



NASHVILLE AREA

**Metropolitan Planning Organization**

# **Nashville Regional Freight & Goods Movement Study – Phase III**

**Technical Coordinating Committee  
June 3<sup>rd</sup>, 2015**

# Project Overview

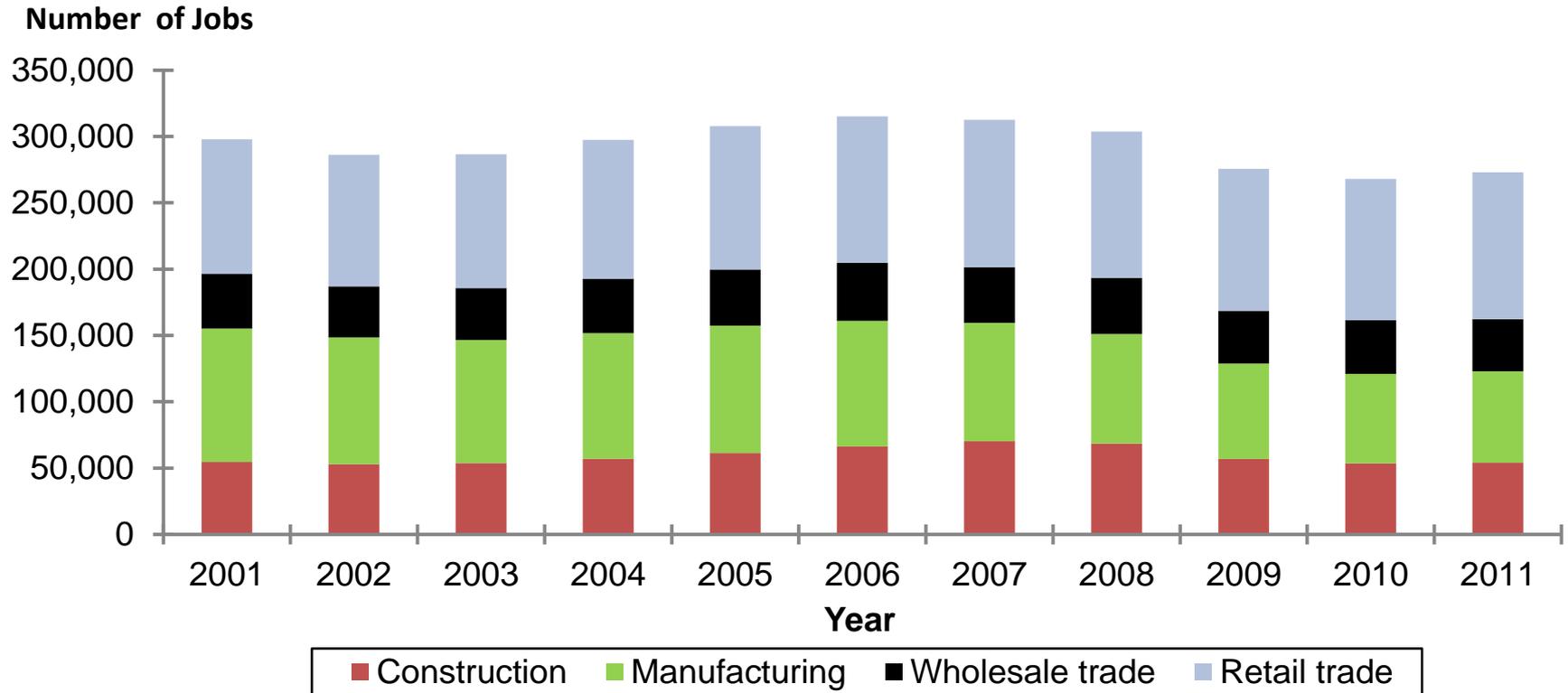
- ➔ Phase III of Nashville Area MPO Regional Freight & Goods Movement Study
- ➔ Highlights of Phase III work are:
  - Existing and future conditions report
  - Development of region's freight system including a designated truck network
  - Recommendations for optimizing local ordinances and land use plans and policies
  - Project and policy recommendations for improving freight flow

# Importance of Freight Planning

- ➔ Identify vision for freight planning and path for achieving vision
- ➔ Key topics addressed:
  - Explore passenger rail opportunities on Class I Rail
  - Improve truck mobility
  - Address freight and community livability issues

# **KEY FINDINGS FROM EXISTING AND FUTURE CONDITIONS REPORT**

# Freight-Sector Employment



***Approximately 300,000 jobs in Nashville region are heavily dependent on freight transportation***

# Trucking is Largest Freight Mode

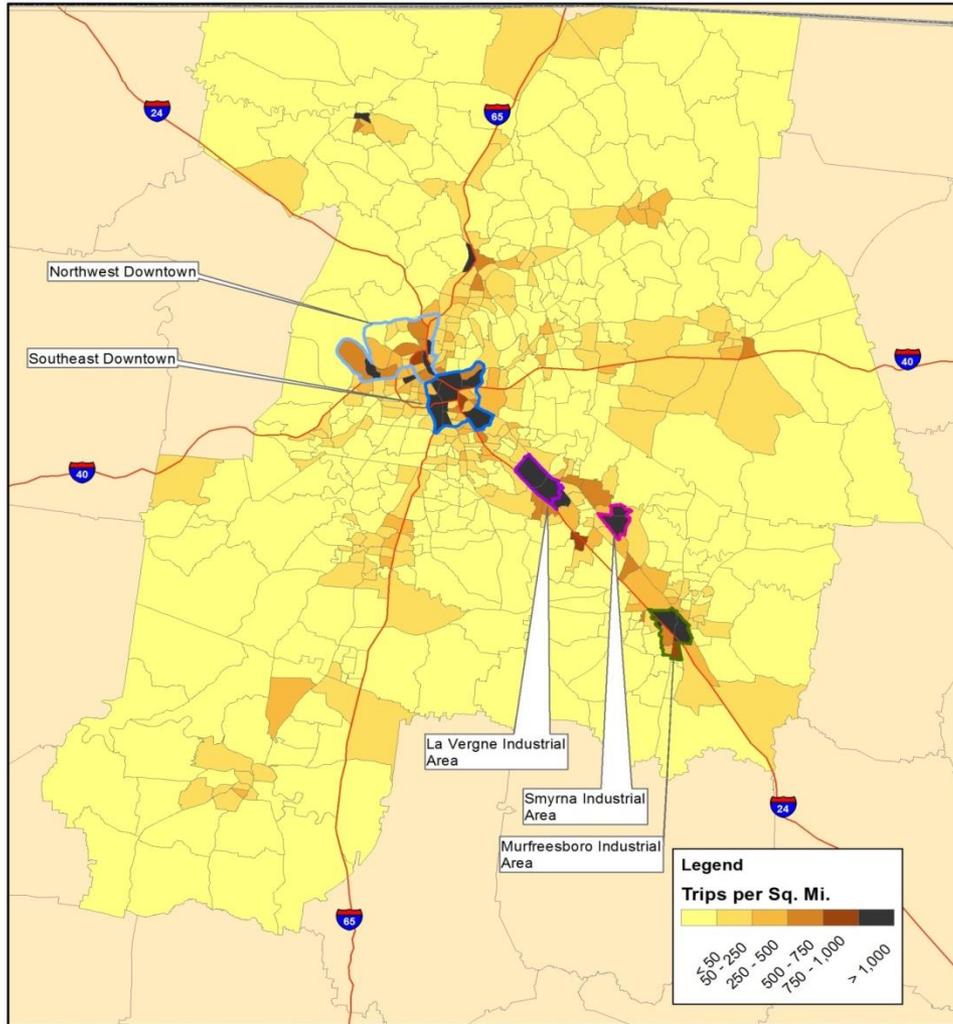
Commodity	Truck Tons	Water Tons	Rail Tons	Air Tons	Total Tons
Sand, Gravel, Stone and Nonmetallic Minerals	27,079,885	1,543,325	81,280	140	28,704,631
Truck Drays to/from DCs, Railyards and Airports	9,096,890	–	–	–	9,096,890
Coal	43,567	5,680,763	–	–	5,724,330
Fuel, Petroleum Products, and Fuel Oils	8,690,017	146,432	6,520	8	8,842,978
Agricultural and Food Products	6,360,749	–	102,520	1	6,463,270
Waste and Scrap	2,981,062	215,357	161,264	1	3,357,683
Motor Vehicles and Parts	846,667	–	793,080	1,561	1,641,308
Subtotal	55,098,837	7,585,877	1,144,664	1,711	63,831,090
Other Commodities	11,055,078	497,301	2,003,445	38,004	13,593,827
<b>All Commodities (Tons)</b>	<b>66,153,915</b>	<b>8,083,178</b>	<b>3,148,109</b>	<b>39,715</b>	<b>77,424,917</b>
<b>Tons (%)</b>	<b>85%</b>	<b>10%</b>	<b>4%</b>	<b>&lt; 1%</b>	<b>100%</b>
All Commodities (Values in \$ billions)	74.0	0.9	13.2	4.3	92.3
<b>Value (%)</b>	<b>80%</b>	<b>1%</b>	<b>14%</b>	<b>5%</b>	<b>100%</b>

*\*Does not include through trips*

# High Percentage of Through Truck Trips

Truck Trip Type	Millions of Tons	Percent of Total
Through Nashville Region	99.6	62%
Into Nashville	36.4	23%
Out of Nashville	24.6	15%
<b>Total</b>	<b>160.6</b>	<b>100%</b>

# Clustered Truck Trip Generation



- ➔ 41% of all truck trip ends in Nashville area are in one of these five subregions
- ➔ 71% of all truck trip ends in Nashville area are in Davidson or Rutherford Counties

# Top Trading Partners by Rail

## Carload Rail

State	To	From	Total	Percent of Total
Tennessee	234,440	222,800	457,240	20%
Ohio	29,720	193,520	223,240	10%
Florida	104,800	69,440	174,240	8%
Illinois	11,556	142,520	154,076	7%
Other	338,128	920,705	1,258,833	56%
<b>Total</b>	<b>718,644</b>	<b>1,548,985</b>	<b>2,267,629</b>	<b>100%</b>

➔ Major trading partners for carload traffic are domestic

- Ohio
- Illinois
- Florida
- Alabama

## Intermodal Rail

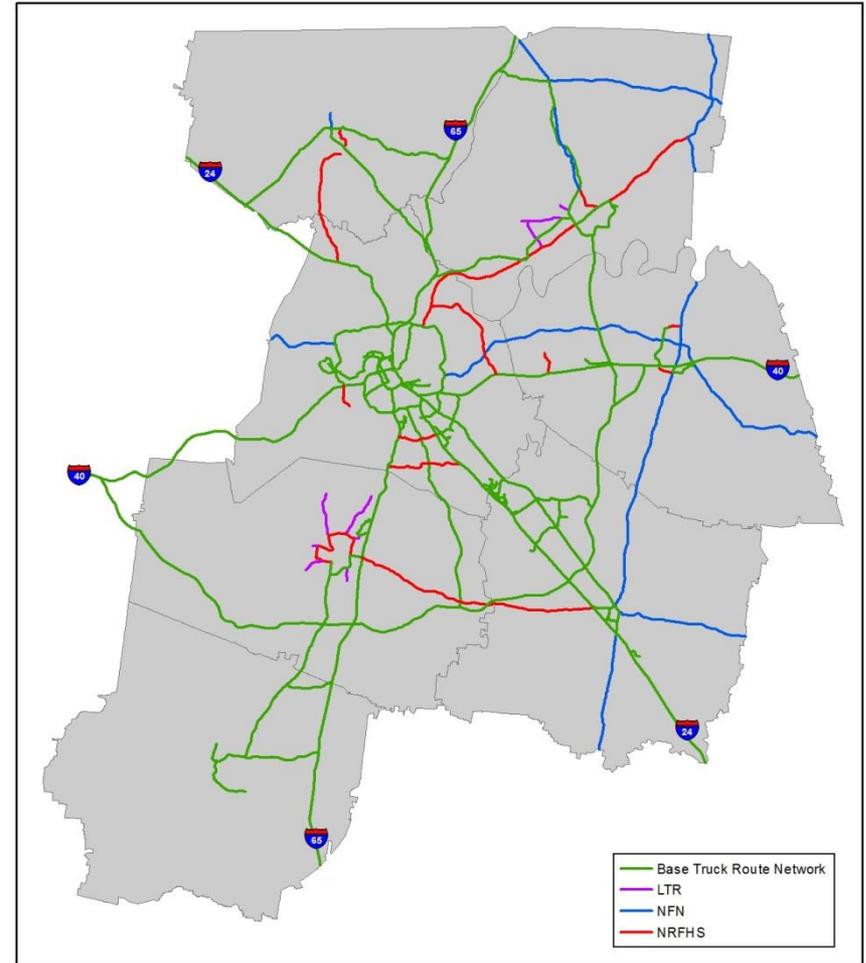
Metropolitan Area	To	From	Total	Percent of Total
Savannah, GA	248,480	100,320	348,800	40%
Charleston, SC	155,040	72,880	227,920	26%
Chicago, IL	38,280	155,760	194,040	22%
Other	73,360	36,360	109,720	12%
<b>Total</b>	<b>515,160</b>	<b>365,320</b>	<b>880,480</b>	<b>100%</b>

➔ Intermodal rail traffic connects Nashville to the world

# REGIONAL TRUCK ROUTE NETWORK

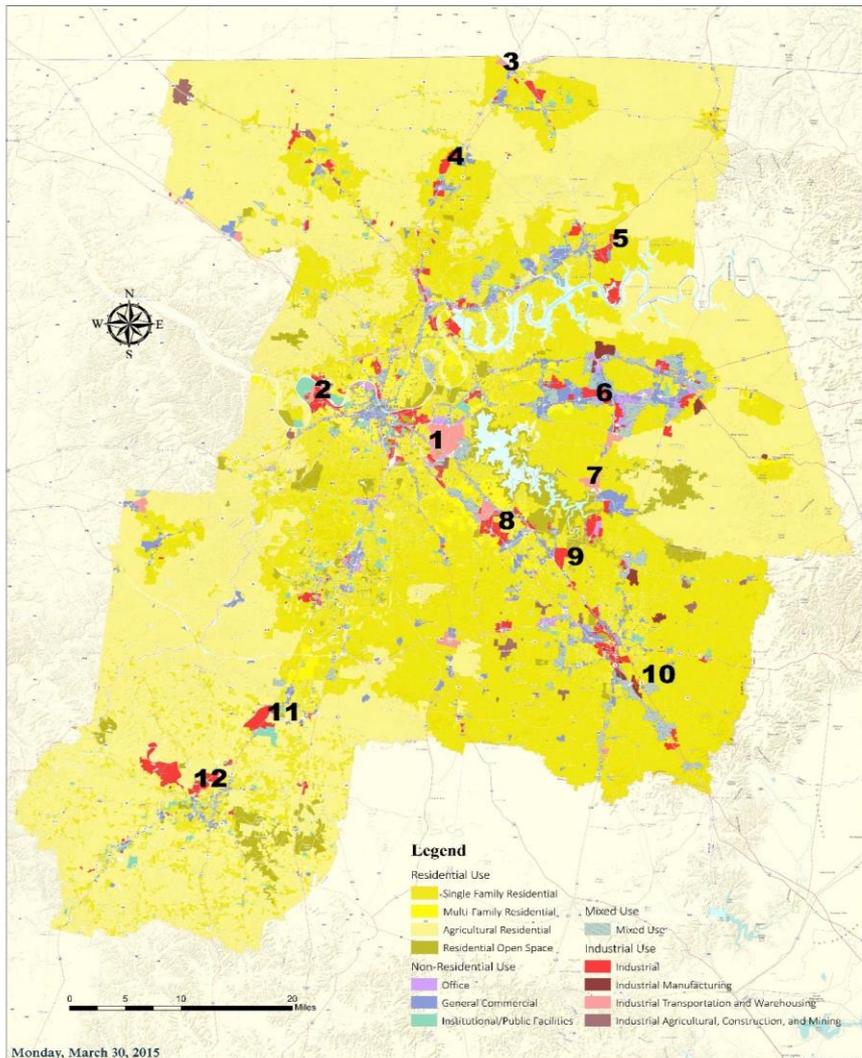
# Truck Route Development Process

- ➔ Assemble Federal, state, and local truck route information
- ➔ Identify key freight facilities and land uses
- ➔ Consider incompatible land uses
- ➔ Conduct two Trucker's Forums
- ➔ Develop truck route design features



# **FREIGHT AND LAND USE ISSUES**

# Nashville Area Land Use Designations



➔ Land use designations identify 12 clusters of freight activity in Nashville region

- ➔ 1 - Downtown SE and airport
- ➔ 2 - Downtown NW
- ➔ 3 - I-65 and SR 109 cluster
- ➔ 4 - White House cluster
- ➔ 5 - Gallatin
- ➔ 6 - Lebanon
- ➔ 7 - Smyrna/SR 840
- ➔ 8 - LaVergne
- ➔ 9 - Smyrna/Nissan
- ➔ 10 - Murfreesboro
- ➔ 11 - Spring Hill/GM
- ➔ 12 - Columbia

# Freight and Land Use Items

- ➔ Zoning
- ➔ Research of local ordinances
- ➔ Permitted uses
- ➔ Location of freight intensive development
- ➔ Vehicular circulation
- ➔ Industrial site access
- ➔ Intersection turning radii
- ➔ Truck traffic restrictions
- ➔ Parking restrictions
- ➔ Loading requirements

Which topics are most important for supporting freight movement and why?

Which topics are most important for “freight as a good neighbor” with other modes?

What additional land use ordinances and specifications should be considered?

# Research of Local Ordinances

➔ Freight-related land use ordinances and subdivision regulations were analyzed in the following localities:

Brentwood

Columbia

Fairview

Franklin

Gallatin

Goodlettsville

Greenbrier

Hendersonville

Lebanon

LaVergne

Maury County

Millersville

Mt. Juliet

Metropolitan Nashville

Murfreesboro

Portland

Robertson County

Rutherford County

Smyrna

Springfield

Sumner County

White House

Williamson County

Wilson County

# Recommendations for Municipalities

Land Use Topic Area	Recommendation
Permitted Uses	Subdivide Industrial land use category into Manufacturing, Transportation, and Warehouse/Distribution Center to specify different on-site activities and truck trip generation levels
Access Management	Require access to industrial facilities from arterial or collector street. Driveway separation between property and street shall be appropriate for adjacent uses.
Industrial Overlay District	Develop districts to preserve areas for future industrial activity
Setback Standards	Side or Rear Yard Adjacent to Residential Use: 50 feet. Front yard: 50 feet.
Landscape and Buffer Standards	Industrial buildings located in close proximity to residential neighborhoods must maintain minimum 10 feet planting and vehicular use areas shall be screened from public streets and adjacent uses.
Performance and Context Standards	Industrial buildings shall have requirements to avoid nuisances of noise, air pollution, hazardous waste, and odor requirements on adjacent land uses
Parking, Loading and Circulation Standards	Parking and loading requirements shall be consistent with facility usage. Major industrial facilities must conduct a traffic impact analysis.
Truck Route Standards	A regional truck route network should be incorporated into local truck route designation. Municipalities can add supplemental roads based on local needs including truck prohibited routes. Designated truck routes should have adequate pavement depth and material. Designated truck routes should be designed appropriately based on urban, suburban and rural designations. Additional design features should be considered for truck designated routes that are adjacent to bicycle lanes, sidewalks, schools and hospitals.

# **DRAFT FREIGHT PROJECT AND POLICY IMPROVEMENTS**

# Nashville Area Projects and Policies

- ➔ Regional Top Freight Mega-Projects
  - Upgrade SR109
  - Increase speed limit along SR840
  - Improve operational flow on I-24 SE and I-65 North
- ➔ Preserve industrial land along SR 840
- ➔ Upgrade interstate interchanges, particularly I-24 in Smyrna and Murfreesboro
- ➔ Upgrade truck route network around Nissan Plant
  - Nissan Drive, Enon Road, entry/exit gates
- ➔ Safety projects
  - Add median barriers to priority truck routes

# Next Steps

- ➔ Finalize regional truck route network
- ➔ Finalize recommendations
  - ↘ Land use recommendations for municipalities
  - ↘ Project and policy recommendations for the Nashville Area MPO
- ➔ Second FAC Meeting held later today
- ➔ Develop final Nashville Area Freight Plan