PB-MPO POLICY BOARD PROJECT BRIEFING

Interregional Planning Environmental Linkages (PEL) Study

PERMIAN BASIN MPO

November 14th, 2022

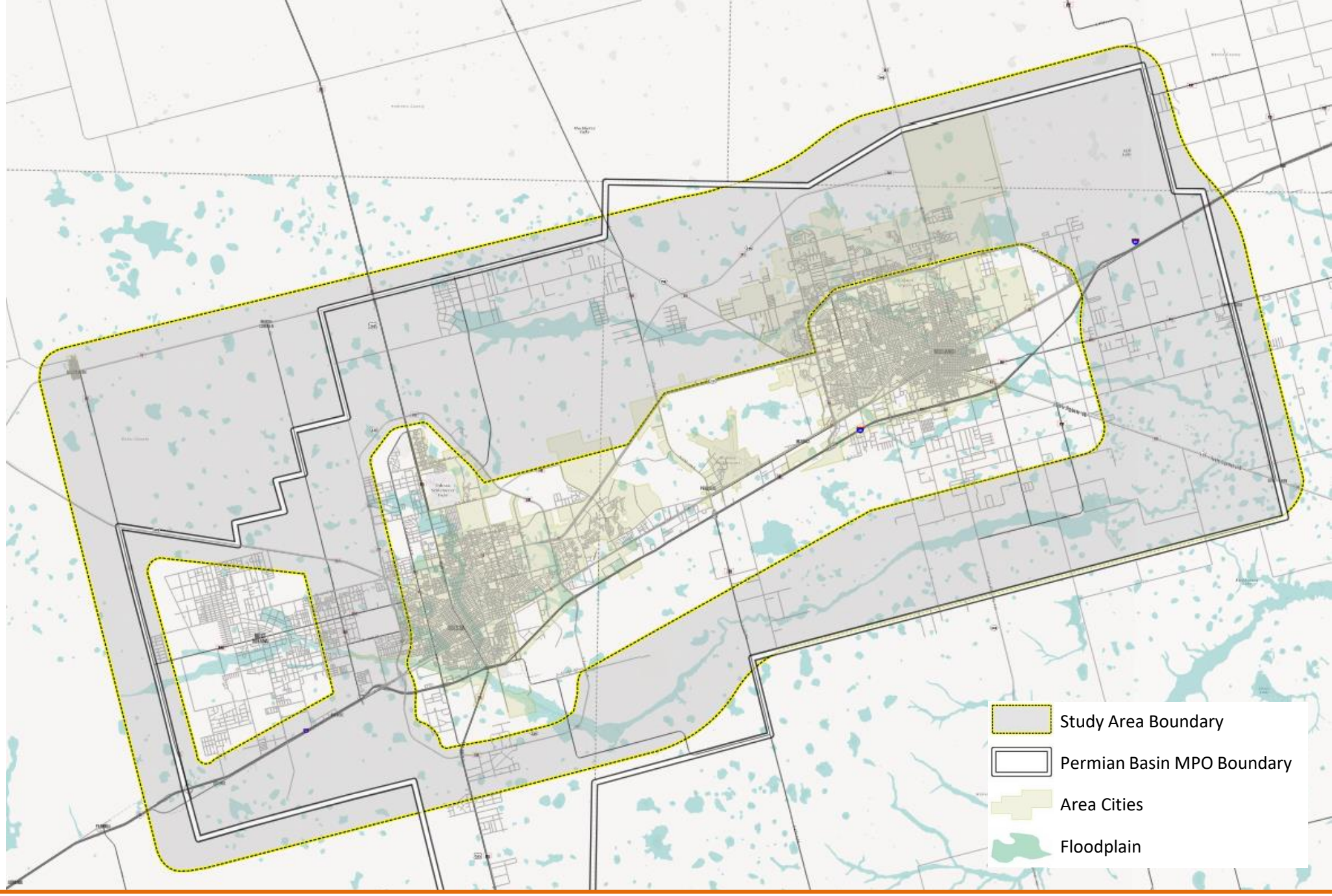
FREESE AND NICHOLS

Permian Basin MPO Metropolitan Planning Organization

Study Area

Interregional PEL Study

Over 550 Sq. Miles



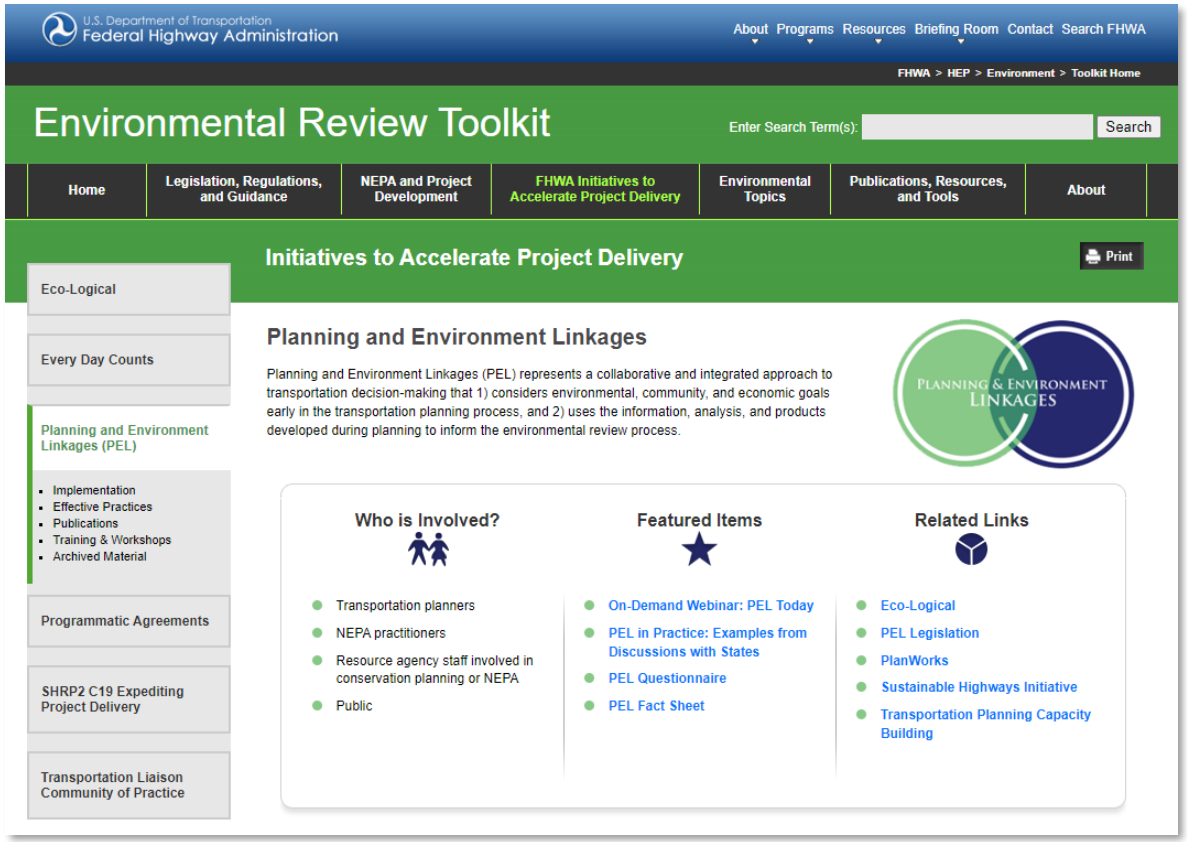
Background
Legislation

U.S. Department of Transportation
Federal Highway Administration

Federal Acts

- SAFETEA-LU
- MAP-21

Support transportation planning & environmental consideration



PEL Basics

Planning Environmental Linkages

What is a **Planning & Environmental Linkage (PEL)** Study?

- A holistic approach to identify transportation alternatives
- Identifies goals for future mobility corridors (or other transportation improvements) based on:
  - Environment
  - Community
  - Economic Development
- Planning study *informs* the environmental review process (NEPA)
- Leverages multiple agencies
  - TxDOT, Cities, Counties, PB-MPO, Private Entities

PEL Basics

Planning Environmental Linkages

Purpose of PEL:

- Establish collaborative forum for common vision
- Development of potential corridor goals and objectives
- Identification of potential corridors for future evaluation

Objectives of Study:

- Common shared vision
- Understanding study area stakeholder/partner capabilities/limitations
- Broad awareness/understanding of study area
- Collaboration tool to assist and facilitate orderly area development

PEL Benefits[1]

Planning Environmental Linkages

Relationship-Building

- Process strengthens interagency relationships
- Resource and regulatory agencies are encouraged to get involved early in the planning process, providing an opportunity to help shape transportation projects

Improved Project Delivery Timeframes

- Minimizes potential duplication of planning and NEPA processes, creating one cohesive flow of information
- Improved interagency relationships may minimize differences on key issues through project lifetime

On-the-ground Outcome Benefits

- MPO is equipped with information on resource considerations from public and can better plan for projects that meet the community's needs more effectively

[1] environment.fhwa.dot.gov/env_initiatives/PEL

What is an *Interregional Corridor?*

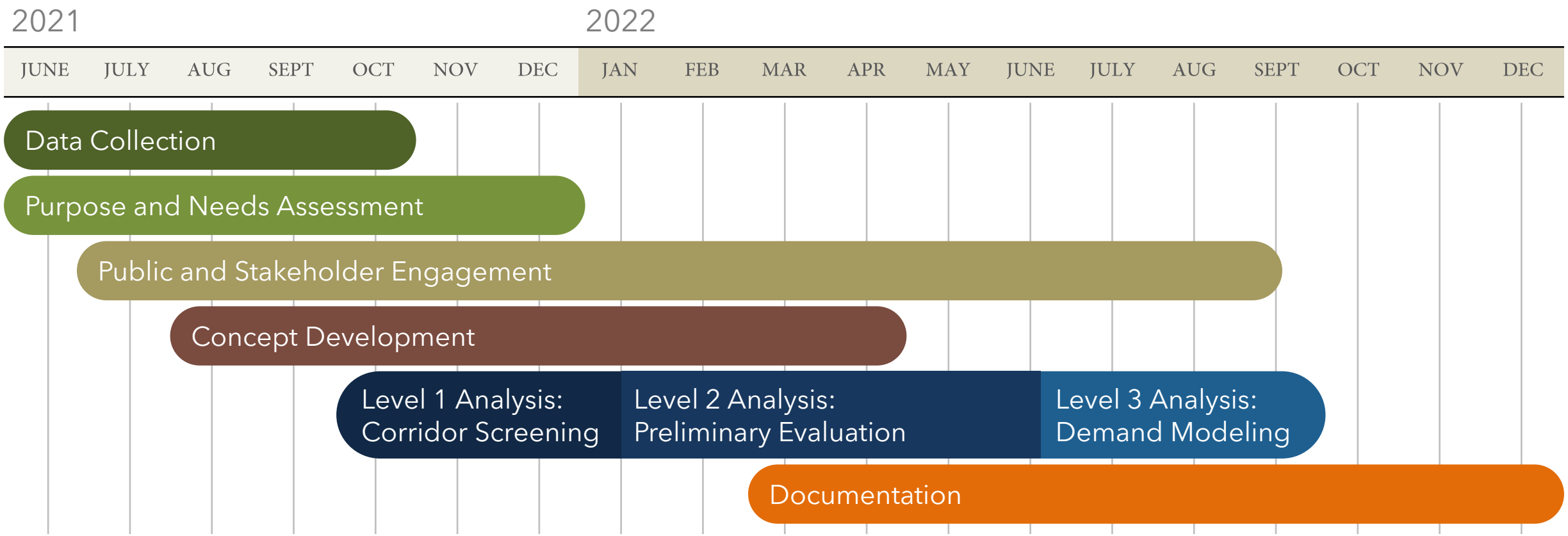
Possible Key Factors

- Enhance mobility and safety
- Longer distance/Though-trips
- Greater volume of goods and services
- Regional connections serving both Odessa and Midland
- Points to Higher Functional Classification Roadway
  - Highway
  - Principal Arterial Roadway / Major Arterial

Study Process

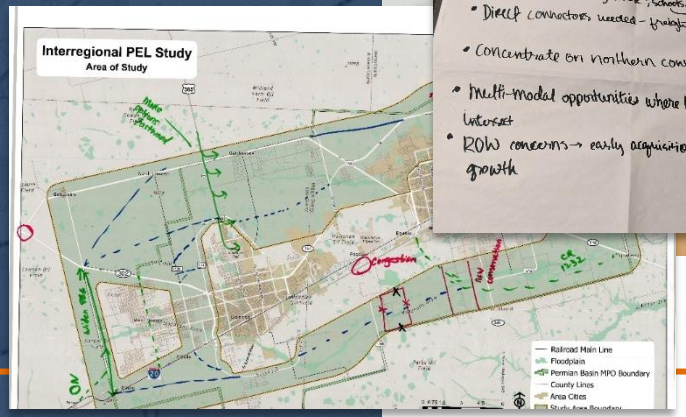
- Data Collection
- Public & Stakeholder Involvement
- Purpose and Needs Assessment
- Develop and Screen Potential Alternatives
- Project Next Steps

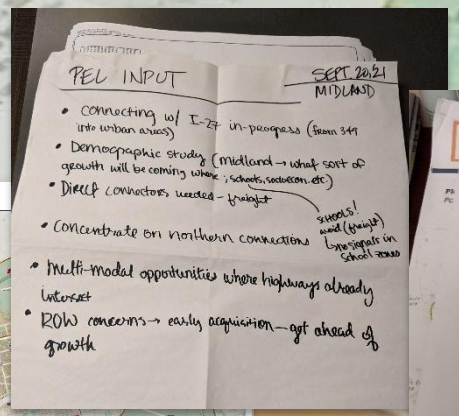
PEL Timeline

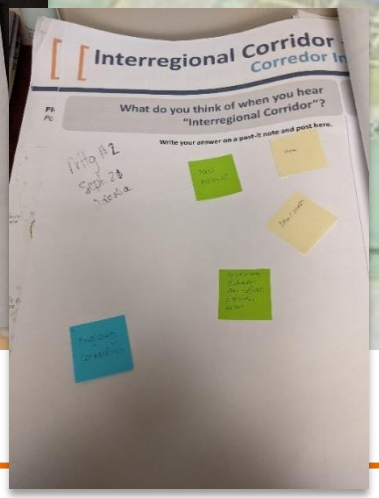


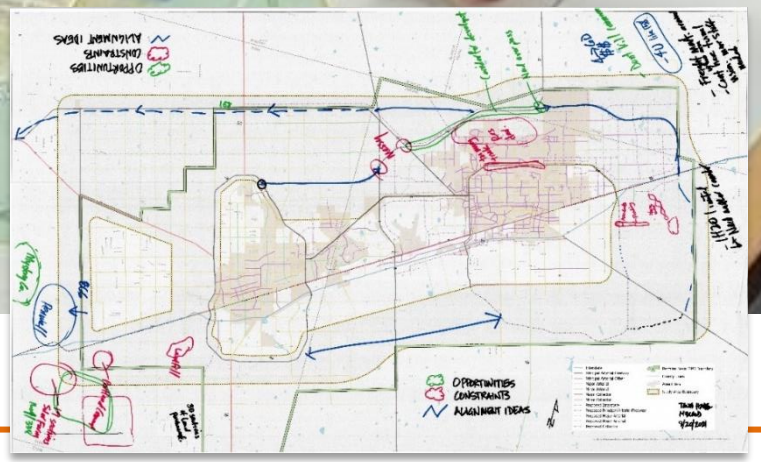
Public & Stakeholder Input:

the basis for Alternatives Development









Public Involvement

Stakeholder Interviews:

July 2021

Public Town Hall & Workshop #1:

September 2021

Public Town Hall & Workshop #2

May 2022

Public Town Hall & Workshop #3

August 2022

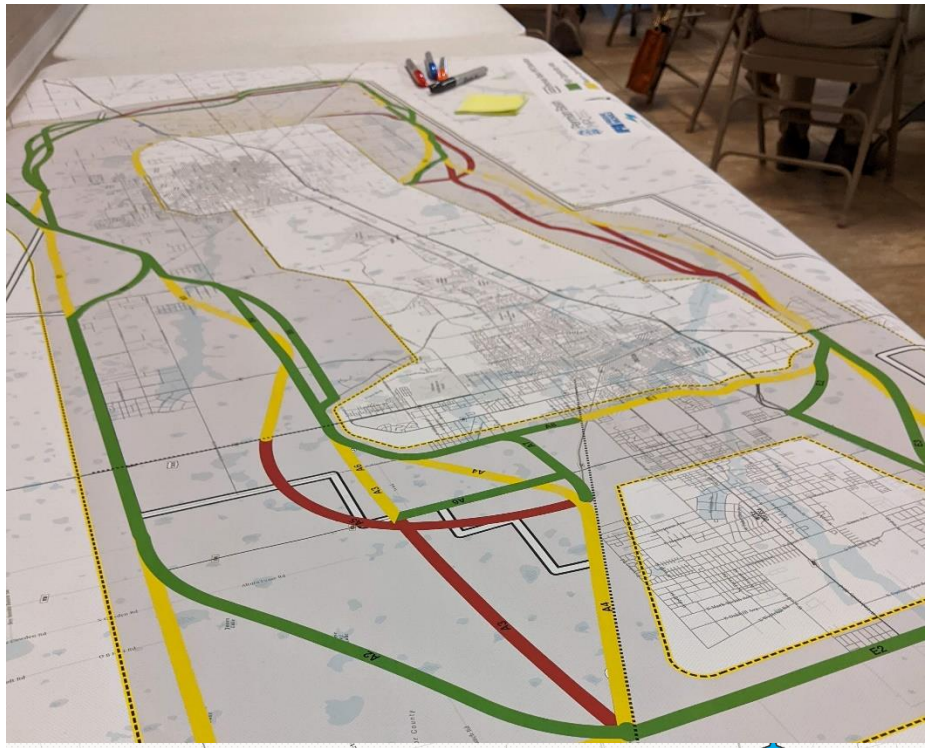
Public *Engagement*

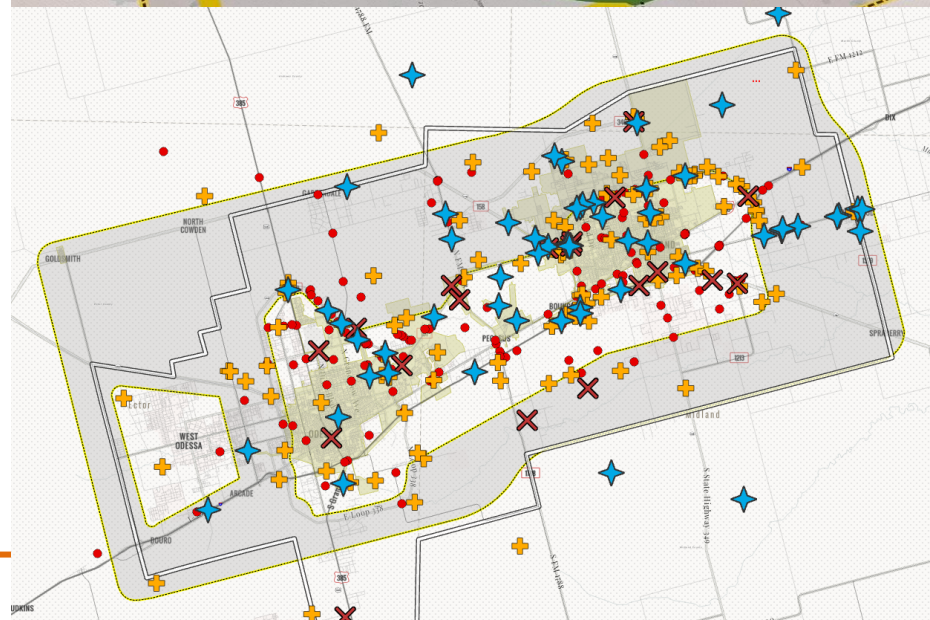
Sources of Feedback

- Study Oversight Committee
- Stakeholder Interviews
- Town Hall Meetings
- Materials to MPO Website
- Virtual Engagement
  (>700 visitors; 226 respondents)

Outreach

- Cities, Chambers of Commerce, EDCs, ISDs, Hospitals
- Media organizations
- Nonprofits, Universities, Utilities, Firms
- Oil Firms, Transportation, Distribution Companies
- Homeowner Association, Individuals





Public
Engagement

Outreach Trends

- Highest Ranked Needs: Roadway Connectivity & Safety
- Preference for weighting Environmental Criteria higher
  - Oil & Gas, Hazardous Waste, Historic & Cultural Resources, Wetlands, Threatened & Endangered Species, Parks & Open Space, Agriculture

Purpose & Needs Assessment

Connectivity (Nodes)

Safety

Mobility (Links)

Access and Proximity to Growth

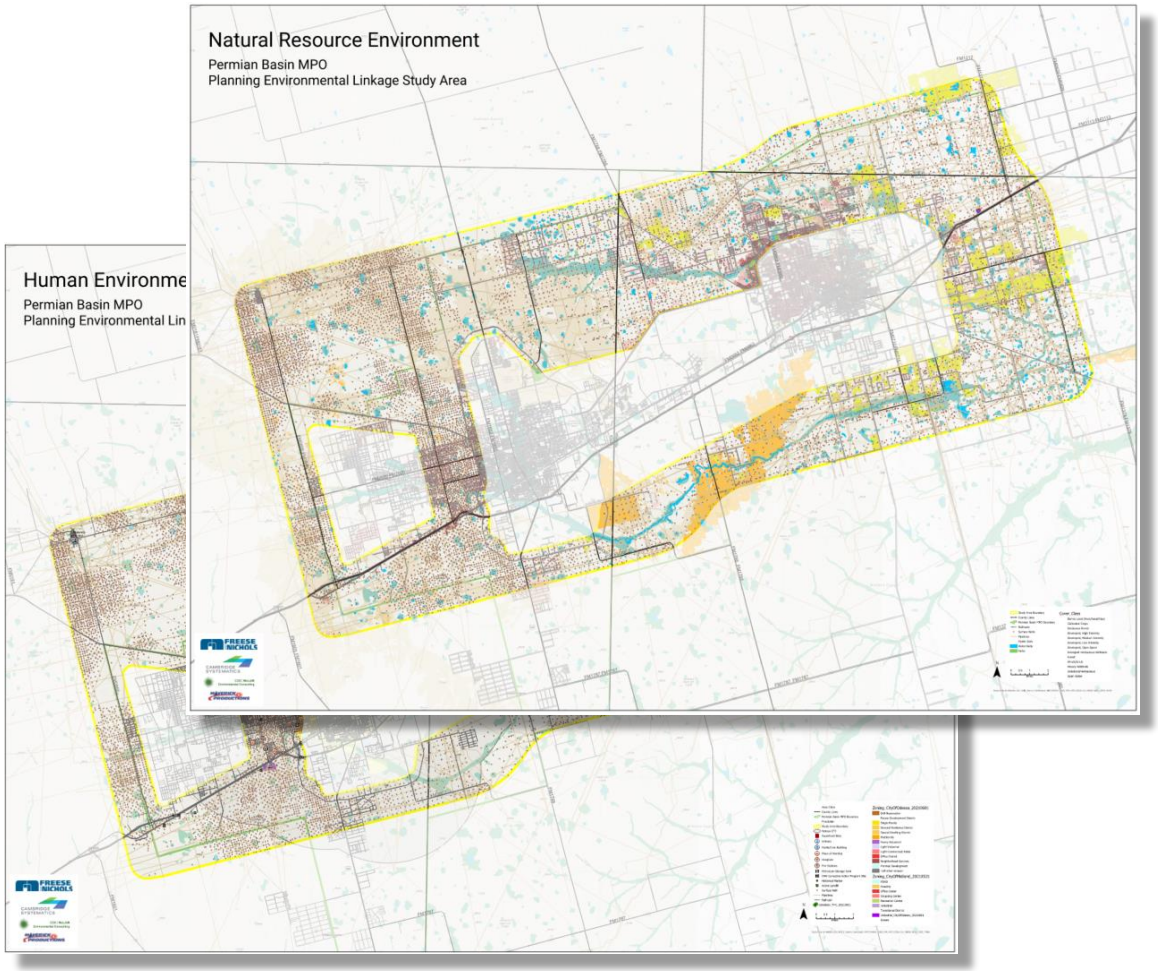
Interregional Benefits

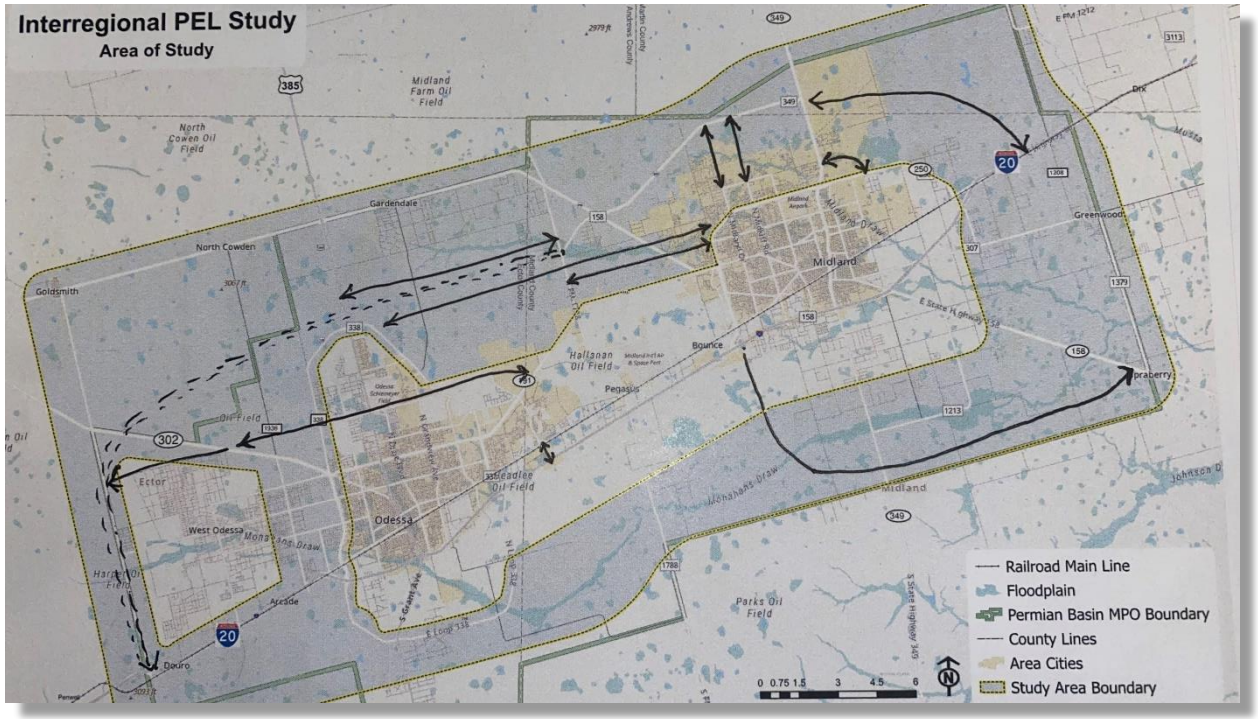
Project Goals

Selection Criteria Categories

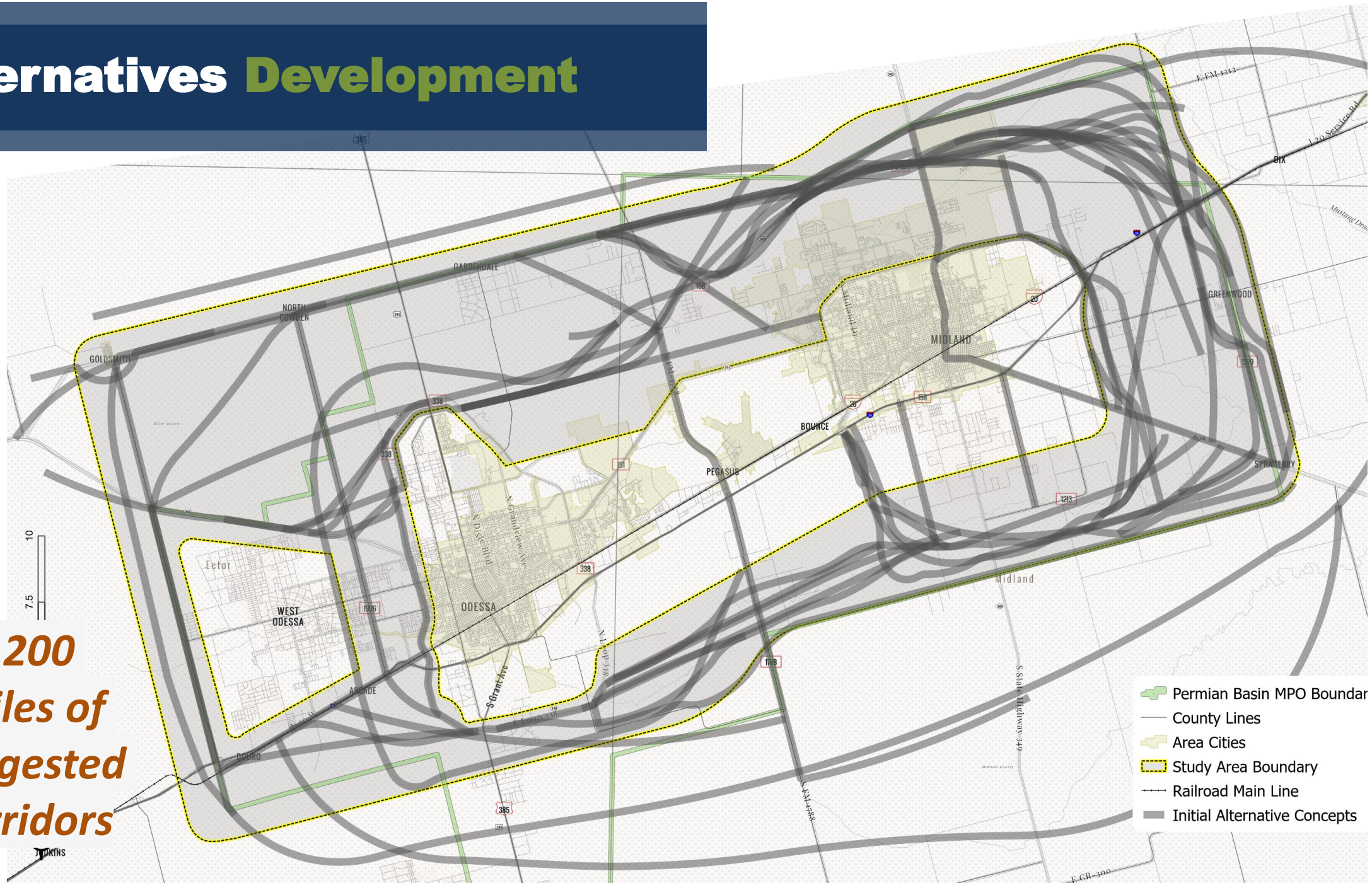
1. Meets Need and Purpose
2. Consistency with Regional Plans & Infrastructure
3. Freight Impacts and Future Travel Demand
4. Natural Environmental Impacts
5. Social Environmental Impacts
6. Economic Development

Gather Data & Analyze Feedback





Alternatives Development



1200 Miles of suggested corridors

Alternative Screening

Universe of Alternatives

Alternatives identified from previous studies, current plans, and public input, designed to **address concerns** in the area and establish major issues and needs**.**

Level 1 Screening – “Red Flag” Analysis

Potential alternative concepts are screened against the purpose and needs for the study, screening for potential “Red Flags.” Results of Level 1 screening are the **Preliminary Corridor Alternatives**.

Level 2 Screening - Comprehensive Evaluation

Preliminary Corridor Alternatives are evaluated using a comprehensive range of environmental, social, and economic criteria. Continued engagement with the public and stakeholders. Alternatives are then scored and categorized by level of opportunity offered.

Level 3 Screening – Refine Areas of Opportunity

A detailed evaluation is conducted using a sample of preliminary corridor alternatives found to yield further future opportunity. This included travel demand modeling and further integration of public and stakeholder engagement to refine areas of opportunity.

Level 1 Screening:
Needs & Purpose

ISSUES

Problems to address in the region

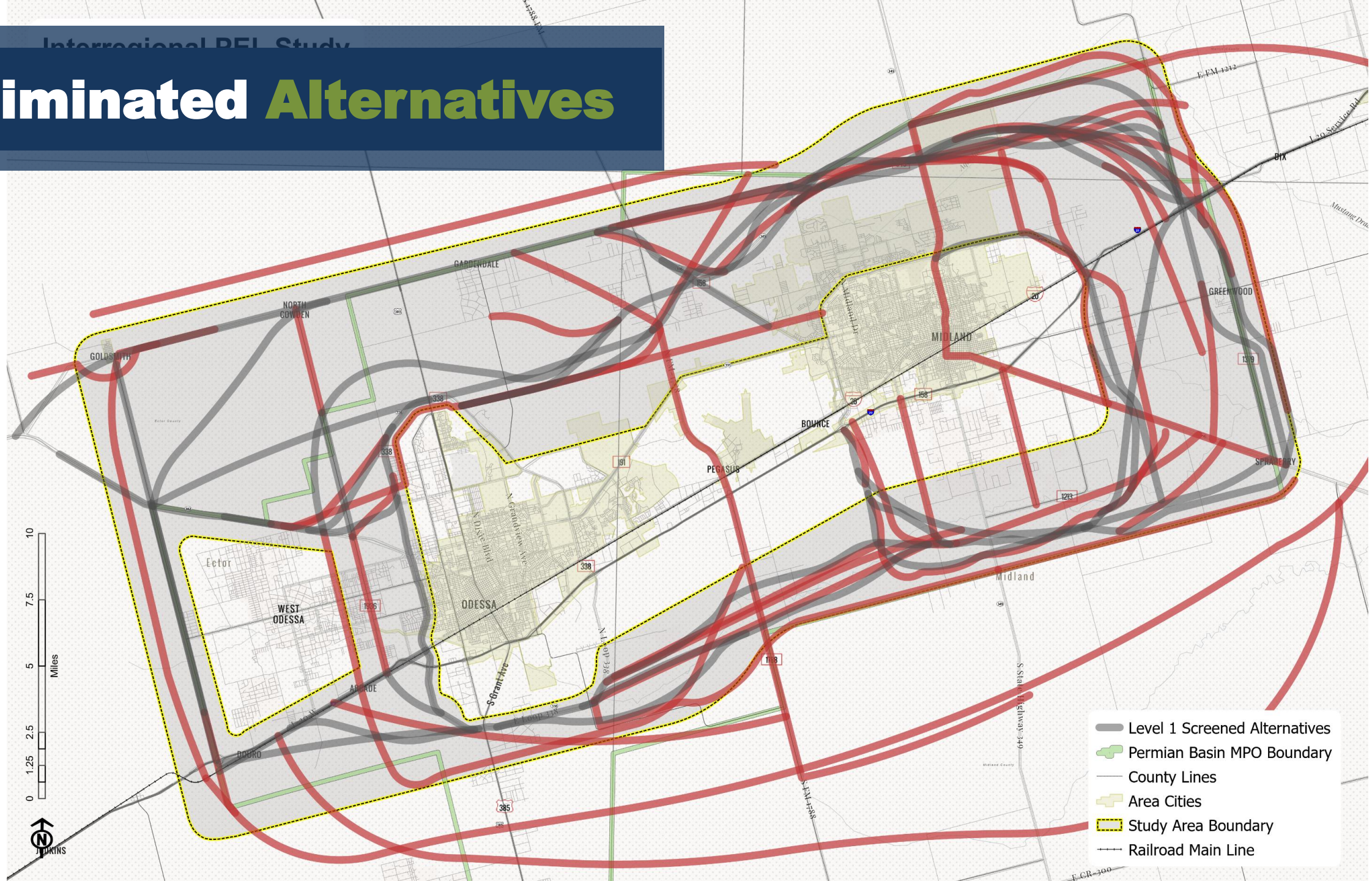
NEEDS

Ideal solutions to address the issues

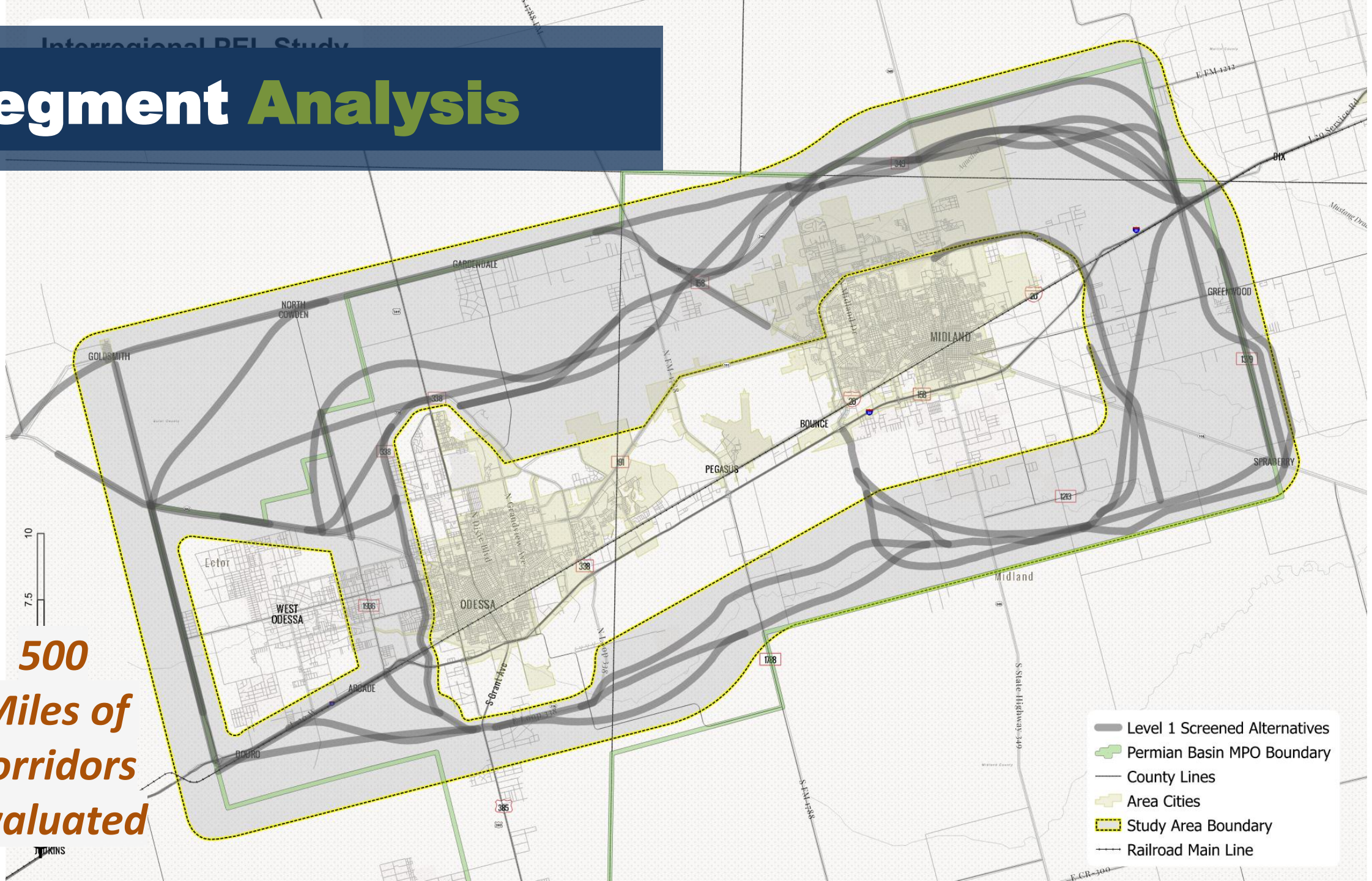
PURPOSE

Ways to work toward meeting the needs

Eliminated Alternatives

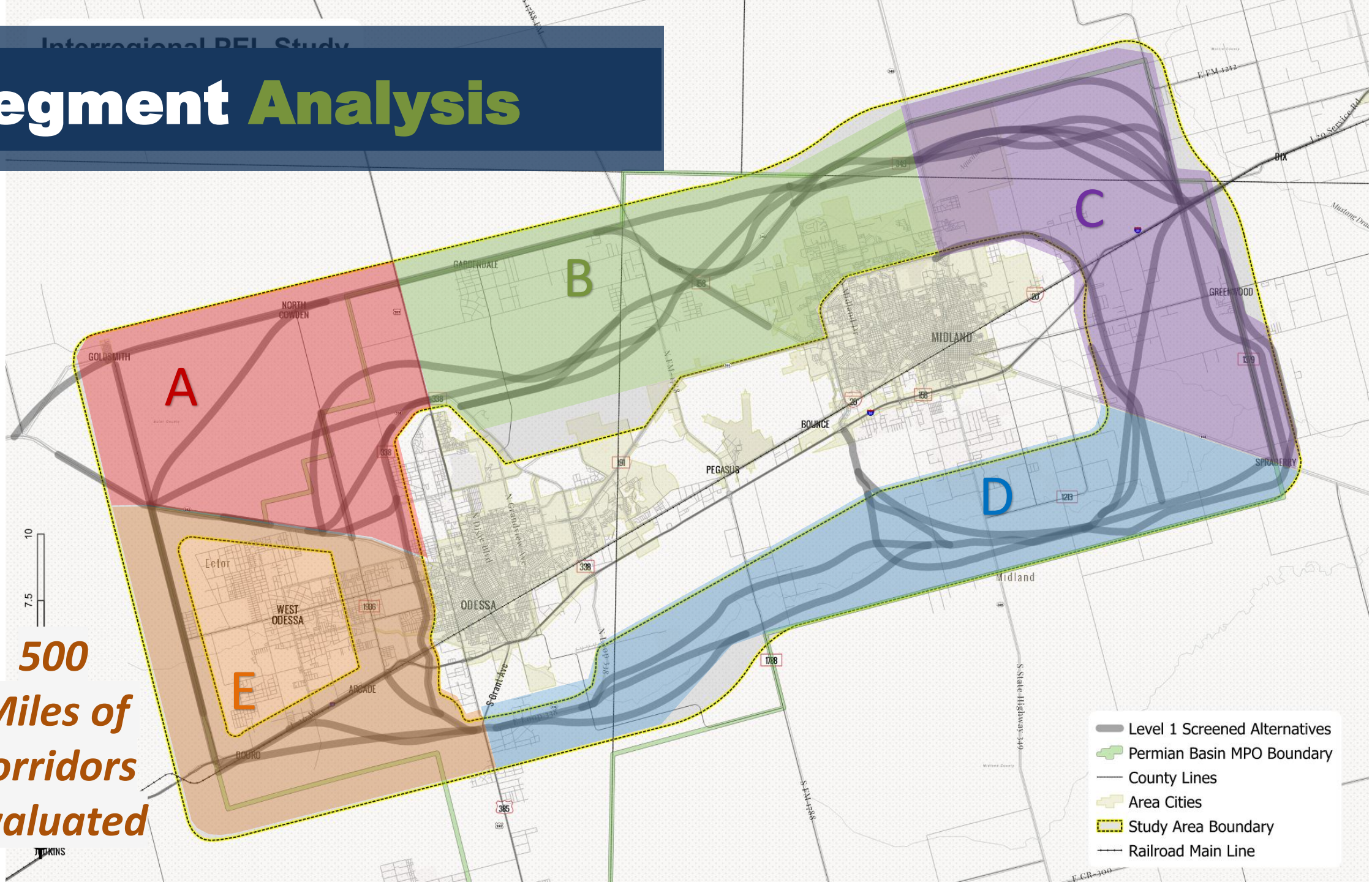


Segment Analysis



500 Miles of corridors evaluated

Segment Analysis



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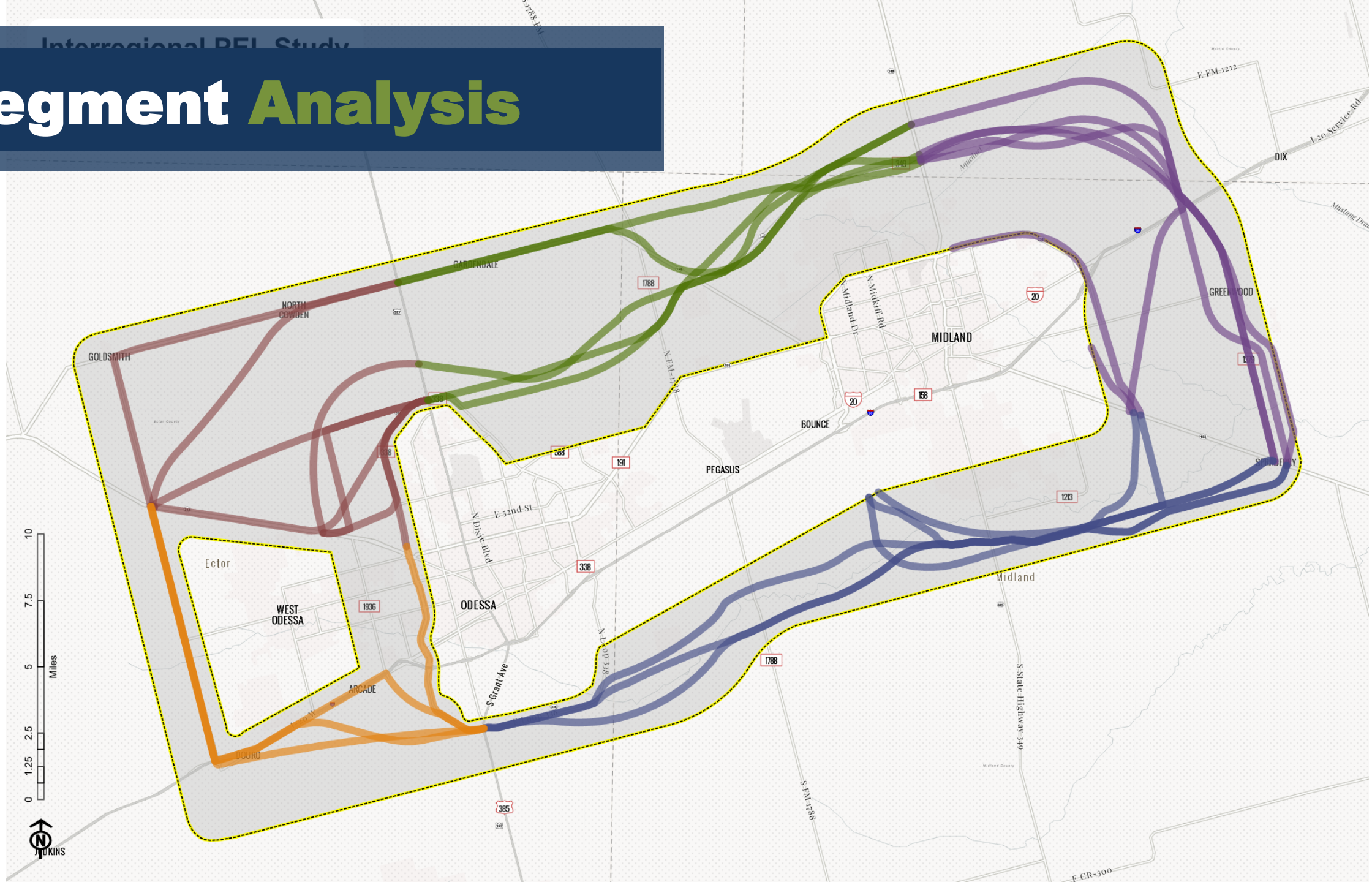


Level 2 Screening Criteria

	More Opportunity	Neutral/Needs More Info	Less Opportunity
1. Need and Purpose	Assessed during Level 1 Analysis		
2. Consistency with Regional Plans			
3. Travel Demand Modeling	Level 3 Detailed Evaluation		
4. Natural Environmental Impacts			
5. Social Environmental Impacts			
6. Economic Development			

Level 2 Screening Criteria

Consistency with Regional Plans & Infrastructure

Planned and Existing Systems and Projects

Natural Environmental Impacts

Archeological Sites
Threatened/Endangered Species
Parks and Open Space
Agriculture
Oil and Gas Infrastructure
Etc.

Social Environmental Impacts

Vulnerable Populations
Community Facilities
Sensitive Receptors

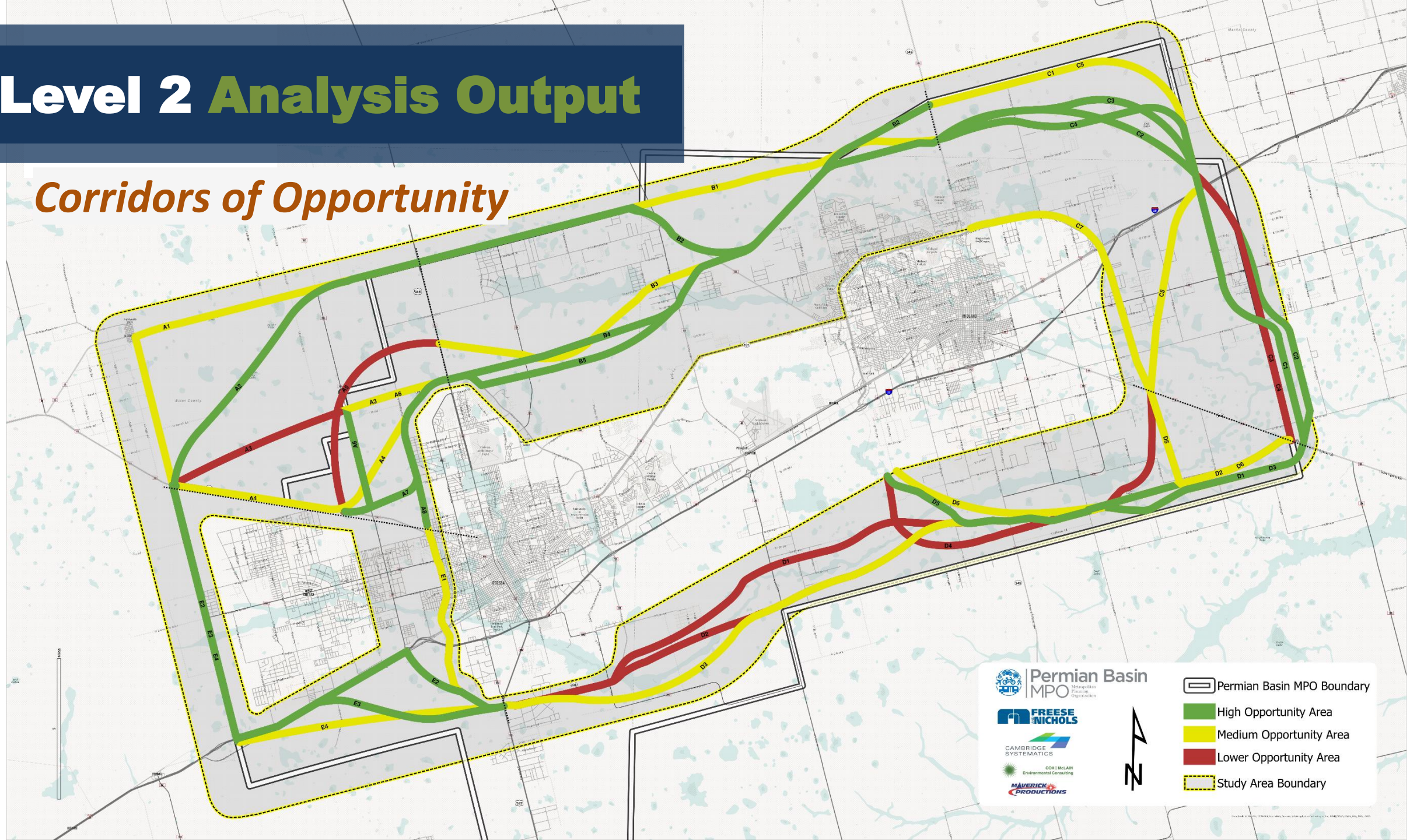
Economic Development

Conducive to future job growth
Land Use Compatibility

Criteria	Attribute Name	Resource Type/Measure	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	E1	E2	E3	E4
2. Consistency with Regional Plans and Infrastructure	2.1 Planned Systems																														
	2.2 Existing Systems																														
3. Modeling																															
4. Natural Environmental Impacts	4.1 Archeological and Historical Sites	NRHP Property																													
		NRHP District																													
		TXDOT Historic Properties																													
		TXDOT Historic Bridges																													
		Historical Markers	x	x							x	x																	x	x	x
		DOE Eligible Points																													
		DOE Eligible Polygons																													
		Archaeological Site																			x										
		Historic Highway Routes									x					x	x	x	x	x	x	x	x		x			x	x	x	x
	4.2 Oil and Gas	Surface Wells	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Pipeline Conflicts	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Storage Tanks	x								x	x								x								x	x	x	
	4.3 Wetlands or Major Water Features	NHD Flowline	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		NHD Waterbody	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		NWI	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4.4 Threatened and Endangered Species/Species of Concern	TXNDD			x	x	x	x	x	x			x	x	x			x	x			x	x	x				x			
	4.5 Parks/Open Space/Floodplain	Cemeteries																													
		100-year Floodplain	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Park Areas																x	x		x										
	4.6 Hazardous Site/Landfills	Petroleum Storage Tank	x																												
		Leaking Petroleum Storage Tank	x			x			x	x								x	x									x	x		
		Industrial and Hazardous Waste Corrective Action (IHWCA)	x			x			x	x																		x	x	x	x
		Superfund Site																										x	x		
		Landfill																													
	4.7 Agricultural Areas	Center Pivot																													
		Prime Farm Land/Farmland of Statewide Importance									x	x				x	x	x	x		x		x								
5. Social Environmental Impacts	5.1 Relocations/Displacements	Population + HHs in 2045											x	x	x	x	x	x	x	x		x	x								
	5.2 Area Development	City Limits y/n	x																												
	5.3 Corridor Effect on Community Facilities and Sensitive Receptors	Public Buildings									x	x	x	x	x	x	x	x	x	x	x							x			
		Hospitals																													
		Fire Stations																													
		Schools																													
	5.4 Corridor Effect on EJ and Vulnerable Populations	Block Groups w/ Minority Pop <50%	x	x	x	x	x	x	x	x								x	x												
	5.5 Corridor Effect on Income Levels	Low Income Block Groups										x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6. Right of Way, Public Support																															
7.1 Economic Development	Conducive to ED and LU Compatibility	Jobs in 2045																													
TOTAL (FINAL) - Collaborative Result			1	2	3	4	5	6	7	8	9 43	10	11	12	13	14 30	15 31 35	16 32	17 33	29 34	18	19 45	20	21	22	23 47	24	25	26	27	28 49

Level 2 Analysis Output

Corridors of Opportunity



Level 3
Screening

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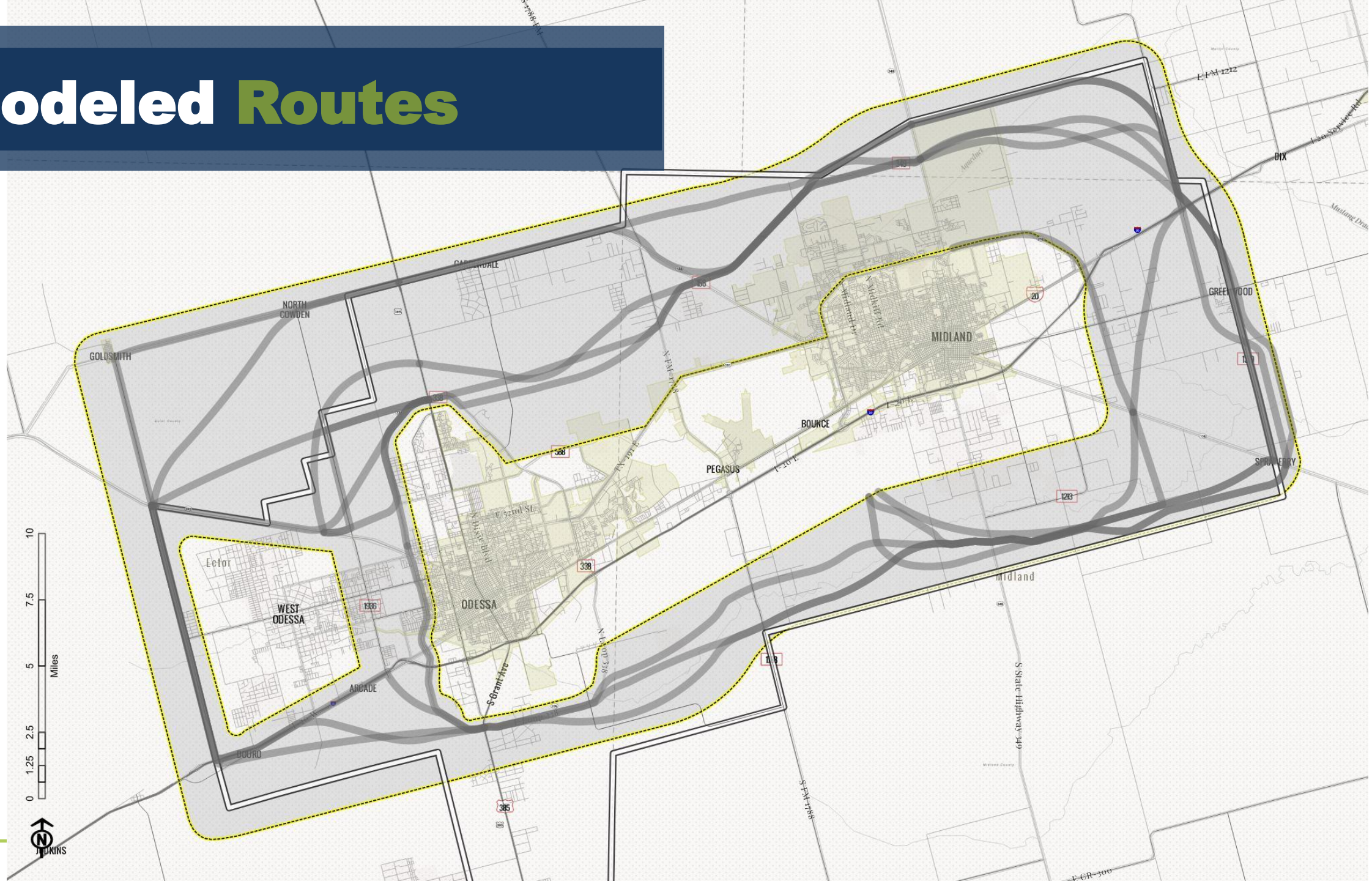
2. Consistency with Regional Plans			
3. Travel Demand Modeling	Level 3 Detailed Evaluation		
4. Natural Environmental Impacts			
5. Social Environmental Impacts			
6. Economic Development			

Level 3 Screening Goals

- Use Transportation Demand Modeling (TDM) to simulate how an interregional loop might affect the network
- Identify areas with most potential benefit from added capacity

Modeled Routes



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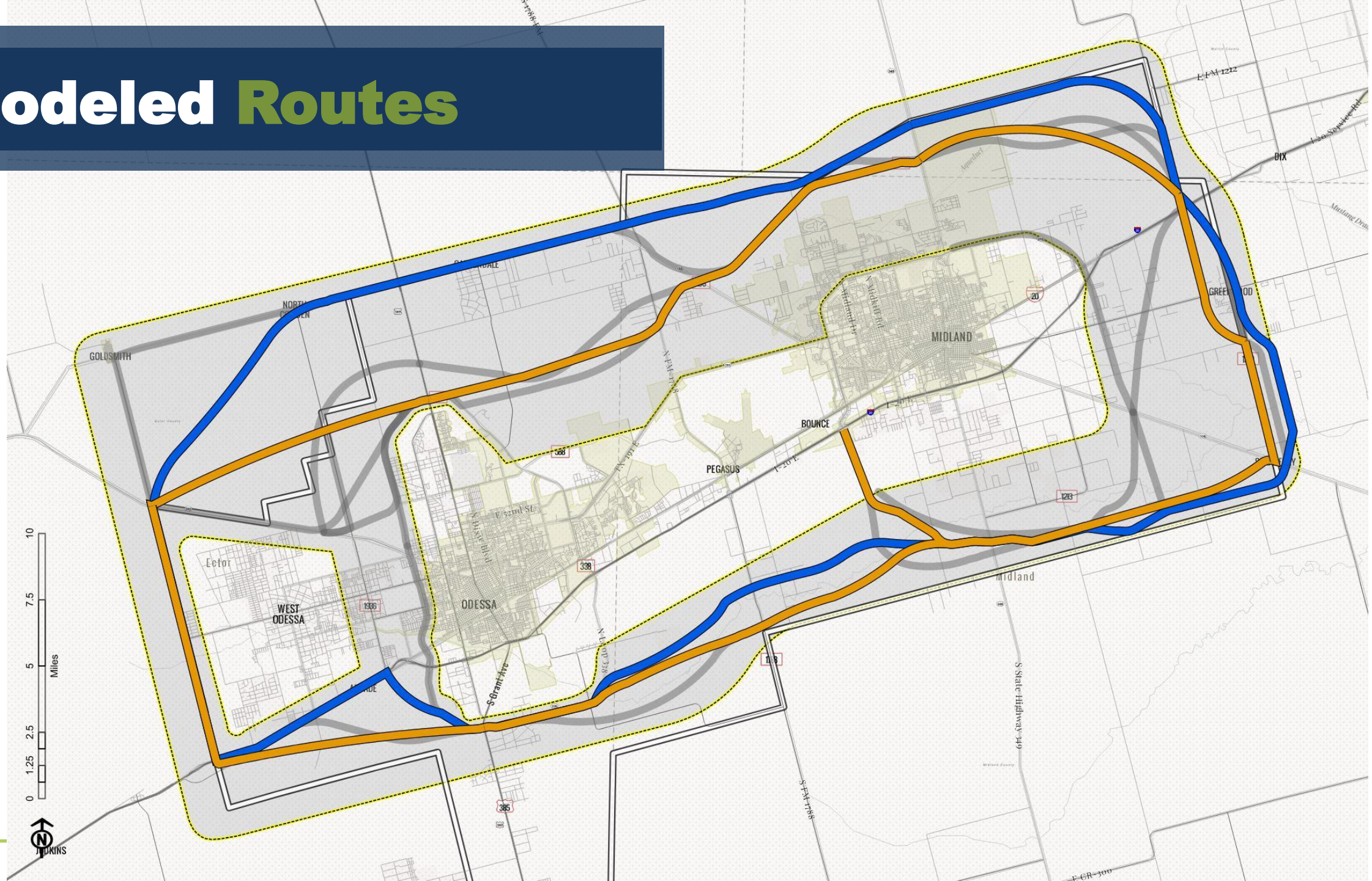
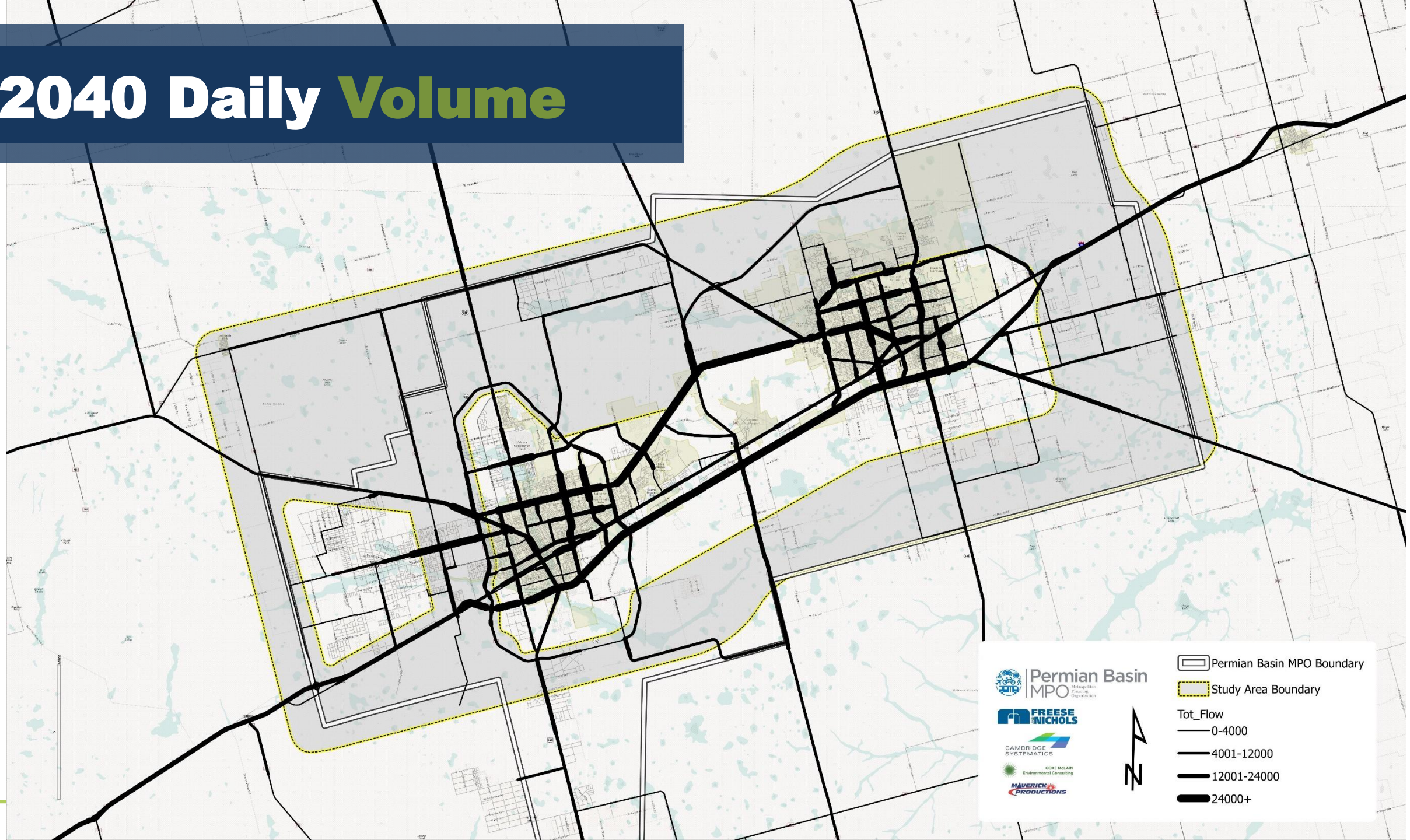


2040 Daily Volume



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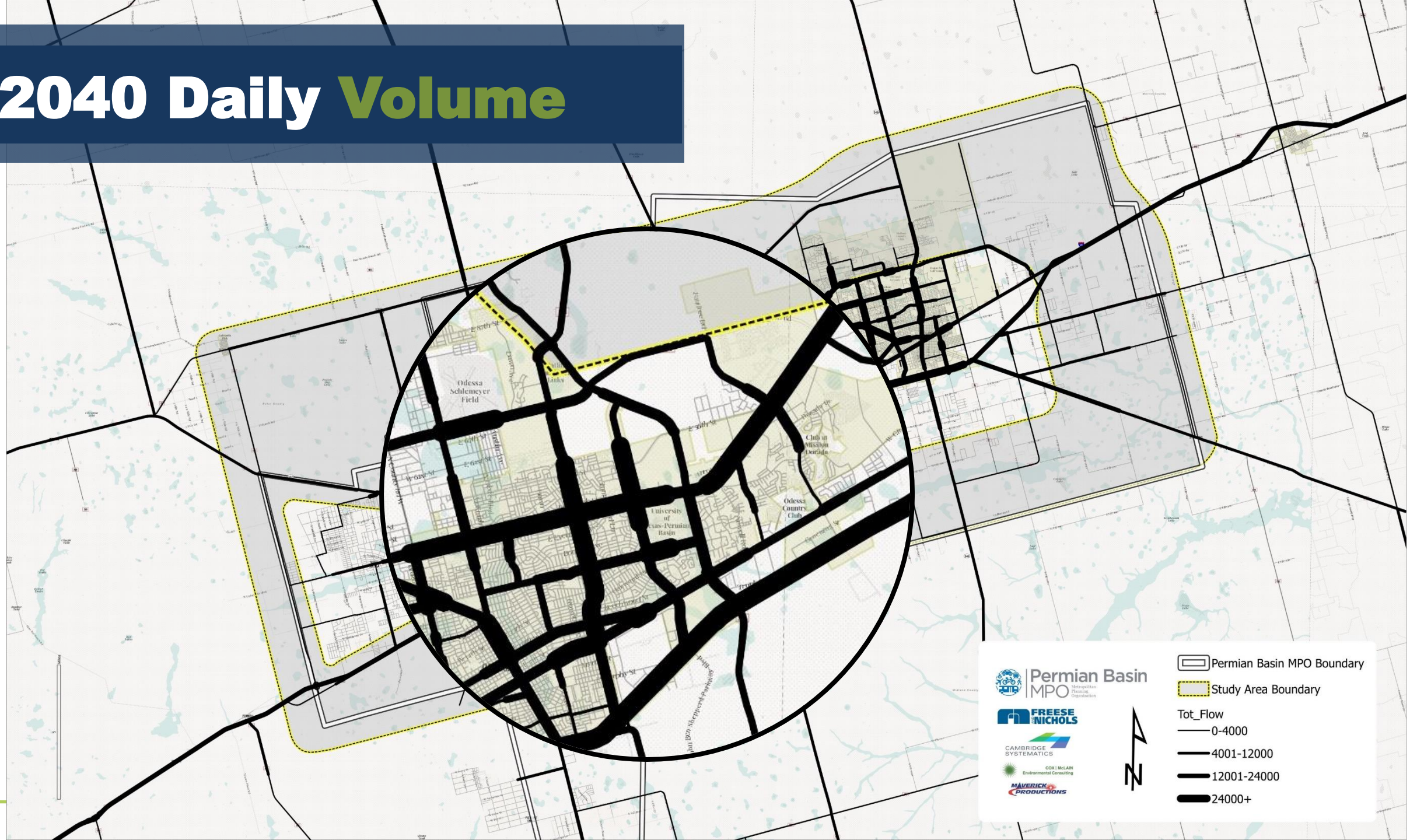

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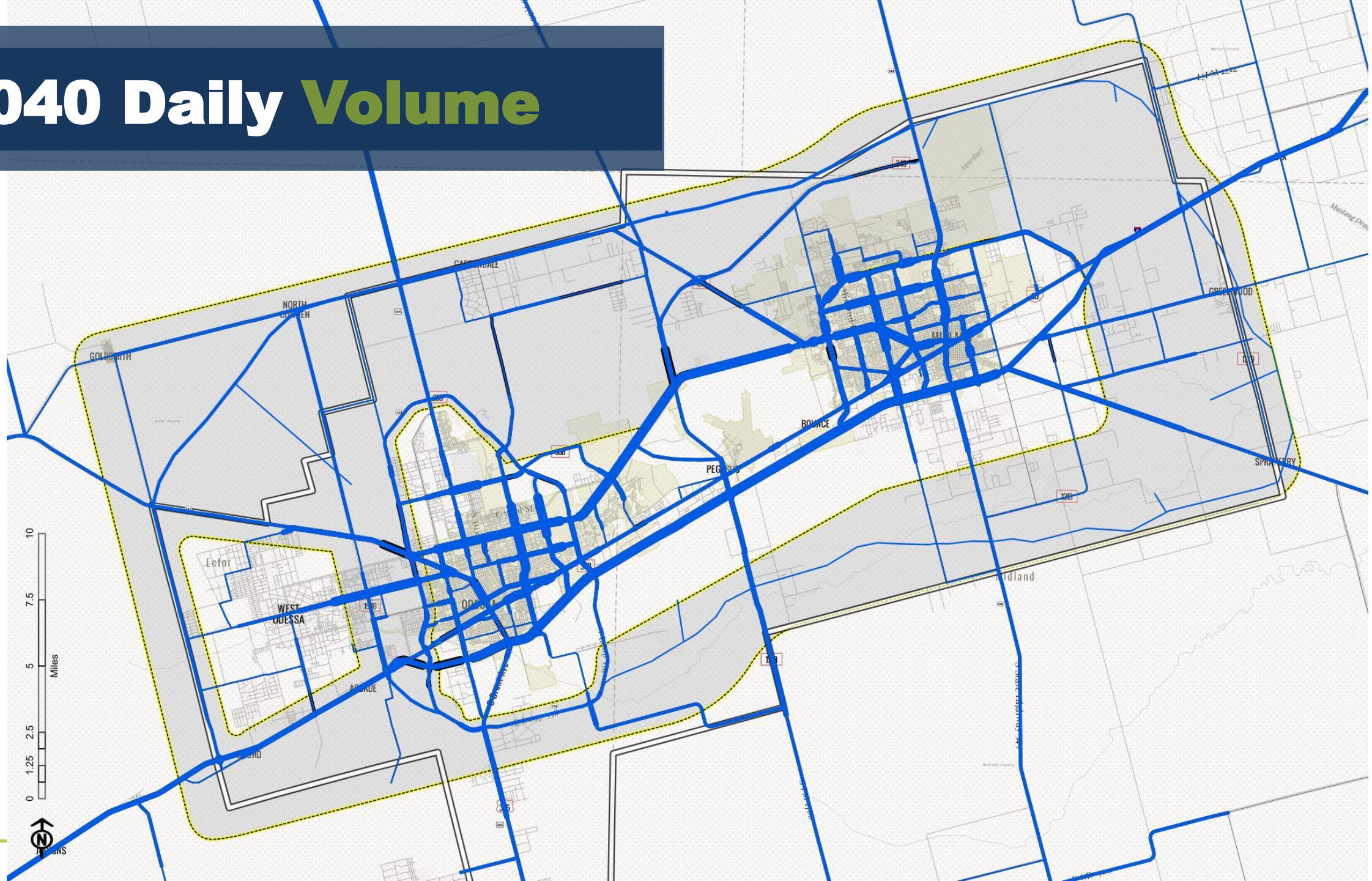

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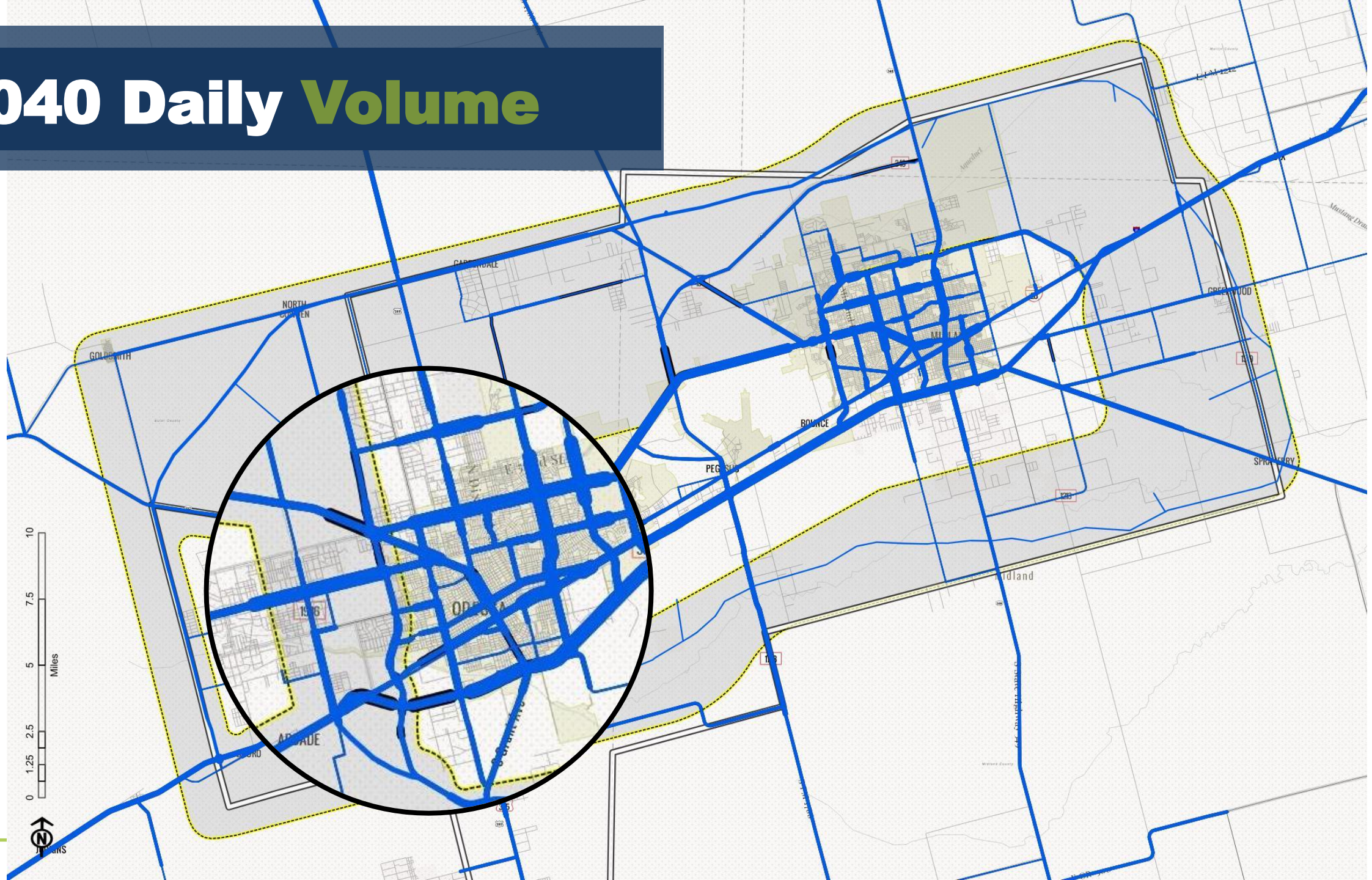

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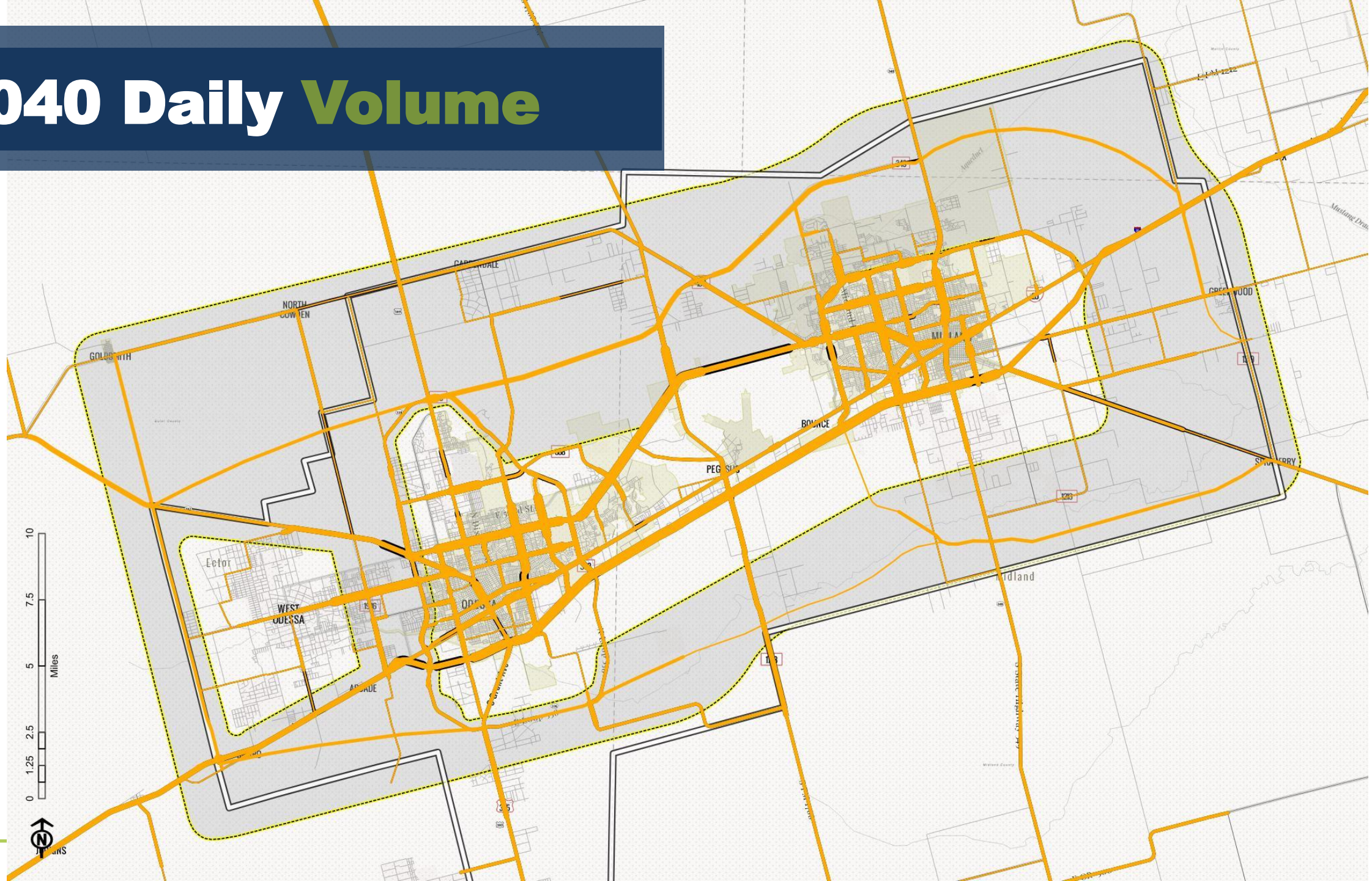

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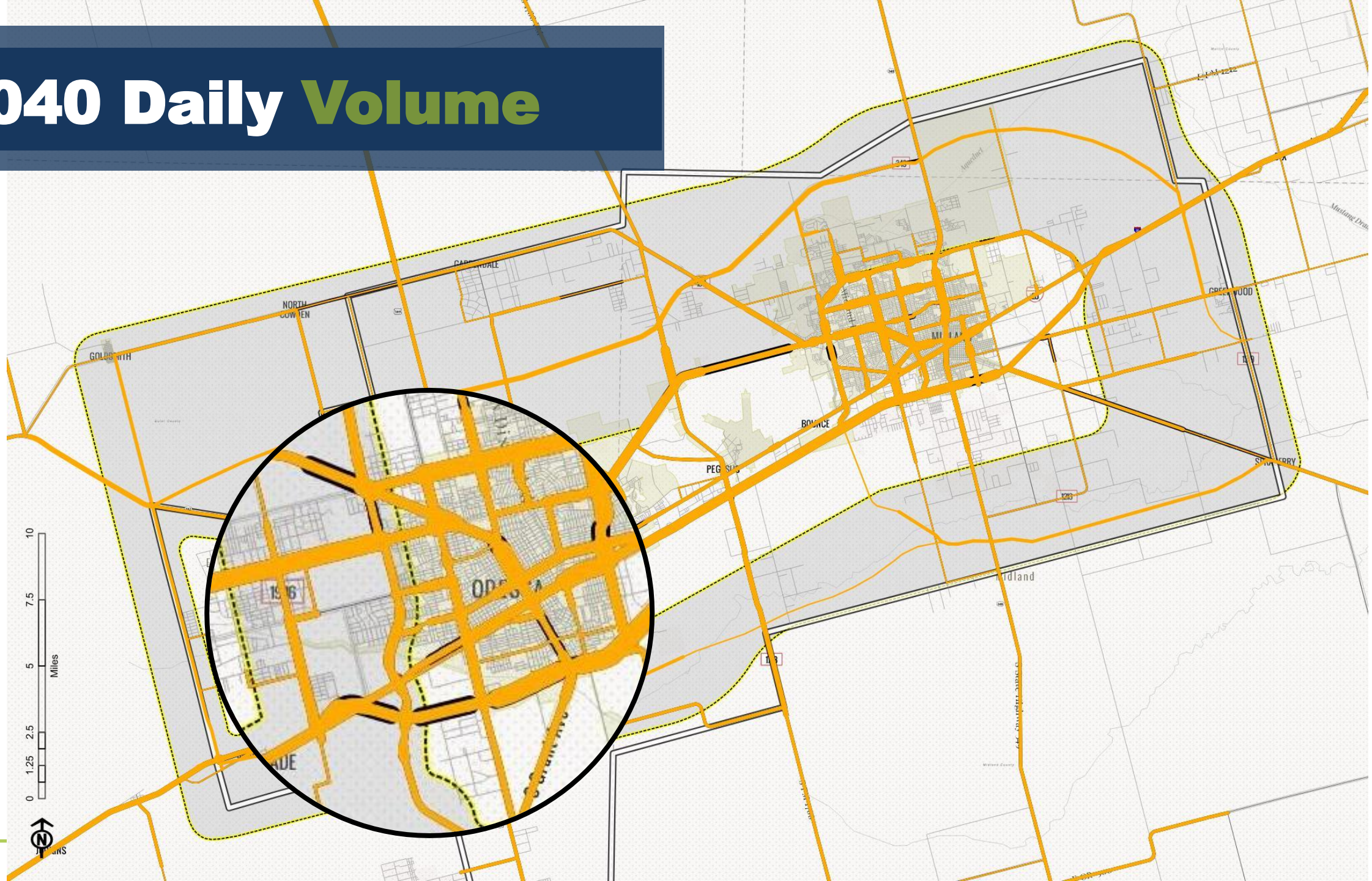

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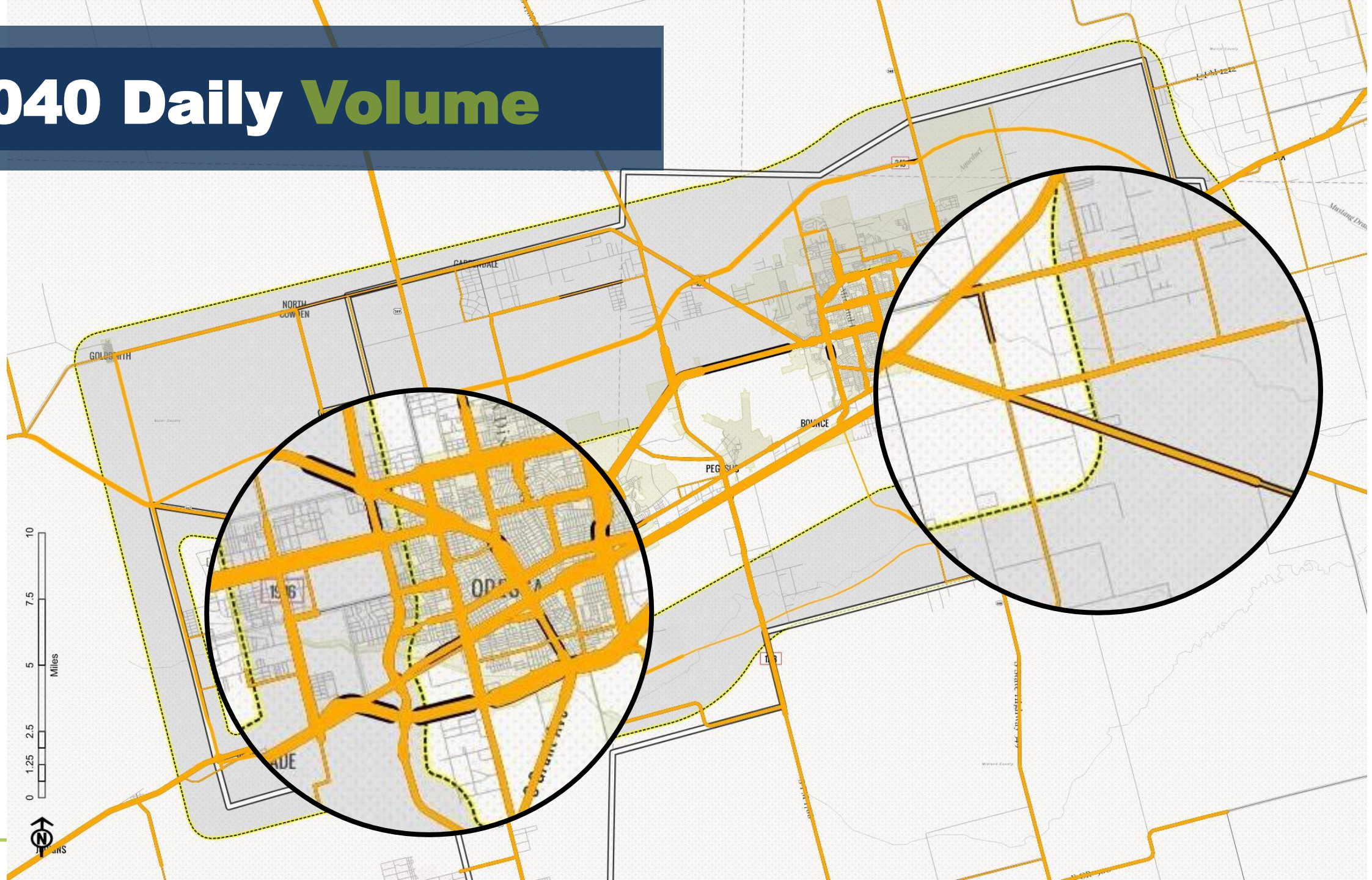
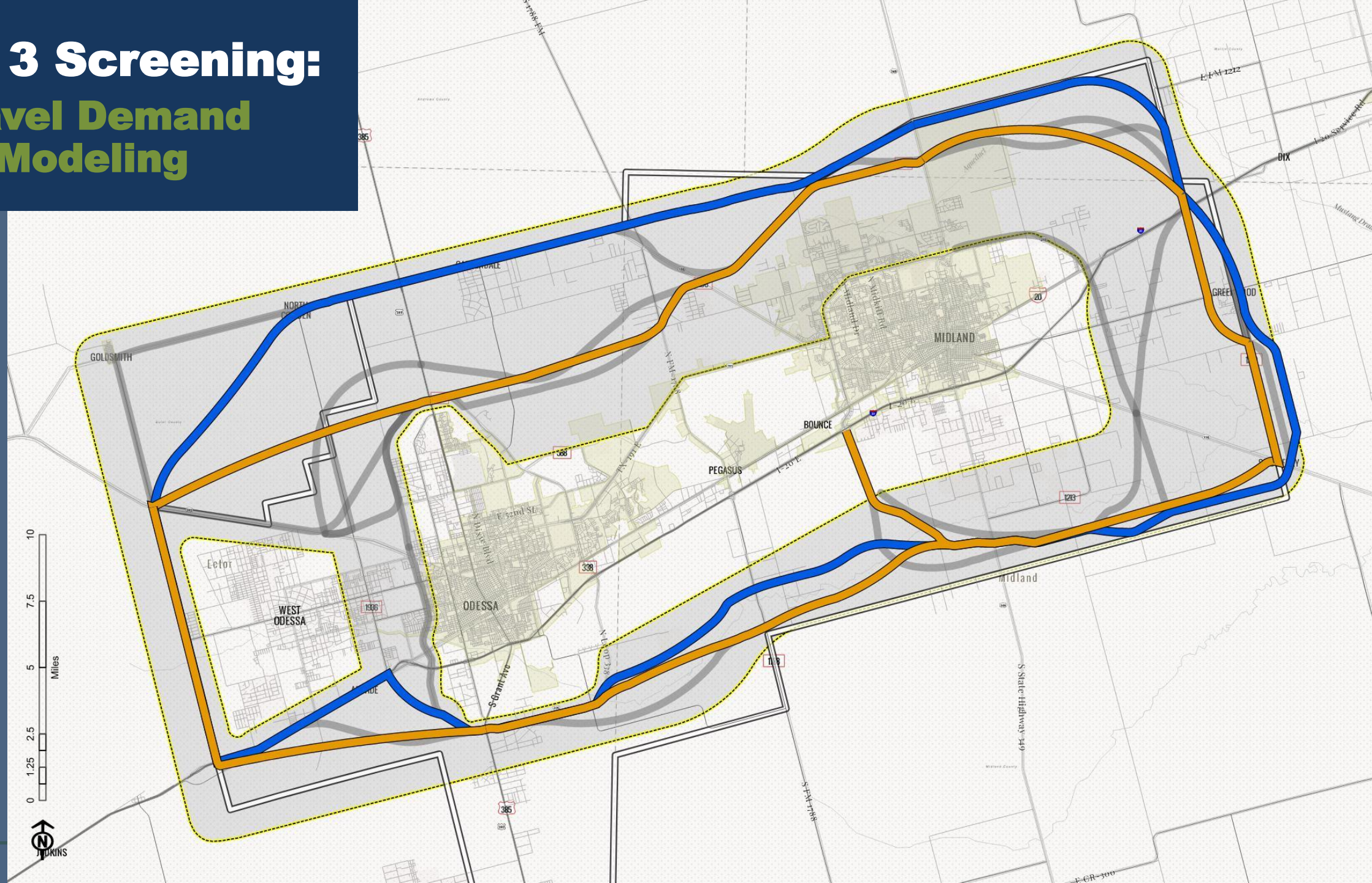


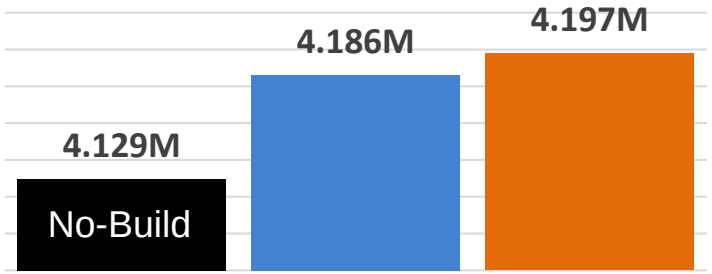
Level 3 Screening:

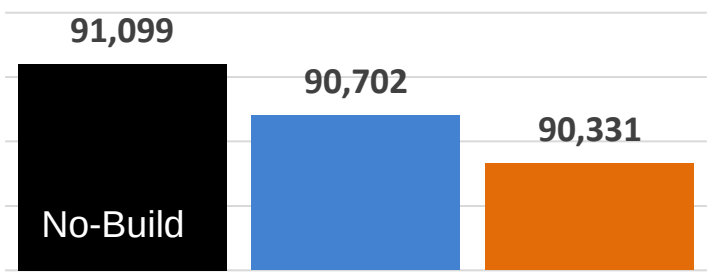
Travel Demand Modeling



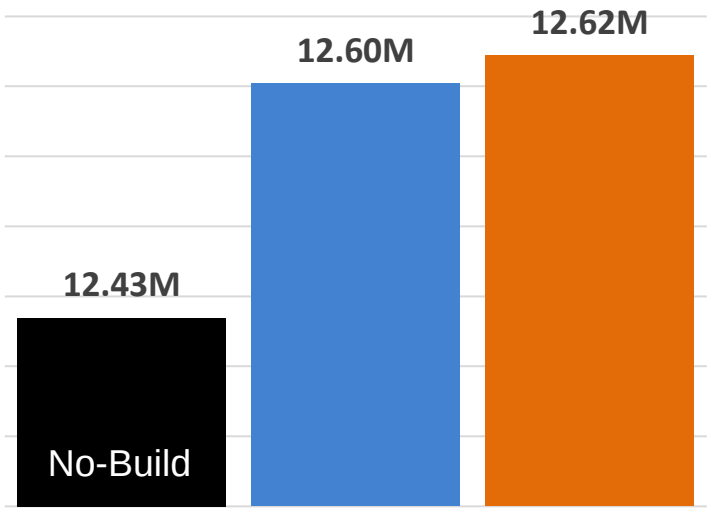
Performance Metrics

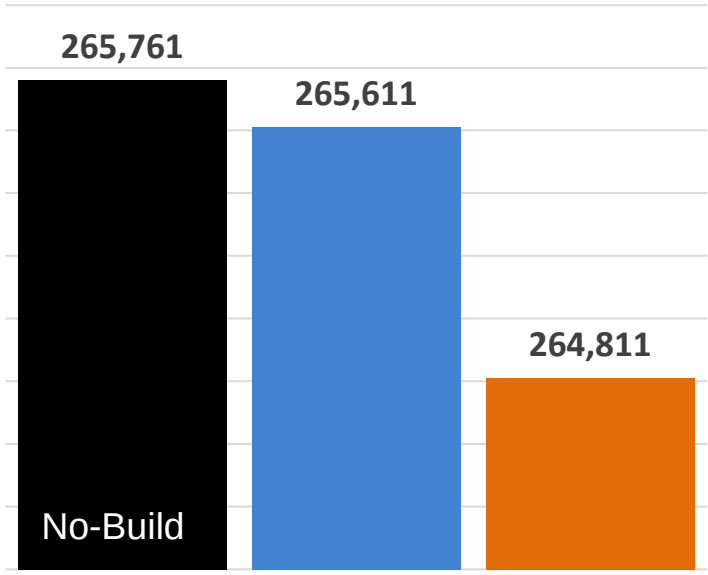
PM





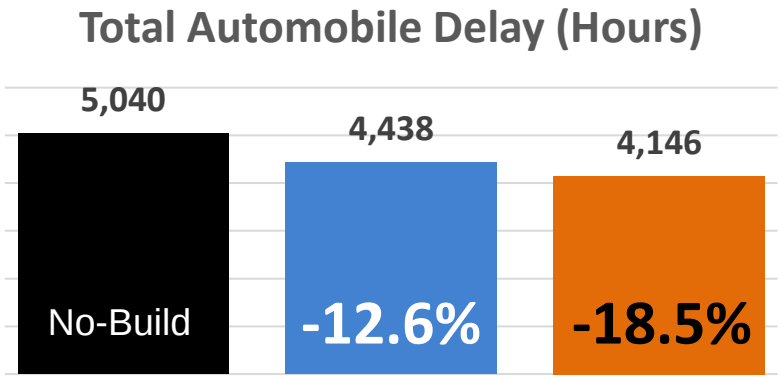
DAILY

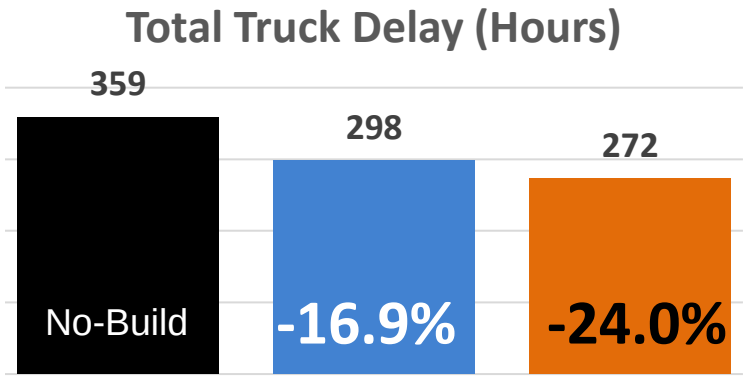




Traffic Delay

PM





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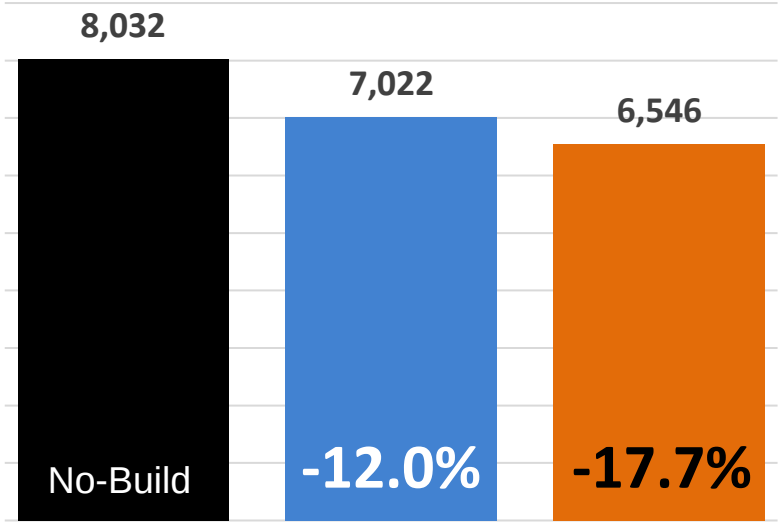
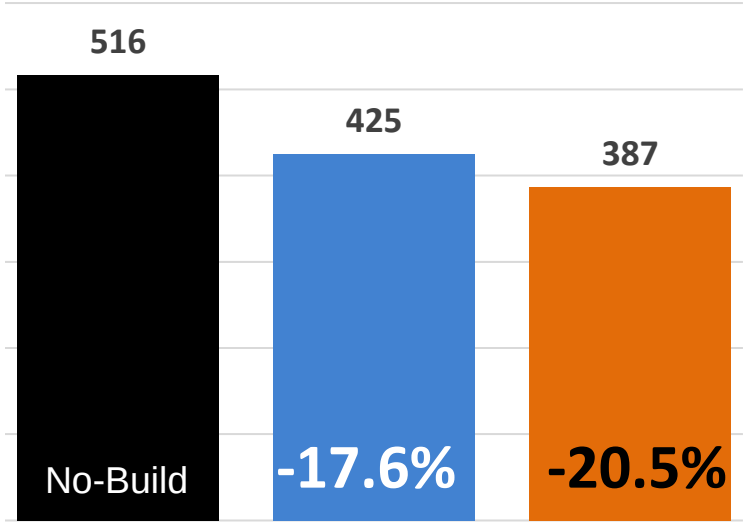
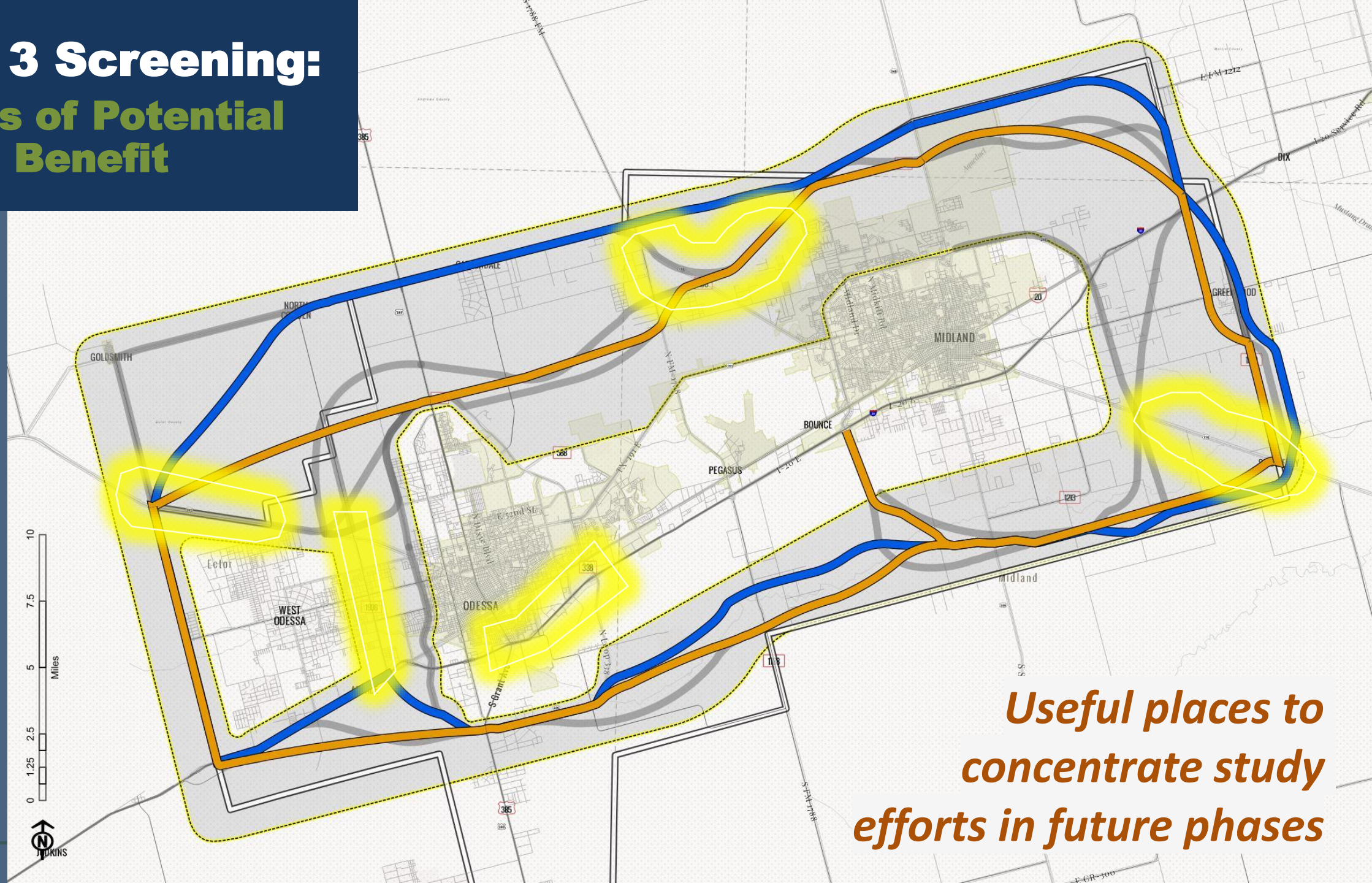




Level 3 Screening:

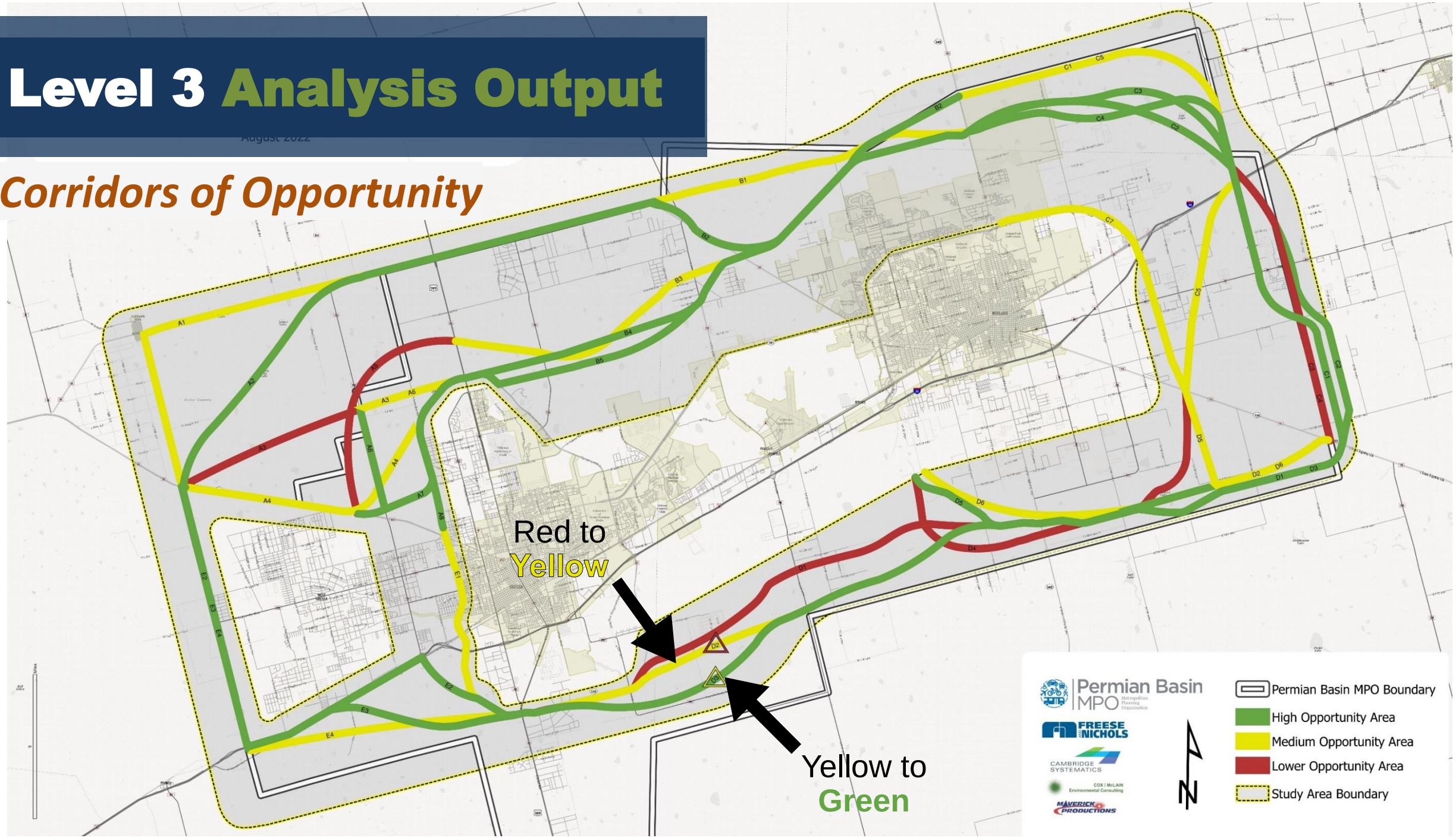
Areas of Potential Benefit



Useful places to concentrate study efforts in future phases

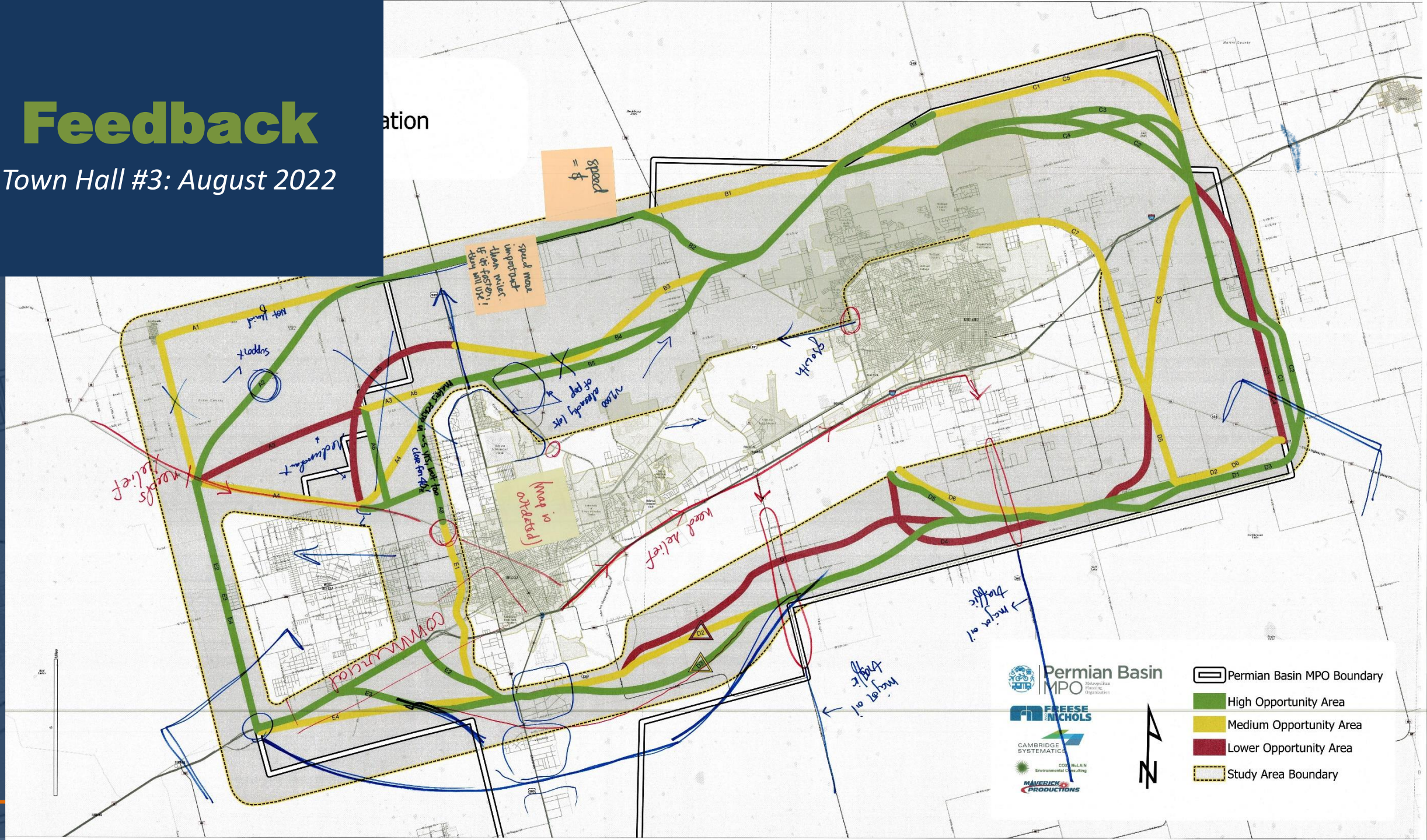
Level 3 Analysis Output

Corridors of Opportunity



Feedback

Town Hall #3: August 2022



Level 3
Screening

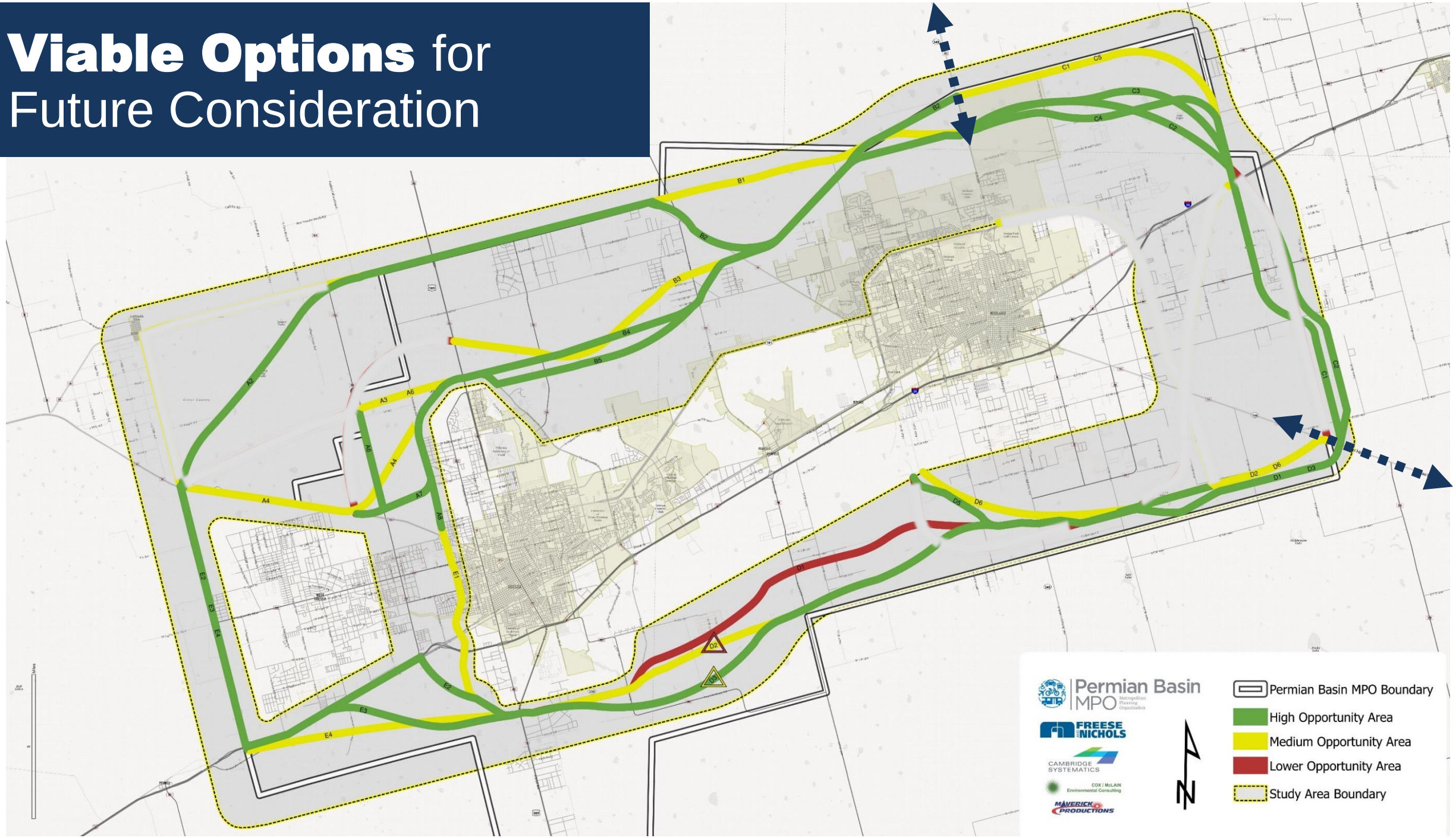
What does this mean for the PEL?

- Modeled Alternatives
  - Shift in projected truck traffic
  - Reduction in congestion
  - Air quality benefits
  - Resiliency benefits
- PEL Considerations
  - Modeling is only one component of study
  - People- and Environment-Centered Analyses
  - Ultimate Test relies on the Needs and Purpose
    - *Connectivity, Safety, Mobility, Proximity & Growth, Interregional Benefits*

Further Investigation

- PEL provides tiered approach to analysis with 1,500’ corridor bands and Area of Potential Effect.
- Alignments may have both positive and potential negatives; not all may agree
- Three areas warrant continued consideration
  - Southwest Loop portion
  - East of Midland
  - Alternative “D1” south of both cities
- Consider new information outside of study area

Viable Options for Future Consideration



Next Steps

Interregional PEL Study

- **Project Documentation**
  - ✓ Purpose and Need Statements
  - ✓ Analysis
  - Appendices – Stakeholder Engagement, Modeling
- **Stakeholder Engagement**
  - ✓ Town Hall #1 – September 2021
  - ✓ Town Hall #2 –May 2022
  - ✓ Town Hall #3 – Summer 2022
- **Study Conclusion - December 2022**
- **Potential Further Investigation**
  - Consider new information outside study area

PERMIAN BASIN MPO

Interregional Planning Environmental Linkages (PEL) Study

FREESE AND NICHOLS

Permian Basin MPO Metropolitan Planning Organization