



# Urban Rail: *Using Modern Streetcar to Connect Regional Service*



**Robert Spillar, P.E.**  
**Director of Transportation**  
**Austin Transportation Department**

# Austin .....

- **14<sup>th</sup> Largest City in US**
  - 2010 Population: 790K (City); 1.7M (region)
  - Third fastest growing city in the nation (population doubling every 20 years)
  - Median age 30
- **Economy**
  - “Number 1 Boom Town for the next Decade”, Forbes Magazine
  - No. 2 Performing US Metro Region in 2010, Milken Institute
- **Employment:**
  - Government,
  - Hi-Tech Manufacturing,
  - Banking/Legal/Venture Capital,
  - Education



## **Austin Core: Downtown, Capitol, Univ. Of Texas**

- 30% of regional employment
- 60 thousand students
- Pipeline Development
  - UT – 15,000
  - Capitol – 15,000 to 20,000
  - Downtown – 8,000 to 10,000



# Land Use and Transportation

## Nested Planning Model

Regional Vision  
CAMPO 2035



Imagine Austin Comp Plan



Strategic Mobility Plan



Rail  
Planning

Regional Land Use  
Transportation  
Alignment

City of Austin  
Land Use and  
Vision

Multi-modal  
Transportation  
Strategy

City of Austin  
Rail Program

# Regionally Focused Partnership



## MetroRail & BRT

- Red Line to Leander
- Green Line to Manor/Elgin
- Georgetown-Round Rock 'T'
- Rapid Bus (Lamar/Congress)

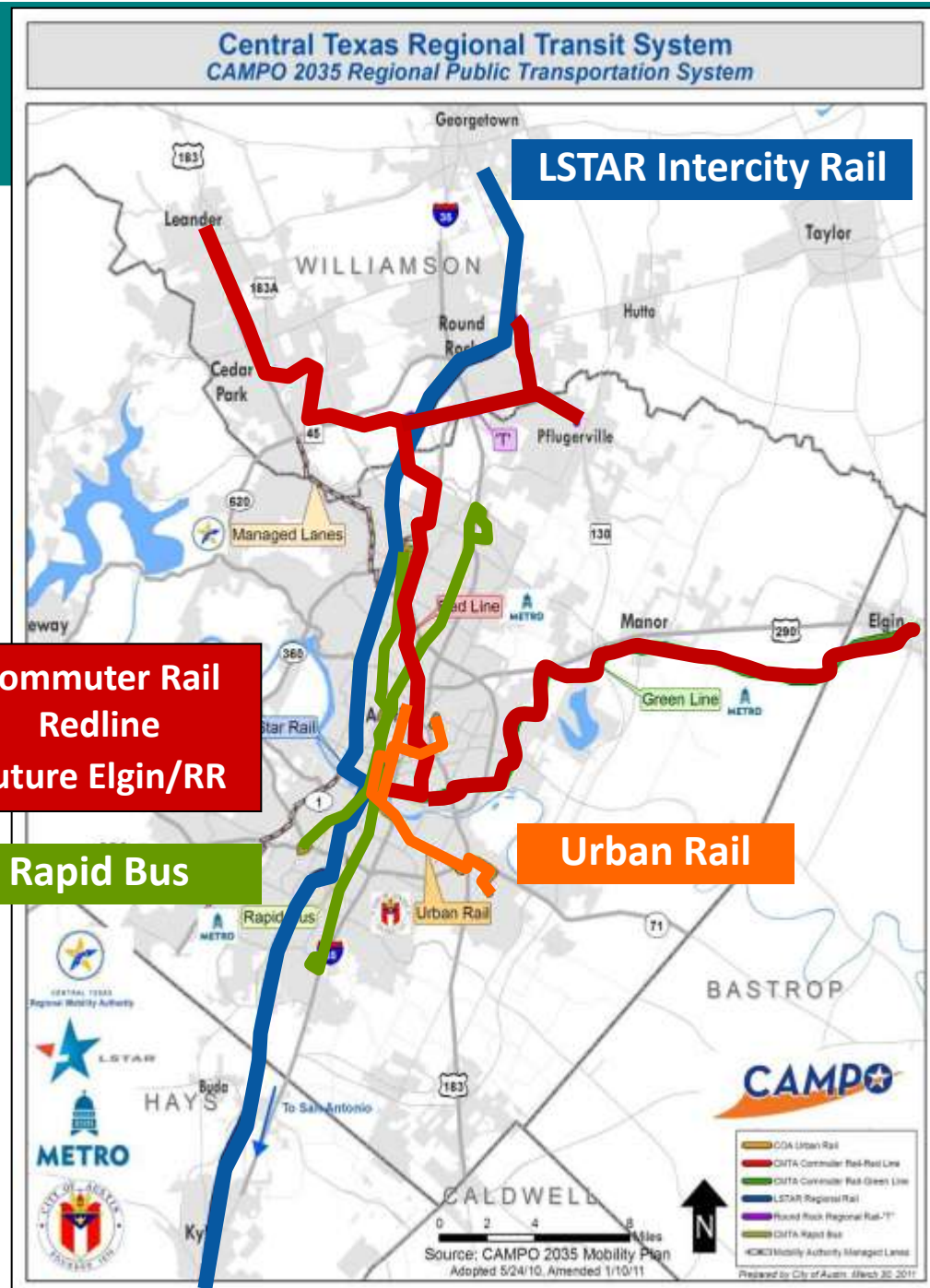


## Lone Star Rail

- Georgetown to San Antonio
- Bergstrom Spur

## Urban Rail

- Connect commuter & Intercity rail with major employment centers



# Need for Rail in Austin

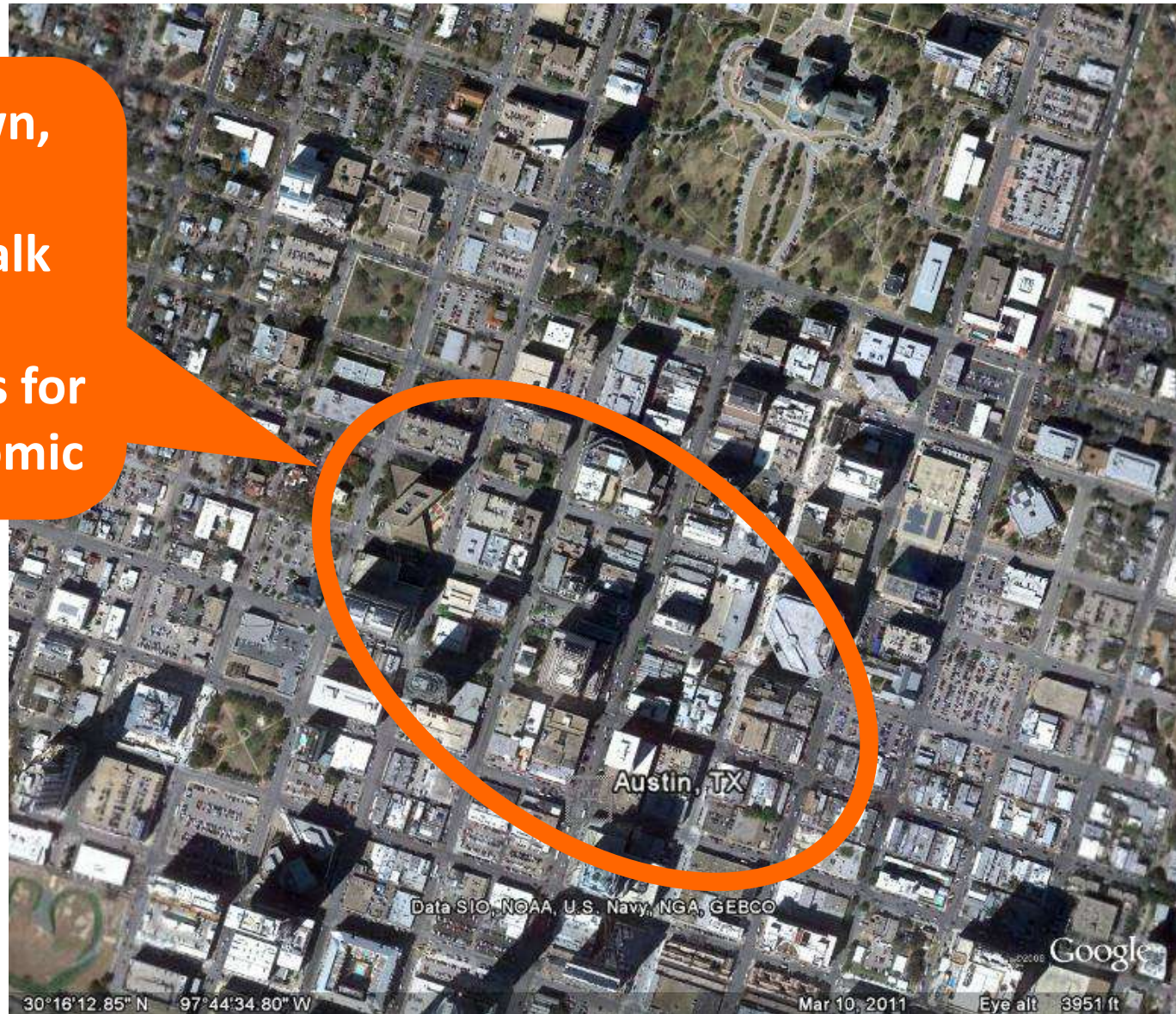
## Technology Objectives:

- Facilitate economic development and community land use goals
- Allow incremental local investment in regional system (scalable and/or interoperability)
- Maneuver within existing street grid (90-foot turn radius, use of traffic signal grid, running speeds up to 45 mph)
- Minimize off-vehicle infrastructure (preserve sidewalk capacity for economic activities)
- Minimize construction disruption



# Need for Rail in Austin

Within downtown, Austin needs to maximize sidewalk space and remaining blocks for maximum economic benefits



# Need for Rail in Austin

## Technology Objectives:

- Operate in both mixed-flow & dedicated track-ways, interact with pedestrians
- Fully accessible frequent stops within core
- Ability to escape ring of constrained gateways
- Vehicles that couple or run independently, depending on time of day, travel demand, routing (desirable)
- Flexibility in power source (desirable)

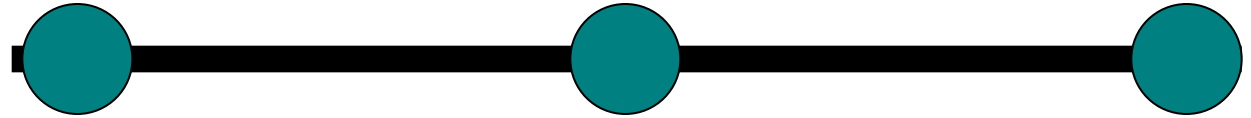


# Traditional Service Concepts



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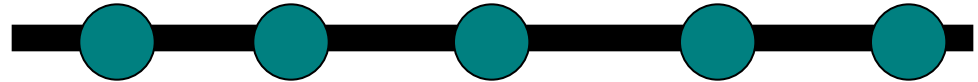
**Commuter Rail**



**Traditional Light Rail**



**Modern Streetcar**



DMU CR Vehicle  
Austin, TX



LRT Vehicle  
Minneapolis, MN



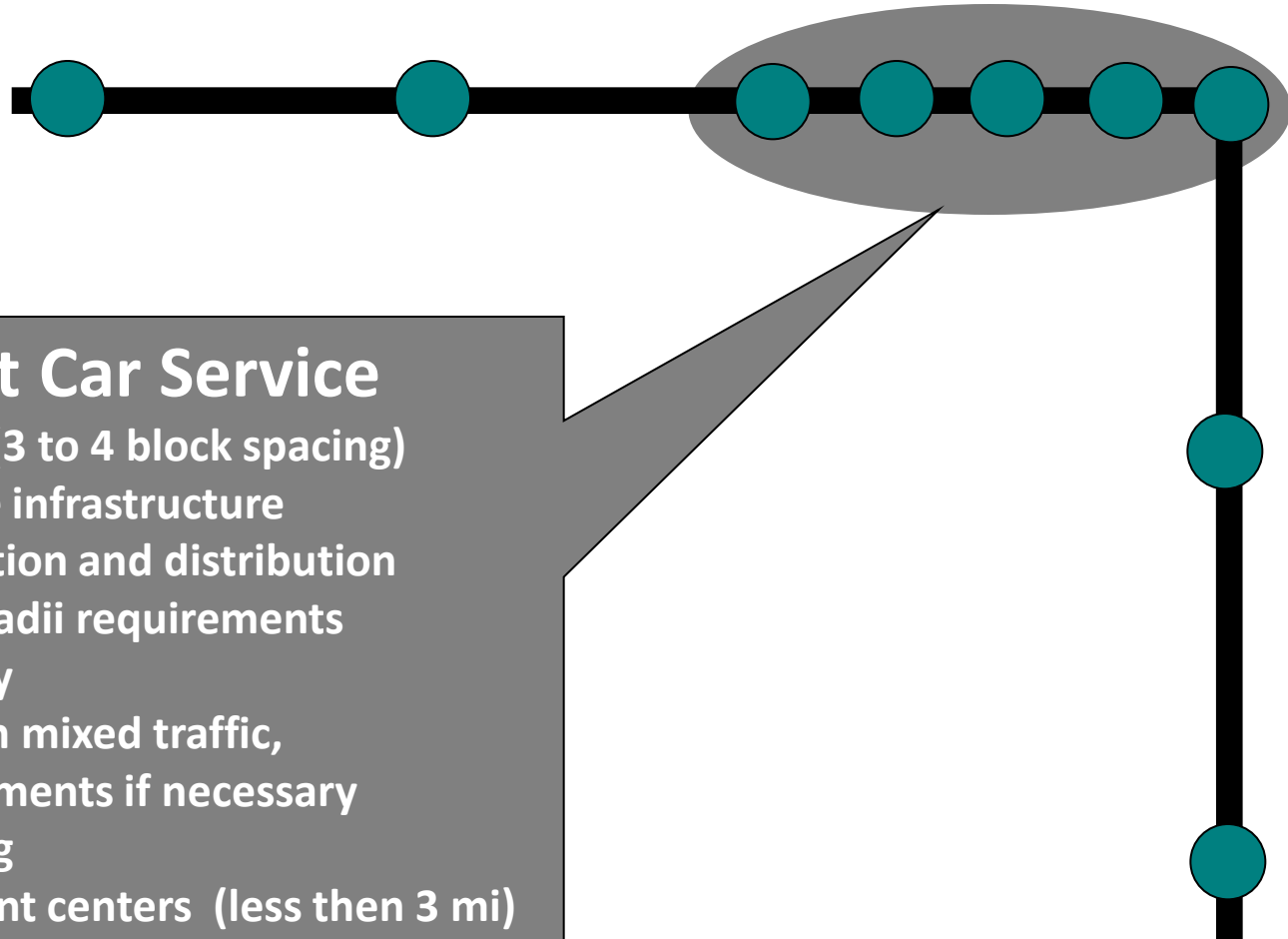
Modern SC Vehicle  
Portland, OR



Michael Knox

# Desired Service: Austin

## Urban Rail



### Modern Street Car Service

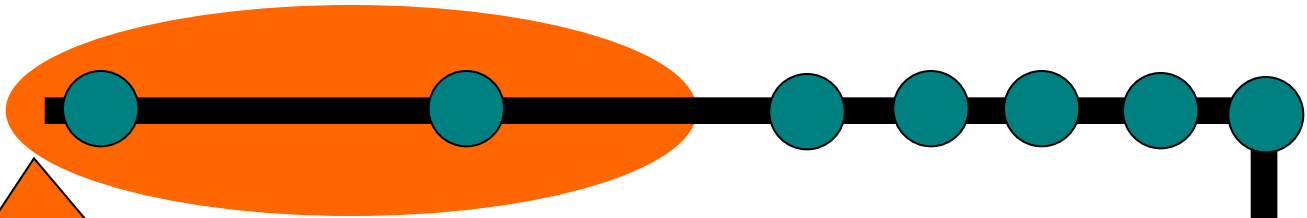
- Close stop spacing (3 to 4 block spacing)
- Minimal off-vehicle infrastructure
- Emphasis on collection and distribution
- Minimum turning radii requirements
- Maximum flexibility
- Ability to operate in mixed traffic, pedestrian environments if necessary
- Off-vehicle ticketing
- Primary employment centers (less than 3 mi)



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# Desired Service: Austin

## Urban Rail



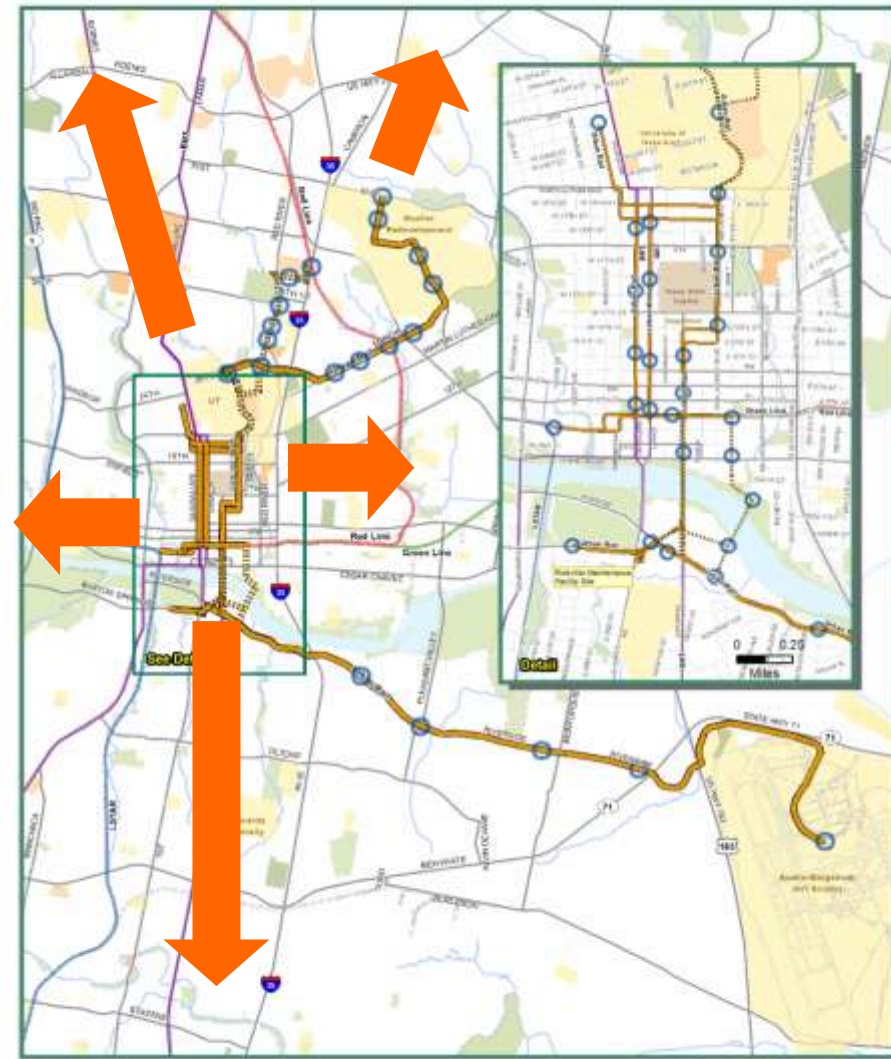
## Light Rail Service

- Stop spacing typically ½ mile or more
- Opportunity for more extensive off-vehicle infrastructure
- Emphasis on moving between stations
- Longer turning radii for speed and comfort
- Ability to operate in exclusive or semi-exclusive rights-of-way
- Off-vehicle ticketing
- Primarily outside primary employment centers (4 to 7 miles from City Center)



# Urban Rail Proposal: Austin

CITY OF AUSTIN PROPOSED URBAN RAIL SYSTEM



## Proposed System Elements:

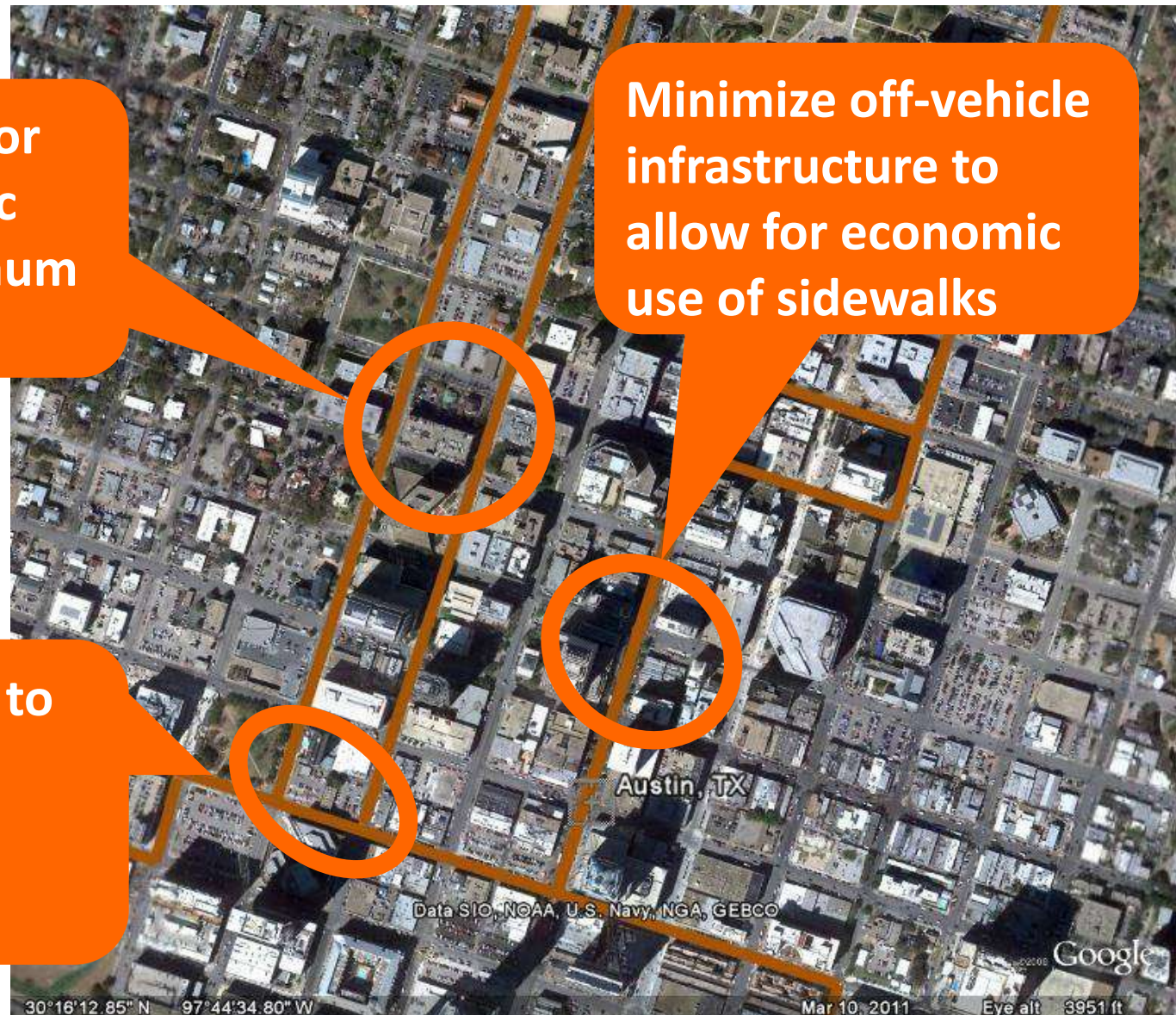
- 16.5 Miles, electric/hybrid, double tracked system (4 to 6 mi runs from primary destinations)
- Provide direct connectivity to downtown, Capitol, Univ. of Texas
- Forms backbone of regional rail system using modern streetcar or similar technology
- Maximizes dedicated track-way
- Multi-phased delivery (regional system – local investment)
- **Scalable with Inter-operability opportunities**

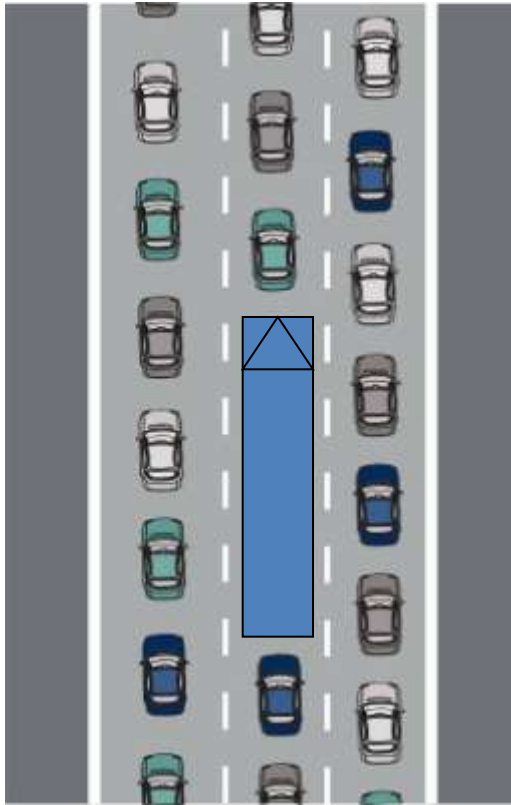
# Urban Rail Proposal: Austin

Dedicated lanes or mixed flow traffic ability for maximum efficiency

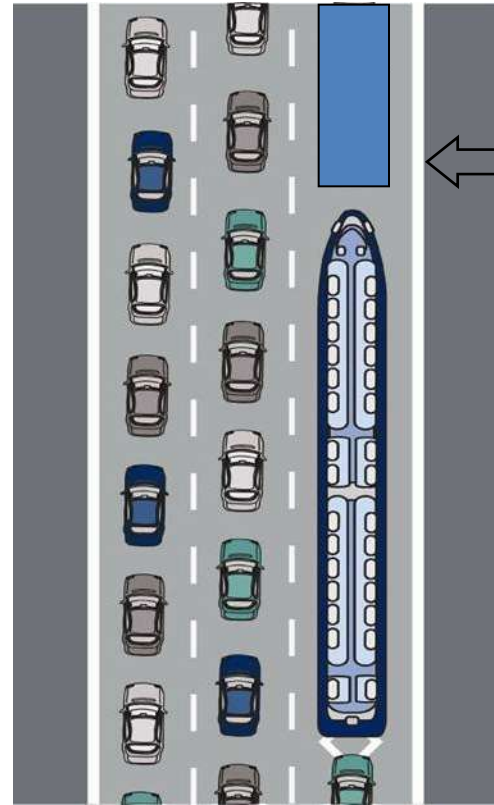
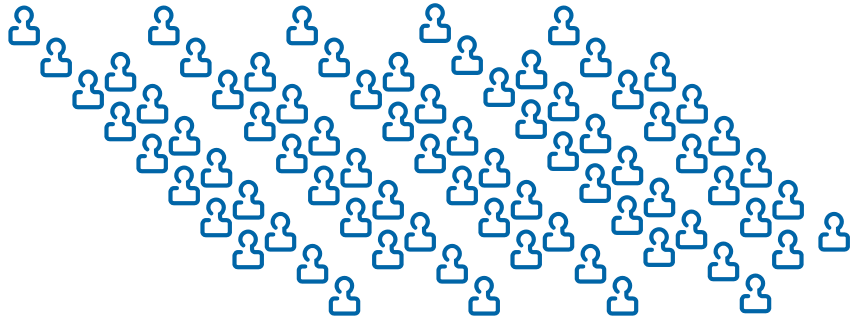
Minimize off-vehicle infrastructure to allow for economic use of sidewalks

Maneuverability to negotiate tight street corners (90ft Radii)

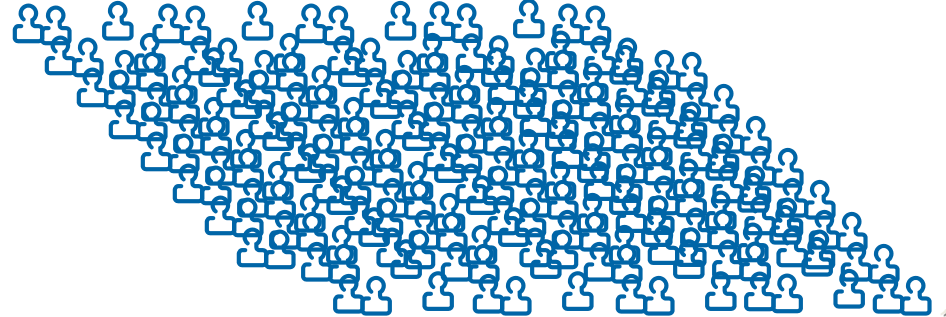




**19 cars + 1 bus = 88 people**



**16 cars + 1 bus + 1 train = 249 people**



# Urban Rail Proposal: Austin



[WWW.AustinStrategicMobility.com](http://WWW.AustinStrategicMobility.com)