysis
5. Benefit-Cost Analysis
6. Questions

Speaker Introductions



Mike Dolde

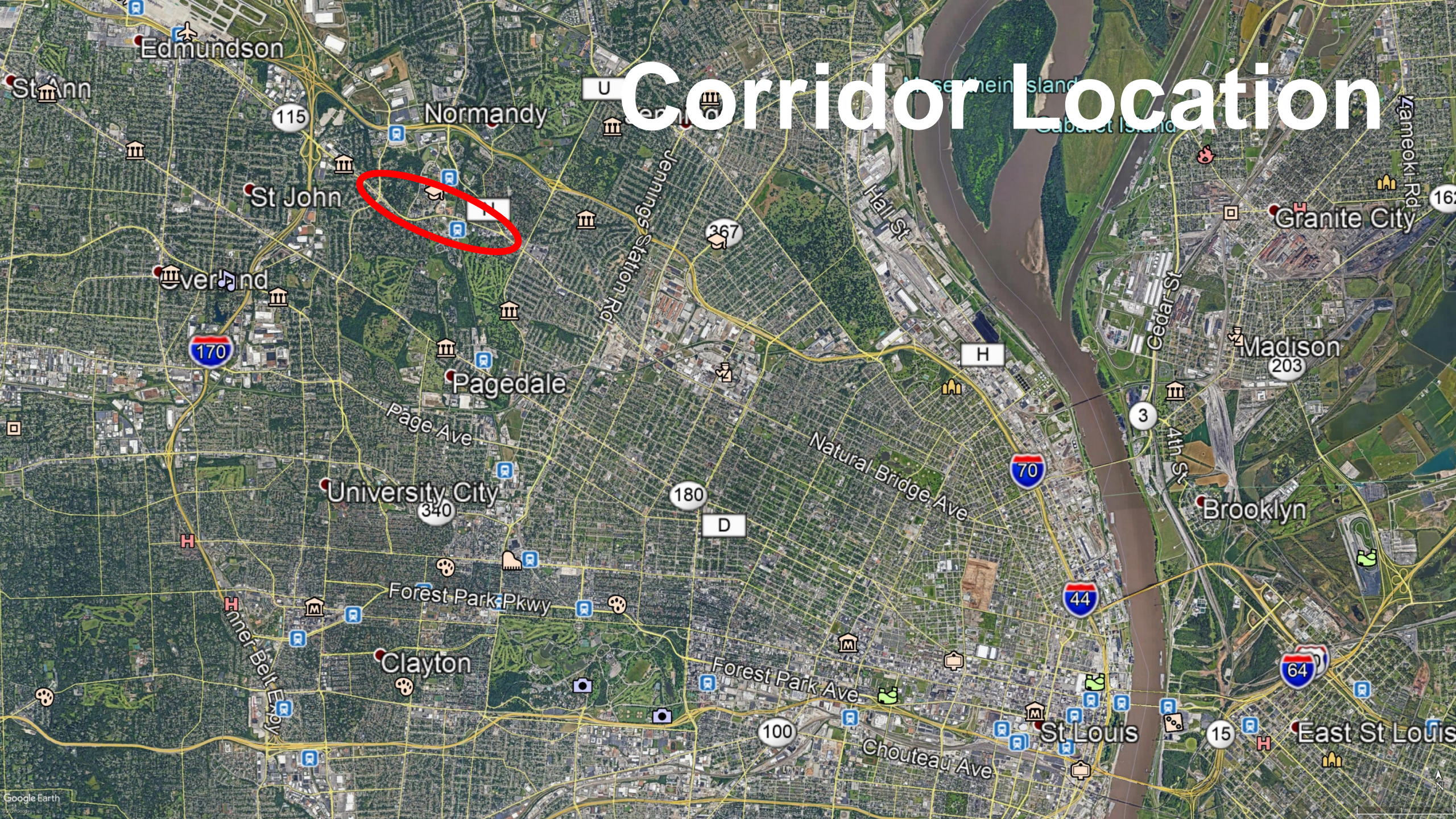


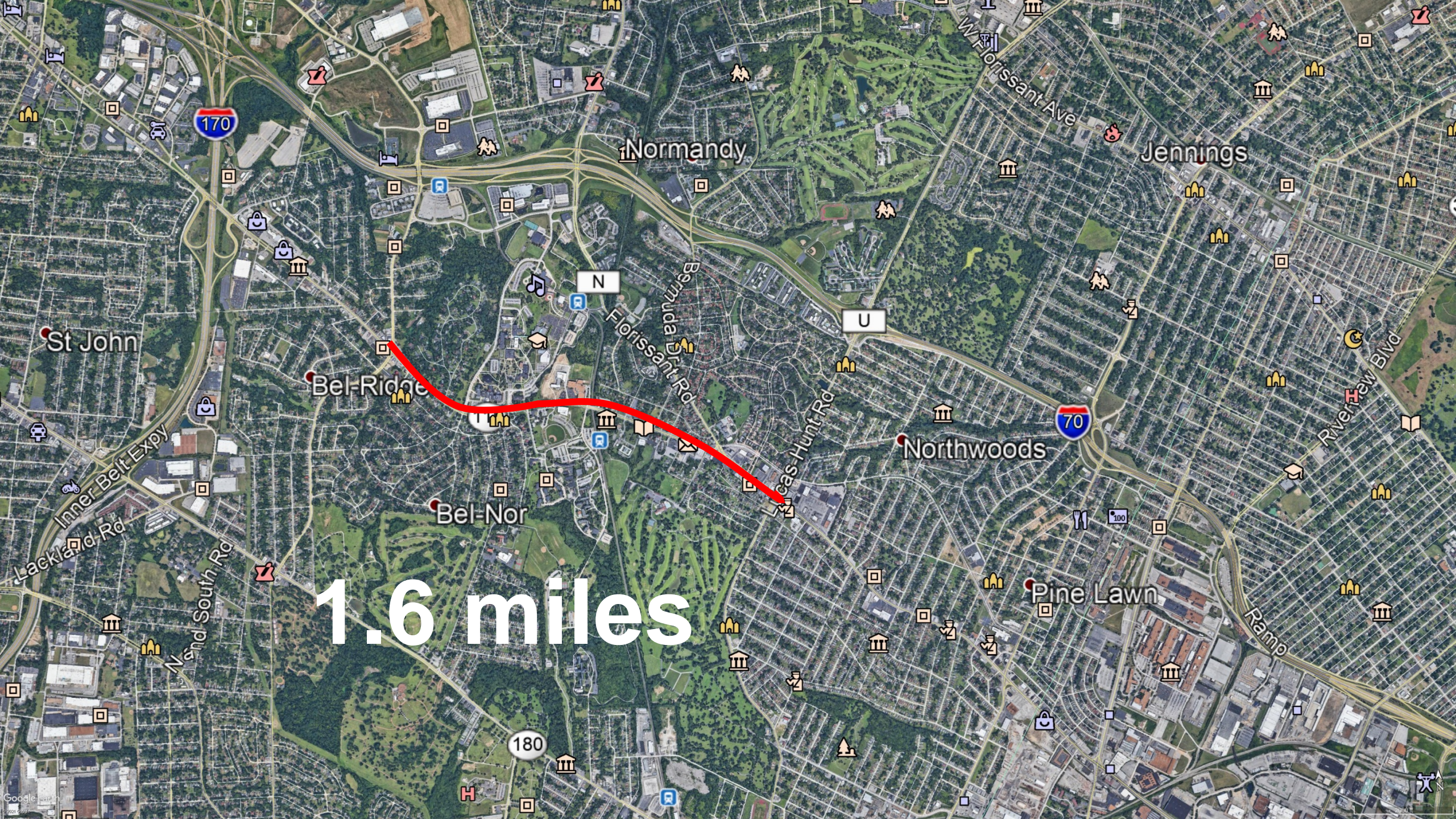
Gabor Debreczeni

Corridor History

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Corridor Location





1.6 miles

- Excess capacity and width of roadway
- Lack of solidified access management
- Lack of safe pedestrian sidewalks
- Overlapping parking with sidewalks
- Excess vehicular speeding
- No bicycle facilities





- Excess capacity and width of roadway
- Excess vehicular speeding
- High traffic land use
- Lack of and unsafe pedestrian crossings
- Not great walking experience
- No bicycle facilities



- Excess capacity and width of roadway
- Excess vehicular speeding
- Vacant land ripe for redevelopment
- Lack of and unsafe pedestrian crossings
- Transit station access not visible and connected
- No bicycle facilities



- Excess capacity and width of roadway
- Lack of solidified access management
- Lack of safe pedestrian sidewalks/crossings
- Excess vehicular speeding
- No bicycle facilities



- Unsafe and geometrically confusing intersection
- Excess capacity and width of roadway
- Lack of solidified access management
- Lack of safe pedestrian sidewalks/crossings
- Excess vehicular speeding
- Overlapping parking with sidewalks
- Lack of sense of place
- No bicycle facilities



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Issues from Before Analysis:

- **Wide, under-utilized corridor** serving a diverse mix of residential, commercial, and institutional traffic.
- Overcapacity of roadway for the 8,000 to 20,000 cars per day traffic count exemplifies the roads over built condition.
- MetroLink Station located approximately midway between Lucas and Hunt Road and Clearview Drive/West Drive **lacks sufficient connectivity**
- **Few parks and green space** in the area and along the corridor.
- **Access is inconsistent** and private parking overlaps the public sidewalk and roadway in some areas.
- Lack of bike lanes and problematic and unsafe pedestrian facilities.
- **Limited parking** for private property accentuates



Reasons for a Great Streets Consideration:

1. **Community requested** – partners, agencies, and private land owners all engaged on consensus
2. Realization of the **issues**
3. **Safety for all users** – and high demographics of walking, biking, and transit riders
4. Opportunity for **development** changes
5. Long-term community benefits
6. Ways to address **speeding**
7. Opportunity to create a **sense of place**
8. Opportunity to minimize pavement and **add pervious surfaces and greenspace**



What is Great Streets?

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Principle #1

Great Streets are Great Places

The street is public space. Features such as buildings, walkways, open space, and activity help establish a community's sense of place.

Principle #2

Great Streets Integrate Land Use and Transportation Planning

The transportation network is planned to refine and support a community's vision. Both the land use and transportation elements must work cohesively at the local level and within a regional context.

Principle #3

Great Streets Accommodate all Users and all Modes

A plan includes a practical network of all travel modes. Trips to, through, and within an area are all facilitated. Priority for pedestrians, motorists, transit riders, cyclists, and service functions is balanced according to use and need. Most every trip begins and ends on foot, so parking, transit stops, and bicycle facilities provide safe and amenable transitions to walking.

Principle #4

Great Streets are Economically Vibrant

A healthy local economy draws diverse functions, attracts investment, builds creative fiscal stewardship, and supports social activity. Great streets provide stability and resilience for surrounding neighborhoods. They also offer healthy and free access to neighborhood retail and services for those who live or work near them.

Principle #5

Great Streets are Environmentally Responsible

Great Streets provide an attractive and refreshing environment by working in concert with natural systems. Addressing environmental concerns such as storm water runoff, urban heat island effect, planting maintenance, as well as air, sound and light pollution, can add value and durability by reducing energy consumption, waste, and project costs.

Principle #6

Great Streets Rely on Current Thinking

Great Streets rely on current best practices, advances in technology, and lessons learned from local and global examples. Collaboration with those charged with plan implementation is essential when applying such practices to the local context.

Principle #7

Great Streets are Measurable

Key issues are identified and considered in terms of current conditions and aspirations. Defining important issues, goals, and strategies facilitates constructive discussion when weighing priorities and resources. Tying measures to the goals allows key elements of a project to be assessed over time.

Principle #8

Great Streets Develop Collaboratively

Combining local knowledge with technical skill is essential. People who live, work, and play in a place must work with a design team throughout a planning process. In doing so, the community develops a sense of ownership and an expectation to effect change. All involved must be well prepared to evaluate the work and weigh competing issues. The process is equally important as the final plan.

East West Gateway's Great Streets Principles

List improvements

- Florissant Road and Natural Bridge Road Intersection
- Transit Improvements – Bus and MetroLink
- Public Art, Signage, Landscaping, and Utility Placement



Pedestrian and Bicycle Improvements



- Redesign road to three lanes with bike lanes, sidewalks, and on-street parking
- Enhance access management



Performance Assessment and Scope

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Transportation Assessment



Corridor Operating Conditions



Signalized
Intersections

Roundabout

Mid-block Ped
Crossings

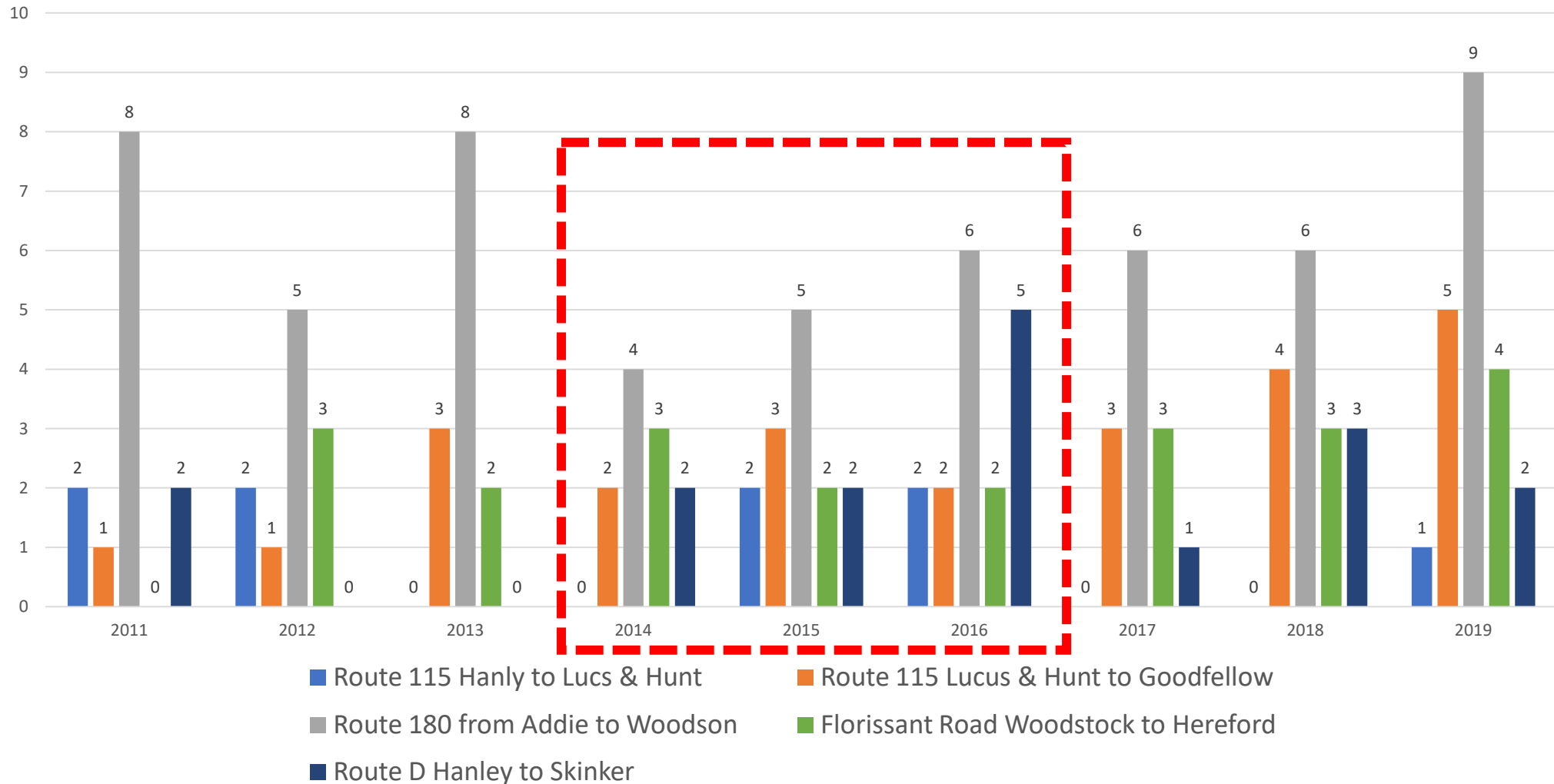


Intersection Performance

PM Peak Period	2010 Existing		2030 Build Forecasted		2017 Calculated	
Intersection	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Hanley	NA	NA	NA	NA	53.0	D
West/Clearview	15.4	B	19.2	B	14.8	B
University/Arlmont	21.7	C	31.7	C	20.2	C
Normandy Middle School	18.6	B	15.0	B	5.1	A
St. Ann's Lane	18.0	B	19.1	B	7.3	A
Florissant	15.3	B	25.2	C	NA	NA
Lucas-Hunt	28.4	C	42.6	D	47.5	D

Bicycle & Ped Crash History

Bike and Crashes per Year

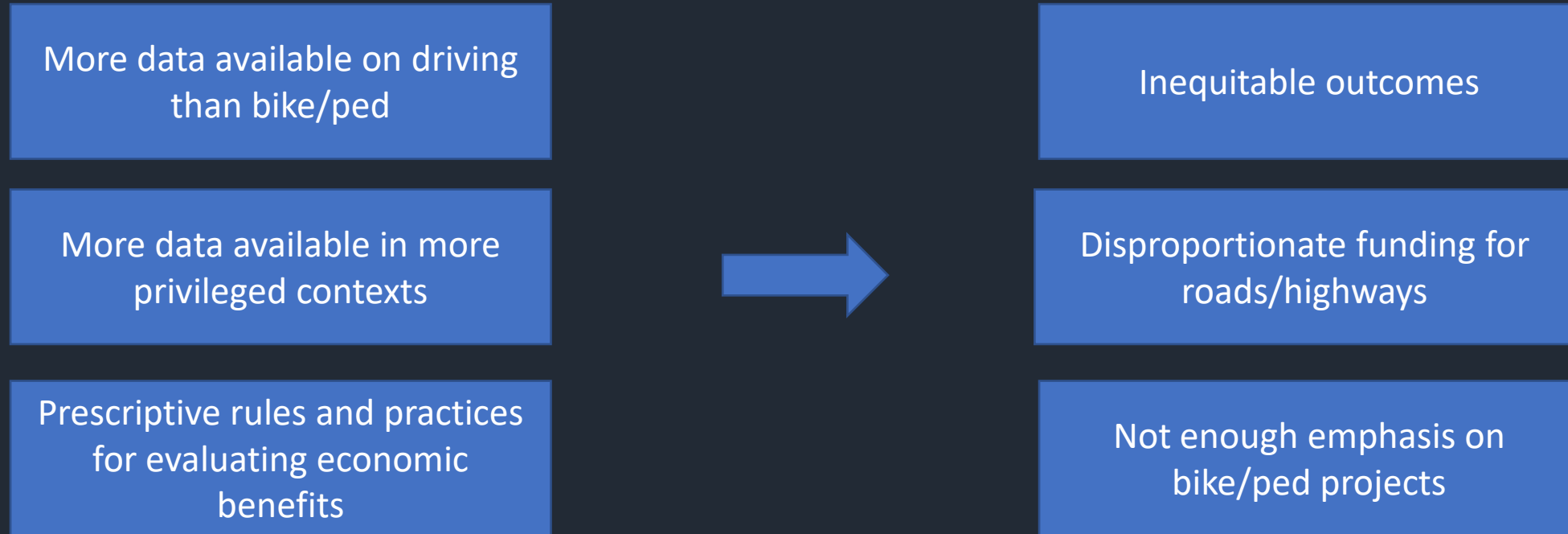




Cost Benefit Assessment Overview

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A Note About Equity, Data, and Economic Analyses



1. We attempted to address in this Great Streets project
2. A little better now given new USDOT guidance

Cost Benefit Approach

1. Broad consideration of as many benefits to community as possible
2. Tie back to Great Streets Principles where applicable
3. Request and quantify community and corridor data (retroactive analysis)






















	Cost Benefit Indicators	Volumes 	Speeds 	Operations 	Safety 
Mobility Benefits	Operations 	✓	✓	✓	○
	Safety 	✓	✓	✓	✓
	Walkability 	✓	✓	✓	✓
	Mode Shift 	✓	✓	✓	✓
Land Use Benefits	Development 	✓	○	○	○
	Public Realm 	○	○	○	○
Equity Benefits	Social Investment 	○	○	○	✓
	Equal Access 	✓	✓	✓	✓
Economic Benefits	Capital Investment 	○	○	○	○
	Land Value 	○	○	○	○
	Reinvestment 	○	○	○	○
	Local Tourism 	✓	○	○	✓
Environmental Benefits	Noise Pollution 	✓	✓	○	○
	Pervious Surfaces 	○	○	○	○
	Emissions 	✓	✓	✓	○
COST	Capital Cost 	○	○	○	○
	Maintenance Cost 	✓	○	✓	○

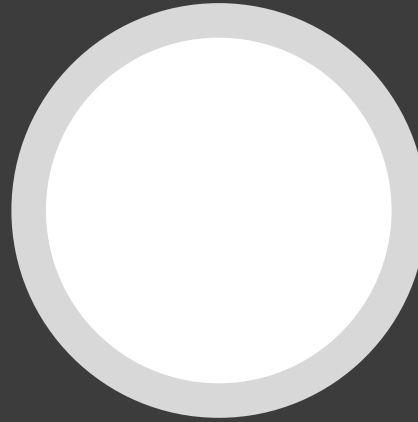
Table Comparing Performance Assessment Factors with Cost Benefit Analysis Indicators



Mobility Indicators

- **Walkability** – sidewalks, shorter distances for crosswalks, health benefits
- **Mode Shift** – more walkable local trips, enhanced transit connections, safer bike facilities (mode value added)

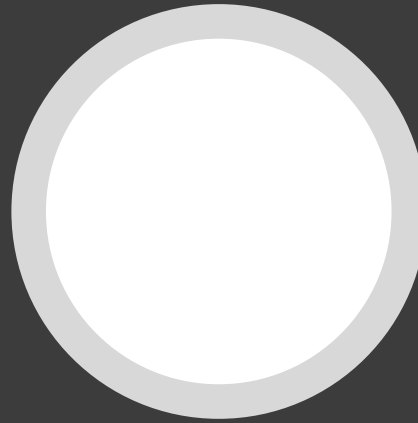




Land Use Indicators

- **Public Realm** – there is a sense of community and pride along the corridor, landscaping and sense of place adding value to residents and businesses

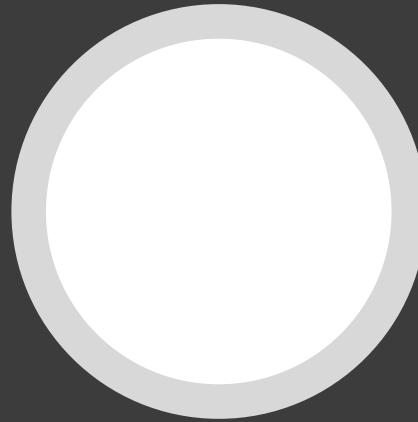




Equity Indicators

- **Social Investment** – intergenerational value of encouraging walking at younger age, access to parks, schools and activity centers, local economy
- **Equal Access** – great place for all ages and abilities






















Environmental Indicators

- **Noise Pollution** – stress and health benefits, public space for people
- **Pervious Surfaces** – increase in green space, stormwater management, street trees



Cost Benefit Summary

- ❖ Better analyses if more focus on the people and communities
- ❖ Benefit to cost ratio is significant
- ❖ We intuitively know this for bike/ped projects – just challenging to prove out given data issues highlighted earlier
- ❖ Would expect this to be the case for other bike/ped projects

Cost Benefit Indicators		Summary of Benefits by Indicator
Operations 	-\$4.02M	Mobility Benefits: The mobility benefits total approximately \$38.91M and include time saved for pedestrians, increased access to quality transit, new mobility options for all modes, less need for parking, time saved for parents near the schools. An additional benefit of approximately \$18.6M is gained due to increase in walking and benefits and 8.5M for safety benefits including reduction in crashes and injuries, lighting, and more public safety.
Safety 	-\$8.72M	
Walkability 	-\$14.85M	
Mode Shift 	-\$11.58M	
Development 	-\$N/A	Land Use Benefits: The land use benefits total approximately \$2.58M and include increased public spaces for all people, placemaking benefits, and other community programming and amenities.
Public Realm 	-\$2.58M	
Social Investment 	-\$9.10M	Equity Benefits: The equity benefits total approximately \$19.99M and include the value of increased community connections, intergenerational benefits for the youngest residents, increased trust, community ownership and pride.
Equal Access 	-\$10.89M	
Capital Investment 	-\$3.51M	Economic Benefits: The economic benefits total approximately \$3.51M and include the value of increased spending in the local economy, which includes jobs and reinvestment.
Land Value 	-\$N/A	
Reinvestment 	-\$N/A	
Local Tourism 	-\$N/A	
Noise Pollution 	-\$2.45M	Environmental Benefits: The environmental benefits total approximately \$2.91M and include decreased emissions and pollution, decreased noise experienced, and additional green space and stormwater management.
Pervious Surfaces 	-\$302K	
Emissions 	-\$160K	
Capital Cost 	+\$12.06M	Benefit / Cost Ratio = 5.69
Maintenance Cost 	-\$135K	

Cost Benefit Results by Indicator

The background is a photograph of a suburban street. On the right, a speed limit sign for 30 mph is visible. An American flag flies on a pole. Two cars are driving on the road. Large green trees line the street under a clear blue sky.

Questions?
Or reach out to us at:
