

Leveraging Urban Freight Geography for Cargo Oriented Development

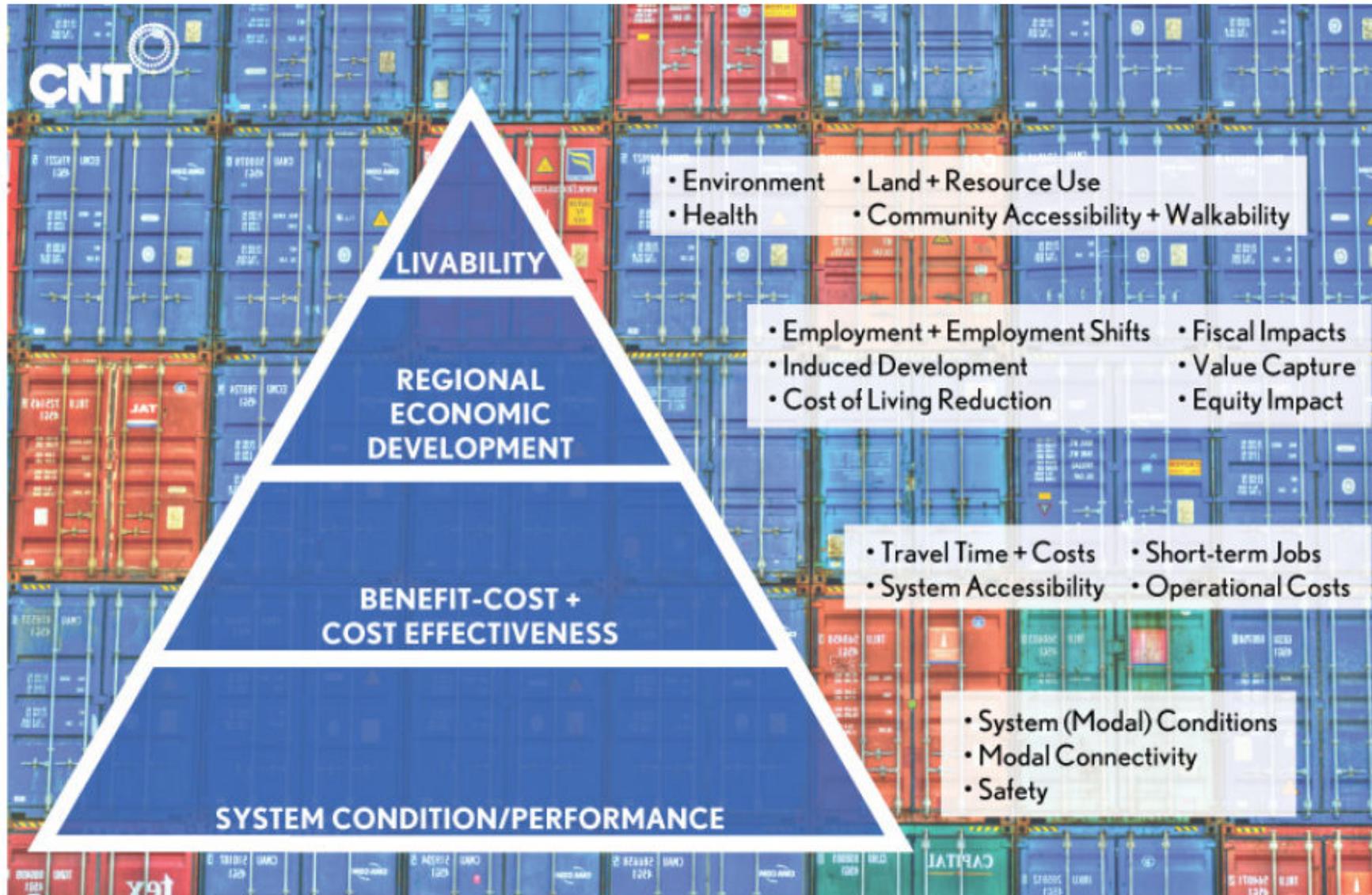
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and Mike Brown,
Metro Analytics



How do we use freight data to create an urban environment that is prosperous and sustainable?

What is Cargo Oriented Development?

- The Urban Freight Answer to “Transit Oriented Development”
- Freight Planning that Considers the Full Range of Urban Performance Areas:
 - Land Use
 - Mobility
 - Safety
 - Environmental
- Addressing issues that livability often overlooks:
 - Where do the goods in all those pretty stores come from?
 - How can you make and sell goods and still have a “Livable” City?
 - How do you balance industrial and household/personal needs for space & infrastructure?



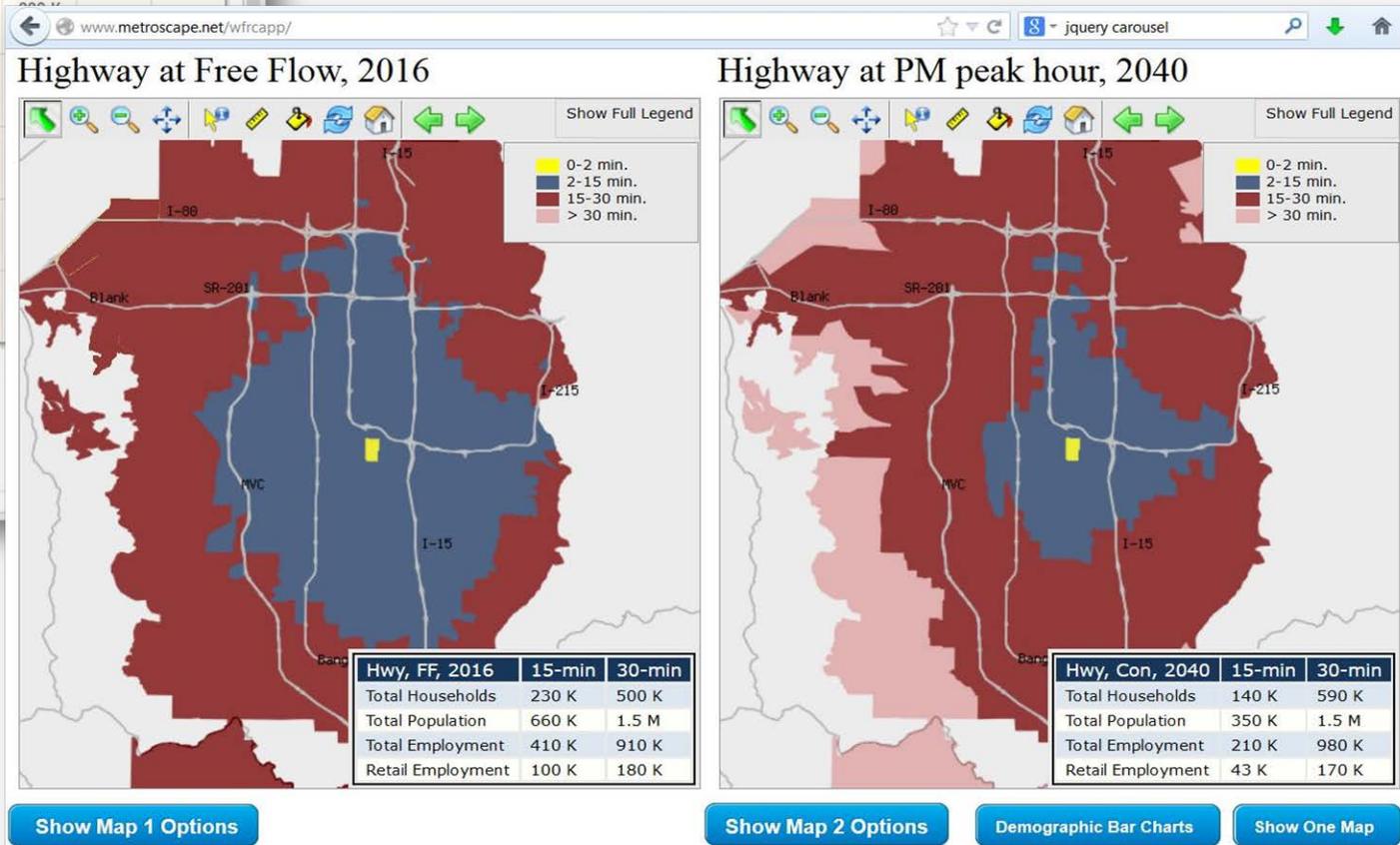
Typical COD Metrics to Benchmark/Evaluate

COD Metrics Overview		
A. Local Economic Development	B. Freight System Efficiency	C. Environmental Impact
Industrial Location Efficiency	Truck and System Productivity	Air Quality
Access for Manufacturers	Travel Time and Reliability	Water Quality
Job Creation and Career Paths	Drayage and Terminal Operations	Noise Level
Worker Transportation Access	Right-Sized Shipping	Lighting
Public Costs and Revenues		Regional Land Use
D. Safety (Affecting All Metrics)		

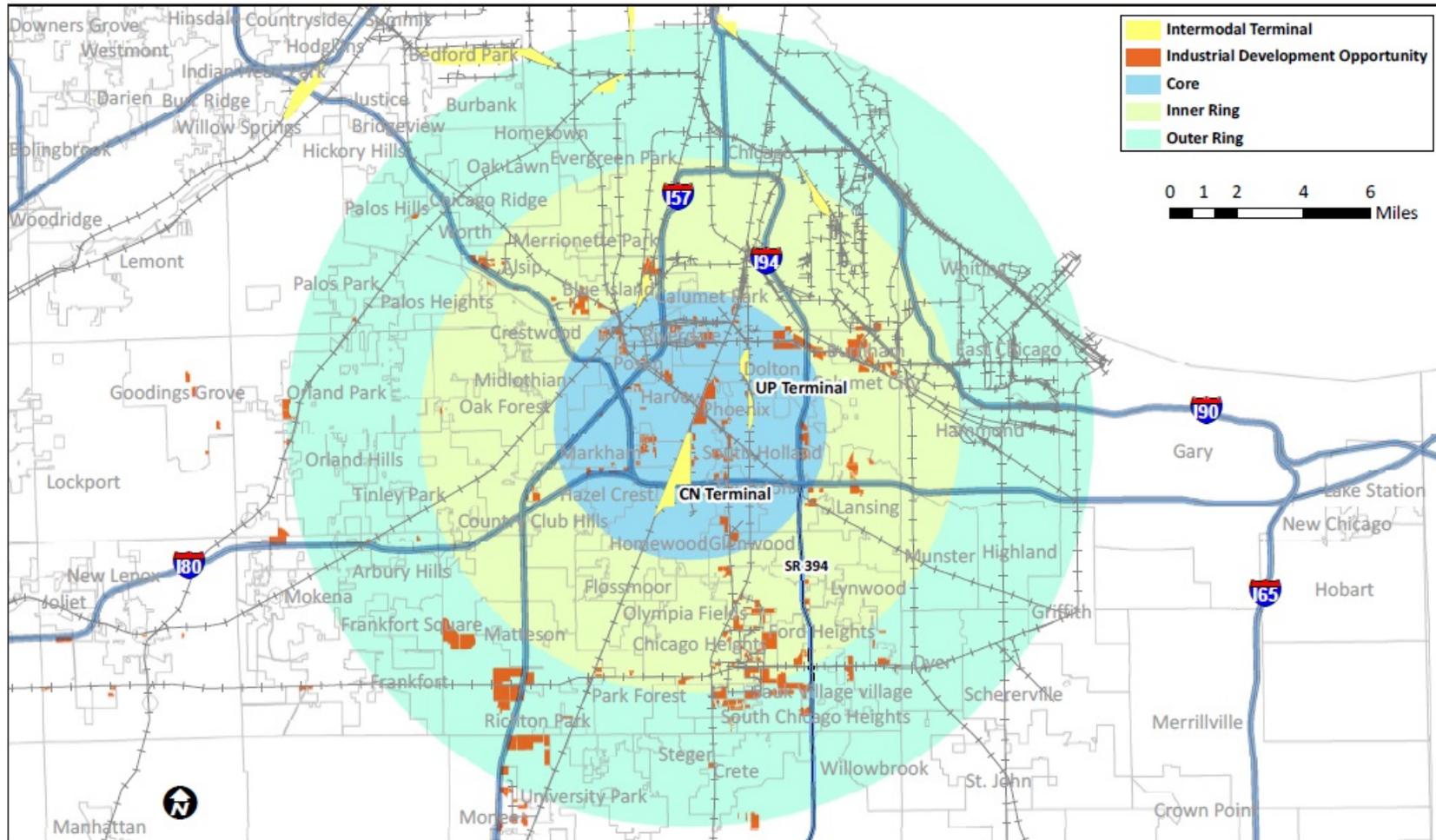
From Data to Design

- At the urban and sub-area level of geography, large expensive data bases are less important than practical and site-specific observations.
- Regional Data can provide a compass to (1) pinpoint where to focus COD efforts and (2) specify where and how innovative freight-oriented design solutions can work.
- Three data “views” are helpful for urban freight geography
 - Spatial & Quantitative View (models/traffic patterns)
 - Top-Down View (GIS/Locatoinal view)
 - Cross Sectional (Use of corridor/roadway space view)

Spatial & Quantitative Views



Top-Down View of Opportunities



Complete Street? Think Bigger – Complete System!



How can we make the best and highest use of space, revenue and access in the urban setting?

I must stop
business from
thriving...
but how?



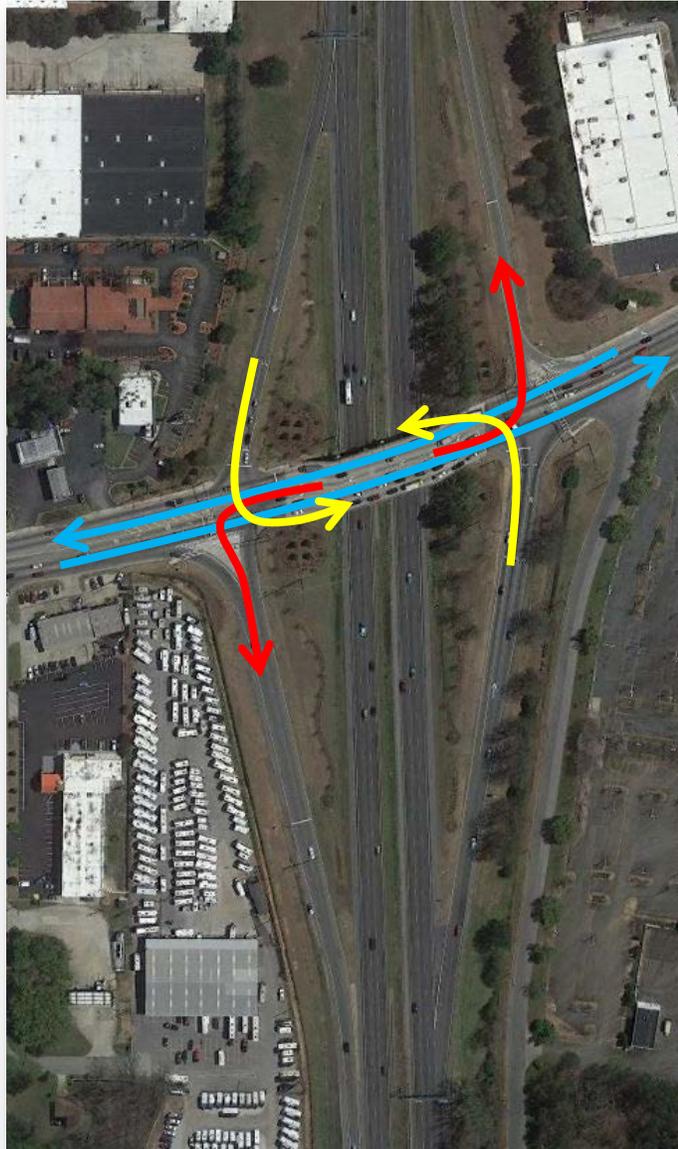
Aha! I'll become a traffic engineer, and create a huge, terrible mess!



Too Fast!

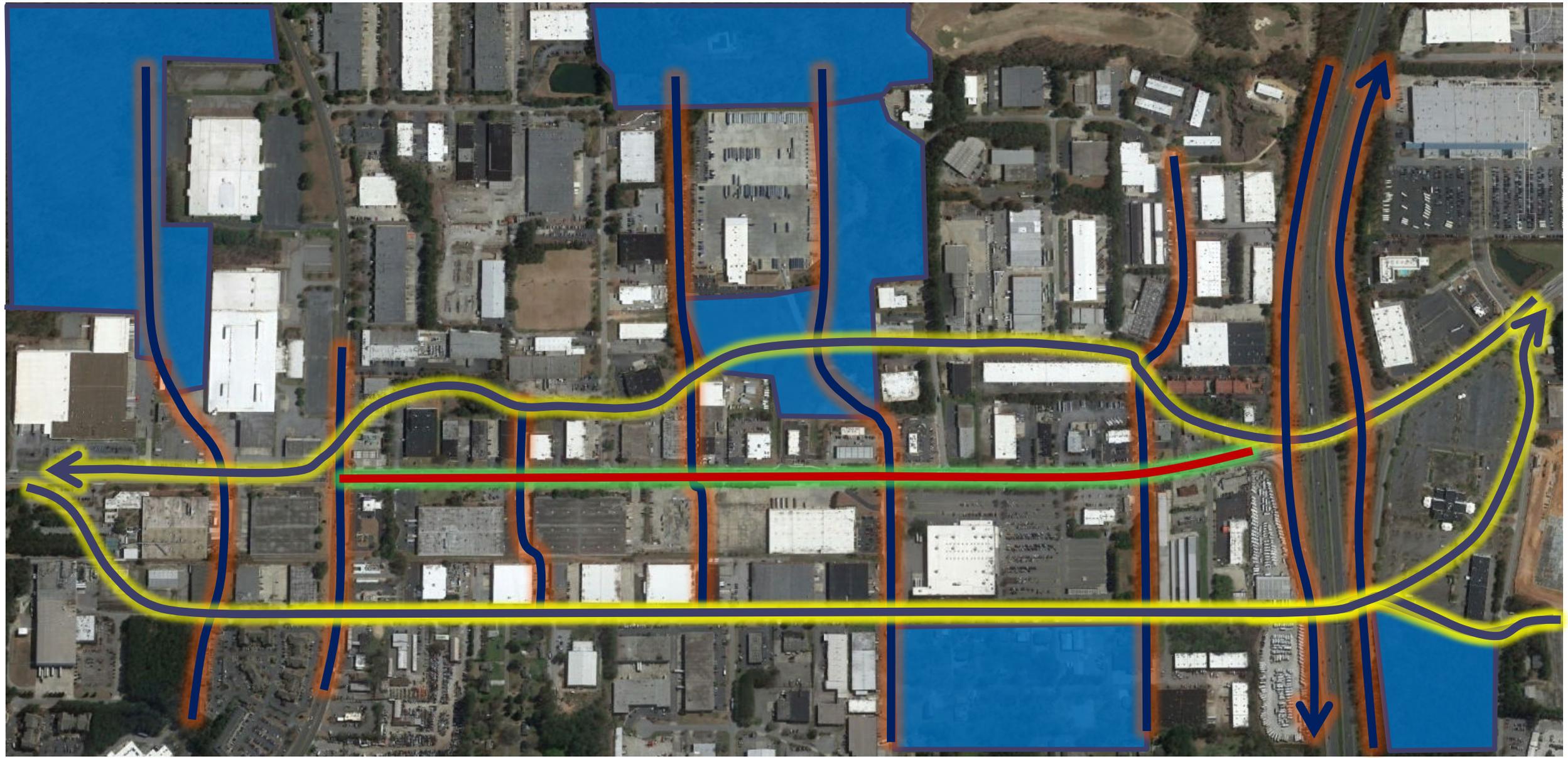
But also too slow!

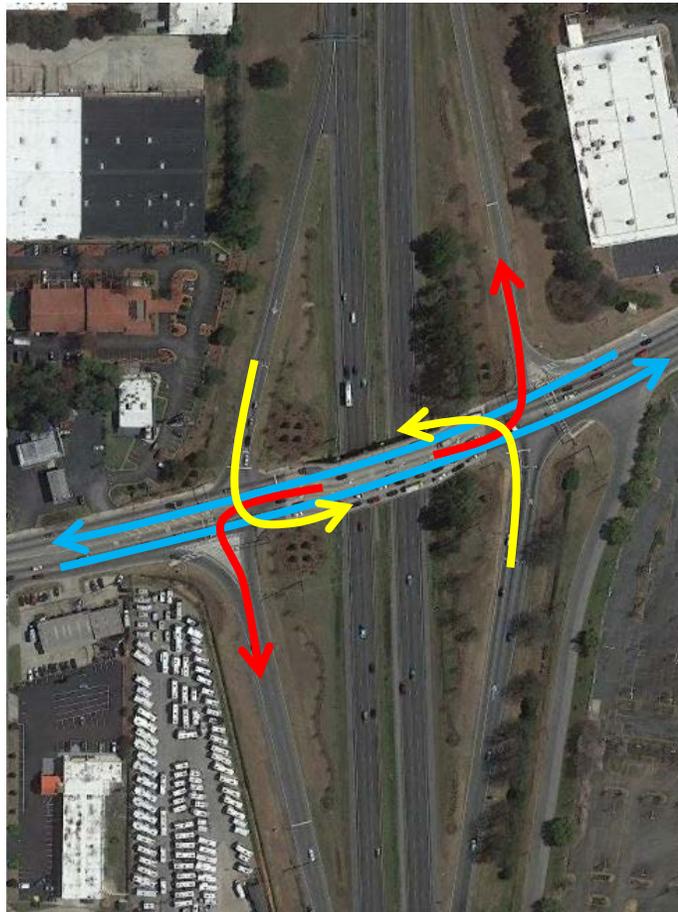




Interchanges often concentrate too much action at a single bridge, and traffic signals become overly complex.



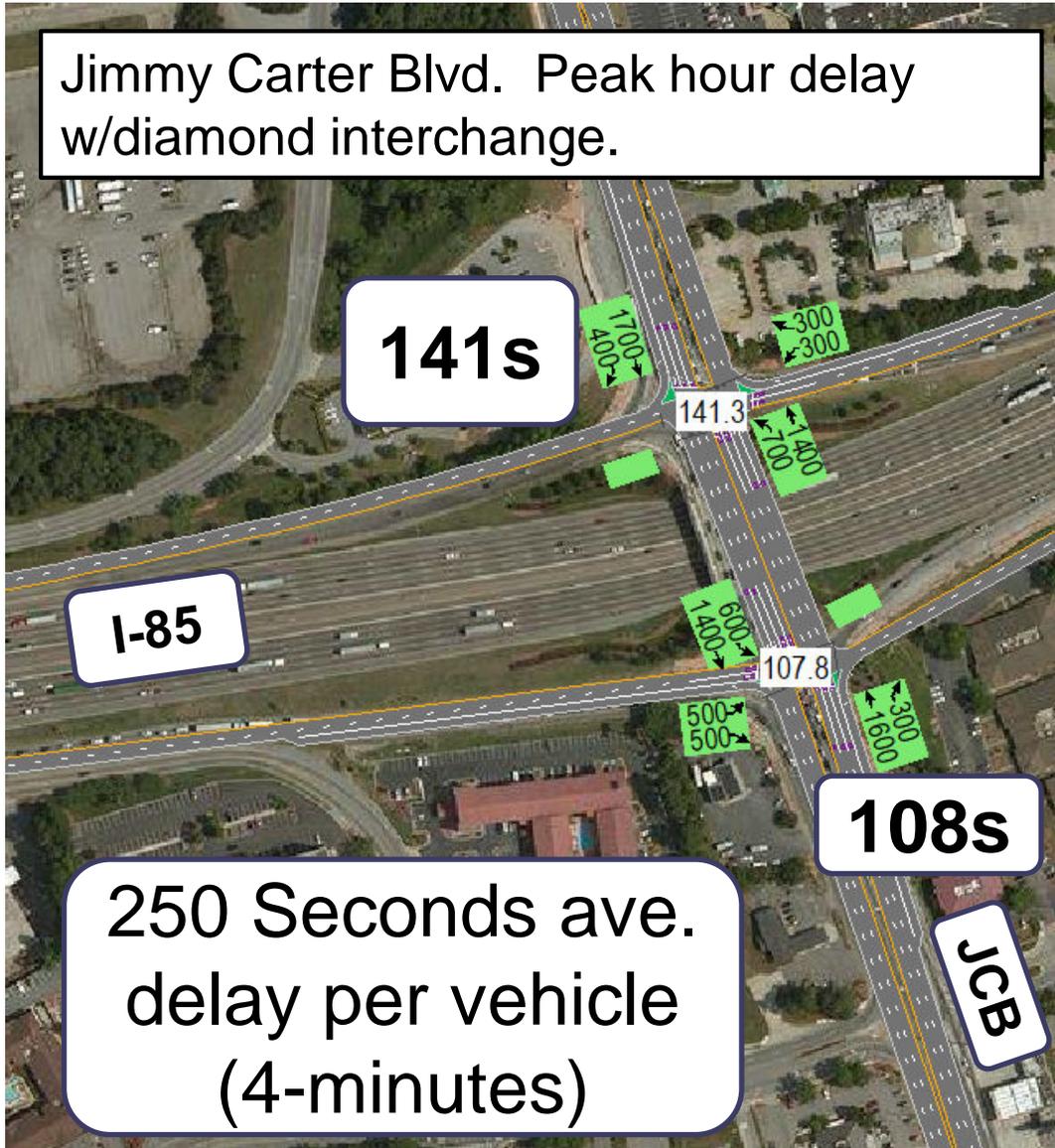




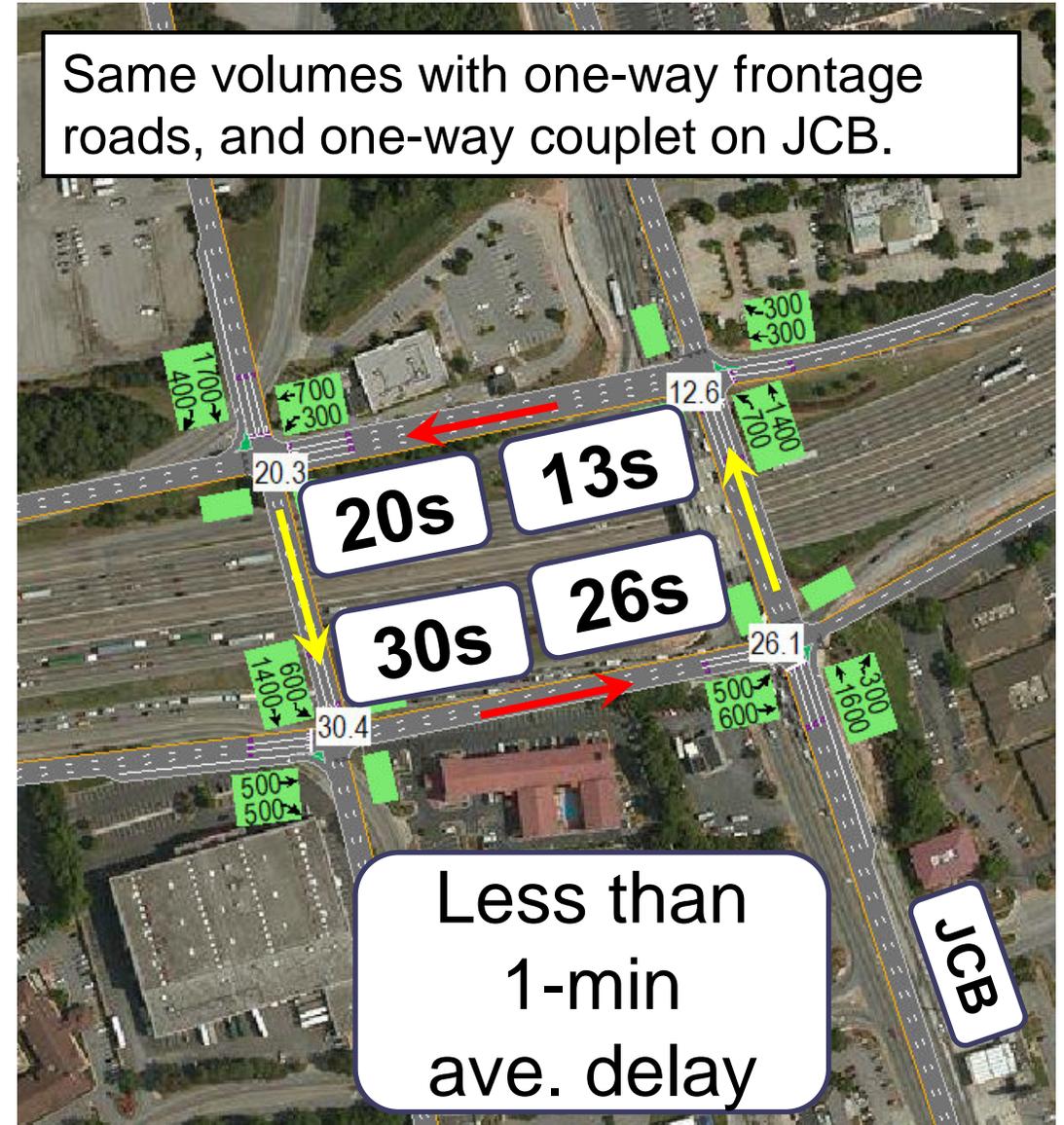
One Extra-Wide 2-way bridge, vs.
Two narrow one-way bridges in a
Split-Diamond configuration.
How does each perform?



Jimmy Carter Blvd. Peak hour delay w/diamond interchange.



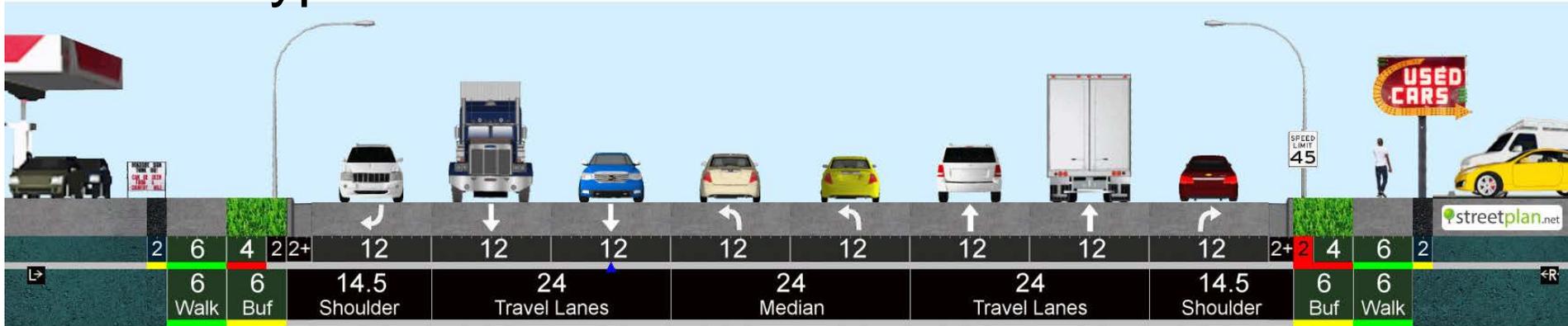
Same volumes with one-way frontage roads, and one-way couplet on JCB.



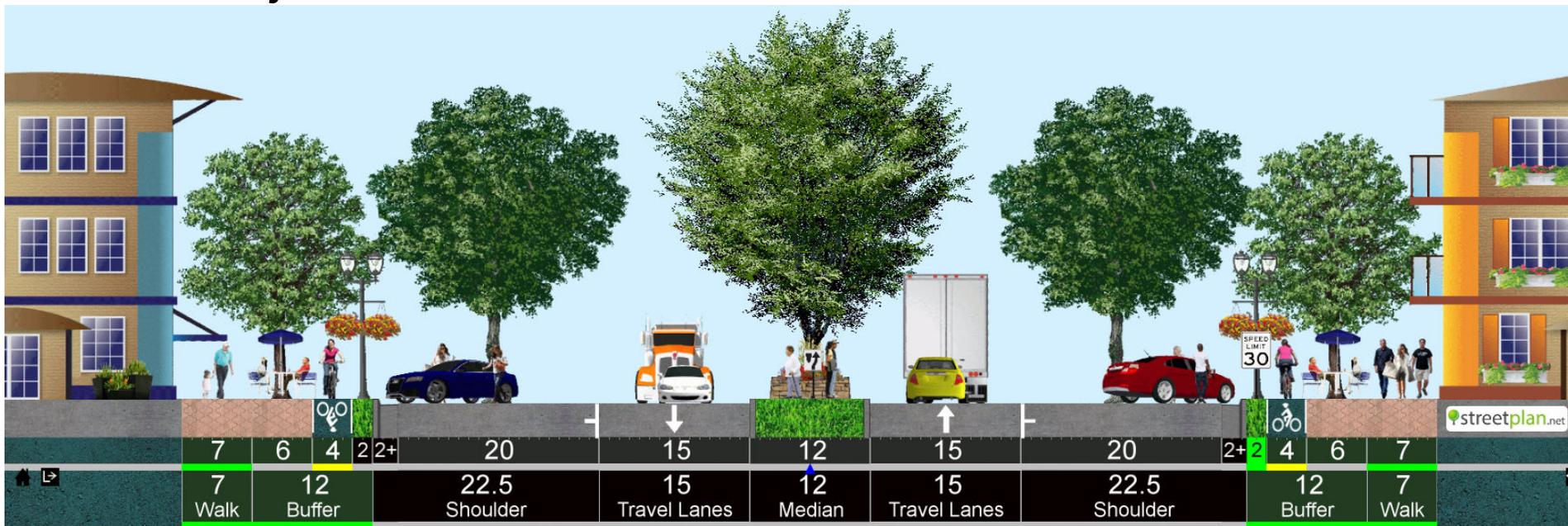
What to do now with the previous arterial?



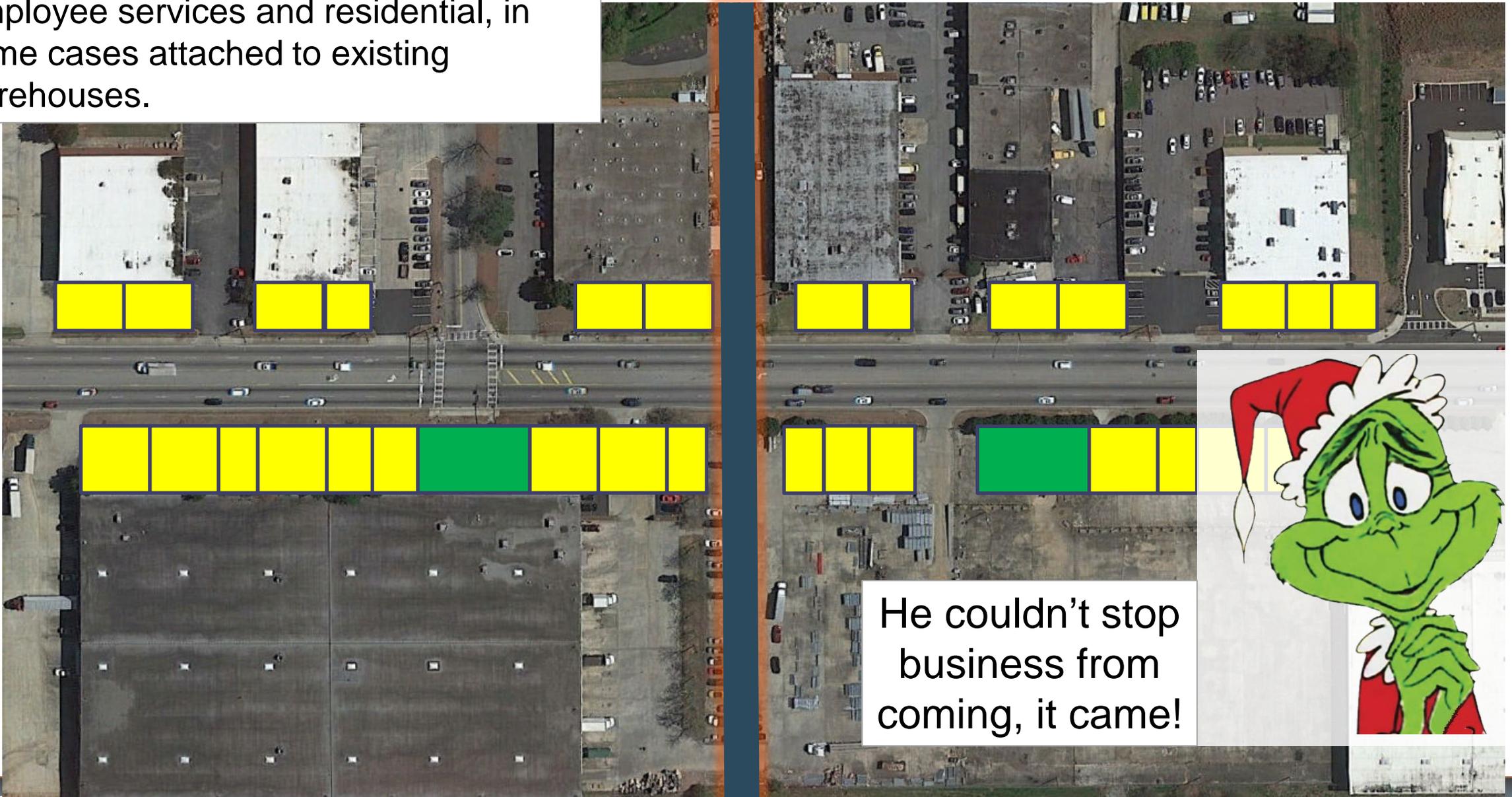
Before: Typical Industrial Arterial



After: Major traffic relocated



Employee services and residential, in some cases attached to existing warehouses.



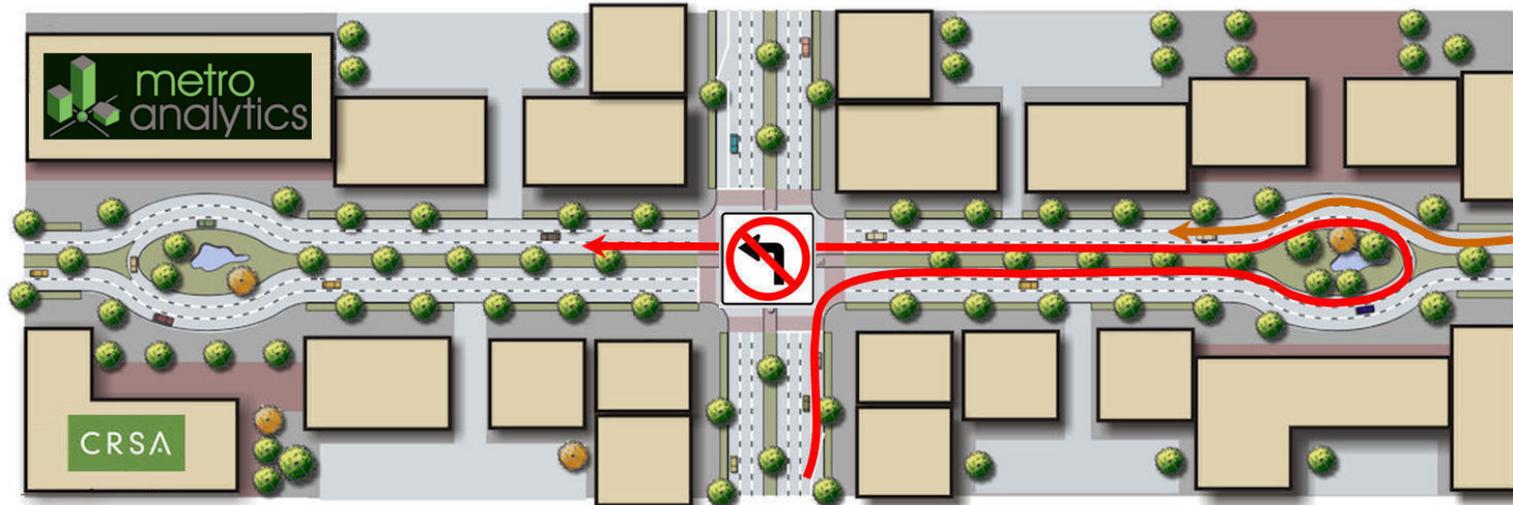
He couldn't stop business from coming, it came!



Drive Slower, Travel Faster!

Use Alternative Intersections and other strategies to reduce congestion and create thriving business environments.

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Thank You!

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www.innovativeintersections.org

<https://www.cnt.org/cargo-oriented-development>