

# Initial Transportation Analysis

## *Status Report (Draft 07/09/07)*

*presented to*

**Tysons Corner Study Land Use Task Force**

*presented by*

**Donald Vary  
Cambridge Systematics, Inc.**

**July 9, 2007**

**Transportation leadership you can trust.**

# Initial Transportation Analysis Agenda

- **Status Update**
- **Description of Transportation and Land Use Inputs**
- **Review of Results**
  - Travel by mode, level of service
- **Next Steps**

# Initial Transportation Analysis Status Update

- **Completed Initial Analysis of Land Use Scenarios and Transportation System**
- **Completed Review of Transit Ridership Model**
- **Completed Initial TDM Analysis**
- **Completed Initial Non-Motorized Impact Analysis**

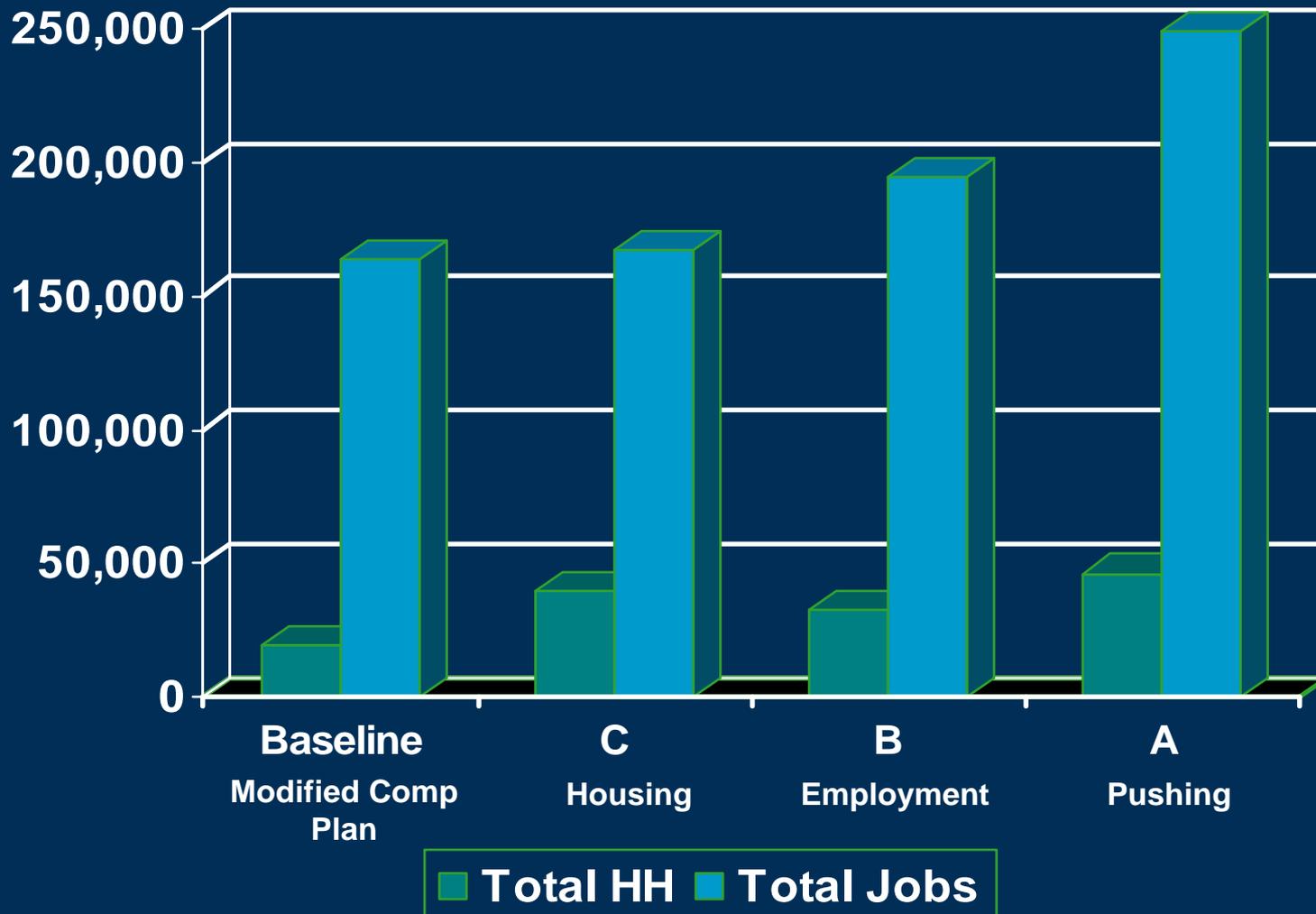
# Initial Transportation Analysis

## What's Underway

- **Integrating Results into Larger Evaluation Framework**
- **Fine-tuning Results and Presentation**
- **Preparing Next Level of Analysis**

# Initial Transportation Analysis

## Land Use Inputs - Four Scenarios

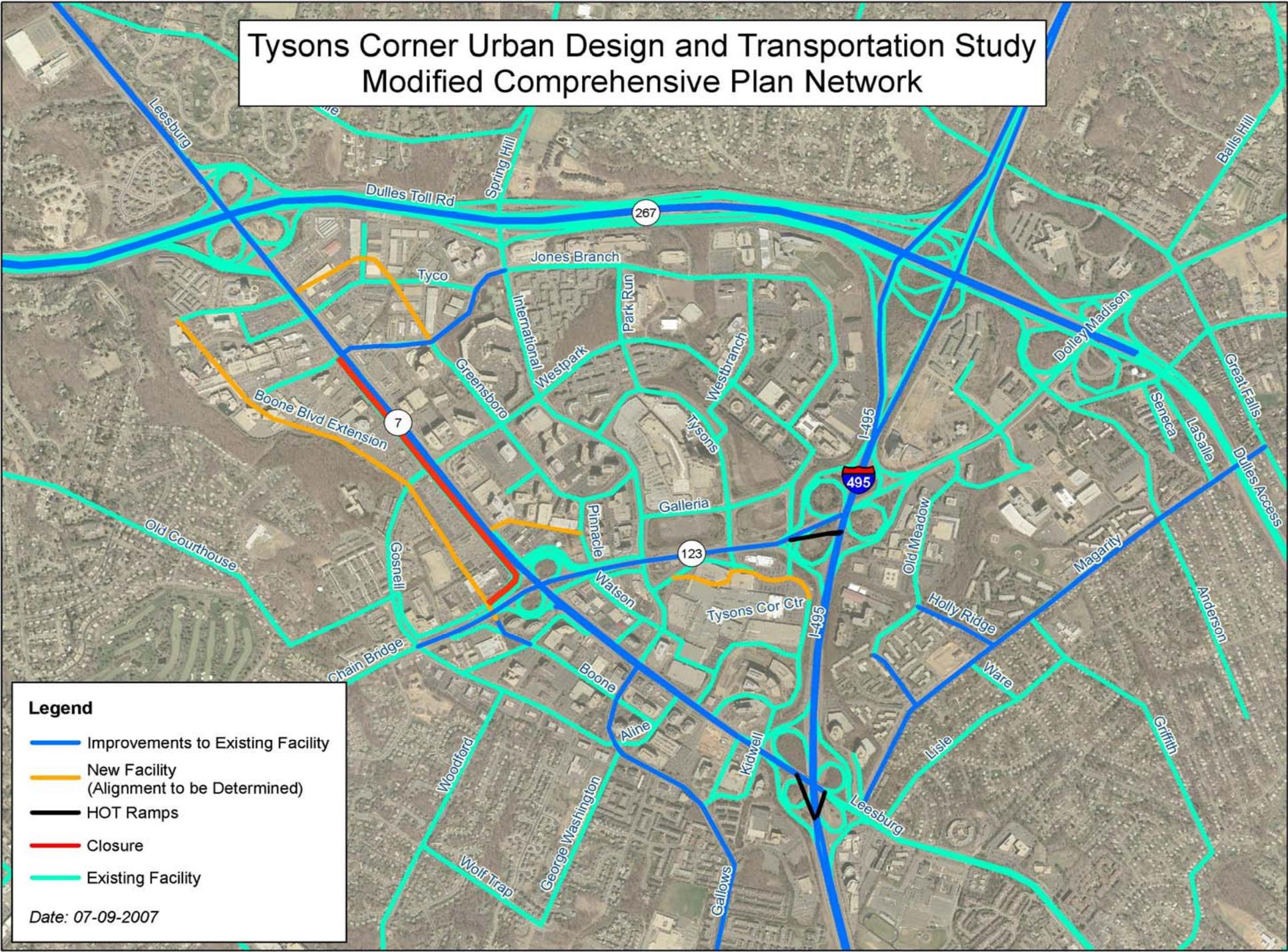


# Initial Transportation Analysis

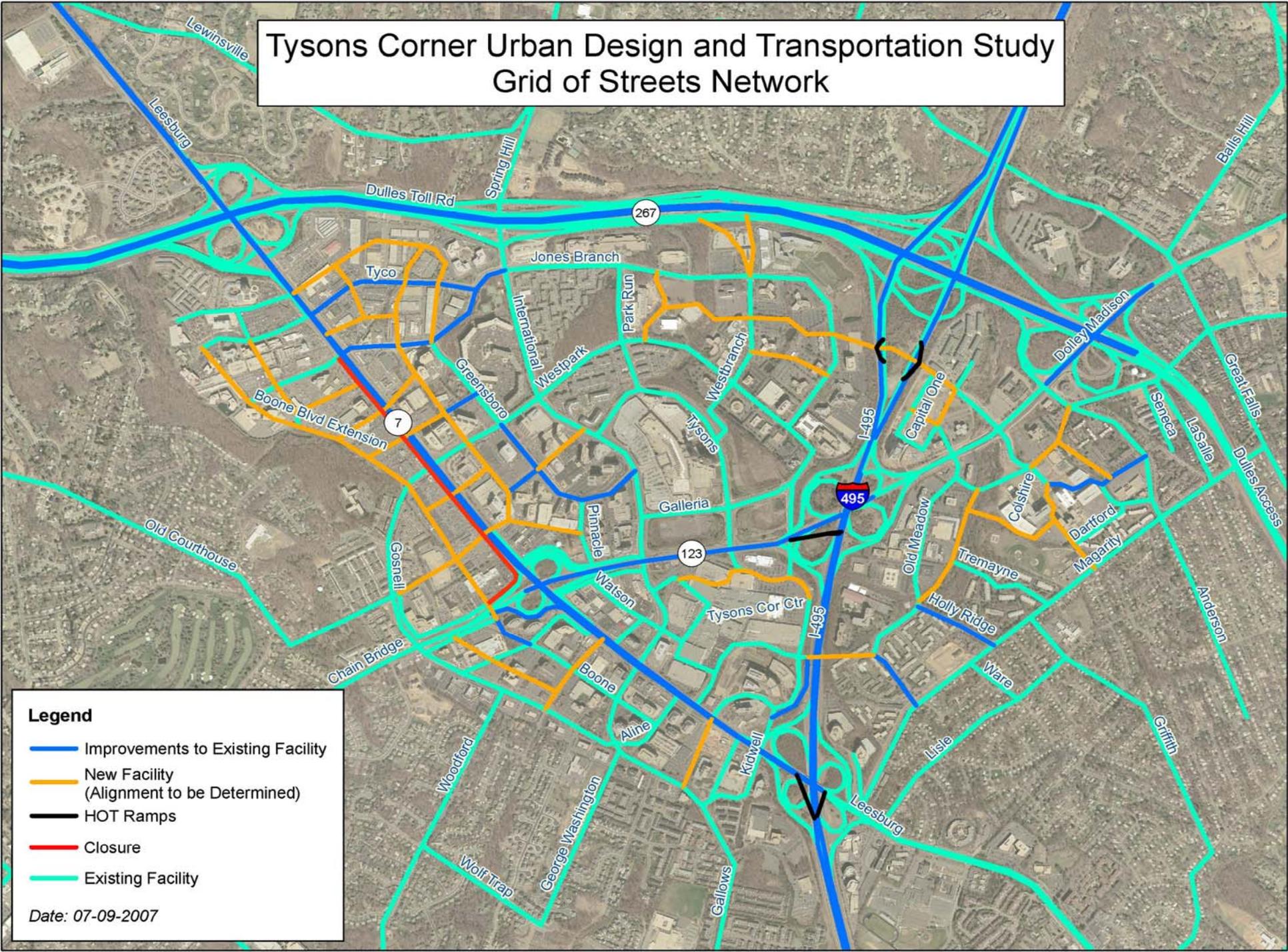
## Transportation Network Inputs

- **Modified Comprehensive Plan Network**
  - Metrorail, HOT lane elements
  - No additional interchanges ( VA Route 7, VA Route 123)
- **Grid of Streets Network**
  - Metrorail, HOT lane elements
  - Designed to improve internal circulation for everyone
  - Additional transit and roadway connections to Tysons

# Tysons Corner Urban Design and Transportation Study Modified Comprehensive Plan Network



# Tysons Corner Urban Design and Transportation Study Grid of Streets Network



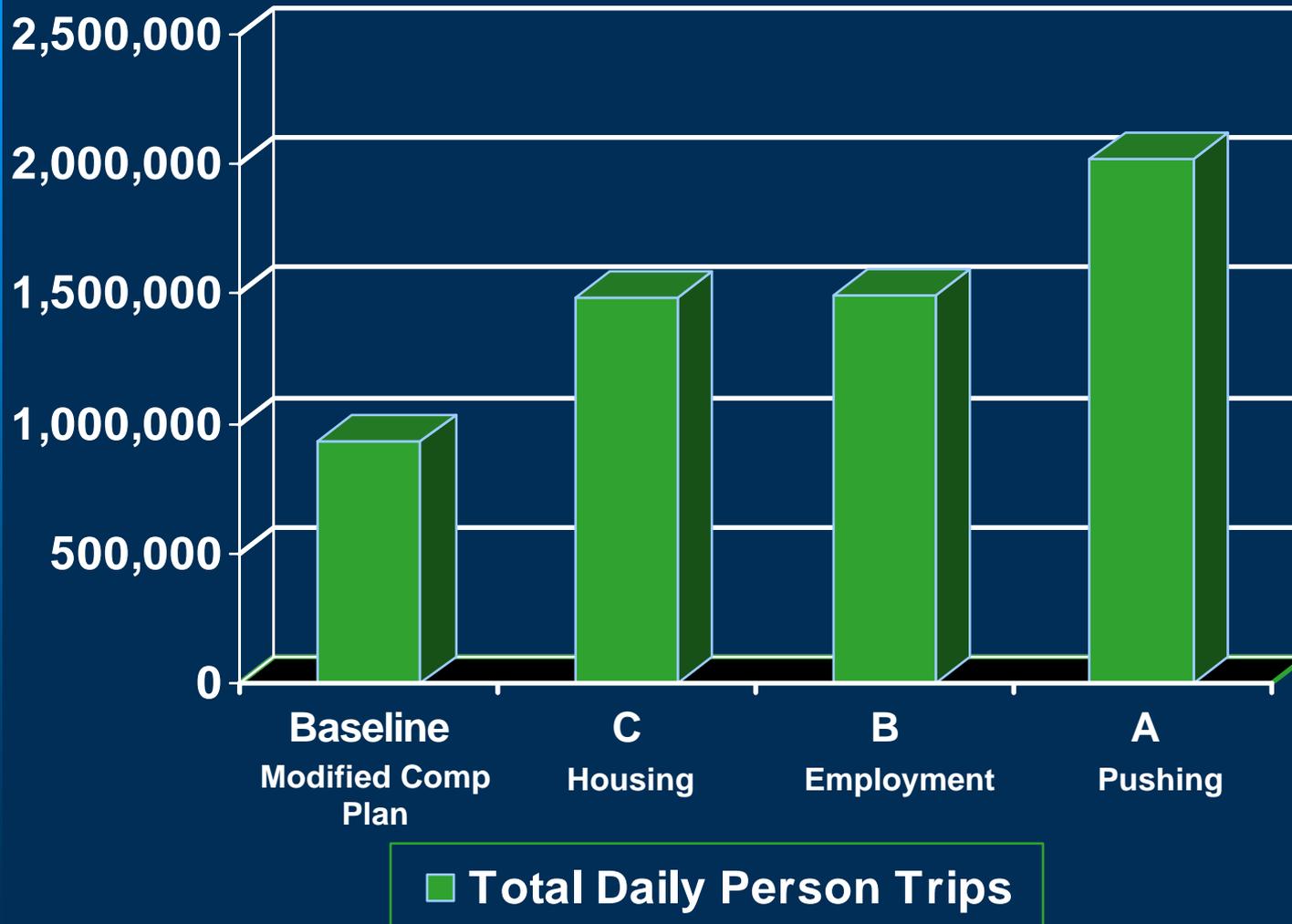
**Legend**

- Improvements to Existing Facility
- New Facility (Alignment to be Determined)
- HOT Ramps
- Closure
- Existing Facility

Date: 07-09-2007

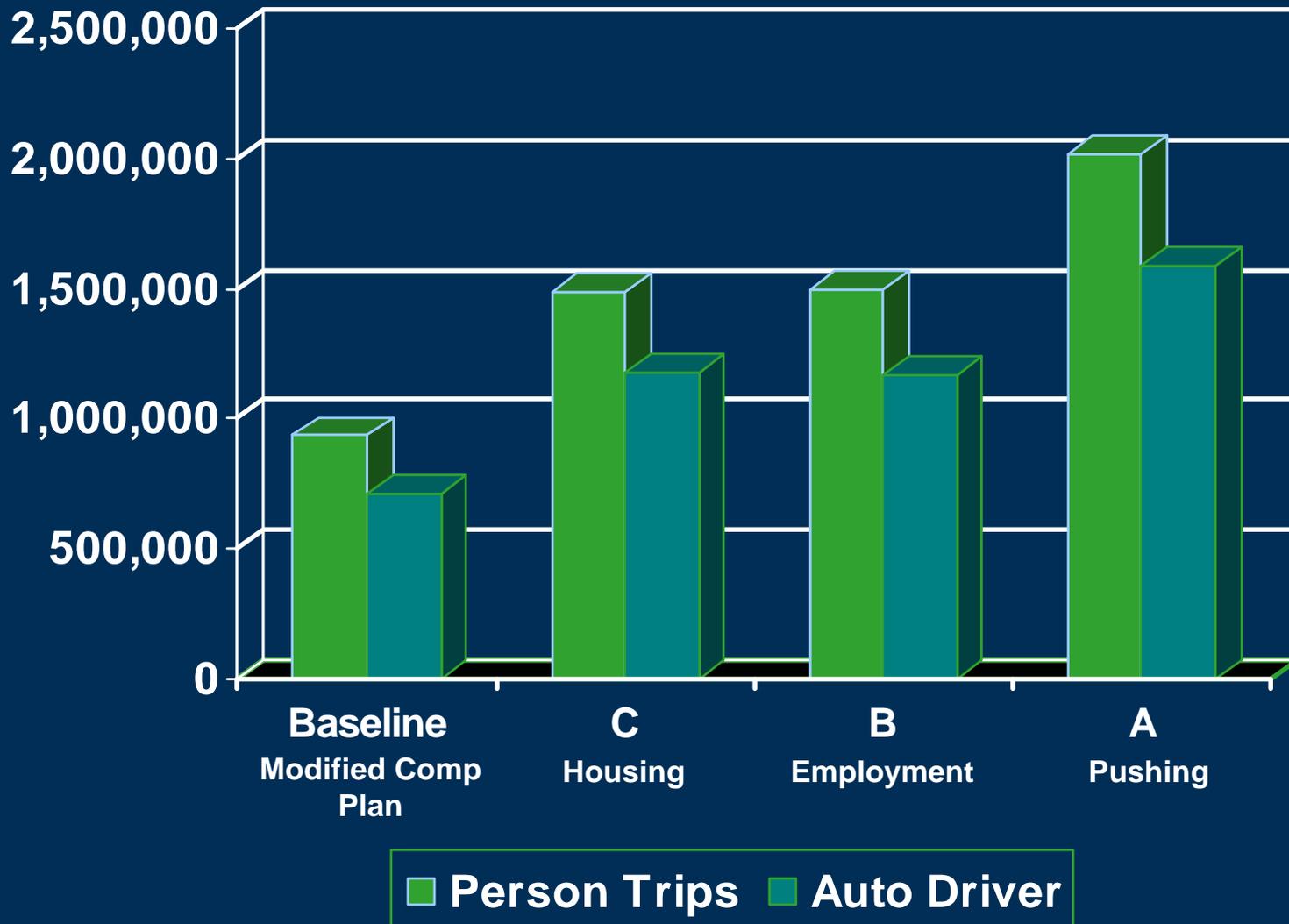
# Initial Transportation Analysis

## Person Trip Forecasts



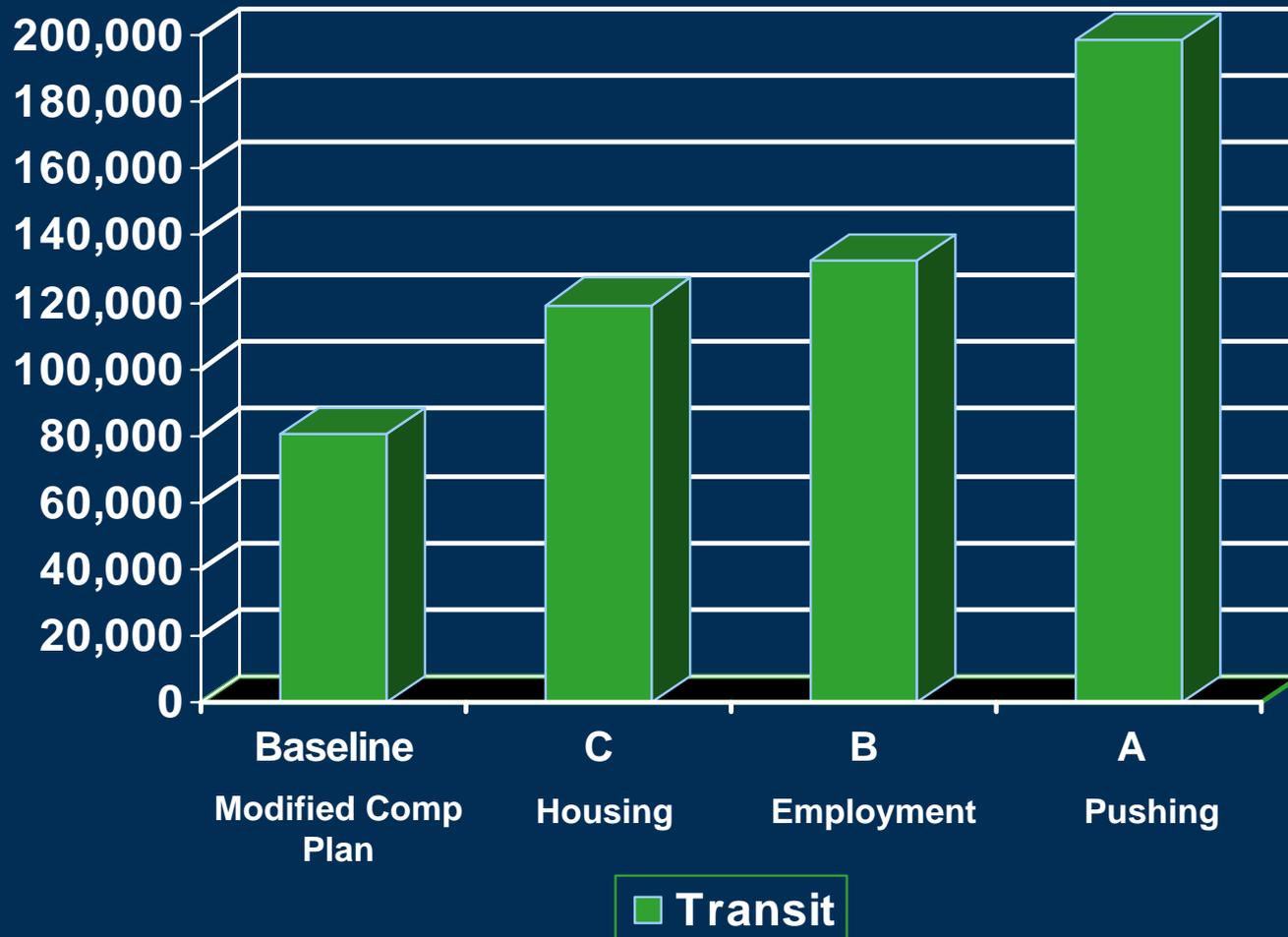
# Initial Transportation Analysis

## Daily Person and Auto Driver Trip Forecasts

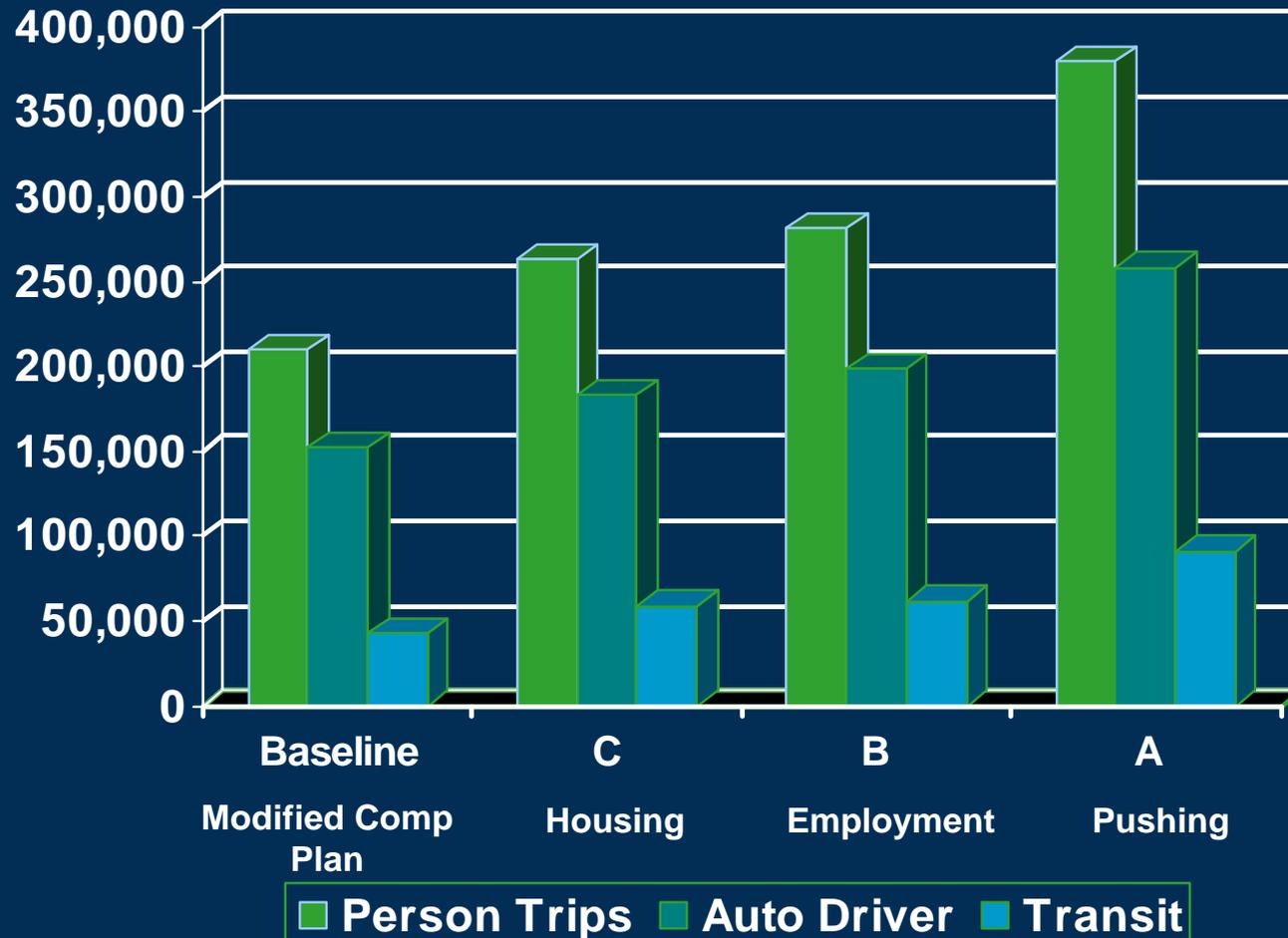


# Initial Transportation Analysis

## Transit Trip Forecasts



# Initial Transportation Analysis Work Trip Forecasts



# Initial Transportation Analysis

## TDM Work Trip Reduction Potential

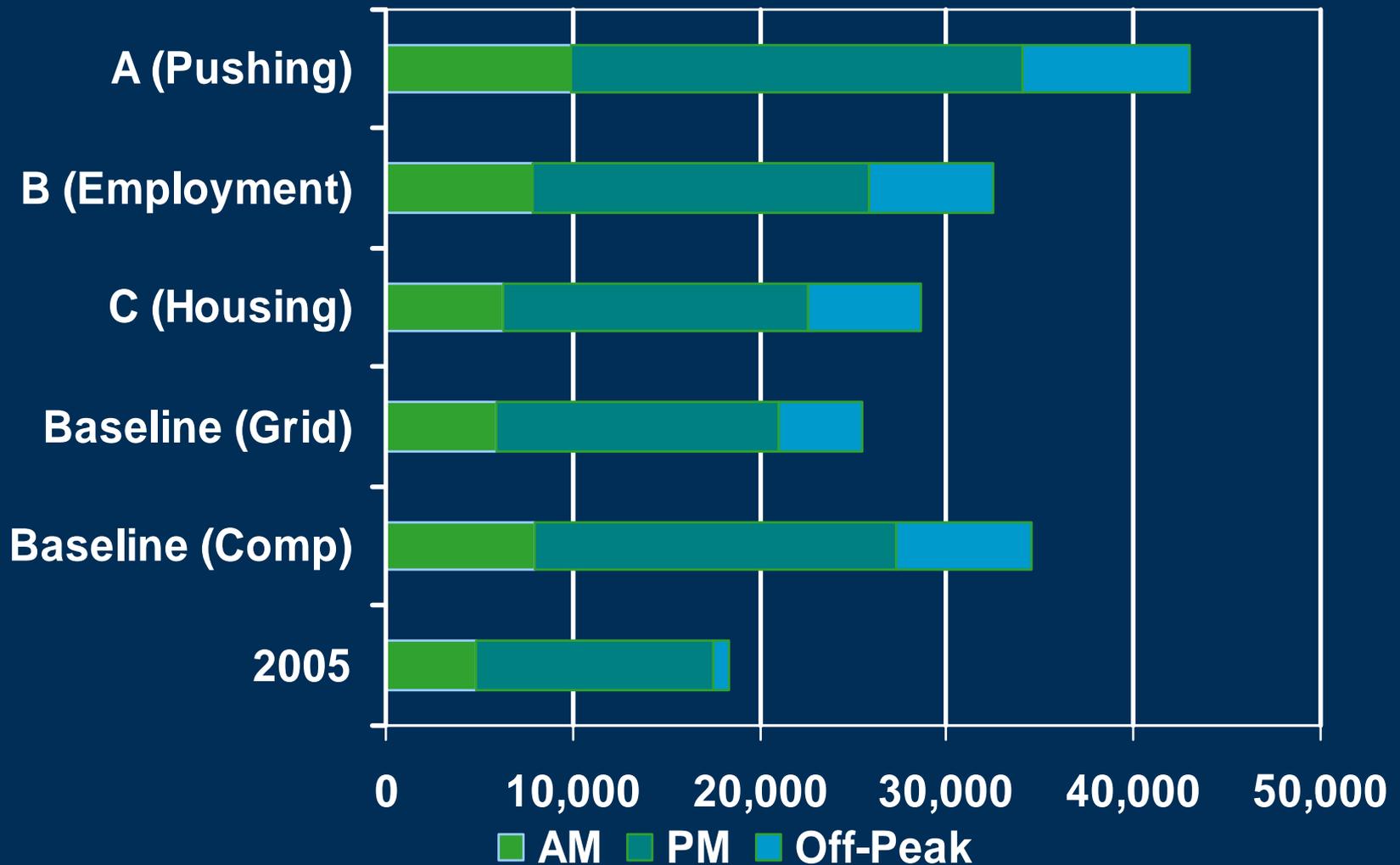
- **Expansion of Current TDM Plan**
  - Mandatory for **new** development
  - Transit coordinators
  - Carpool/Vanpool incentives
  - Transit subsidy
  - Flex-work arrangements
  - Transit connector
- **10-15% Reduction Achievable**

# Initial Transportation Analysis

## TDM Work Trip Reduction Potential

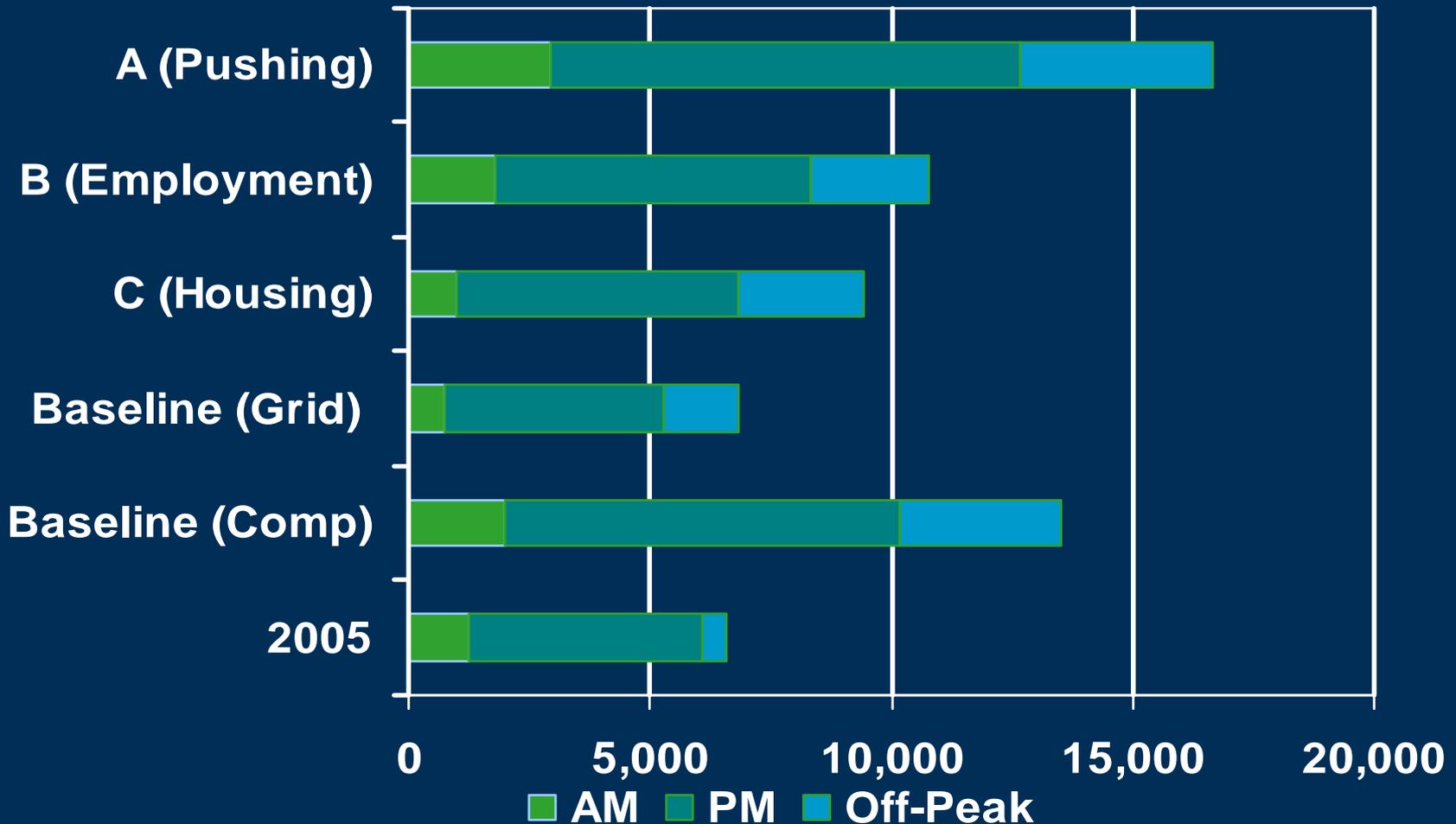
- Fully-Committed TDM Plan
  - Mandatory for **all** development
  - Transit coordinators
  - Carpool/Vanpool incentives
  - Transit subsidy
  - Flex-work arrangements
  - Transit connector
  - **Parking management**
- Enabling Legislation Probably Necessary
- Greater than 20% Work Trip Reduction Achievable

# Scenario Comparison – Daily Travel in Highly Congested Conditions



Hours of LOS "F" Travel, including Beltway and DTR

# Scenario Comparison – Daily Travel in Highly Congested Conditions



Hours of LOS "F" travel, excluding Beltway and DTR

# Initial Transportation Analysis

## Potential Non-motorized Impacts – “4Ds”

- **Density**
- **Diversity**
  - Mix of uses
- **Design**
  - Sidewalks, directness, network density
- **Destinations**
  - Proximity of people to jobs

# Initial Transportation Analysis

## Potential Non-motorized Impacts

	Density	Diversity	Design	Destinations	Total
<b>Modified Comp Plan</b>	<b>0.0%</b>	<b>0.0%</b>	<b>-0.37%</b>	<b>-0.4%</b>	<b>-0.8%</b>
<b>C (Housing)</b>	<b>-0.9%</b>	<b>-2.8%</b>	<b>-0.37%</b>	<b>-0.5%</b>	<b>-4.5%</b>
<b>B (Employment)</b>	<b>-1.1%</b>	<b>-1.3%</b>	<b>-0.37%</b>	<b>-1.0%</b>	<b>-3.7%</b>
<b>A (Pushing)</b>	<b>-2.8%</b>	<b>-1.7%</b>	<b>-0.37%</b>	<b>-1.9%</b>	<b>-6.8%</b>

# Initial Transportation Analysis

## Initial Findings

- **Baseline (Comp Plan Network)**
  - Higher levels of congestion without Grid of Streets
  - More “highly congested” travel on local roads
  - Fewer opportunities for internal walk/bike travel
- **Housing**
  - More balanced travel patterns
  - Lower levels of congestion than other scenarios
  - Land use mix provides for additional walk/bike opportunities

# Initial Transportation Analysis

## Initial Findings

### ● Employment

- Less balanced travel patterns
- Higher levels of congestion than housing scenario
- Lower walk/bike potential than housing scenario

### ● Pushing

- Highest levels of congestion
- Imbalanced traffic patterns
- Highest opportunity for walk/bike traffic due to land use density

# Next Steps

- **Additional Synthesis of Results**
- **Incorporate Results into Workshop Presentation**
- **Document Results**
- **Initiate Next Level of Analysis**