

# TxDOT Study 0-6627

- Mega-region Freight Issues in Texas: A Synopsis
- CTR and TSU team
- Project Director Jack Foster P.E. TPP
- RTI Engineer Duncan Stewart

# Workshop Agenda

- 10:30-11:15
  - Welcome: Robert Harrison – TxDOT Study 0-6627
  - Mega-region Background and Fall Workshop: Carol Abel Lewis
  - Definitions , Governance, and Policy Challenges: Donovan Johnson
  - Corridor Protection and Freight Challenges: Nathan Hutson
- 11:15-11:45 Participants, Roles and Expectations
  - Jack Foster, TxDOT
  - Regina Minish, BNSF Railway
  - All Workshop Attendees
- 11:45-12:30
  - Break for Lunch
- 12:30-1:45
  - Small Group Discussion
- 1:45-2:00
  - Afternoon Break
- 2:00-3:00
  - Large Group Discussion
- 3:00 Wrap-up

# Fall 2010 Workshop

- ❑ To gather stakeholders in Texas to discuss:
  - The idea of megaregions in our state with a focus on the planning process
  - How the planning process should accommodate the idea of megaregions



# Conceptual US Megaregions

Networks of metropolitan regions:

- Shared economies
- Infrastructure
- Natural resource systems, roughly 300 miles - 600 miles



Figure 1: America's Emerging Megaregions

Source: Hagler & Todorovich, 2009

# Do we need planning at a larger geographic scale?

- ❑ Represents a new perspective on defining regionalism
- ❑ Captures the **economic, political** and **spatial levels** responding to agglomerations
  - **Business activity**
  - **Population**
  - **Mobility**
  - **Natural Resources**

# Megaregions and Transportation

- Trends of global economic markets and increasing international trade puts new pressures on national transportation systems
  - Over the next 30 years, the increase of international trade via ports is expected to be much higher than before
  - More than 77% of commodities were moved from megaregions to other domestic destinations by truck in 2002, and this share is estimated to grow 80% by 2035



# Challenges and Opportunities

- ❑ By 2050 about 35 million people or 70% of Texas residents will live in the four metropolitan areas that comprise the Texas Triangle
- ❑ Metropolitan areas have the potential to merge into a relatively continuous stretch of urbanization

Zhang et al.,( 2007)

# Summary of Fall Workshop Outcomes

- ❑ Megaregional planning should be incorporated into regular planning processes; remaining questions:
  - **Leadership**
  - **Regulatory Environment**
  - **Funding**
  - **Scale**
  - **Data Sharing**
- ❑ This was largely corroborated during the interview process.



# What Planning Activities Should Be Included?

- ☐ Change Triangle to Diamond or “no shape”
- ☐ Freight Planning
- ☐ Air Quality
- ☐ Transportation and Land Use
- ☐ Airlines
- ☐ Agriculture
- ☐ Private Sector

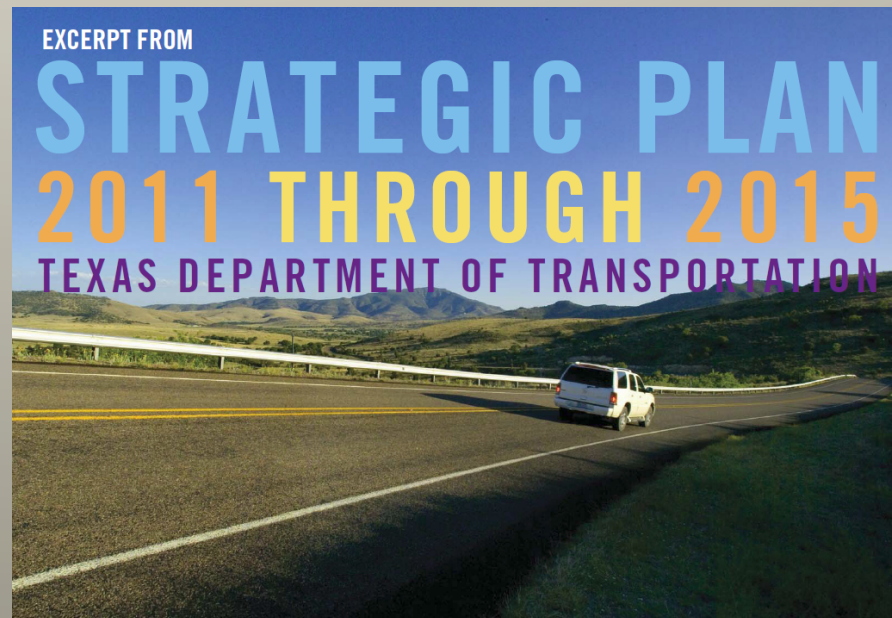
# Options for a Process

- ❑ Include regional businesses
- ❑ Catalog existing planning and regulatory activities
- ❑ Megapolitan Steering Committee/Task Force
  - **Transportation: rail, highway, air, marine**
  - **Utilities: power, water, communication**
  - **Housing**
  - **Green infrastructure**

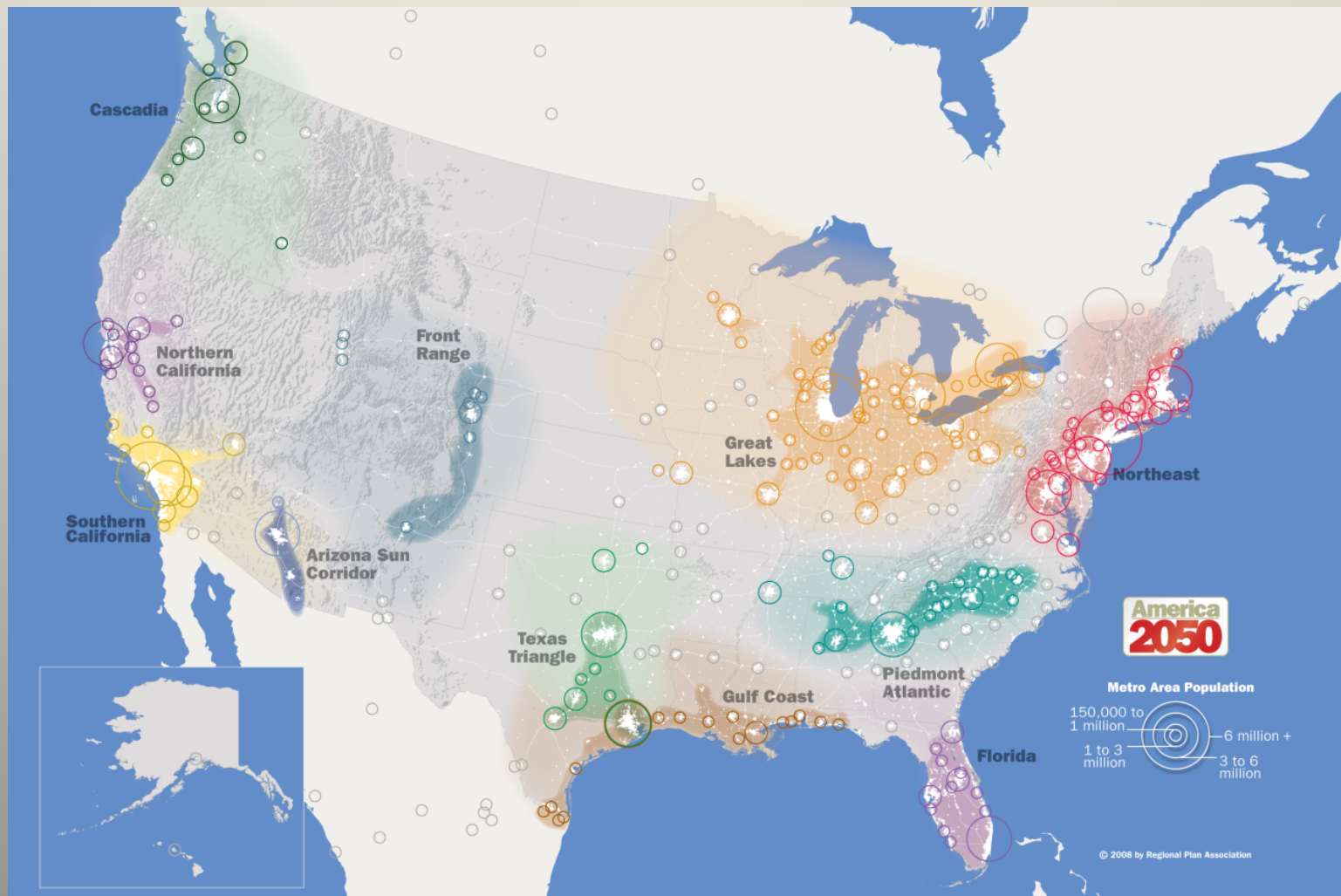


# Priorities

- ❑ Include megaregion concept in the TxDOT LRP and Strategic Plan
- ❑ Educate: develop and publish research report

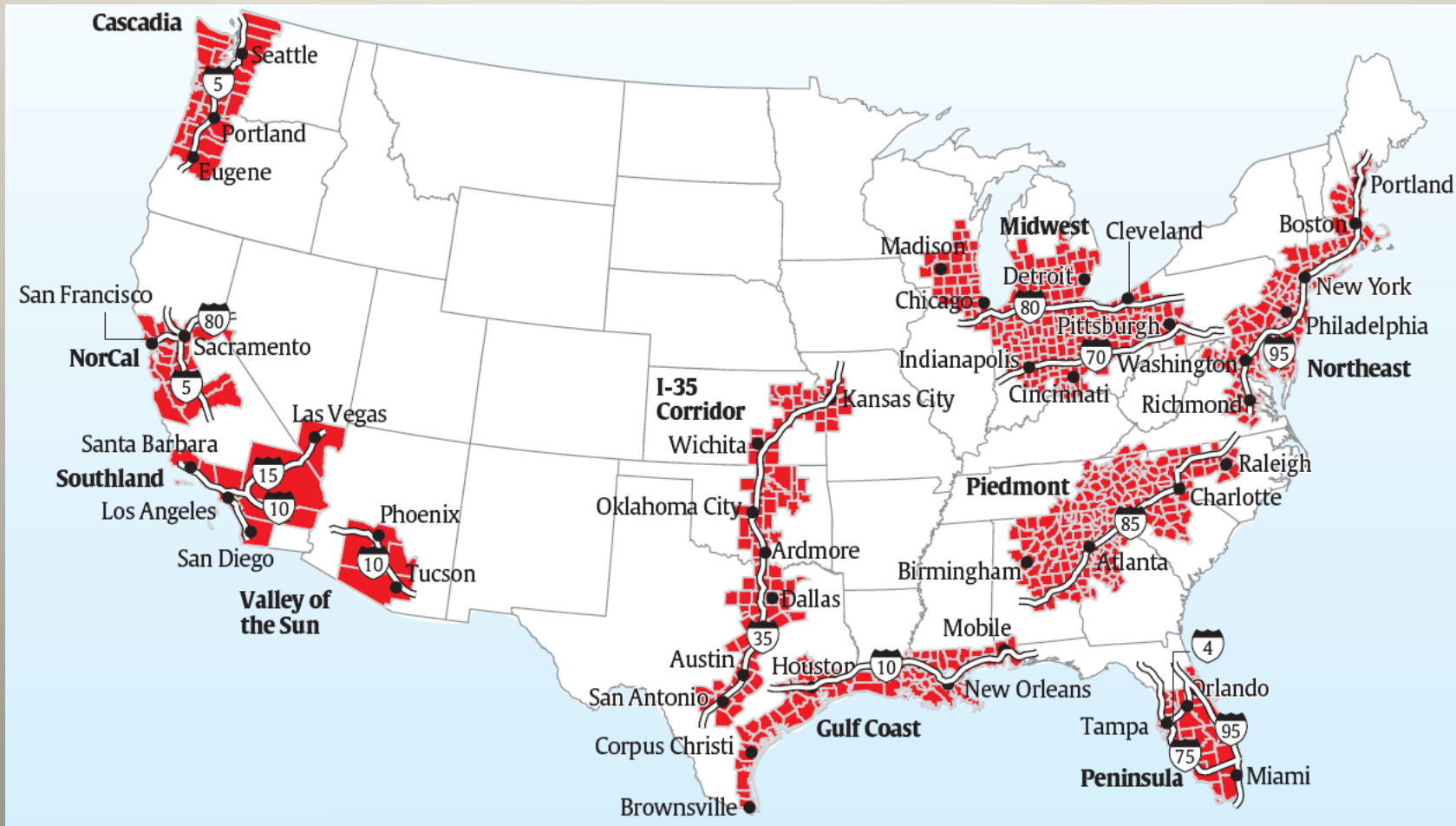


# Definitions-America 2050





# Definitions – Lang and Dhavale

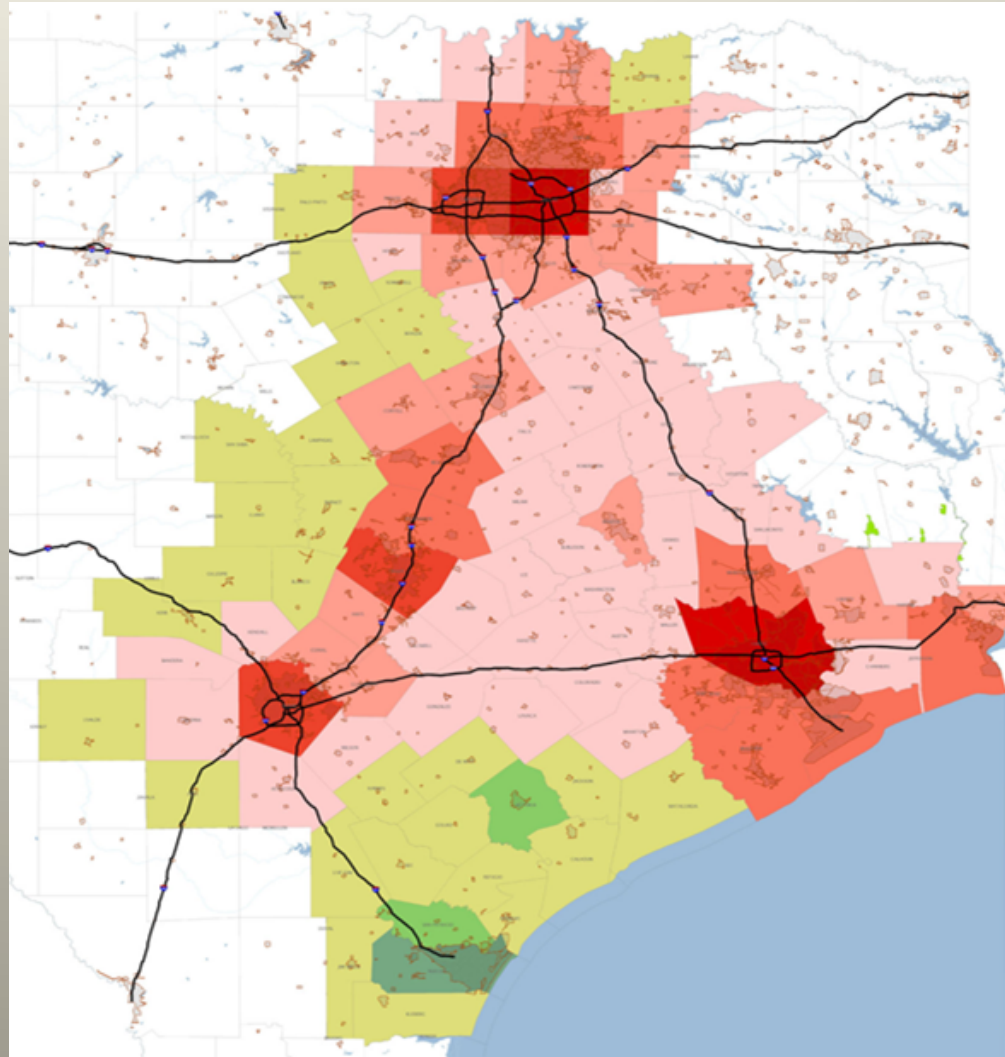


# Definitional Considerations

- Demographic-based (America 2050) vs. corridor-based (Lang and Dhavale)
- What are the advantages/disadvantages of each?
- Freight considerations – how do we incorporate these into a concept primarily based on passenger movement?

# Texas Megaregions

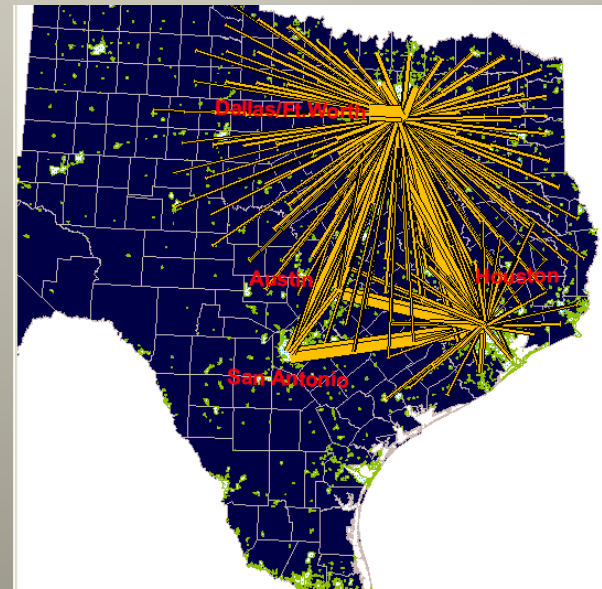
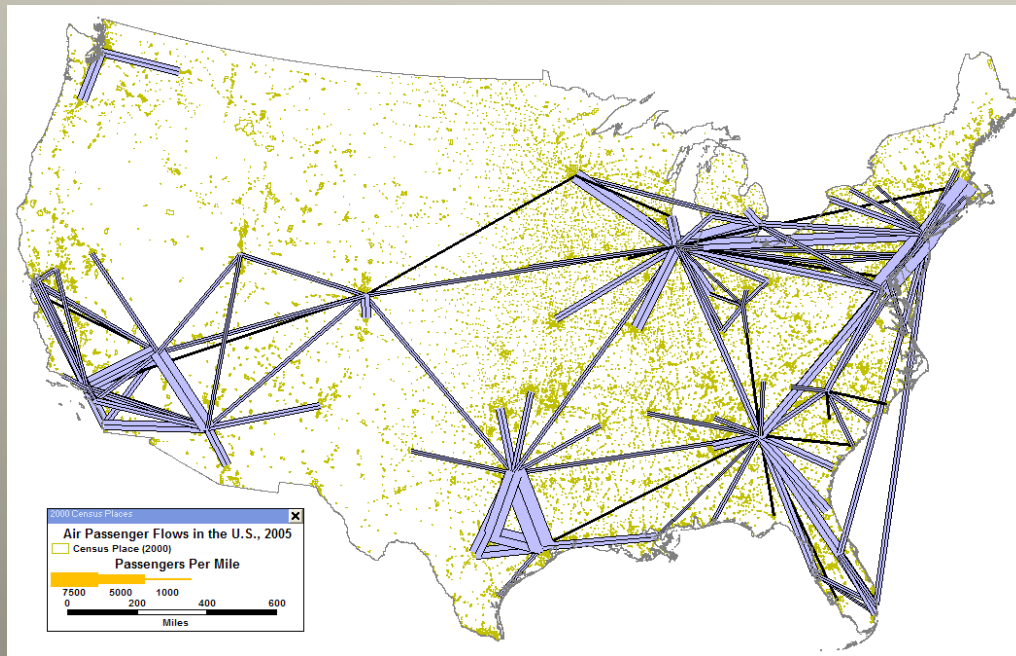
- Mainstream
  - Texas Triangle
  - Gulf Coast
  - I-35 Corridor
- Rural considerations?





# Traffic and Goods Flows

- One way to measure the economic activity is through examining the flows of goods from place to place.
- Texas has both strong air and freight flow between its component metropolitan areas.



# Policy

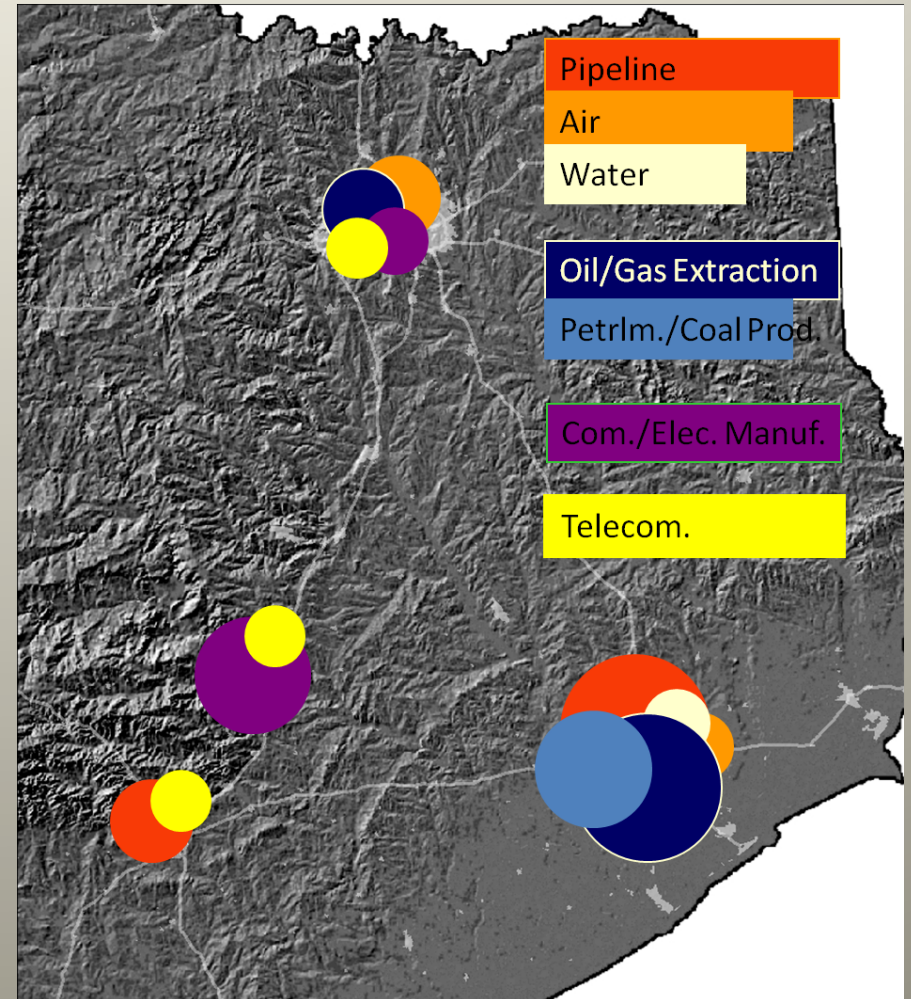
- County and city are currently the two most important local jurisdictions that control planning.
- Counties are not empowered to conduct land-use planning.
- Cities can only plan within their boundaries and there is little coordination in most circumstances.
- Cooperation between MPOs is often done on a case-by-case basis; no real structure for cooperation

# Texas Planning Today

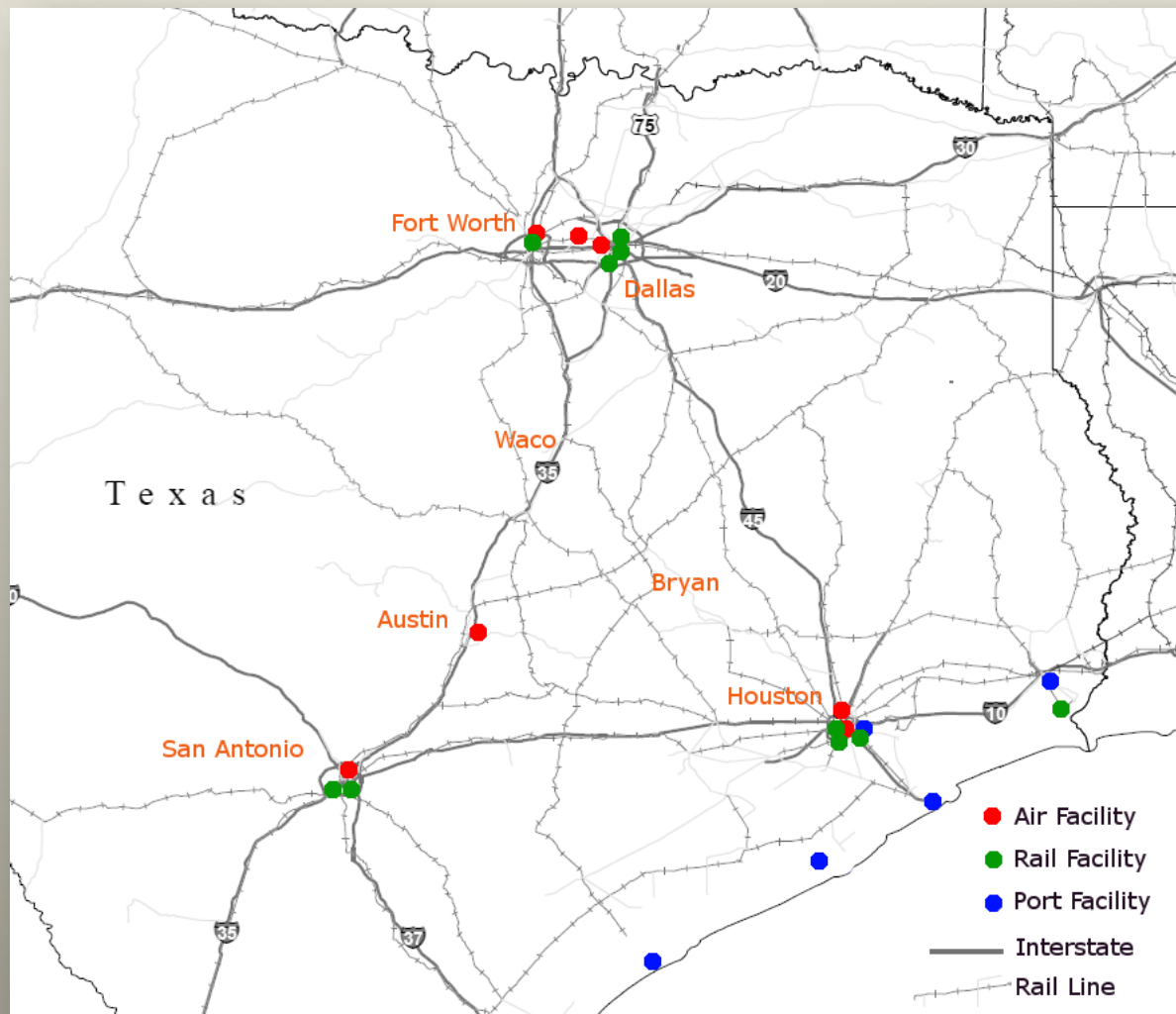
- Many entities exist that plan on a regional scale.
  - MPOs
  - COGs
  - Other entities (e.g. Envision Central Texas, Vision North Texas, Blueprint Houston, etc.)
- These are limited by a lack of statutory power, some entities are essentially limited to recommendations.
- Most planning is done at the state and local levels.
- Is there a gap in the method of reconciliation between state and local plans?

# Texas Interdependence

- The metropolitan areas of Texas have economies that generally complement one another.
- However, there are also economic sectors which are shared among the metros.
- Should Texas cities see themselves as competing with one another, or as collectively competing with other megaregions?

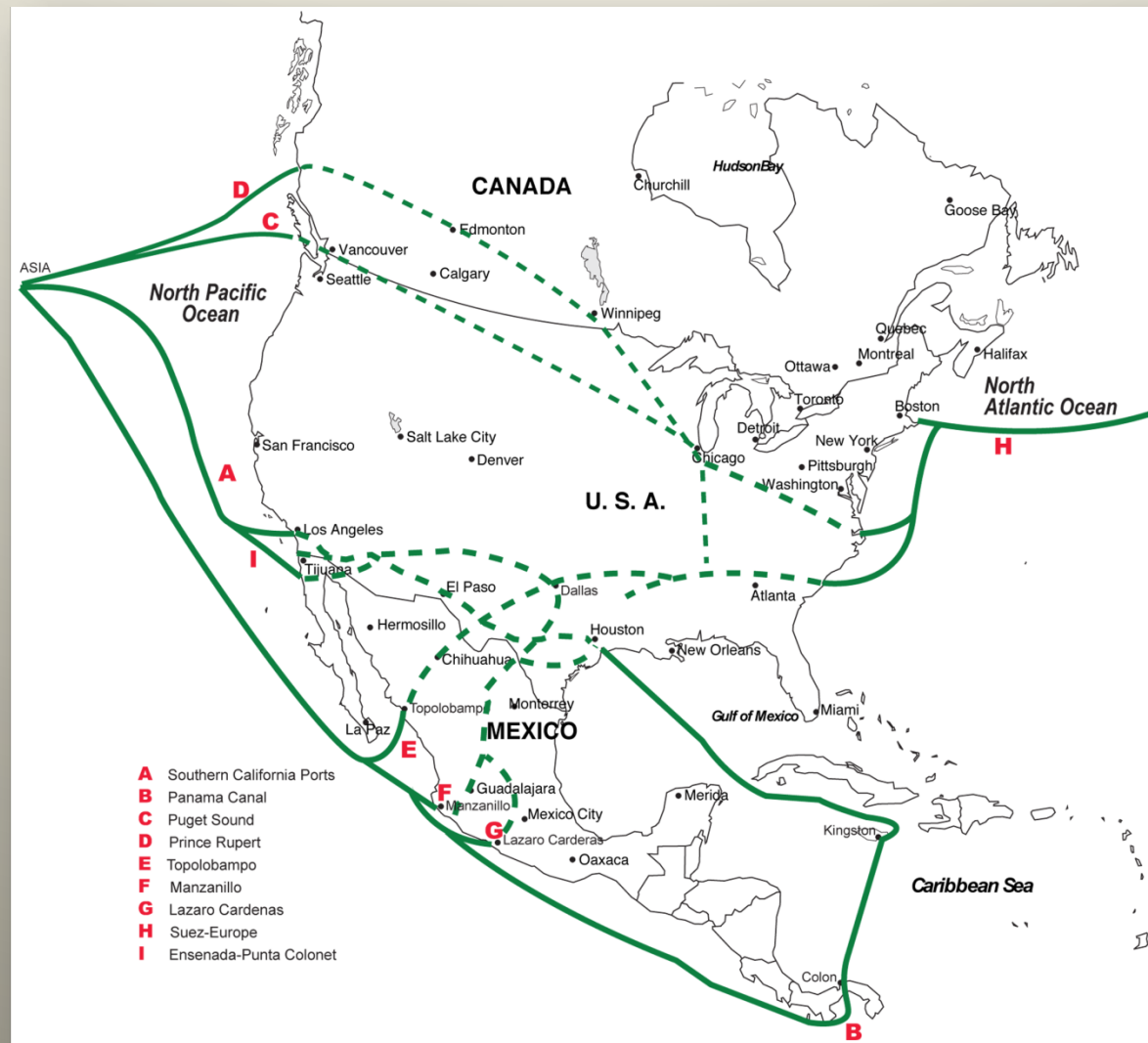


# Freight Facilities

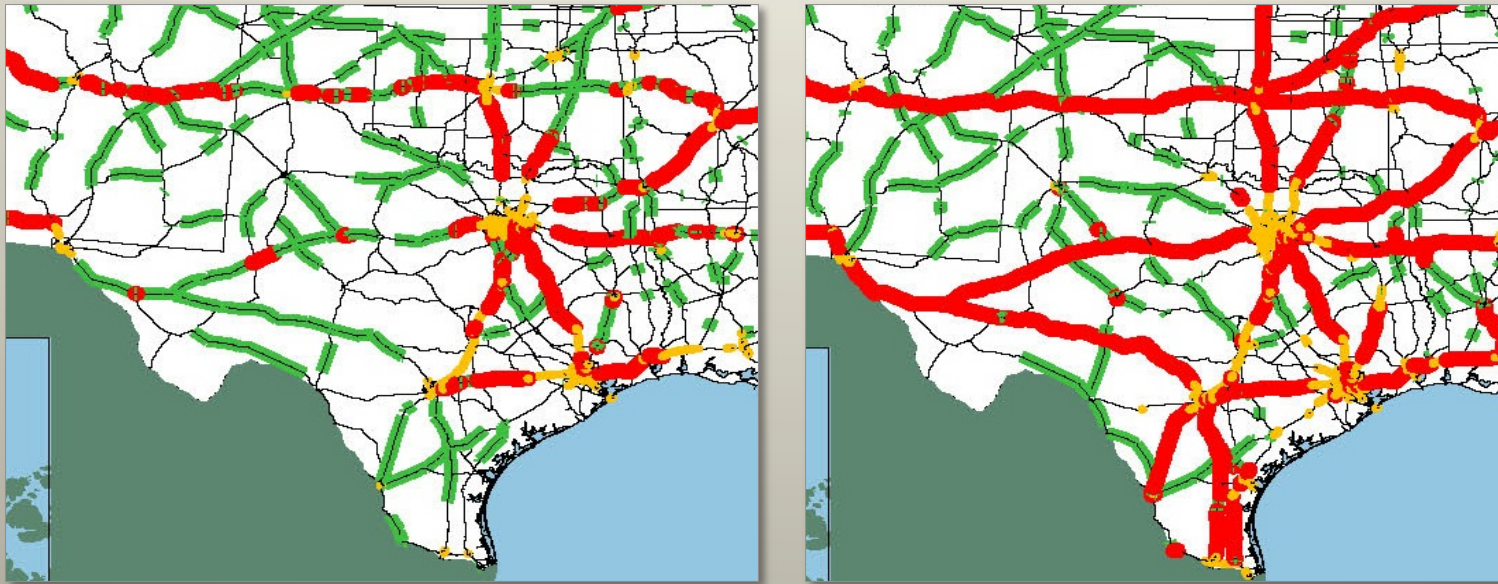




# Trade Corridors



# 2007 and 2040 Major Truck Routes on the National Highway System

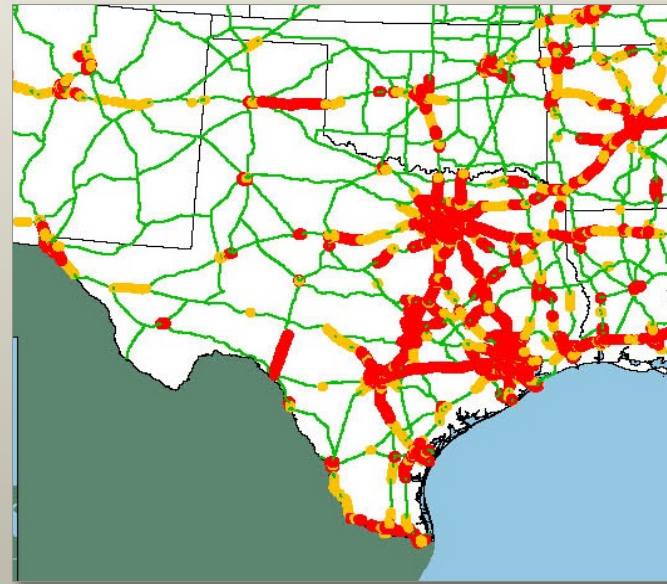
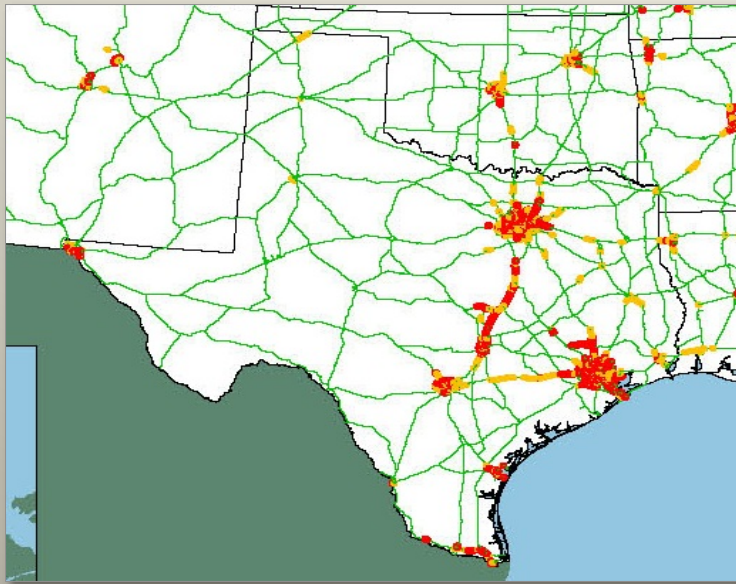


## Truck Volumes and Percentages

- AADTT < 8,500 and AADTT/AADT < 0.25
- AADTT < 8,500 and AADTT/AADT ≥ 0.25
- AADTT ≥ 8,500 and AADTT/AADT < 0.25
- AADTT ≥ 8,500 and AADTT/AADT ≥ 0.25



# 2007 and 2040 Peak-Period Congestion on the National Highway System

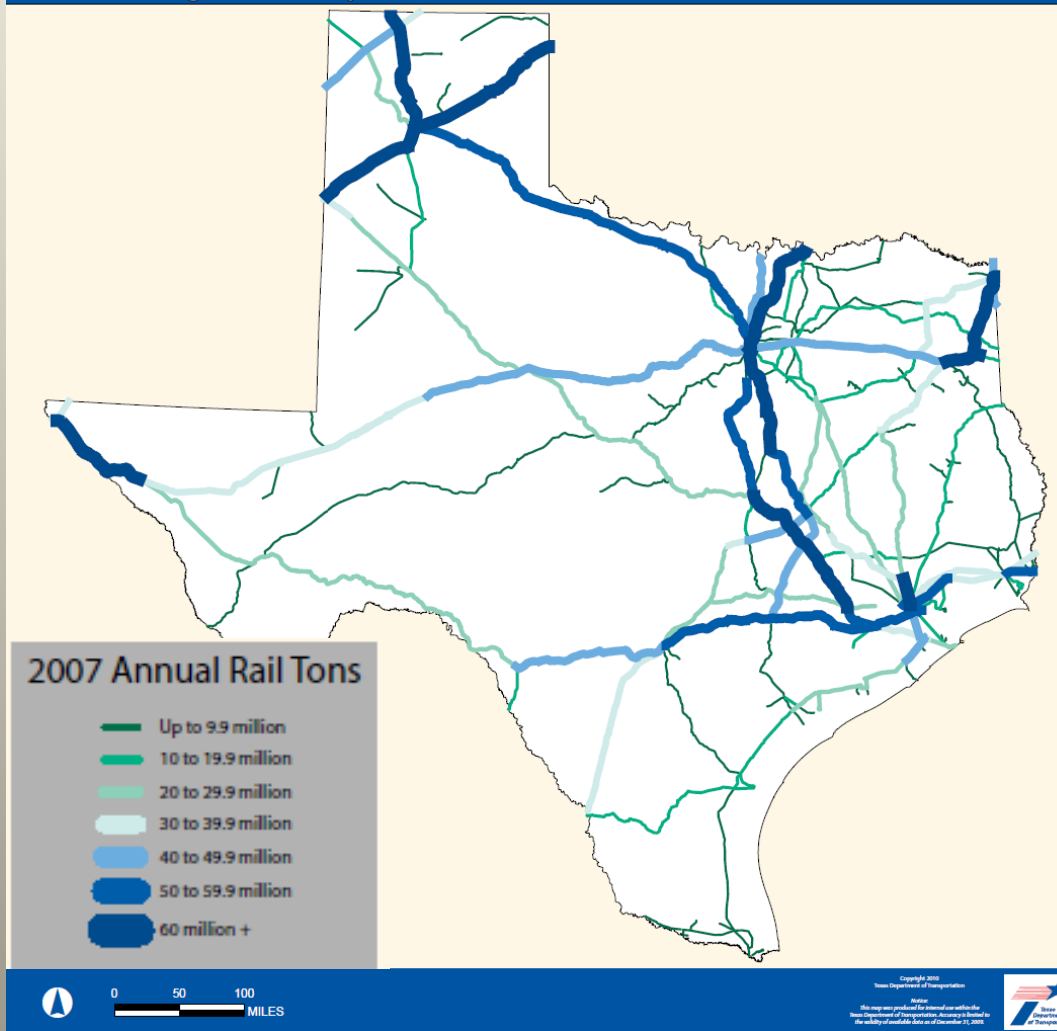


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# 2007 Rail Tons

## Texas Freight Density



# Thank You for Your Participation Today

