Welcome!

We will begin in a few moments.

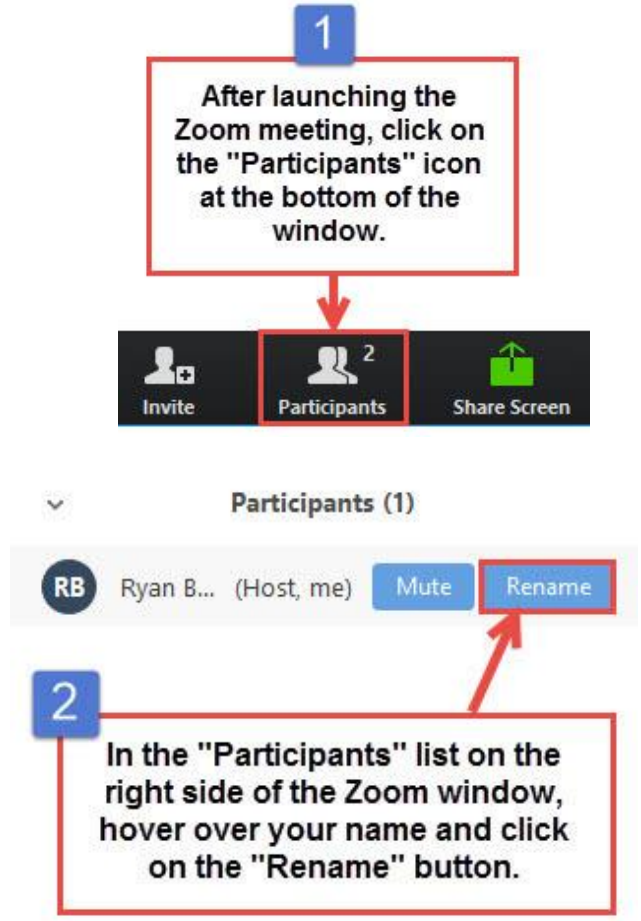
LB-ELA Task Force
Zero-Emission Truck Working Group
Meeting #12
January 17, 2022

Metro

Task Force and CLC Member Identification
Identificación de miembros del Comité Consultivo y CLC

Task Force and CLC Members, please change your Zoom screen name to include: Name and Organization/Jurisdiction

Miembros del Comité Consultivo y del CLC, por favor cambie su nombre de pantalla de Zoom para incluir: *Nombre y su organización*



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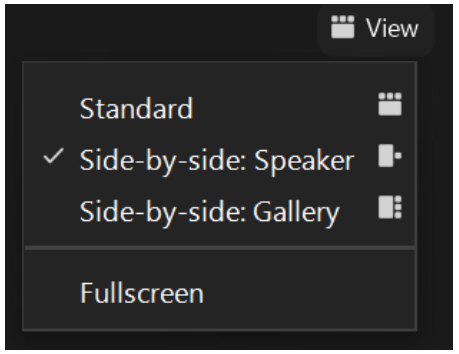
Turn on Camera / *Prende la cámara*

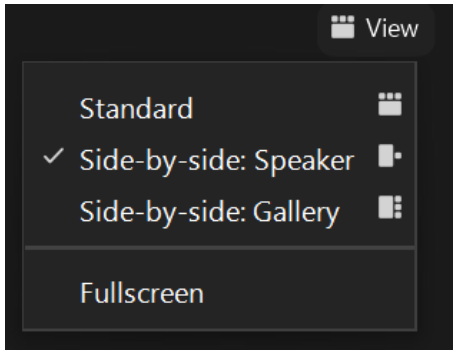
- To **start** and **stop** your video, click the camera icon at the bottom left of your control panel

- To switch between views during the meeting click or tap on **Standard**, **Side-by-side Speaker View**, and **Side-by-side Gallery View** at the top right corner of your zoom screen



- *Para **iniciar** y **detener** su video, haga clic en el ícono de la cámara en la parte inferior izquierda de su panel de control*

- *Para cambiar entre vistas durante la reunión, haga clic o toque **Estándar**, **Vista de orador en paralelo** y **Vista de Galería en Paralelo** en la esquina superior derecha de la pantalla de zoom*



Metro

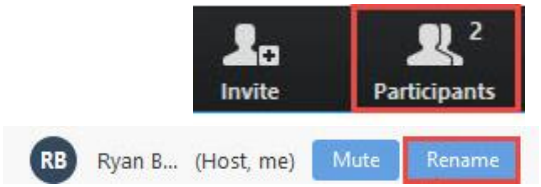
Logistics/*Logística*

Click **Interpretation** to choose your language.

*Haga clic en **Interpretación** para elegir su idioma.*

> To hear the interpreted language only, click **Mute Original Audio** (Optional).

> *Para escuchar solo el idioma interpretado, haga clic en "**Mute Original Audio**" o "**Silenciar audio original**" (Opcional)*



Change your Zoom screen name to include name, CLC, jurisdiction.

***Por favor cambien su nombre de pantalla de Zoom** para incluir:* Su nombre, CLC, la jurisdicción que representan

> Click **Raise Hand** in your meeting controls, **Press*9** on the phone line, or raise your hand physically.

> *Haga clic en **"Raise Hand"** o **"Levantar la mano"** en los controles de la reunión, **presione *9** en la línea telefónica, o levante la mano físicamente.*

> To lower your hand, click **Raise Hand** in your meeting controls.

> *Para bajar la mano, haga clic en "**Raise Hand**" o "**Levantar la mano**" en los controles de la reunión.*

> The **Q&A** button is located on the control panel at the bottom of your screen.

> *El botón **Q&A** se encuentra en el panel de control en la parte inferior de la pantalla.*

> To **mute** and **unmute**, click the microphone icon on the bottom left of your control panel.

> *Para **silenciar** y **cancelar el silencio**, haga clic en el icono del micrófono en la parte inferior izquierda de su panel de control.*

> To **start** and **stop** your video, click the camera icon at the bottom left of your control panel.

> *Para **iniciar** y **detener** su video, haga clic en el icono de la cámara en la parte inferior izquierda de su panel de control.*

> **Technology & interpretation support:** 323.609.3345

> ***Apoyo de tecnología y de interpretación en español** 323.609.3345*

Metro

Detailed Agenda

1:00pm **Welcome, Agenda Review, and Purpose of the Zero-Emission Truck Working Group**

1:05pm **Agenda Item #1: Metro Update** (10 minutes)

1:15pm **Agenda Item #2: Background Presentations** (60 minutes)

Truck Market Segmentation Volumes by Type
Presentation by Keir Opie, Principal, Cambridge Systematics
i. Presentation (10 minutes)
ii. Questions (5 minutes)

Potential Locations for MD HD Truck Charging Facilities
Presentation by Jack Symington, Senior Program Manager Transportation, Los Angeles Cleantech Incubator
i. Presentation (10 minutes)
ii. Questions (5 minutes)

Expeditious Deployment of Resources –State and Federal Grants
Presentation by Kayla Giese, SB 671 Assessment Coordinator, California Transportation Commission
i. Presentation (10 minutes)
ii. Questions (5 minutes)

Discussion (15 minutes)

2:15pm **Agenda Item #3: ZET Program – Community Needs**
Jack Symington, Senior Program Manager, Transportation, Los Angeles Cleantech Incubator
CEHAJ Participants in LACI Blueprint Project
i. Overview (5 minutes)
ii. Facilitated Discussion (10 minutes)

2:30pm **Agenda Item #4: Metro's Sustainability and Transportation Electrification Policies**
Cris Liban, Chief Sustainability Officer, LA Metro
i. Overview (Video)
ii. Discussion

2:55pm **Closing Remarks and Upcoming Meetings**

3:00pm **Adjournment**

Metro

Welcome!

We will begin in a few moments.

LB-ELA Task Force

Zero-Emission Truck Working Group

Meeting #12

January 17, 2022

Metro

Facilitator

Erika C.B. Morales

Partner, Morales + Morales Partners

Metro

Welcome, Agenda Review, and Purpose

of the

Long Beach-East LA Corridor Zero-Emission Truck (ZET) Working Group

Metro

Detailed Agenda

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Metro

Meeting Objectives

During this meeting, the working group will:

> Receive presentations on:
  - Truck Market Segmentation Volumes by Type
  - Potential Locations for MD HD Truck Charging Facilities
  - SB 671 Update

> Discuss Community Concerns about Siting of Charging Facilities

> Discuss potential evaluation criteria and performance measures, and metrics for evaluating equity for the Long Beach-East Los Angeles Corridor ZE Truck Program

Metro

Agenda Item #1:

Metro Update

Metro

ZET Program Recap – Metro Board Direction

- **Metro Board Direction and desired outcomes**
  - $200 million minimum funding target
  - Leverage $50 million local matches with private, regional, state, and federal funding
  - Accelerated ZE deployment in the I-710 South (now Long Beach-East LA) Corridor
  - Collaboration with regional stakeholders
  - Independent, accelerated process from overall 710 (LB-ELA) Task Force Investment Plan process

- **Strategies to accomplish outcomes**
  - Identify discretionary grant opportunities
  - Convene and collaborate with community and regional stakeholders
  - Develop a scope of work for the ZET Program
  - Identify regional funding partners
  - Identify near and long-term opportunities
  - Identify policy and legislative barriers to implementation

Metro

ZET Meeting #11 Recap

Summary

> Held virtually via Zoom on Tuesday October 18, 2022

> 28 participants (25 Task Force Members/Alternates, 3 CLC members)

Highlights

> Vote to approve the ZET Principles

> Receive presentations and engage in discussion on the following topics:

- ZET related Multimodal Strategies, Projects, and Programs
- Federal Transportation Legislation – Inflation Reduction Act
- Publicity Accessible Goods Movement Zero-Emissions Infrastructure – MSRC Request for Information

Metro

ZET Program Principles – Overview

1

Maximize leverage of seed funding

by collaborating with regional partners and funding agencies.

2

Community Engagement

that centers corridor residents and stakeholders throughout the development process.

3

Corridor Community Benefits

by creating economic opportunities, improving air quality, and reducing long-standing health impacts generated by diesel trucks.

4

Coordination

with regional and funding partners, government agencies, and key stakeholders.

5

Workforce Development

that ensures community benefits and access to opportunity through the pursuit and implementation of ZE Technology.

6

Equitable Outcomes

ensured by performance metrics that evaluate sustainable outcomes.

7

Legislative Platform

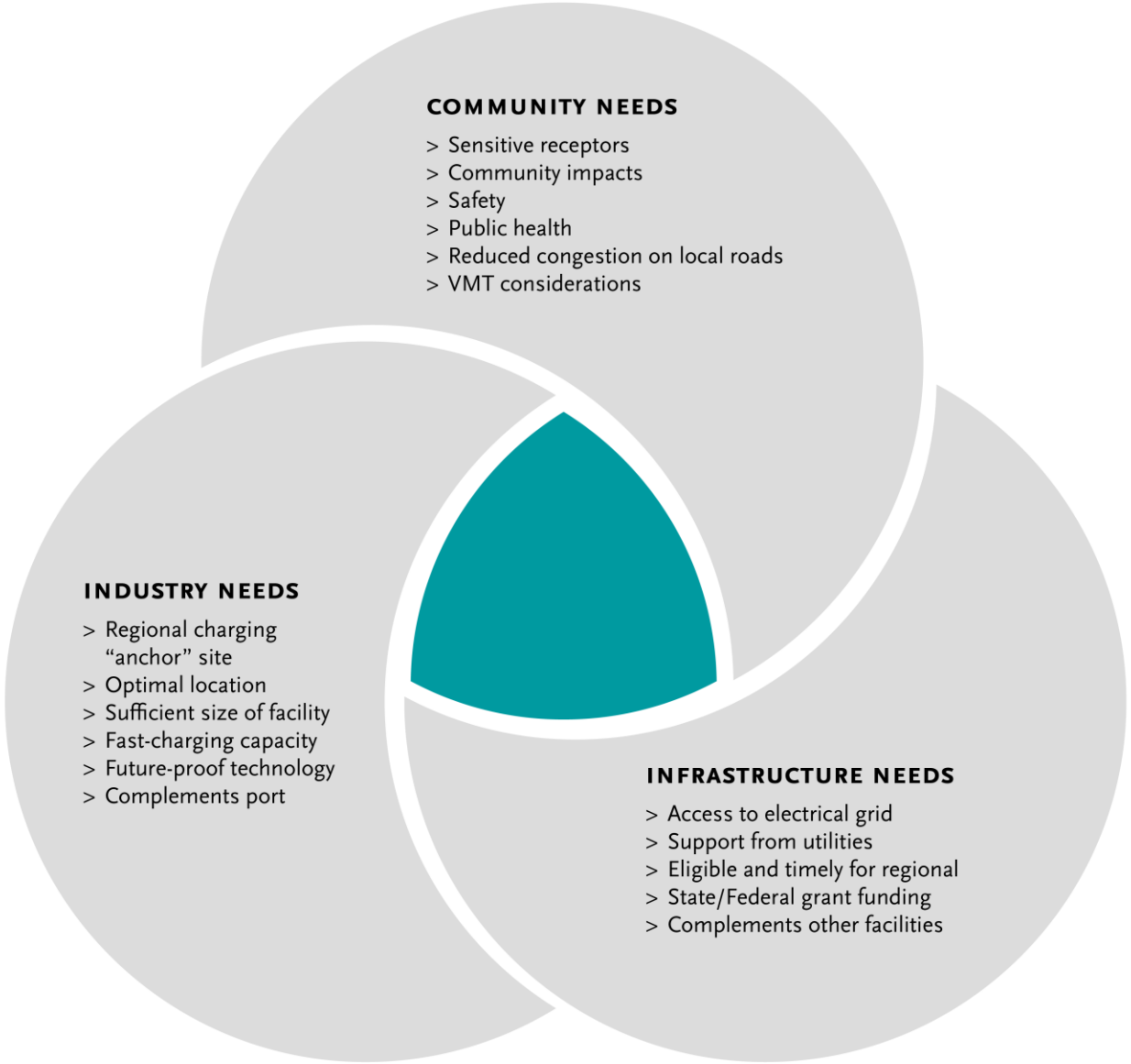
designed to support the accelerated, equitable deployment of ZE technology by reducing barriers and increasing incentives to adoption.

8

Expeditious Deployment of Resources

to maximize the buying power and benefit of investment while supporting community engagement and effective outreach.

Metro Vision -
Regional Zero-Emissions MD/HD Truck Charging Facility



Metro

Agenda Item #2:
Background Presentations

Truck Market Segmentation Volumes by Type
Keir Opie, Principal, Cambridge Systematics

i. **Presentation (10 minutes)**
ii. **Discussion (10 minutes)**

Metro

Presenter

Keir Opie
Principal
Cambridge Systematics

Types of Truck Trips in the Long Beach – East Los Angeles Corridor

- **Port-Related Truck Trips**
  - **Port Primary Truck Trips - Containers**
    - Trips with origin or destination at the ports
    - Includes trips to/from near and off-dock railyards, transload facilities and other warehouses or distribution centers
  - **Port Non-Container Truck Trips*** (e.g., car carriers, bulk products, specialized cargo)
- **Non-Port Truck Trips**
  - **Port Secondary Transload Truck Trips** (from warehouses to railyards and other warehouses)
  - **Domestic Intermodal Trips** (to/from railyards)
  - **All other truck trips such as deliveries to office, retail and home**

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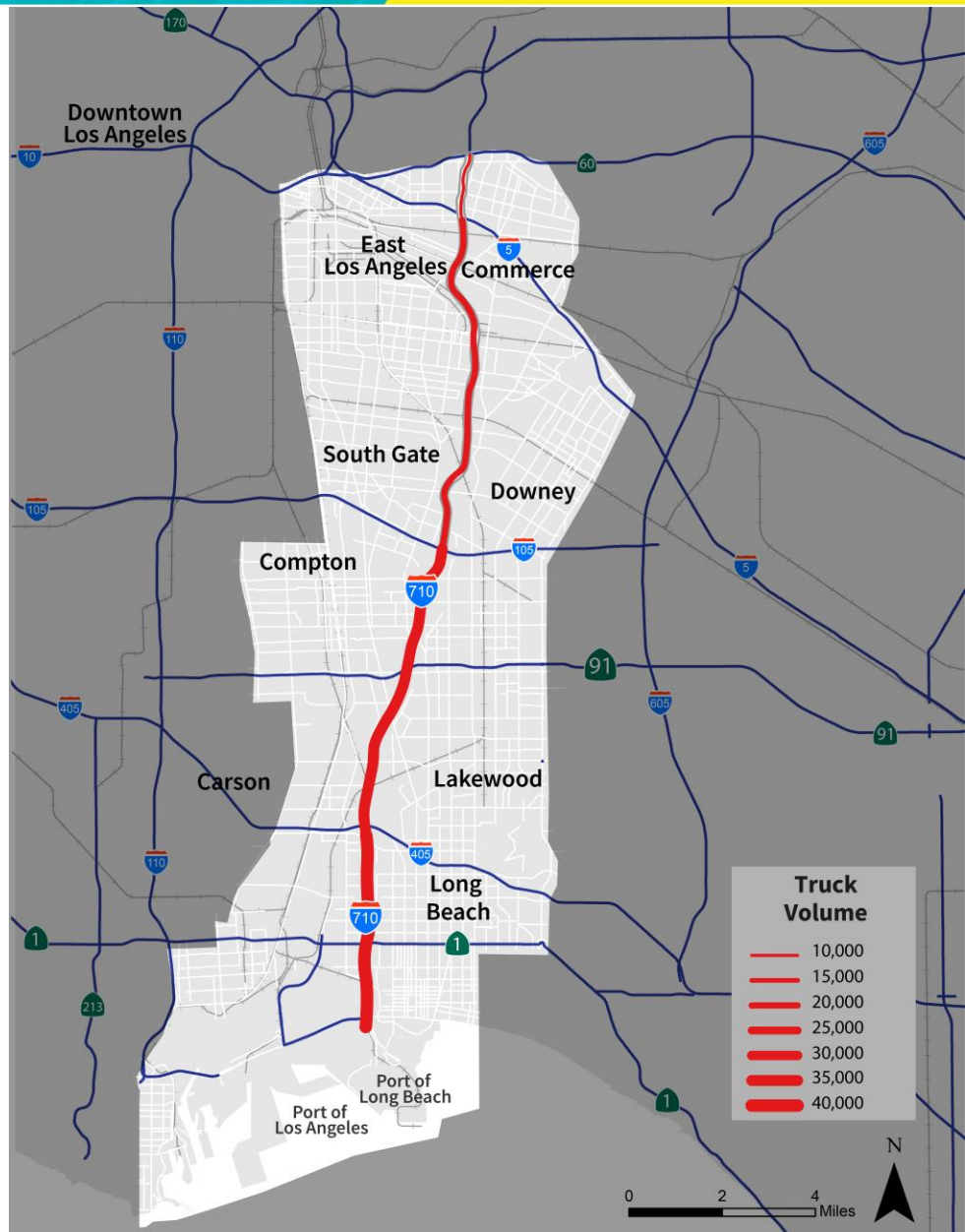
I-710 Freeway Truck Volumes

- Substantially heavier truck volumes occur at southern end of corridor, near the Ports with nearly 40,000 daily heavy-duty trucks
- Truck volume and truck percentage is extremely high south of SR-91 as compared to typical freeways

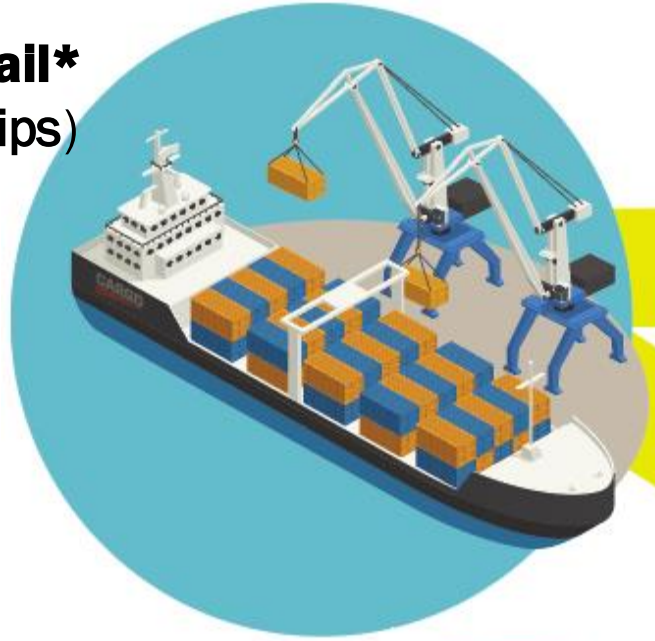
I-710 Mainline location:	Daily Trucks	Port Truck %
Bet. SR60 & I-10	10,000	10%
Bet. I-5 & SR60	15,000	13%
Bet. I-105 & I-5	19,000	32%
Bet. SR91 & I-105	34,000	53%
Bet. I-405 & SR91	35,000	69%
South of I-405	39,000	85%



Metro

Port Primary Container Truck Trips

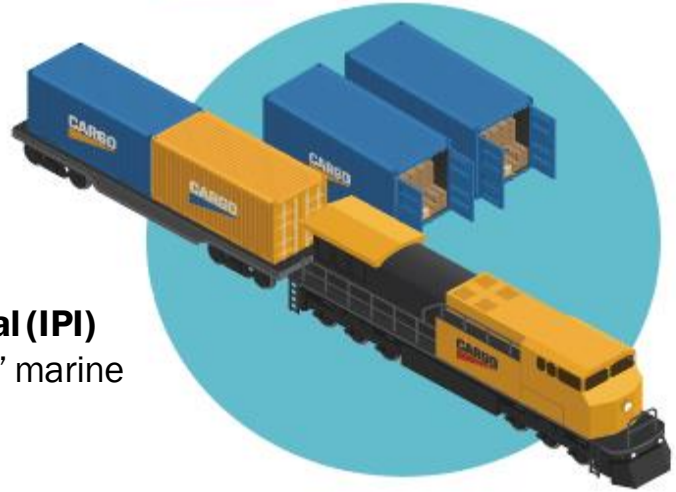
On-Dock Rail*
(no truck trips)

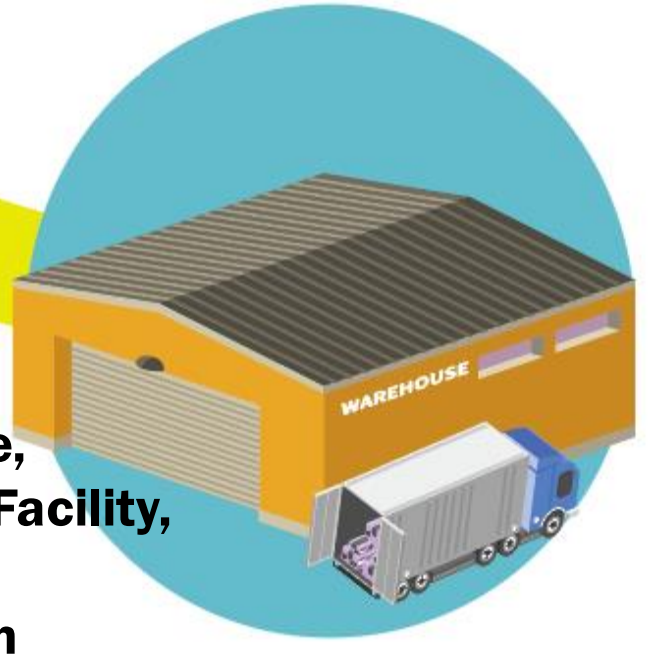


Inland Point Intermodal*

Truck trips

Near-Dock (< 5 miles) and Off-Dock Railyards



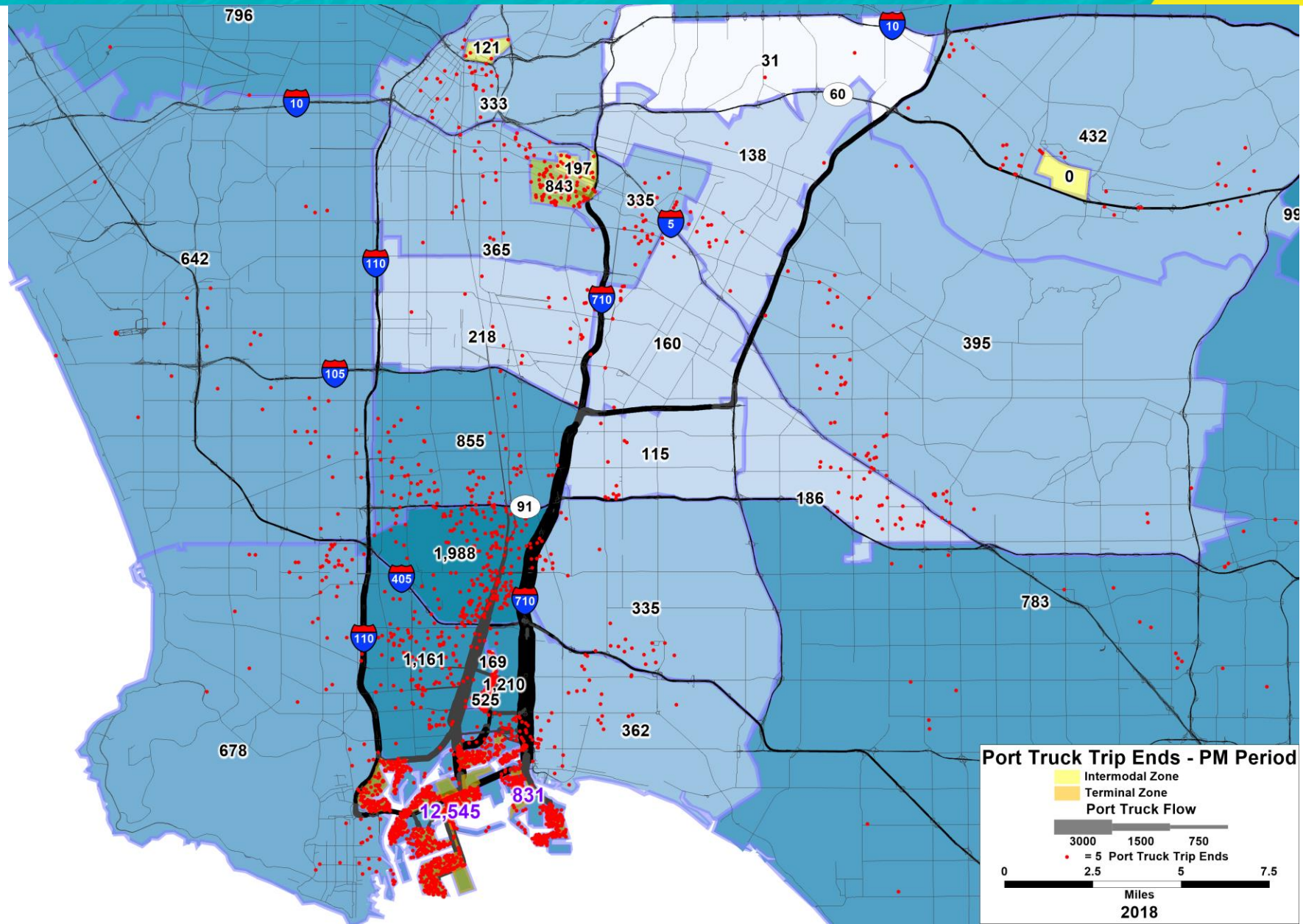


Warehouse, Transload Facility, or other destination

***Inland Point Intermodal (IPI)**
the movement of "intact" marine containers by rail

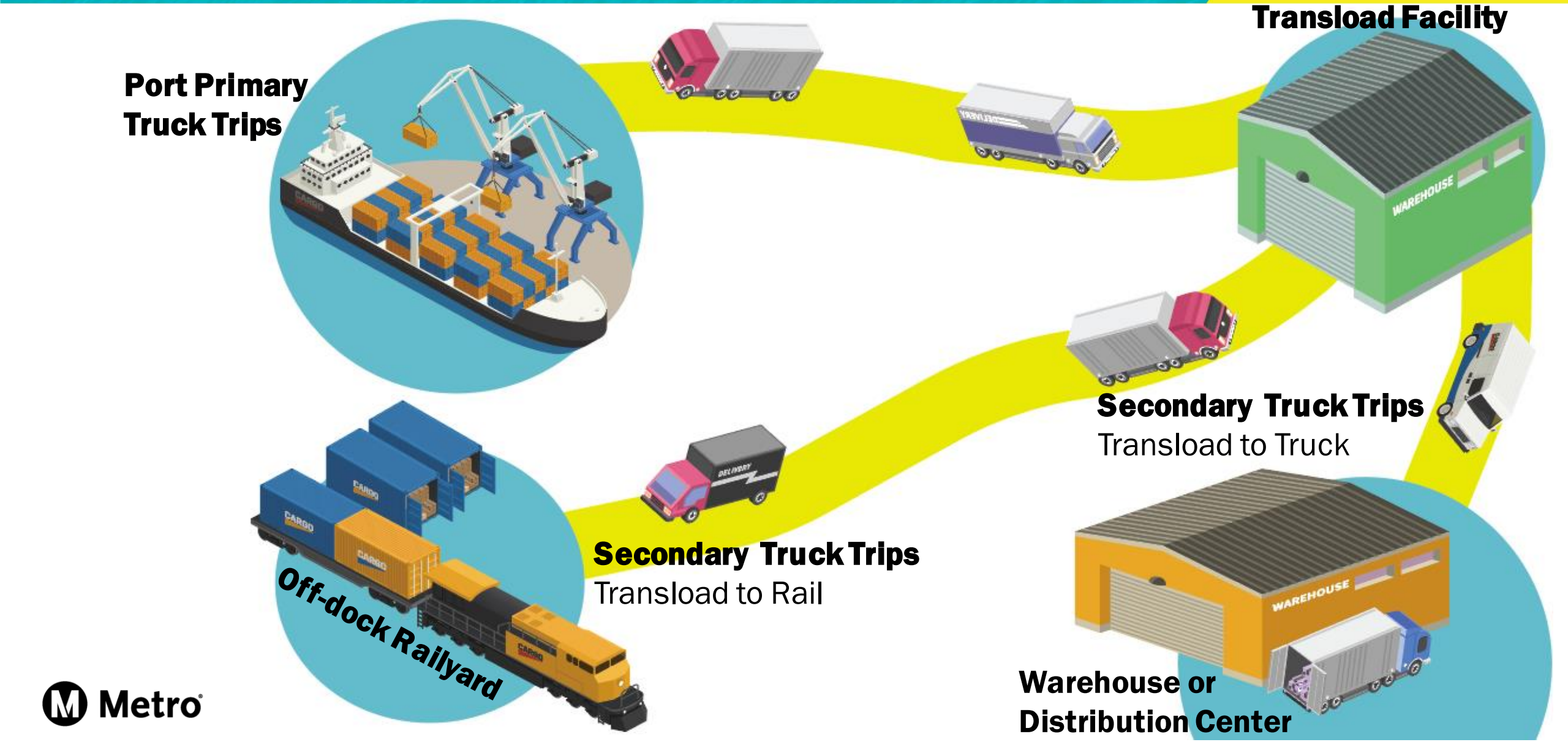
Metro

Port Truck Trip Patterns (PM Period)



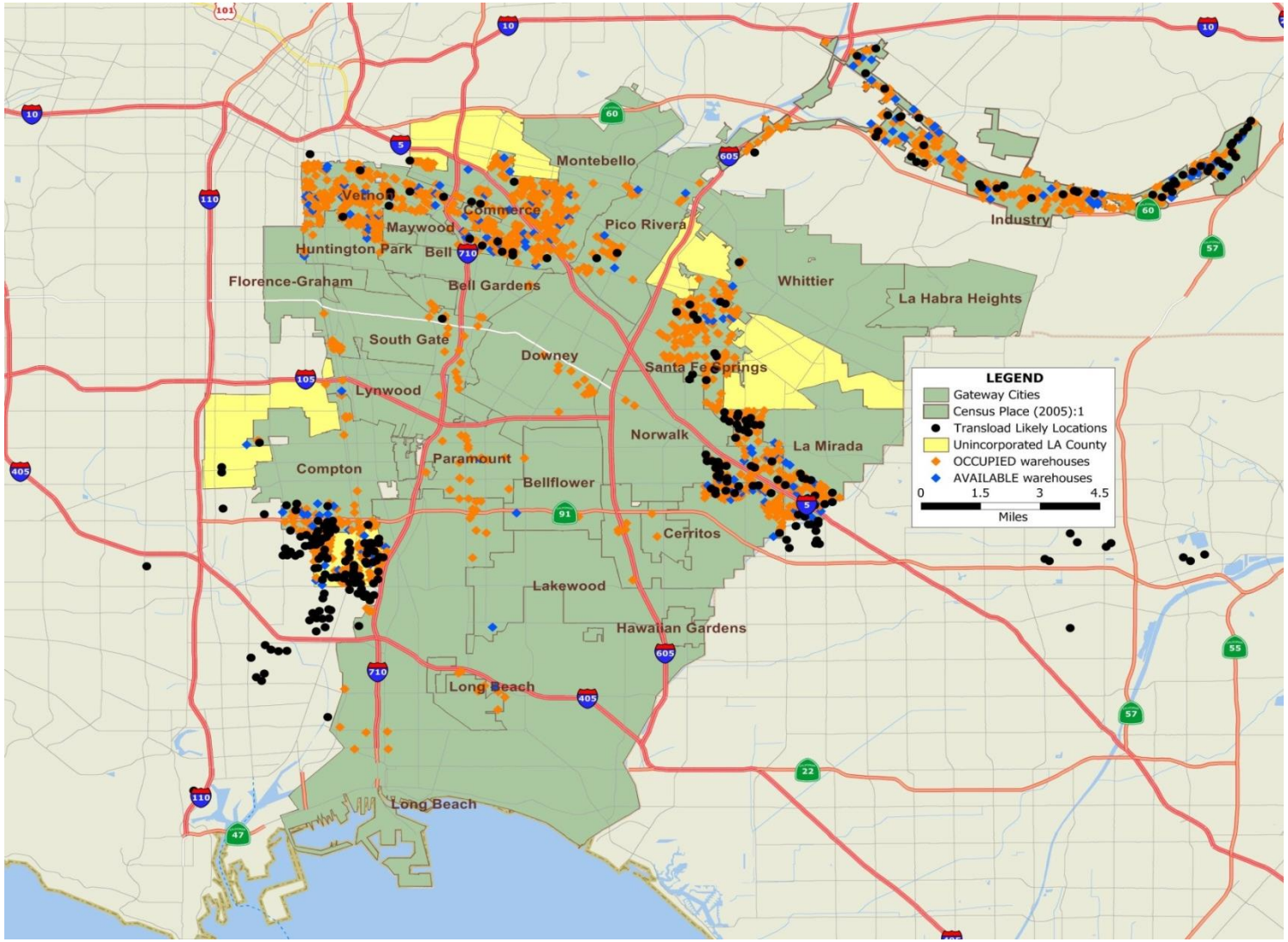
Metro

Transload (Secondary) Truck Trips



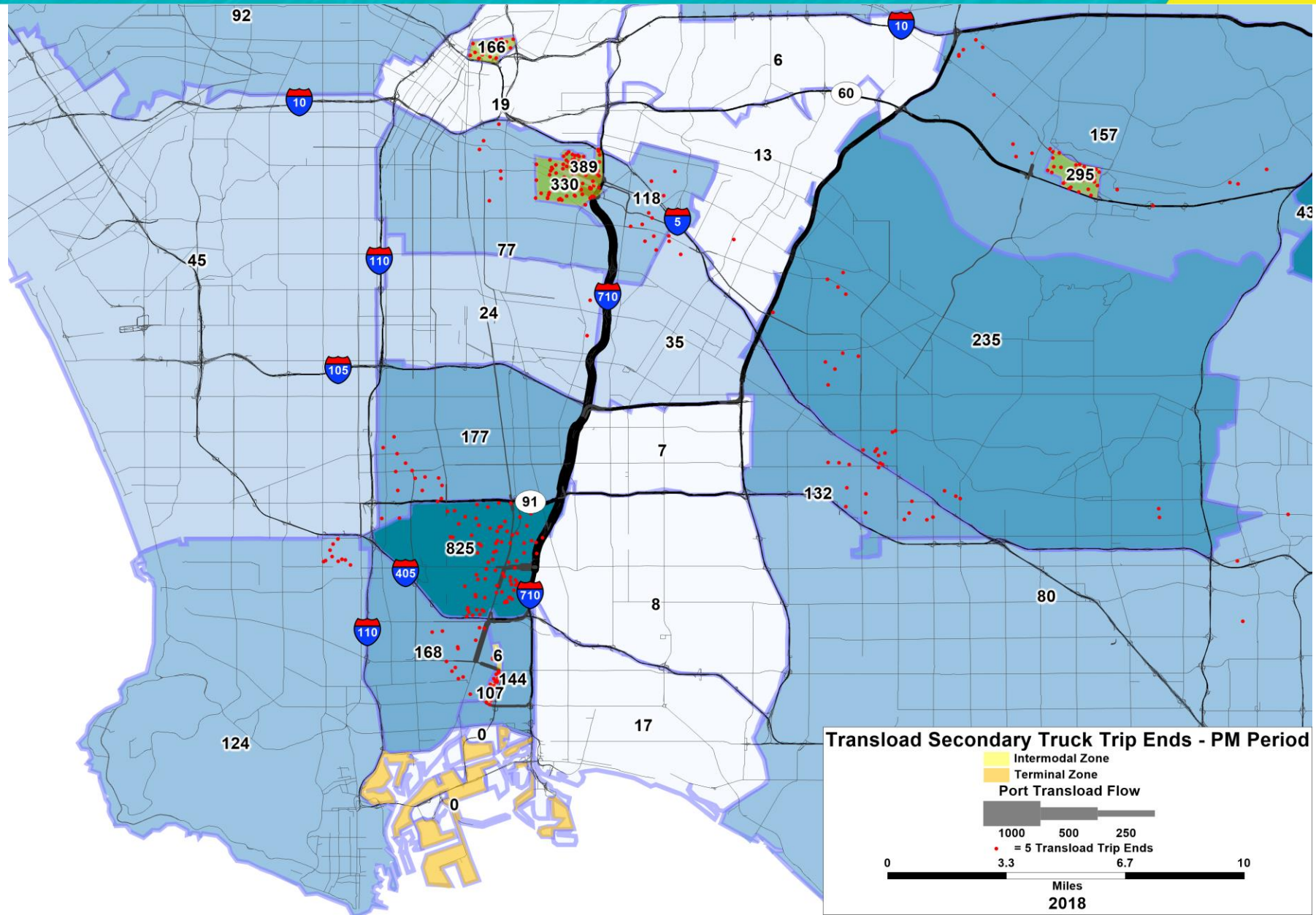
Metro

Warehouse and Transload Locations



Warehouses (orange and blue dots) and Transload Facilities (black dots)

Transload Secondary Truck Trips



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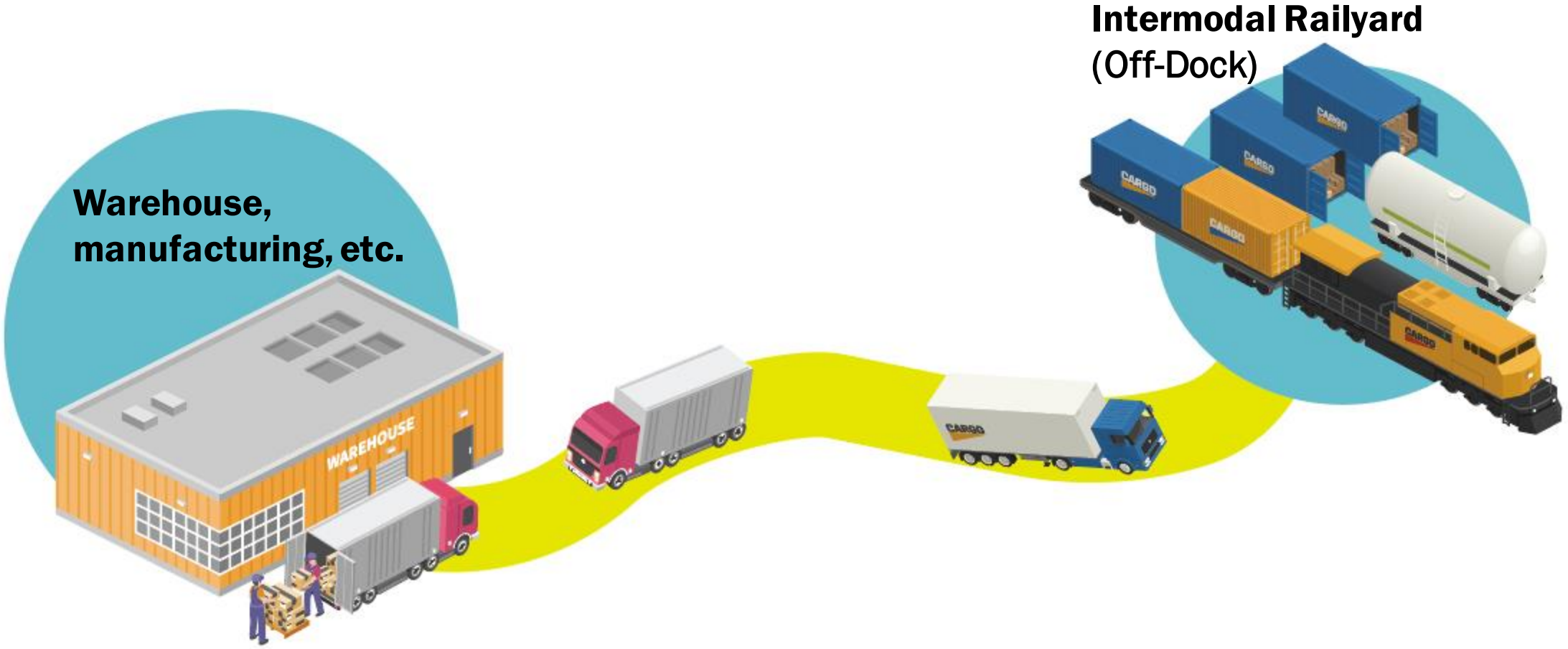
Domestic Intermodal Truck Trips
(Not Directly Port-Related)



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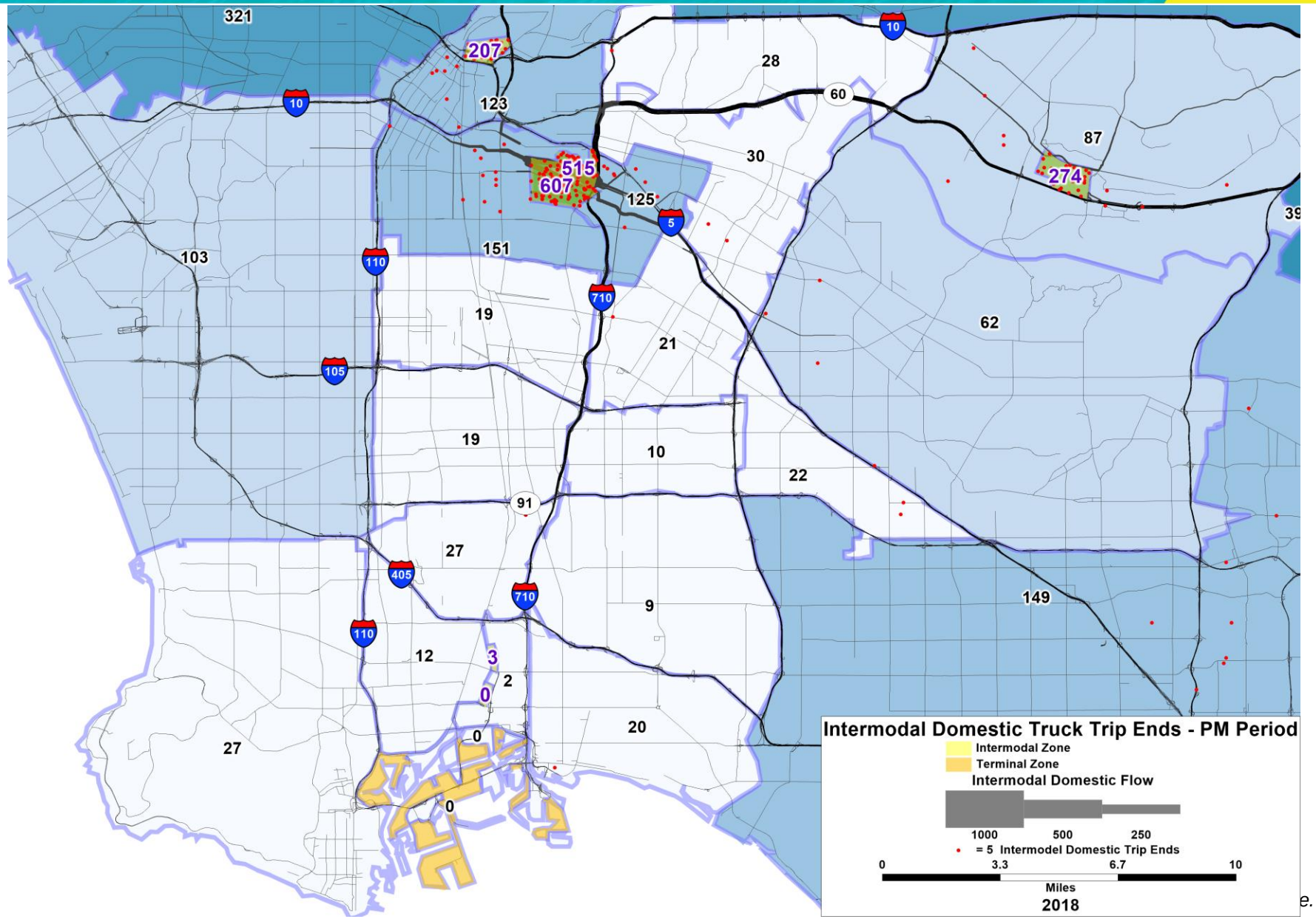
Intermodal Truck Trip Patterns (PM Period)



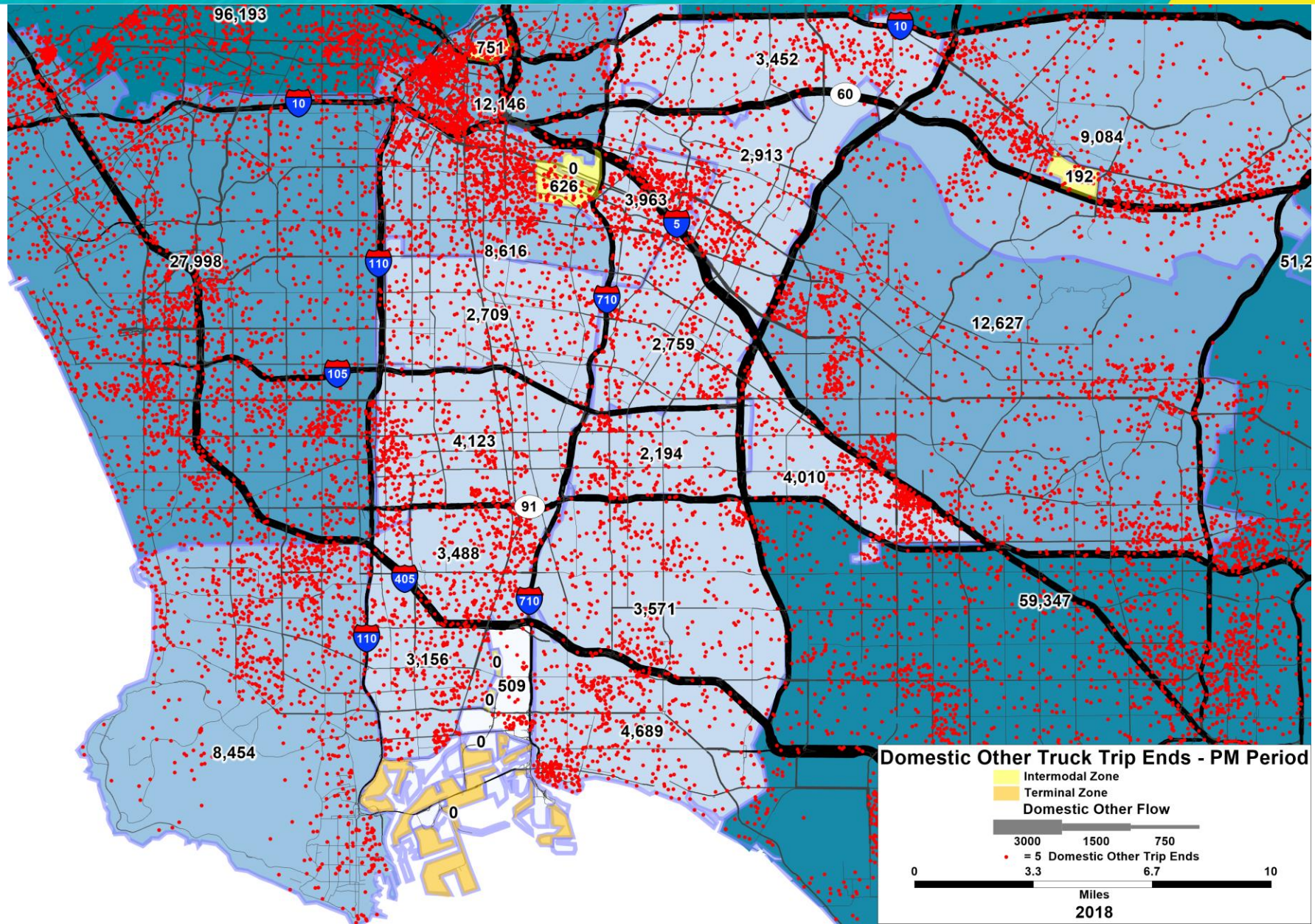
Metro

e.

Domestic - Other Truck Trips
(not Port-Related)

Metro

Domestic Non-Port Truck Trips (PM Period)



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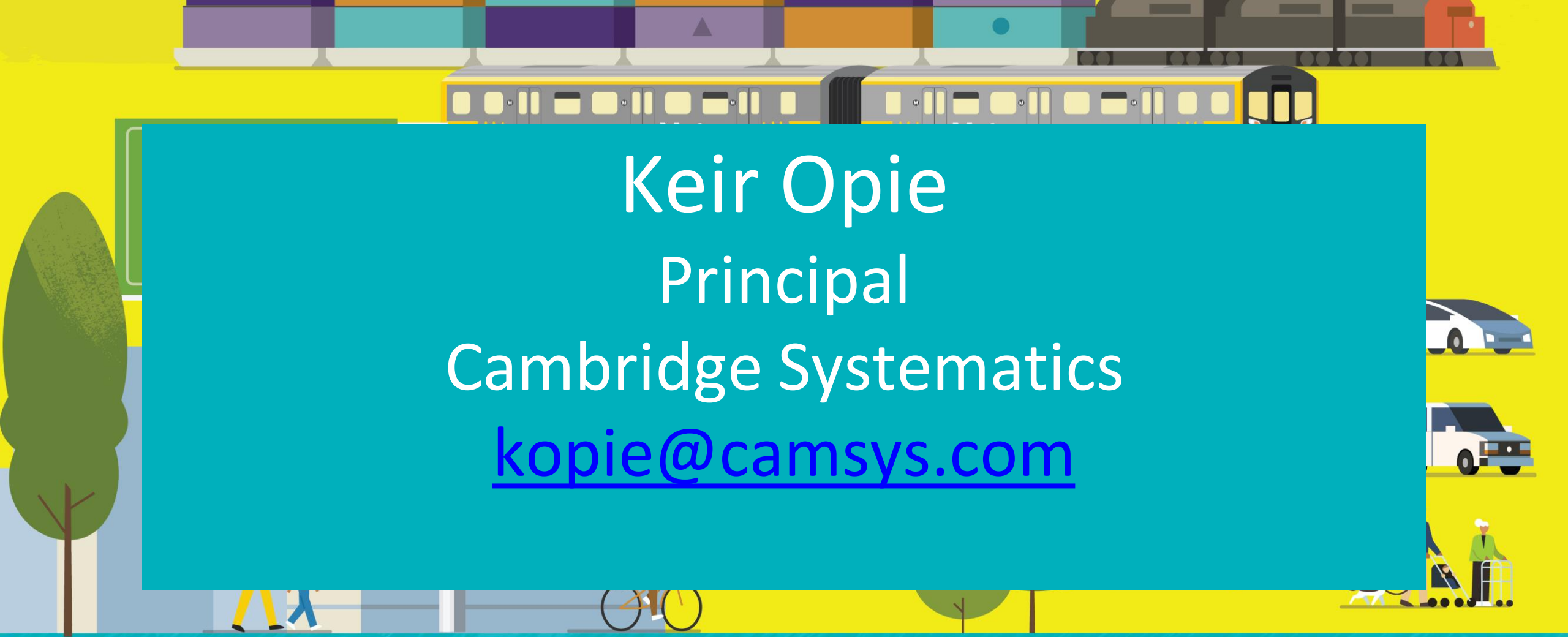
Key Findings: Corridor Truck Trips

- The Long Beach – East Los Angeles Corridor has “regular” truck volumes like all corridors, with deliveries to home, retail, and other destinations
- But the corridor also has substantial Port-related truck trips as well as goods movement related truck trips not directly connected to the Port
- The corridor has both “intermodal” and “transload” truck trips where ocean shipping containers and goods are transferred from truck to rail
- The Port truck trips have one end of each trip in the Ports and the other end along the corridor such as at warehouses and intermodal yards
- The additional truck trips due to the Ports and goods movement activities add tens of thousands of truck trips per day beyond what occurs in other freeway corridors
- The Port and goods movement truck trips are concentrated on the I-710 freeway as well as major arterial truck routes that connect to warehousing and intermodal yards such as in Carson, Rancho Dominguez, and the downtown rail yards in East Los Angeles

Metro



Keir Opie

Principal

Cambridge Systematics

kopie@camsys.com

We're developing a new vision for the 710 corridor.

I-710 TASK FORCE

Metro

Questions:

Truck Market Segmentation Volumes by Type

Metro

Agenda Item #2:
Background Presentations

Potential Locations for MD HD Truck Charging Facilities
Jack Symington, Senior Program Manager Transportation, Los Angeles Cleantech Incubator

i. Presentation (10 minutes)
ii. Discussion (10 minutes)

Metro

Presenter

Jack Symington
Senior Program Manager
Los Angeles Cleantech Incubator

LB-ELA Corridor Plan ZE Truck Working Group

An Investment Blueprint for HD Charging for Supporting Battery-Electric Drayage along the I-710 Corridor

An Investment Blueprint for HD Charging to Support Battery-Electric Drayage along the I-710 Corridor

Plan

LACI will create an investment blueprint for heavy-duty charging depots adjacent to the busy I-710 freight corridor that can support battery electric trucks serving the San Pedro Bay Ports. Following a selection framework that will incorporate grid infrastructure and drayage duty cycles, LACI will identify priority locations for public and private heavy-duty charging infrastructure.

The final blueprint will provide a high-level budget for infrastructure deployments that will enable 100% battery-electric drayage at the San Pedro Ports, extrapolating from specific site evaluations that will include initial capital costs.

Timeline

8/21	11/21	5/22	10/22	2/23
CEC Approval	Kickoff Meeting	Grid & Traffic Map	Site Assessments	Investment Blueprint

Products

1. Grid Transmission and Distribution Analysis
2. Drayage Density Traffic Map
3. Facility Identification
4. Charging Depot Business Model
5. Corridor Charging Investment Blueprint

Partners

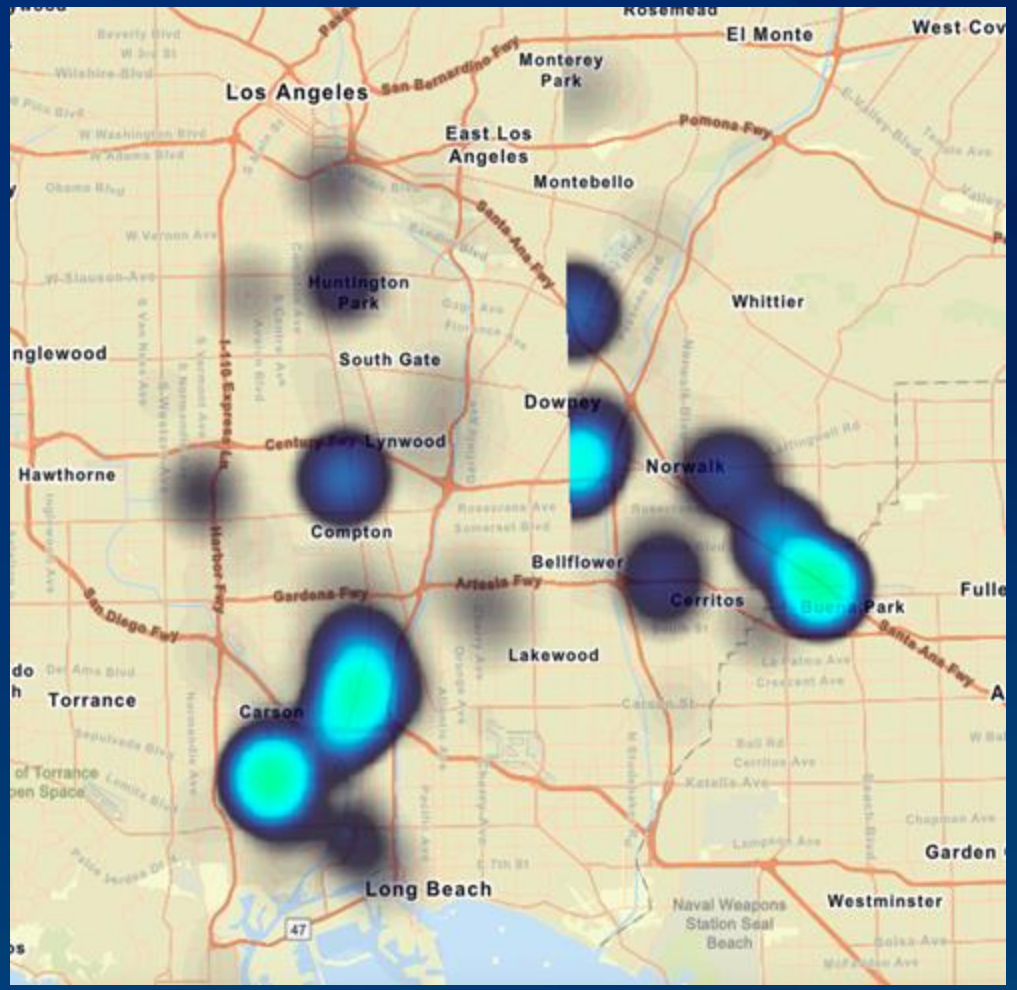
bp pulse
THE PORT OF LOS ANGELES
East Yard Communities For Environmental Justice
LA DWP Los Angeles Department of Water & Power
HTA Harbor Trucking Association
Port of LONG BEACH THE PORT OF CHOICE
SOUTHERN CALIFORNIA EDISON Energy for What's Ahead

10x Impact

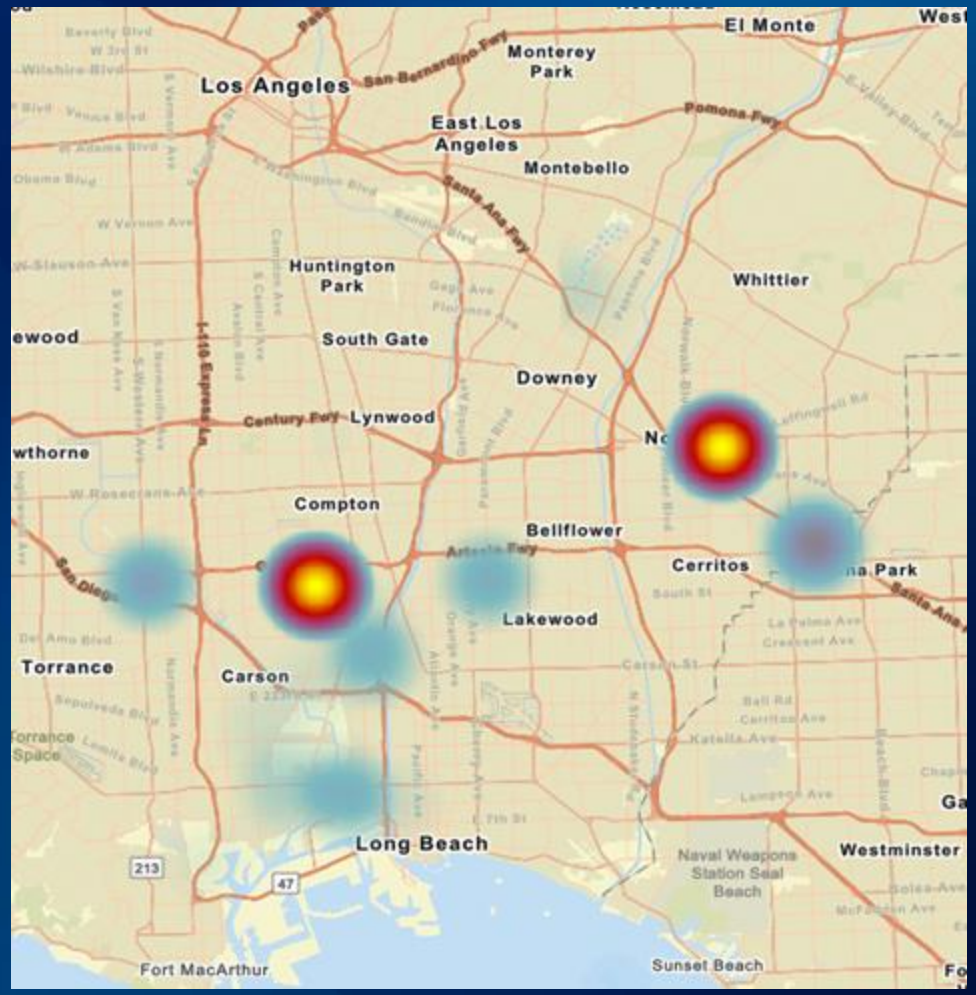
- Successfully outlining how to electrify a critical goods movement region sets a precedent for other intermodal regions in CA and the U.S.
- Accurately assessing costs of depot provides shovel-ready projects to speed transition

STATE OF CALIFORNIA ENERGY COMMISSION

Truck Traffic Maps Created for Blueprint

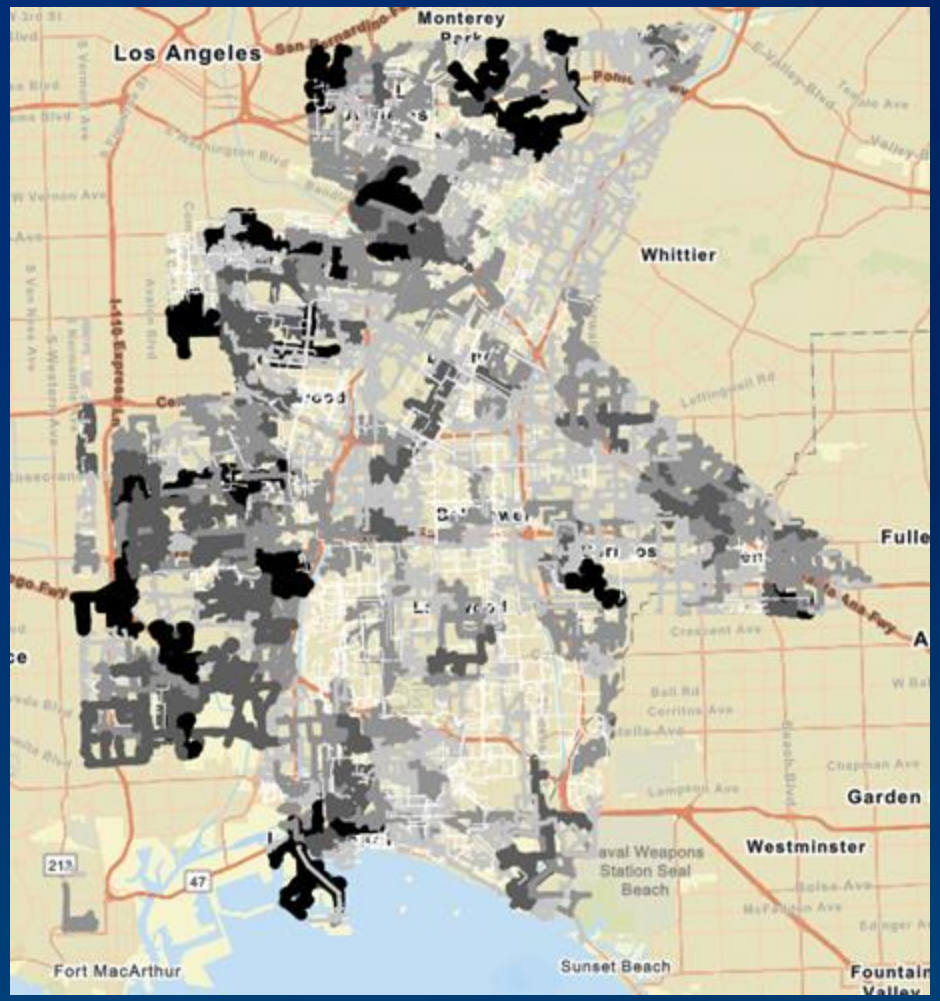


Heatmap of Trucks Stationary for 30 min - 3 hours

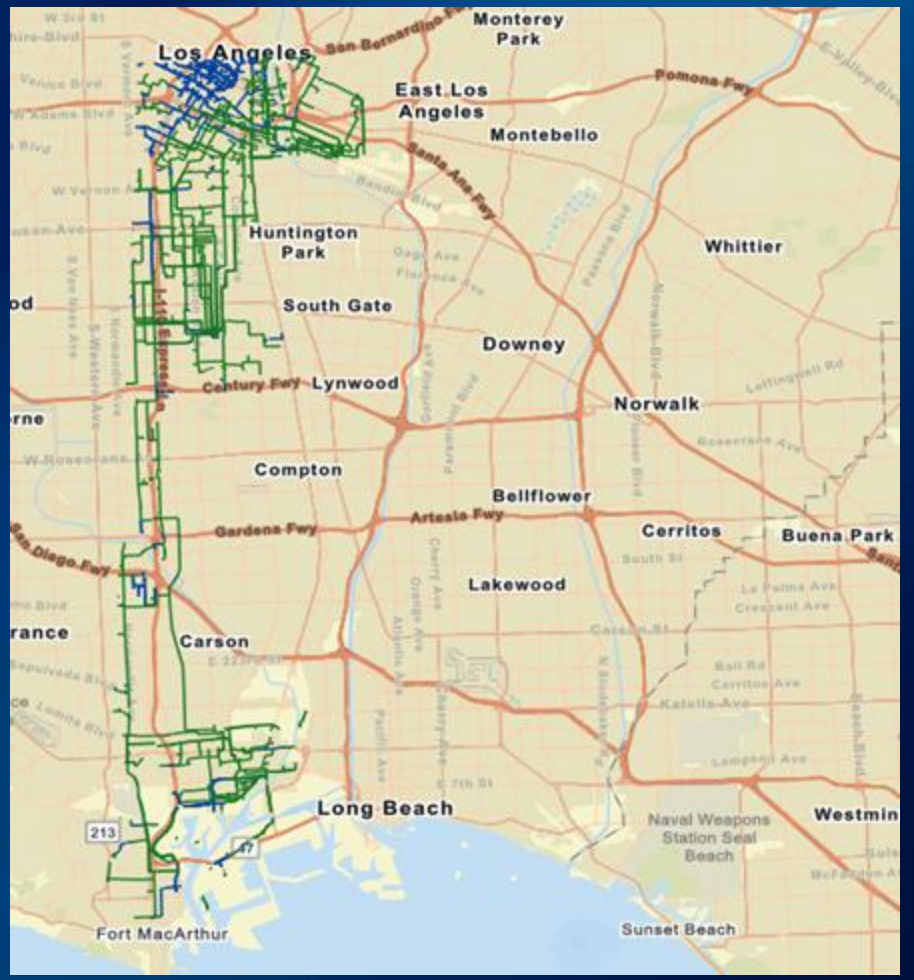


Heatmap of Trucks Stationary for at least 3 hours

Grid Maps Created for Blueprint



SCE Grid Circuits' Capacity Map

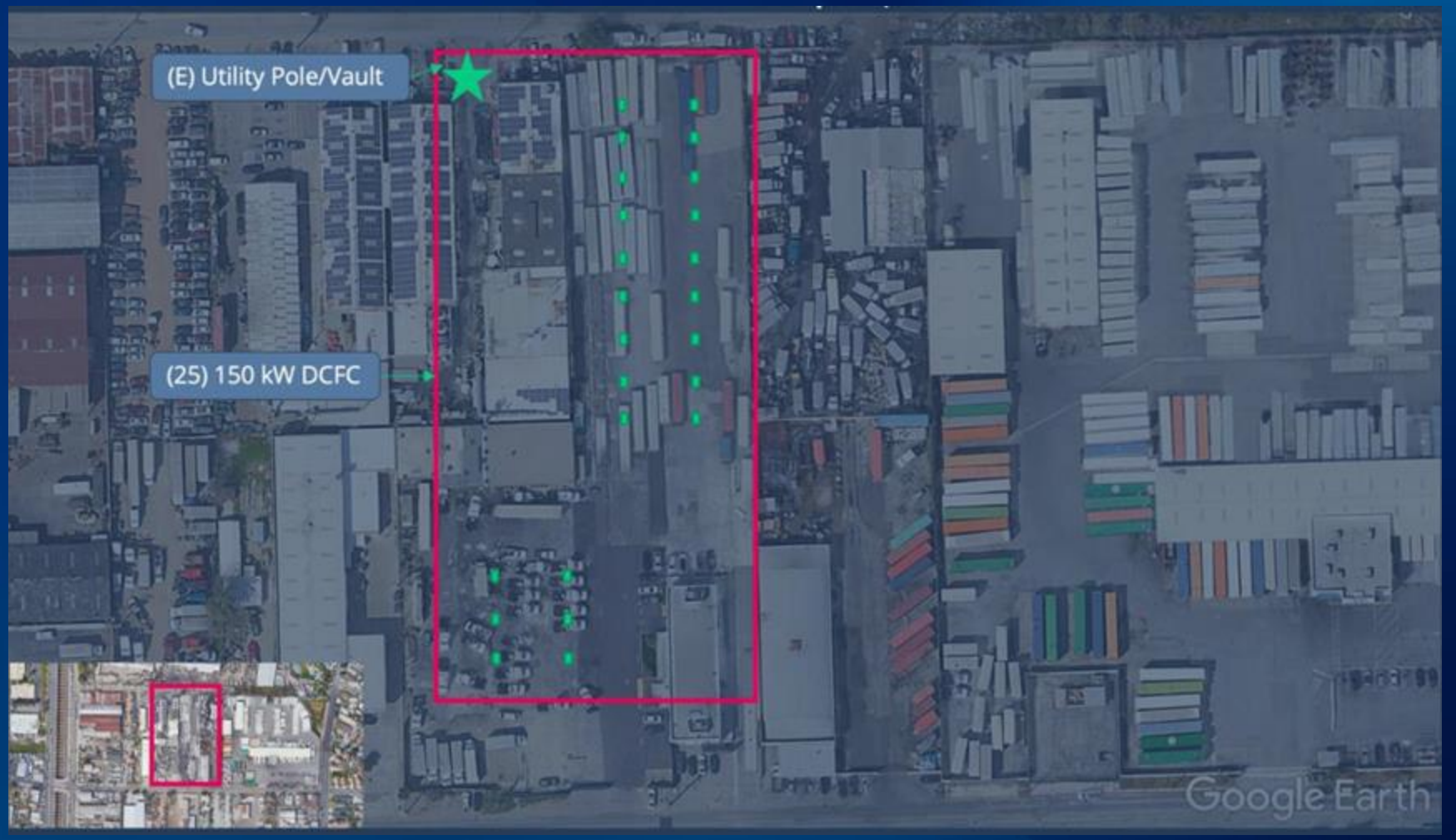


LADWP High Voltage Circuits Locations

Priority Site Selections

Address	City	State	Zip	Location Type
5525 S Soto St	Vernon	CA	90058	Warehouse
4223 Independence Ave	South Gate	CA	90280	Yard
5960 Shull St	Bell Gardens	CA	90201	Existing Building
4560 E Washington Blvd	Commerce	CA	90040	Gas Station
4817 Sheila St	Commerce	CA	90040	Yard
4552 Ardine St	South Gate	CA	90280	Yard
11508 Long Beach Blvd	Lynwood	CA	90262	Park and Ride
20100 Alameda St	Compton	CA	90221	Warehouse
20101 S Santa Fe Ave	Compton	CA	90221	Warehouse
18020 S Santa Fe Ave	Compton	CA	90221	Warehouse
1071 E 233rd St	Carson	CA	90745	Warehouse
2161 Technology Pl	Long Beach	CA	90810	Warehouse
Pier S Ave and Henry Ford Ave	Long Beach	CA	90744	Yard
16424 Valley View Blvd	La Mirada	CA	90638	Distribution Center
1519 E I St	Wilmington	CA	90744	Yard
435 E Weber Ave	Compton	CA	90222	Fleet Depot

Example of Site Assessment (435 E Weber)



Summary of Cost Estimations

Total Capital Cost Range: $670,000 - $5,050,000 (from 5 to 40 chargers)
Cost per Charger (all-in) Range: $97k-$138k
Cost per kWh Range: $0.28 - $0.43 (evaluated only at four facilities)

What estimations did ***not* include:

1. Grid upgrades (potentially >$10M)
2. High voltage components ($500-$750k per site)
3. Environmental reports and/or needed mitigation (tbd)
4. Site improvements: grading, striping, paving ($250k per acre)
5. Distributed energy resources (microgrid, solar, storage–variable costs depending on site)

Takeaways:

- Opportunity to manage truck traffic across region
- Public charging will require public investment to amortize capital costs
- Innovative partnerships can unlock value, mitigate risk
- Most circuits could only handle one large (≥50 charger) depot

Questions:

Potential Locations

MD/HD Truck Charging Facilities

Metro

Agenda Item #2:
Background Presentations

SB 671 Update

Kayla Giese, SB 671 Assessment Coordinator

California Transportation Commission

i. Presentation (10 minutes)

ii. Discussion (10 minutes)

Metro

Presenter

Kayla Giese

SB 671 Assessment Coordinator

California Transportation Commission

SENATE BILL 671

CALIFORNIA TRANSPORTATION COMMISSION

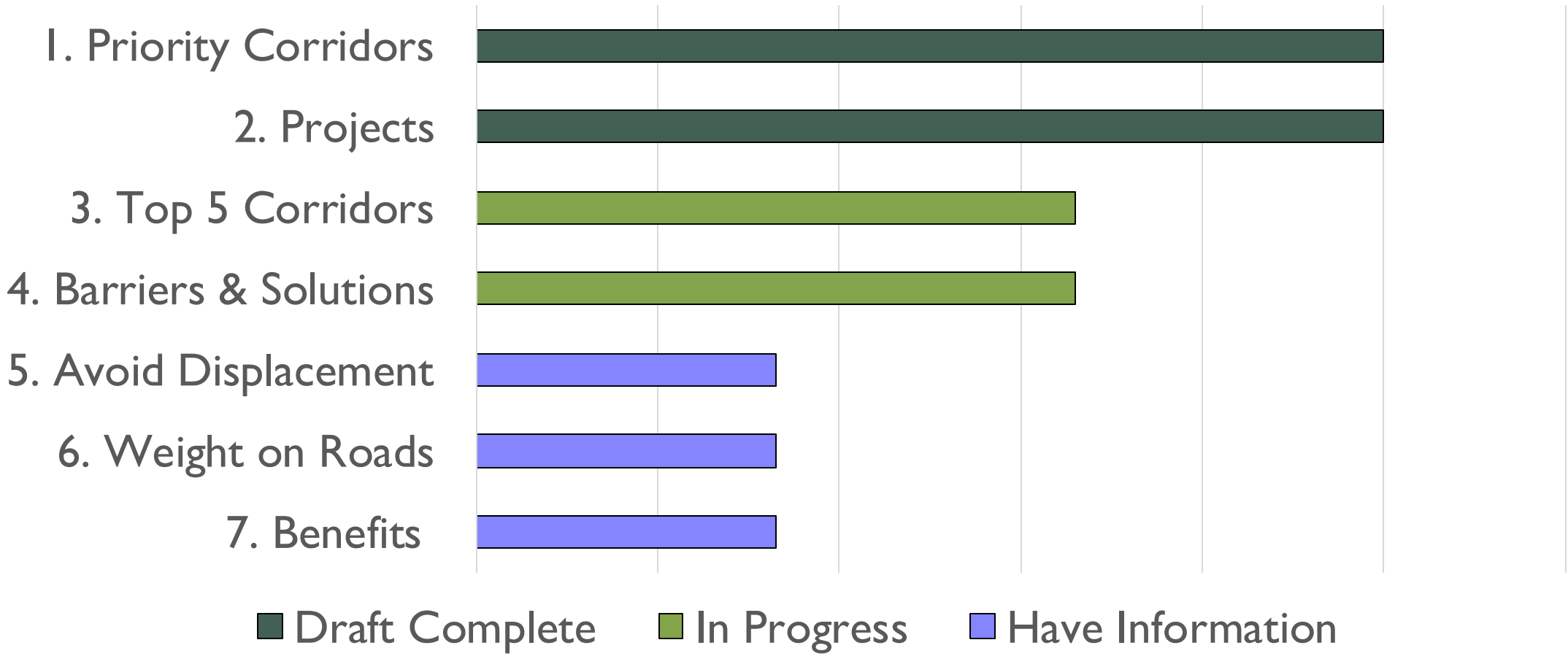
SB 671 HIGH-LEVEL REQUIREMENTS

The Clean Freight Corridor Efficiency Assessment is due December 1, 2023, to the Legislature.

It must be incorporated into the California Transportation Plan and the California Freight Mobility Plan.

The California Transportation Commission, California Air Resources Board, and California Energy Commission shall incorporate, to the extent feasible and applicable, the Assessment's findings and recommendations in their programs and guidelines.

STATUS OF BILL REQUIREMENTS



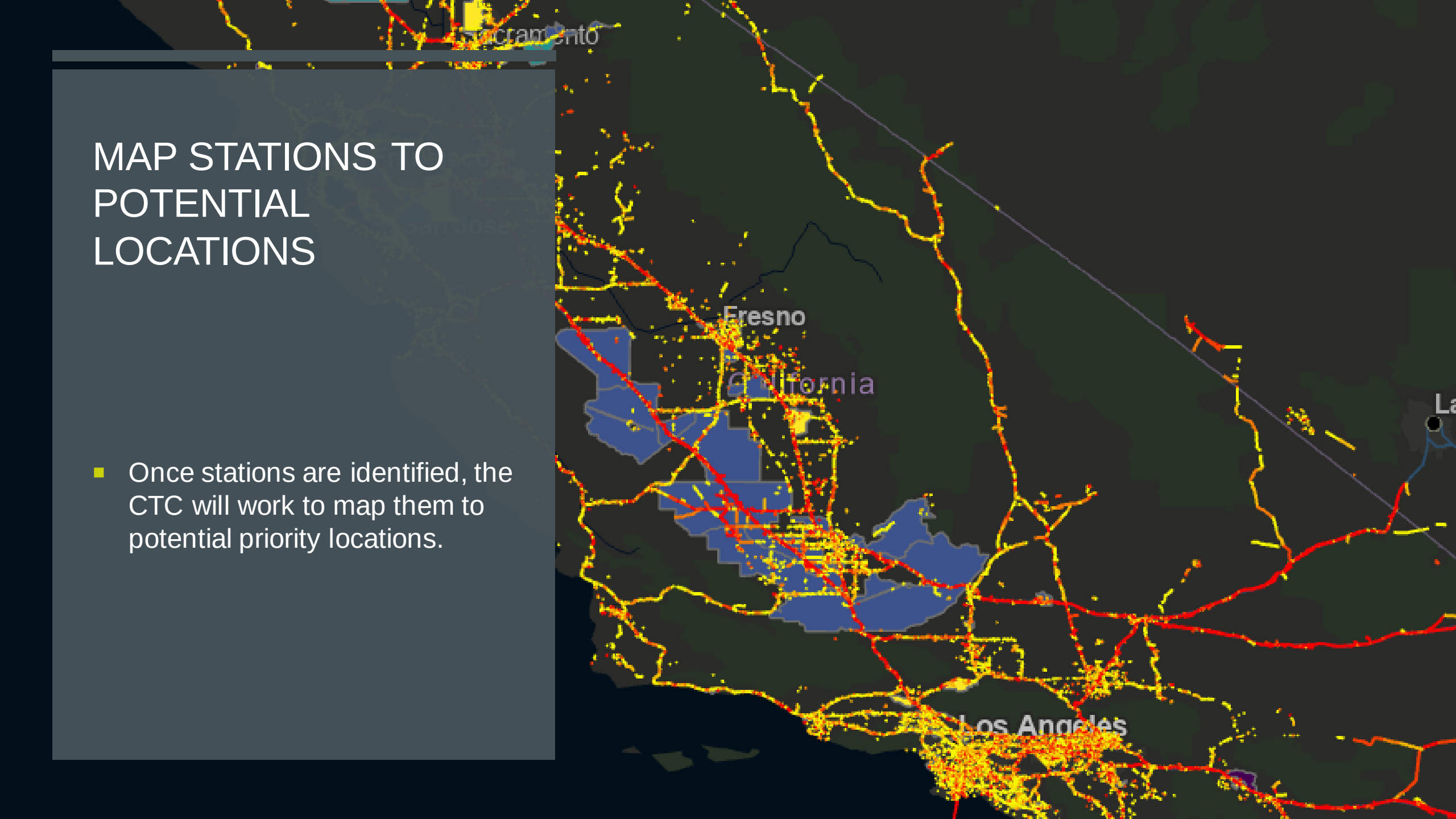
Current Work

ESTIMATE NUMBER OF ZERO-EMISSION FREIGHT STATIONS NEEDED (3 SCENARIOS)

Accelerated BEV Adoption	Accelerated FCEV/FCHEV Adoption	Balanced BEV+FCEV/FCHEV Adoption
Time (2025, 2030, 2035, 2040)		
Zero-emission vehicle numbers		
Powertrain adoption (how many BEV and how many FCEV/FCHEV)		
Sensitivities for powertrain adoption (how fast will the vehicles be adopted)		
Use cases (public versus depot)		
Outcomes		
Constraints (money, time, energy)		

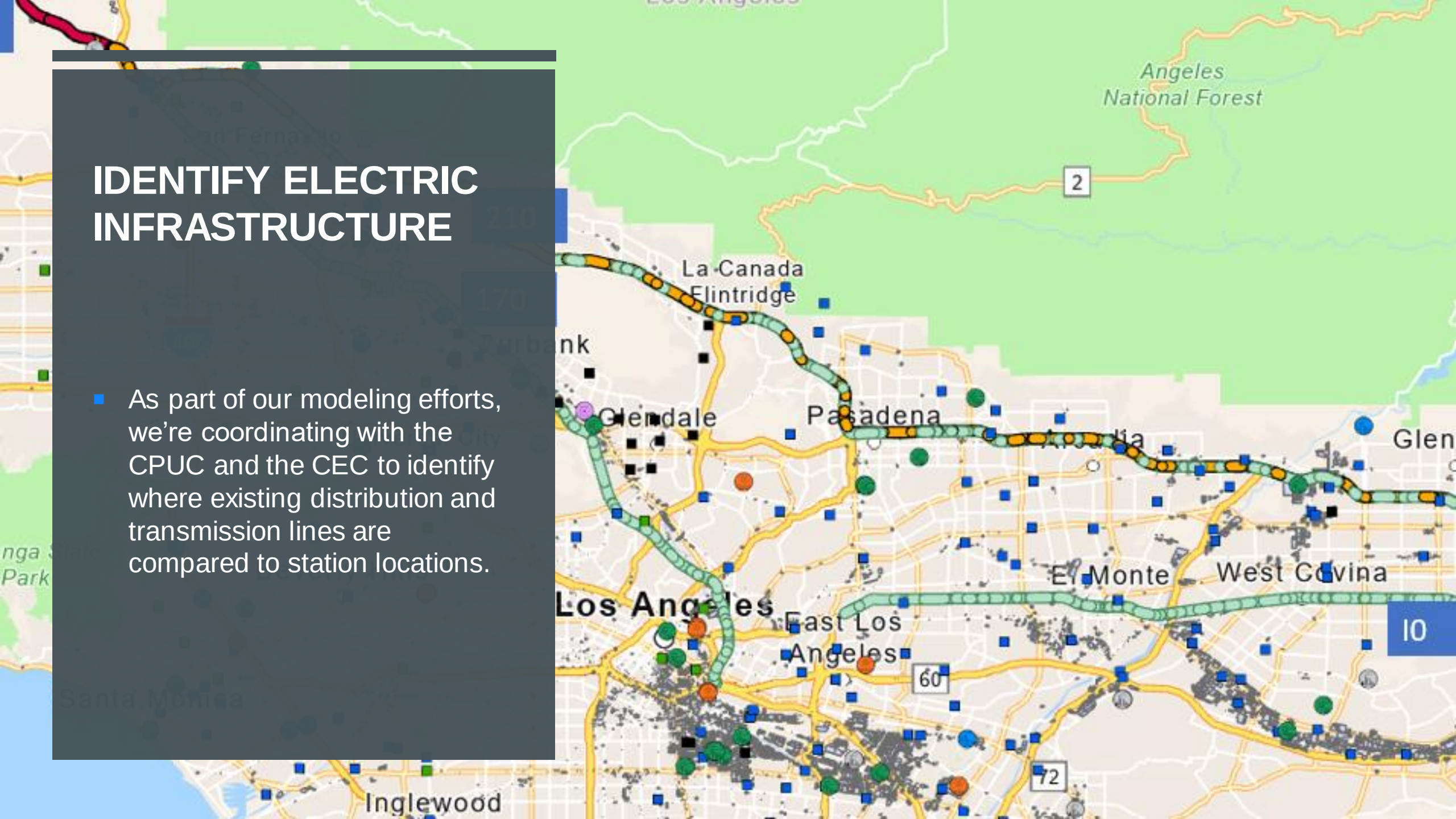
MAP STATIONS TO POTENTIAL LOCATIONS

- Once stations are identified, the CTC will work to map them to potential priority locations.



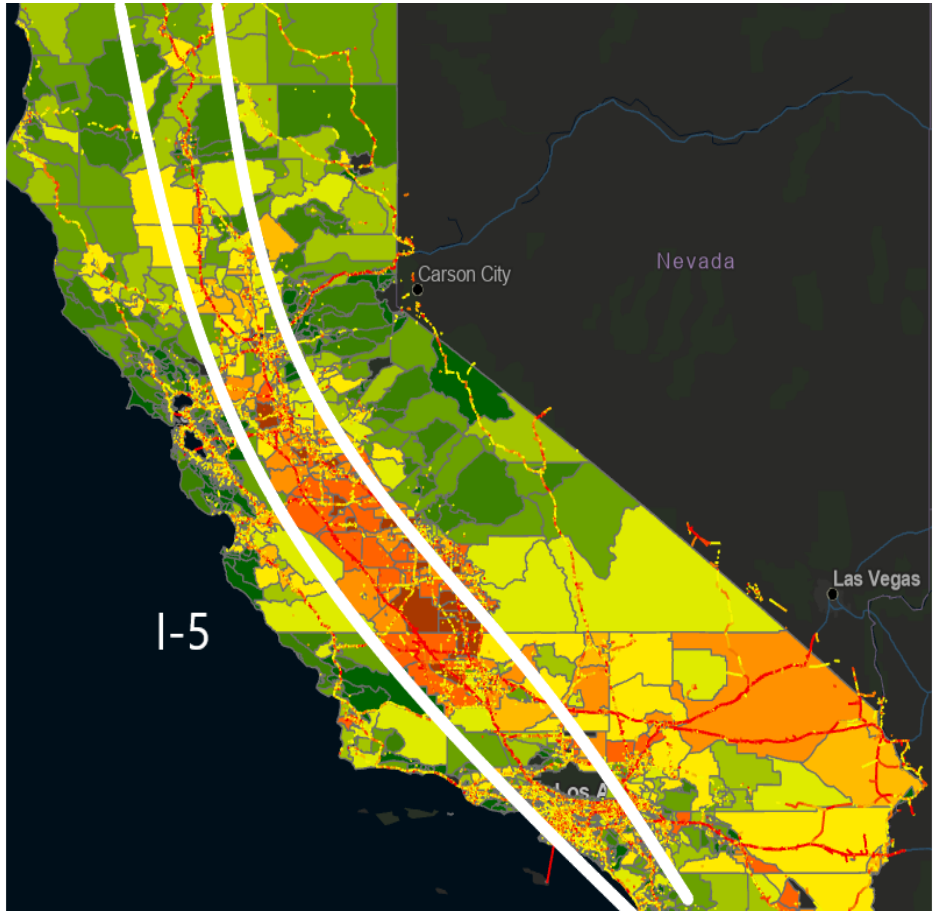
IDENTIFY ELECTRIC INFRASTRUCTURE

- As part of our modeling efforts, we're coordinating with the CPUC and the CEC to identify where existing distribution and transmission lines are compared to station locations.



IDENTIFY TOP 5 FREIGHT CORRIDORS

- Top 5 freight corridors with the most truck traffic and exposure to diesel contaminants



DRAFT BARRIERS AND SOLUTIONS

SB 671 must identify barriers and solutions

Commission staff are gathering information to articulate barriers and solutions.

TIMELINE

DRAFT DUE TO COMMISSIONERS IN AUGUST 2023

FINAL ASSESSMENT DUE IN DECEMBER 2023

Questions:
SB 671 Update

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Discussion:
Potential Locations for Truck Charging Facilities

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Agenda Item #3:

ZET Program – Community Needs

i. Overview (5 minutes)
ii. Facilitated Discussion (10 minutes)

Jack Symington, Senior Program Manager, Transportation, LACI CEHAJ

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Agenda Item #4:
ZET Program
Metro's Sustainability and Transportation Electrification Policies

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ZET Principle 6 – Equitable Outcomes

Equitable Outcomes – ensured by performance metrics that evaluate sustainable outcomes.

> Develop a variety of **localized performance metrics** to measure improvements and quality of life for residents along the corridor.

> Work with the 710 Task Force, Equity Working Group, and CLC to **apply principles from the EPET.**

> Monitor **performance** over time, evaluate **outcomes**, and identify potential **areas of improvement.**

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Performance Measures and Desired Outcomes – Examples

Workforce Development and Jobs

- Net increase in jobs
- Increase in per capita income
- Growth in new manufacturing and deploying infrastructure

Environmental

- Reduction in GHG Emissions
- Amount of EV subsidies for small fleets

Public Health

- Avoided premature deaths over time
- Avoided asthma attacks in young children

Community

- Reduced household energy costs

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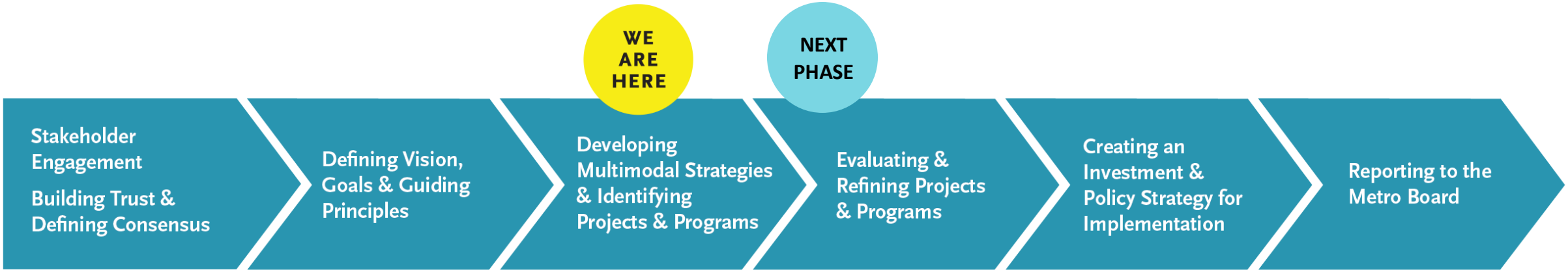
Anticipating the Next Phase



- **November 2022 to January 2023** —Seeking input on criteria to evaluate and refine projects and programs
- **Early 2023**—Projects will begin to undergo evaluation & prioritization in the next phase

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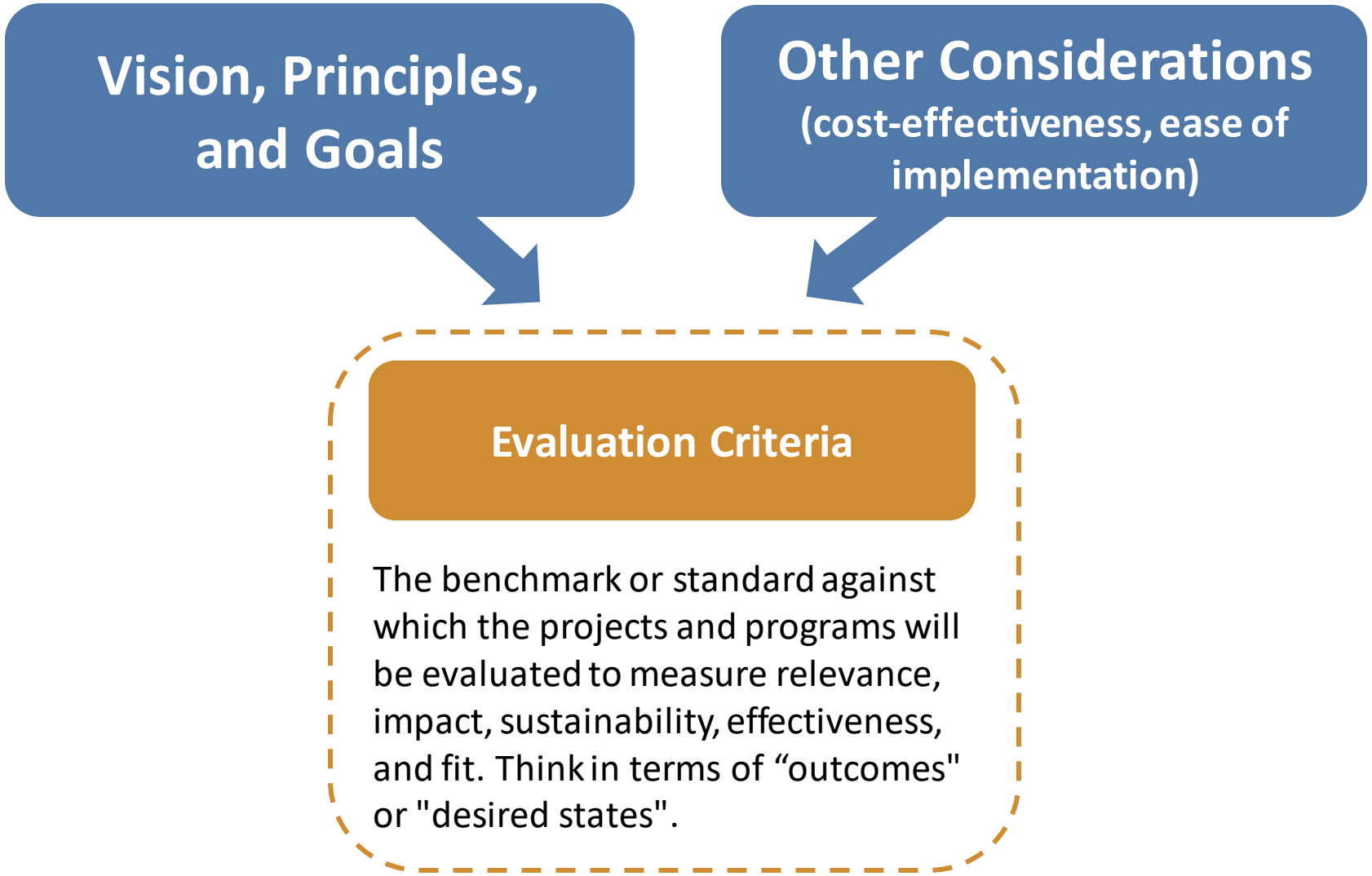
Evaluation Criteria



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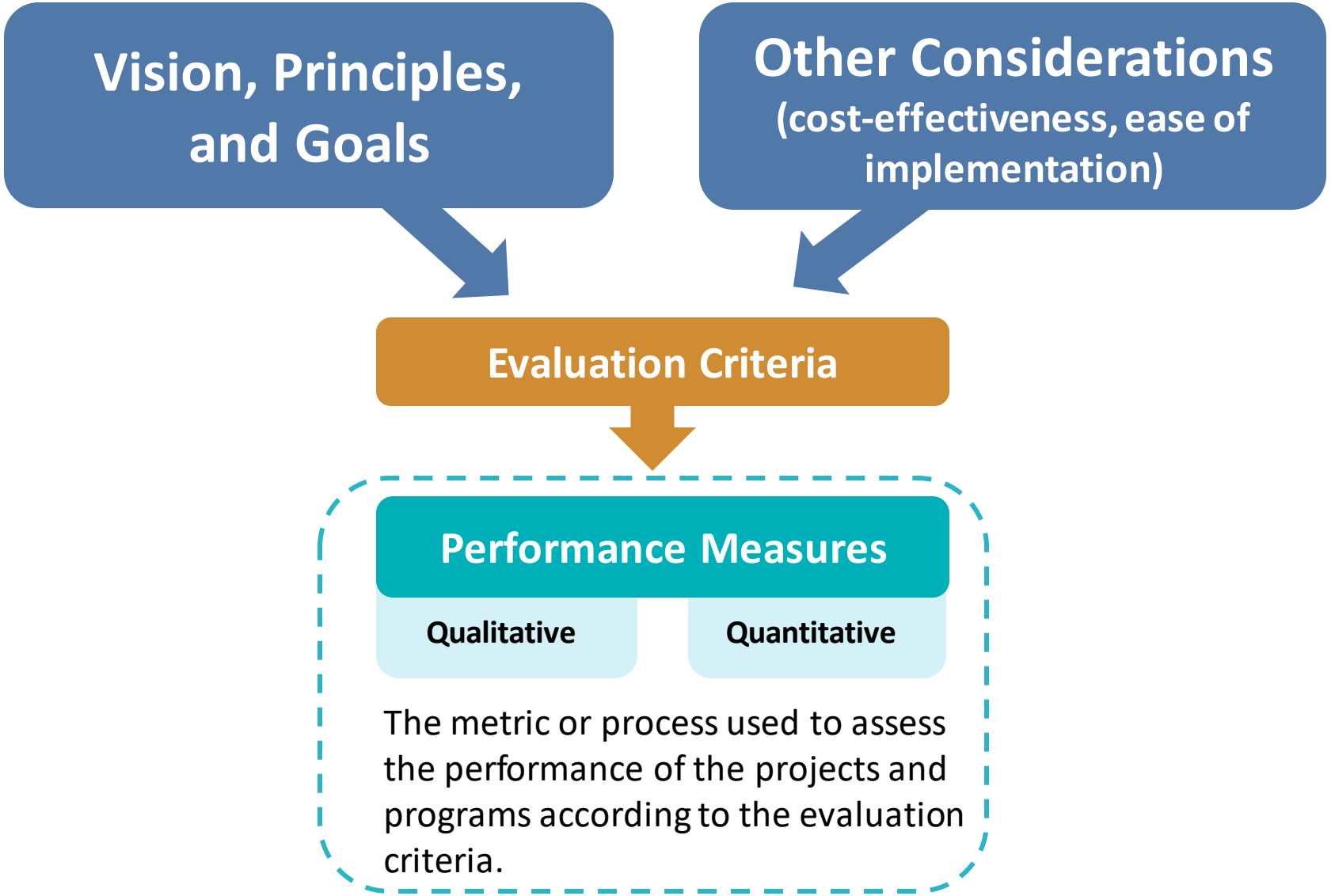
Evaluation Criteria



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Examples of Project Evaluation Criteria

EXAMPLE

Evaluation Criteria

1. Increased use of ZE drayage trucks
2. Increased deployment of ZE charging/fueling infrastructure
3. Eligibility for support from significant State and/or Federal funding programs

Example of Project Improvement:

New charging/fueling stations for zero-emissions trucks along existing routes throughout study area

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Examples of Project Evaluation Criteria

EXAMPLE

Evaluation Criteria

Eligibility for support from significant State and/or Federal funding programs

Performance Measures

Amount of state and federal grant funding available (*for zero-emissions medium and heavy-duty truck infrastructure deployment)*

Quantitative

Example of Project Improvement:

New charging/fueling stations for zero-emissions trucks along existing routes throughout study area

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Examples of Project Evaluation Criteria

Evaluation Criteria

State and federal grant funding awarded for zero-emissions medium and heavy-duty truck infrastructure deployment

EXAMPLE

Performance Measures

- Resources for planning and deploying ZE truck charging/fueling facilities in the study area
  Qualitative

- Increase in number of new fast-charging/fueling docks for ZE trucks
- Overall awarded amount and leverage achieved
  Quantitative

- Locate charging facilities along existing routes throughout the study area consistent with the ZET Program Principles
  Transformational

Example of Project Improvement:

New charging/fueling stations for zero-emissions trucks in the study area

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Evaluating for Equity

Key Issues

Equity assessments must consider several quantitative and qualitative measures:

- **What** a project accomplishes locally and regionally
- **How** a project is implemented
- **Who** is meaningfully involved in the planning and implementation process, and how
- **Who** receives project benefits or faces negative project impacts
- **When** projects are implemented in each community, based on factors such as need and historical disinvestment

Initial List of Projects & Programs: Zero-Emission Trucks

Project ID	Name (if applicable)	Short Description	Source
LB-ELA_0004	Long Beach-East Los Angeles Corridor Clean Truck Program	In January 2021, the Metro Board approved the 2021 Goods Movement Strategic Plan, which included a Countywide Clean Truck Initiative, with the 710 South Clean Truck Program identified as a goods movement strategic priority. At its October 2021 meeting, the Metro Board acted to recommit $50 million from Measure R I-710 South Corridor funds as seed funding for the 710 South Clean Truck Program, which has been subsequently renamed the LB-ELA Zero Emissions Truck Program. The objective of this program is to turn over diesel trucks in favor of zero emissions trucks in the LB-ELA Corridor. The program would contribute subsidy funding to deploy a number of zero emissions trucks on I-710 as well as seed funding to develop electric charging/refueling stations for zero emissions trucks.	Metro LRTP, SPP Survey, SPP Mapping, CA-7
LB-ELA_0023	Clean Truck Infrastructure	Install charging infrastructure for zero emissions trucks.	Metro 2028 Mobility Concept Plan, SPP Survey, SPP Mapping

Closing Remarks and Next Steps

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Upcoming Meetings and Project Information

Community Leadership Committee Meeting

- Meeting #11

  Thursday, January 19, 5-7pm

- Meeting #11.5

  Monday, January 23, 5-7pm

Task Force Meeting

- Task Force Meeting #17

  Monday, February 13, 5-7pm

Working Group Meetings

- Zero-Emissions Truck Working Group #13

  Tuesday, February 21, 1-3pm

For the most updated list
of meeting dates, please visit
http://www.metro.net/710-hub

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Can’t attend the meeting? Reach out to us!

Michael Cano, *Executive Officer (Interim)*
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Thank you!

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