

Positive Truck Signage Study

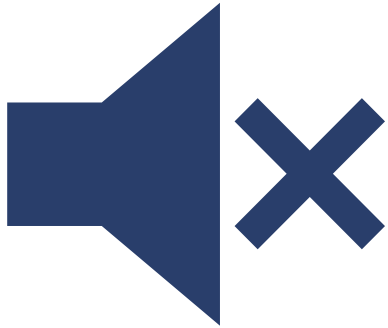
DISTRICT DEPARTMENT OF TRANSPORTATION

Public Meeting
July 20th, 2023
Virtual Meeting: Webex



WEBEX LOGISTICS

Virtual Meeting



Attendees will be muted throughout the presentation



Post your questions to Q&A Panel during the presentation.



Q&A session to follow the presentation. Use the "Raise Hand" feature to be called upon. The moderator will unmute you.

If you need technical support during this meeting, please call 202-997-8354.
This meeting will be recorded.

Using Webex – Audio & Video

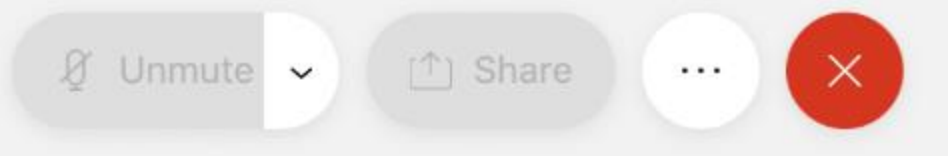
Audio/Muting

Everyone is on mute. The moderator can unmute individuals during the Q&A and Comment period. This helps ensure the meeting runs smoothly and there are no auditory disruptions during the presentation.

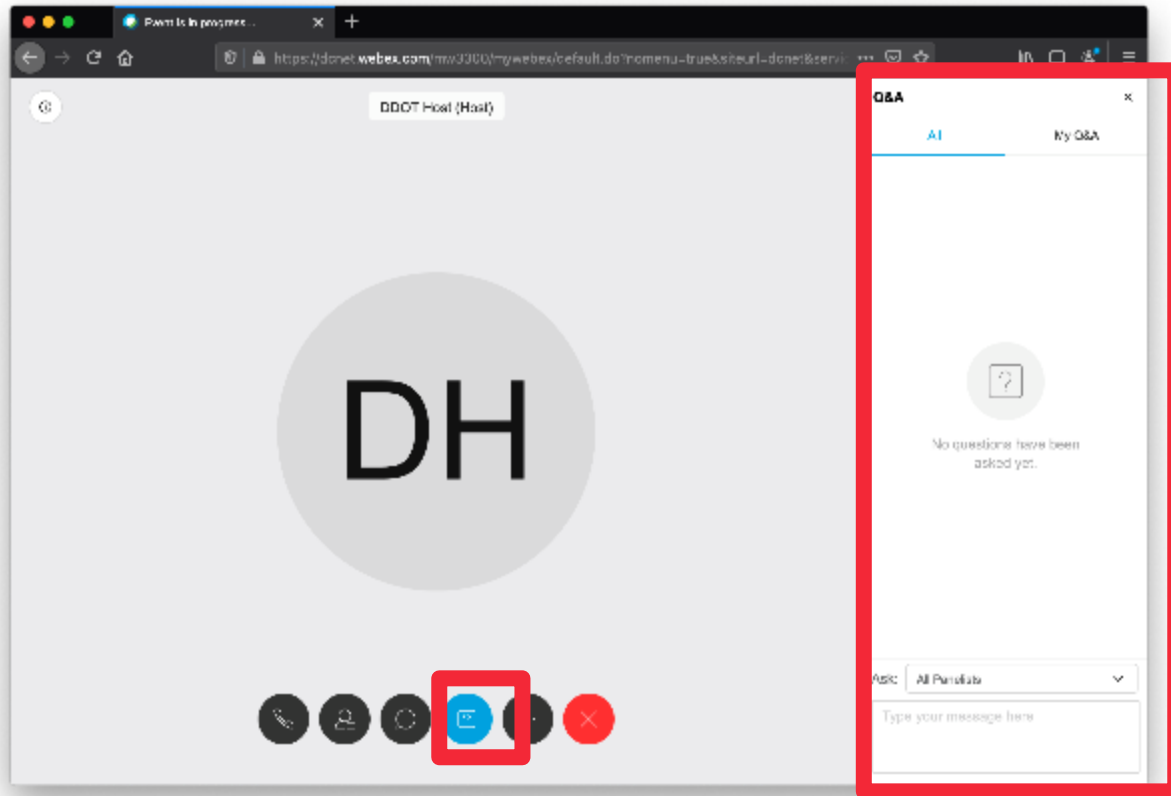
To request to speak, you will need to use the **Raise Hand** feature, which we will cover shortly.

Video

To reduce the bandwidth of the meeting, only the Project Team will be sharing video to improve the overall meeting quality for all participants.



Using Webex – Q&A via Phone & Browser



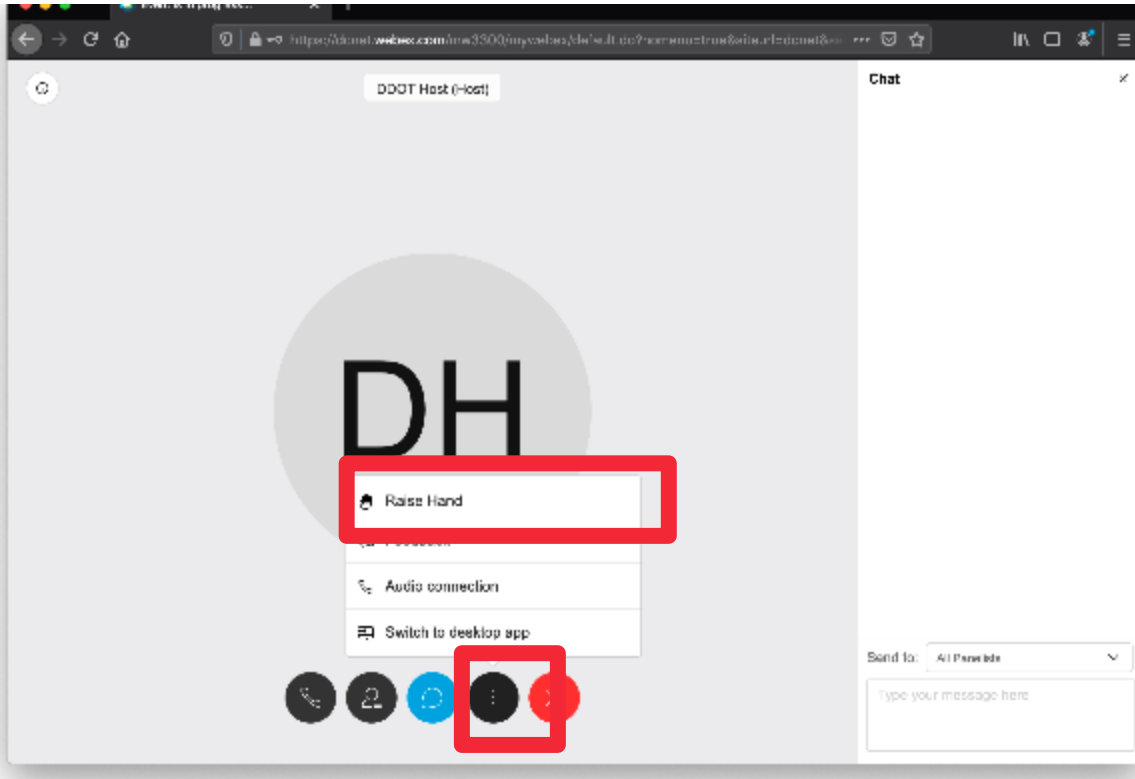
If you have a question during the presentation, send it via the Q&A feature.

Note: If you have called in by telephone, you cannot access the Q&A.

To Send a Question:

- Click the “**question mark icon**” from the controls at the bottom of the browser window.
- A new panel will appear. In the “**Ask**” field, select **All Panelists**.
- Click the text box to type your question and press the Enter key to send it.

Using Webex – Raise Hand via Phone or Browser



If you have called in and you have a question/comment, please **Dial *3** on your phone. This indicates to the Project Team that you would like to speak.

To virtually raise your hand via the browser, click the "**three dot icon**" from the controls at the bottom of the window. Select the **Raise Hand** option.

Project Team Introduction



- Laura MacNeil: DDOT Project Manger
- Florence Dwyer: DDOT Deputy Project Manager
- K.R. Marshall: WSP Project Manager
- Stephanie Finch: WSP Deputy Project Manager
- Holly Chase: Sam Schwartz Project Manager
- Soumya Dey: Sam Schwartz
- Alex Webb: Sam Schwartz

Agenda

Positive Truck Signage

Overview of the DDOT Positive Truck Signage Study

Existing Conditions

Gap Analysis

Benefit-Cost Analysis

Transition Plan

Route Recommendations

Next Steps

Positive and Negative Truck Signage

Positive truck route signage refers to signage that clearly identifies preferred truck routes.



In DC, only black and white restriction signage is enforceable.

Negative truck route signage refers to signage that clearly identifies prohibited truck routes.



A thru/through truck restriction means that the street is still open to trucks making local deliveries.

Existing Conditions in DC

- The District of Columbia currently utilizes an advisory designated truck and bus route network, which **encourages** but does **not require** heavy vehicles to travel along designated routes.
- The District also designates bus restrictions and through-truck restrictions along residential streets, which are enforced by the Metropolitan Police Department when there is associated signage in place.
- Currently, trucks carry more than 90% of goods by weight (and 72% of goods by value) into, through, and out of the District.



Existing DC Truck and Bus Signage



Todd Place and Summit Place NE



7th Street and T Street NW



10th Street and Taylor Street NE



12th Street and M Street NW

A range of signs and styles are used, many of which convey the same message.

Study Purpose

To analyze the **benefits** and **drawbacks** of potentially installing positive truck route signage in the District, with the goal of balancing quality of life for residents with the need to make deliveries.

Evaluate the existing truck and bus network

Study peer cities with positive truck route networks

Develop benefit-cost analysis (BCA) to evaluate a potential positive truck route system against current conditions. This analysis includes two options:

- A **signed advisory** positive truck route system and
- A **signed mandatory** positive truck route system

Understand the components needed for a potential transition plan, including any legal, administrative, enforcement, and public engagement actions

Create a concept plan with sign design materials and guidelines for cost estimates.

Goals for Stakeholder Outreach

Stakeholder perspectives are essential to building a complete and accurate understanding of current conditions, concerns, and any trends in the local trucking environment that may be important to the study. The goals for this outreach are:

Supplement the technical analysis conducted in the study.

Gather perspectives on the effectiveness of the existing advisory framework.

Provide an opportunity to discuss the potential for a mandatory route framework.

Inform a potential transition plan for a mandatory route framework.

Timeline of the DDOT Positive Truck Signage Study

September
2022

September
2023

We are here ★

**Evaluate
Existing
Conditions**

**Research
Existing
Truck/Bus
Frameworks**

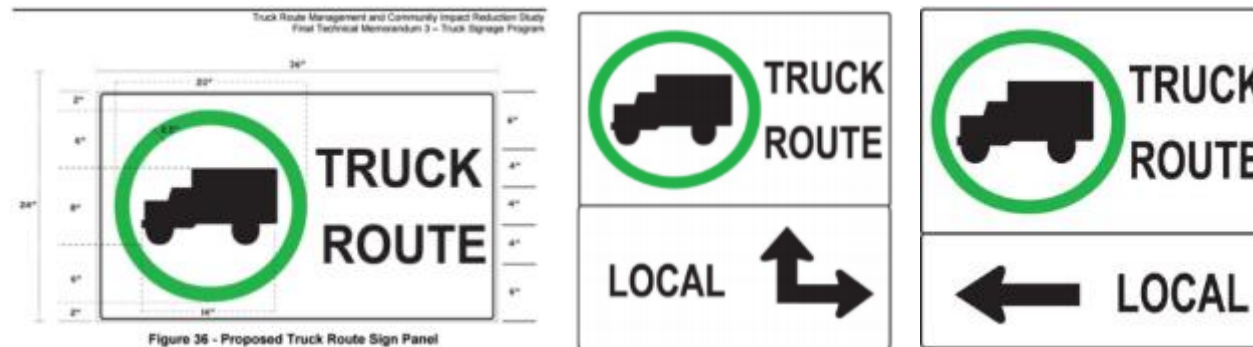
**Complete
Cost /
Benefit
Analysis**

**Develop a
Transition
Plan**

**Develop
Conceptual
Plans and Cost
Estimate**

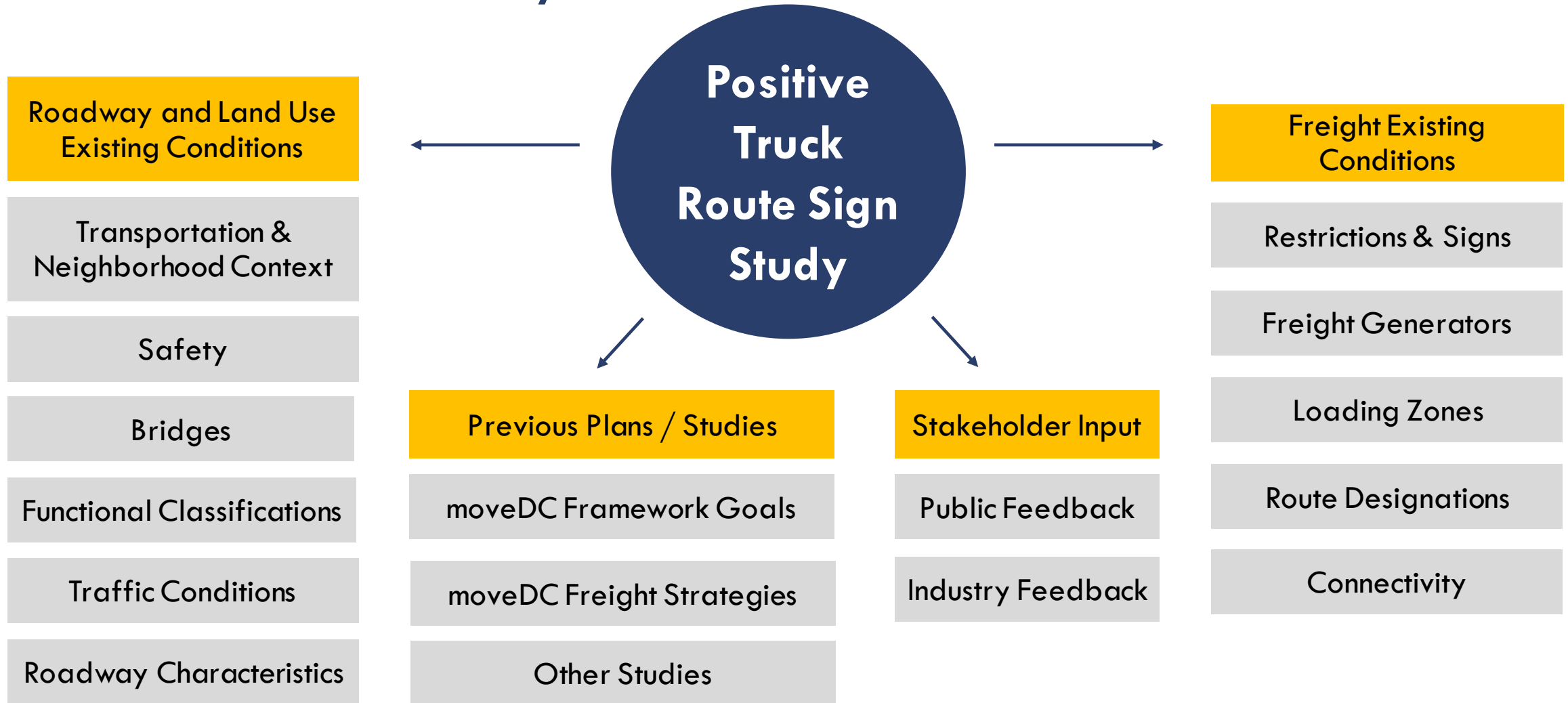
Previous Studies

- **2010:** Established Advisory Truck Route System of designated, though unsigned routes
- **2016:** DDOT updated truck restriction guidelines and review process
- **2020:** DDOT completed Freight Plan Addendum
 - Challenges included land uses and transportation changing faster than supporting freight infrastructure, and vertical clearance restrictions
 - Recommended a comprehensive signage program that easily identifies designated routes and minimizes illegal truck traffic



Proposed Positive Truck Signage from 2016 Study

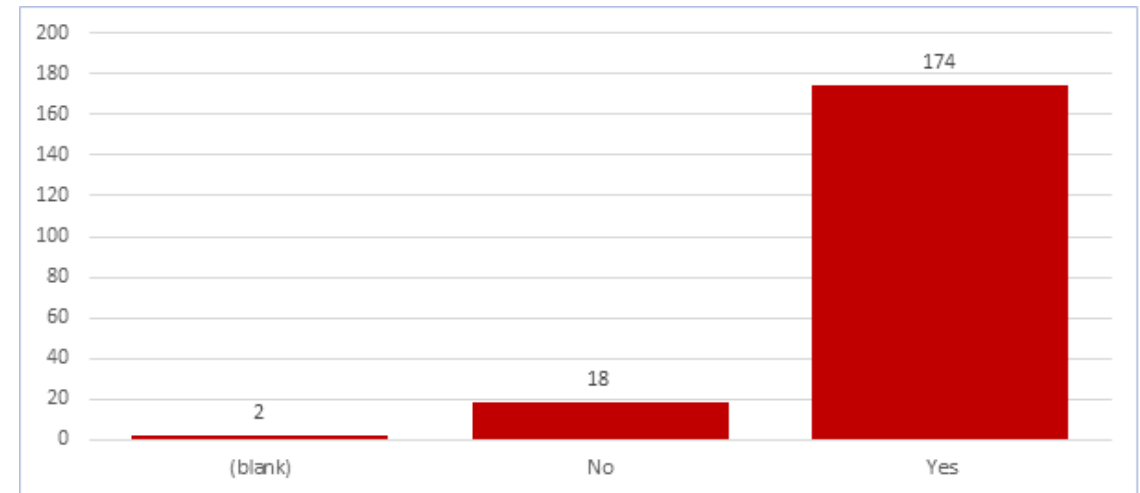
Data Review and Analysis



Input from Stakeholders

- Two interview sessions were held with truck and charter bus industry stakeholders in December 2022 (5 organizations represented)
- A survey was sent to Advisory Neighborhood Commissions in January 2023 (194 responses)
- Interviewed MPD Motor Carrier Safety Unit representative
- Interviewed National Parks Services representative

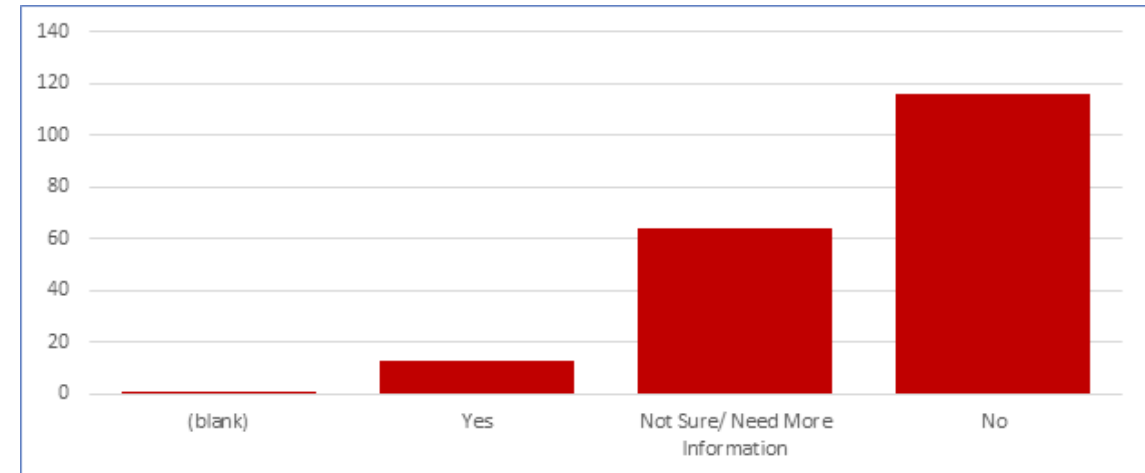
Survey Question: Would You Support a Mandatory Bus and Truck Route Framework? (ANC Survey)



ANC Survey Responses

- Of 194 responses received, roughly half think existing truck routes and restrictions do not work well
- Many were not aware that the District has truck routes and restrictions
 - *“I’ve lived here since 1998, and I didn’t know that we had any truck restrictions.”*
 - *“It is not clear what the routes are.”*
- Responses showed concerns about:
 - Inadequate enforcement
 - Oversized trucks blocking or causing damage along narrow residential streets
 - Effects of large trucks on safety for pedestrians and cyclists

Survey Question: Do the District’s Truck Routes and Restrictions Work Well?



Analysis of Existing Conditions

Conducted to determine roadways' abilities to accommodate trucks and address existing gaps.

Methodology

- Identify corridor gaps in through-routes of truck network
- Develop Composite Truck Connectivity Index to determine appropriateness for truck traffic
- Compare results of Index with designated truck routes

Variables Considered



Truck Volumes

Where are trucks currently going



Demographics

Which communities have a higher portion of low-income households



Roadway Restrictions

Where are trucks restricted by geometry, turn restrictions, and existing truck prohibitions



Land Use

Where are residential, institutional, and recreational land uses



Safety

What populations are most vulnerable to safety issues involving trucks

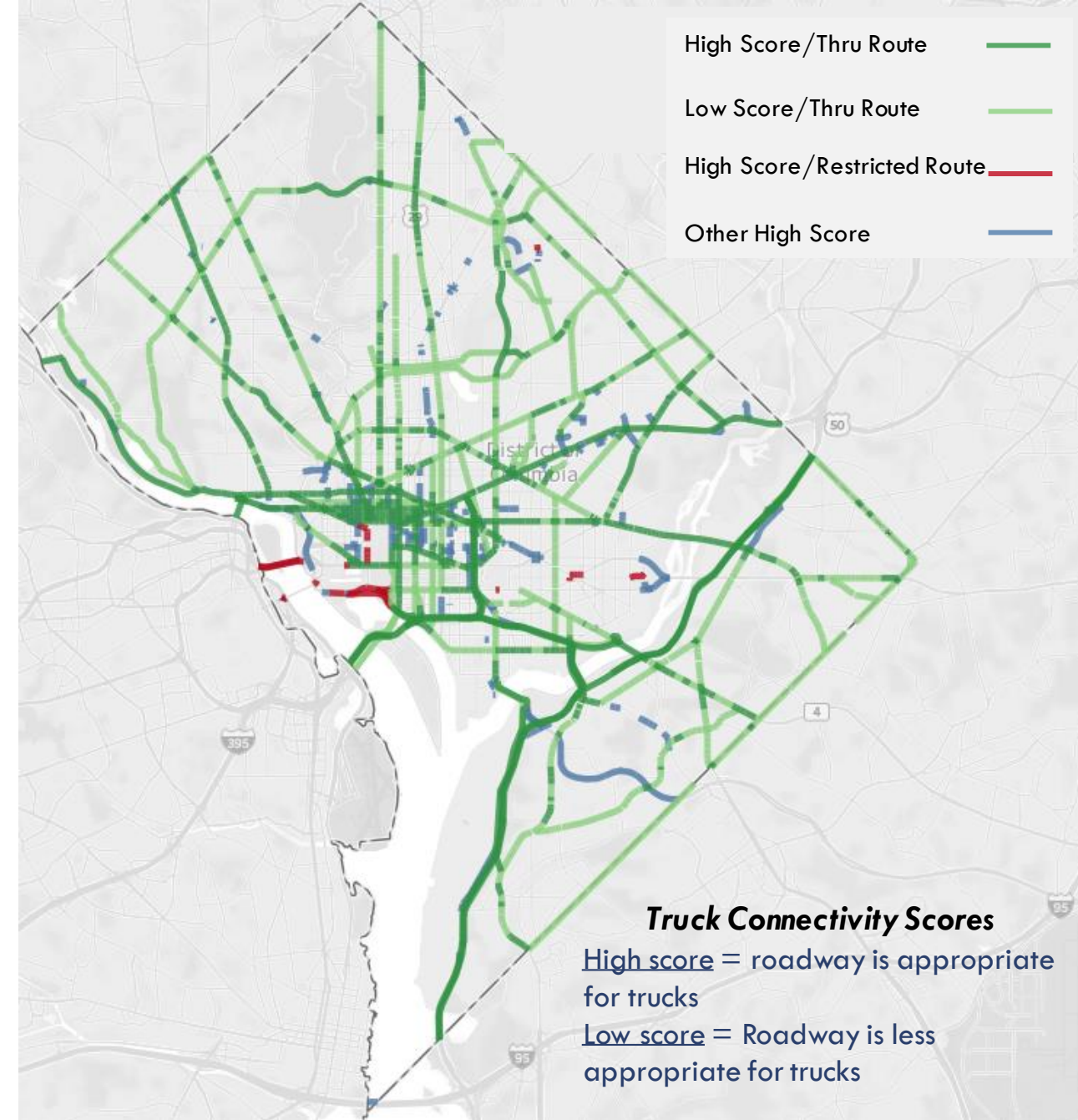


Functional Classification

Which roads are designed to accommodate higher volumes and larger vehicles

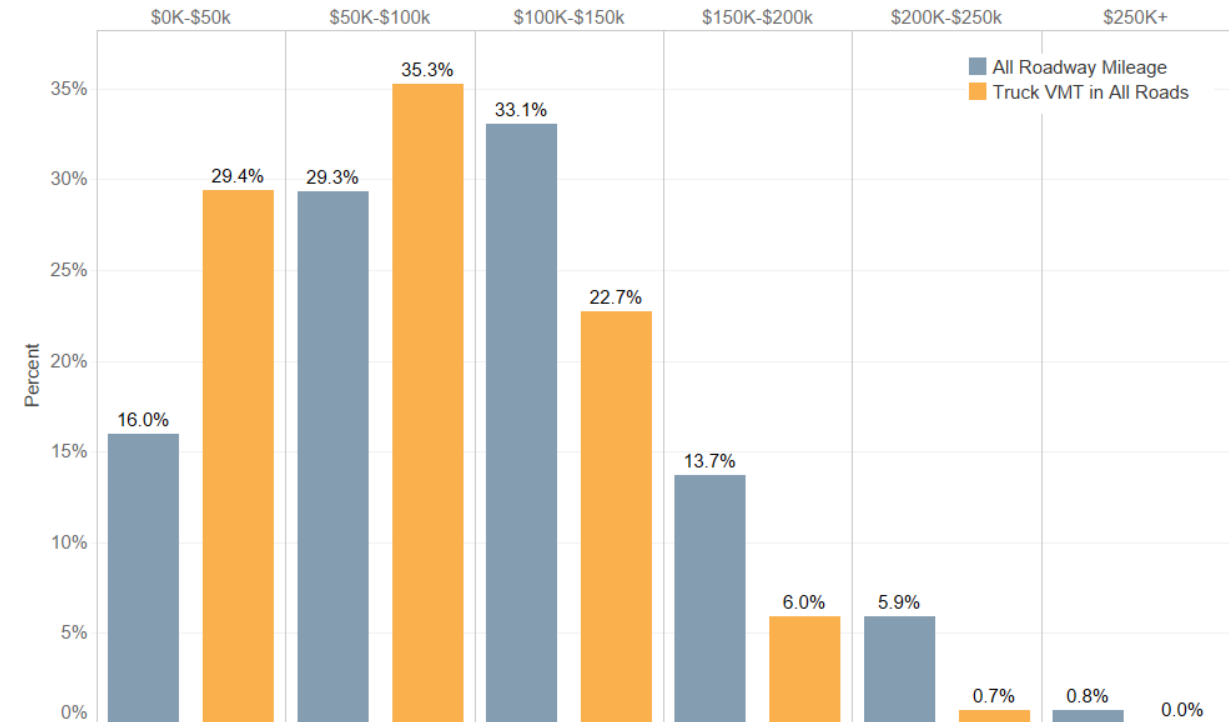
Existing Conditions

- Most truck traffic is on Interstates and expressways.
- The current Truck and Bus Through Network carries **85%** of single unit truck VMT and **78%** of combination truck VMT.
- **30%** of truck VMT is on roads in neighborhoods with median household income of \$50,000 or less.
 - Truck traffic in low-income neighborhoods largely occurs on expressways.
- Most truck signage is on local streets



Potential Impact of Positive Truck Signage

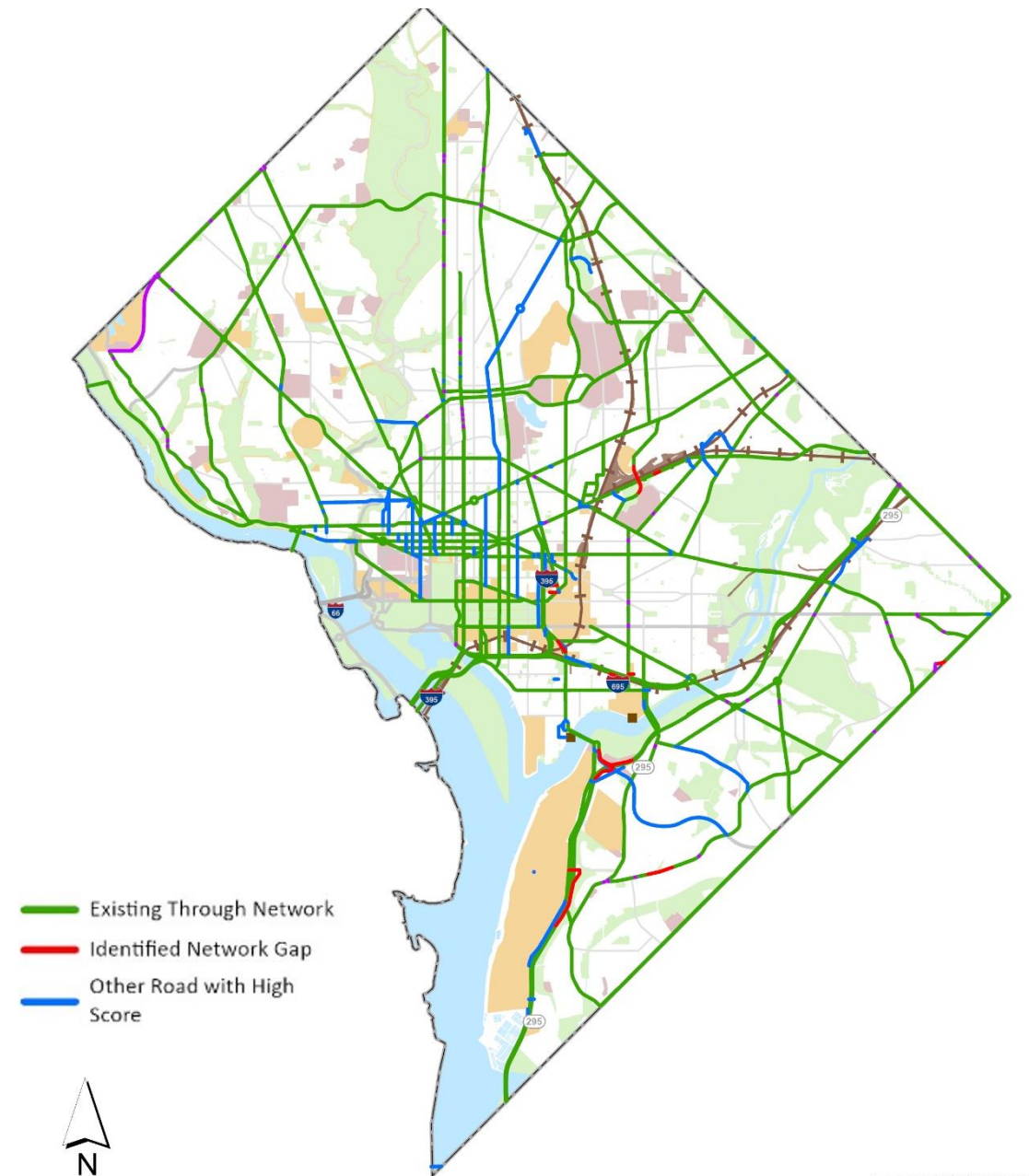
- Vehicle Miles Traveled **shifts to roads better equipped** to accommodate trucks, resulting in fewer impacts to residents and diminished crash risk
- Reduction in trucks **adjacent to residential land uses**
 - Expected reduction in localized air pollution
- Negligible change in trucks adjacent to institutional and recreational land uses
- A positive truck routing system could help channel truck VMT along Principal Arterials and Minor Arterials, which would benefit communities with median household incomes of \$50,000 to \$100,000.



Distribution of Roadway Mileage and Truck Vehicle Miles Traveled (VMT) by Adjacent Median Household Income

Analysis Takeaways

- The truck and bus through route network can serve as an **adequate base** for the Positive Truck Route System but requires **some changes**.
- The Positive Truck Route system should be **extensive** to reduce circuitous trips.
- Positive truck route signing with a mandatory enforcement framework would significantly **reduce truck VMT** in sensitive areas.
- A positively signed network with a mandatory enforcement framework can reduce the burden on residents to request neighborhood truck restrictions.



Benefit-Cost Analysis: Build and No-Build Scenario Descriptions

| Scenario | No-Build | Build-Advisory | Build-Mandatory |
|--------------------|------------------|---|--|
| Description | As-is operations | Implement positive truck signage and maintain truck restriction signage | <p>Implement positive truck signage and remove 75% of truck restriction signage</p> <p>Some signs will need to be maintained</p> |

Benefit-Cost Analysis

| | Benefit-Cost Ratio Impact |
|--|---|
| Change in Operations & Maintenance Costs | Negative (Advisory) Positive (Mandatory) |
| Driver Travel Time | Neutral |
| Safety Benefits | Negative (could be positive with different assumptions) |
| Emissions (system-wide) | Negative |
| Vehicle Operating costs | Negative |
| Pavement Damage | Negative |

Comparison of capital, operations, and maintenance costs with expected improvements in safety, emissions reductions, and travel time improvements.

Transition Plan

What would need to happen for positive truck route signage to be implemented?

Policy

Review of existing code and schedule of required actions within DDOT and City Code

Enforcement

Review of existing enforcement practices and plan to pilot new truck route framework and test compliance; evaluate potential policy and personnel training changes

Communications

Identify who needs to be informed about transition; detail list of target audiences, messaging, and communications channels for each audience; develop preliminary set of questions and answers to prepare for DDOT's media outreach

Truck Route Recommendations

The location and type of routes recommended for Positive Truck Route Signage

Installation Plan

Develop scheduling parameters and budget needs for installing signs along routes

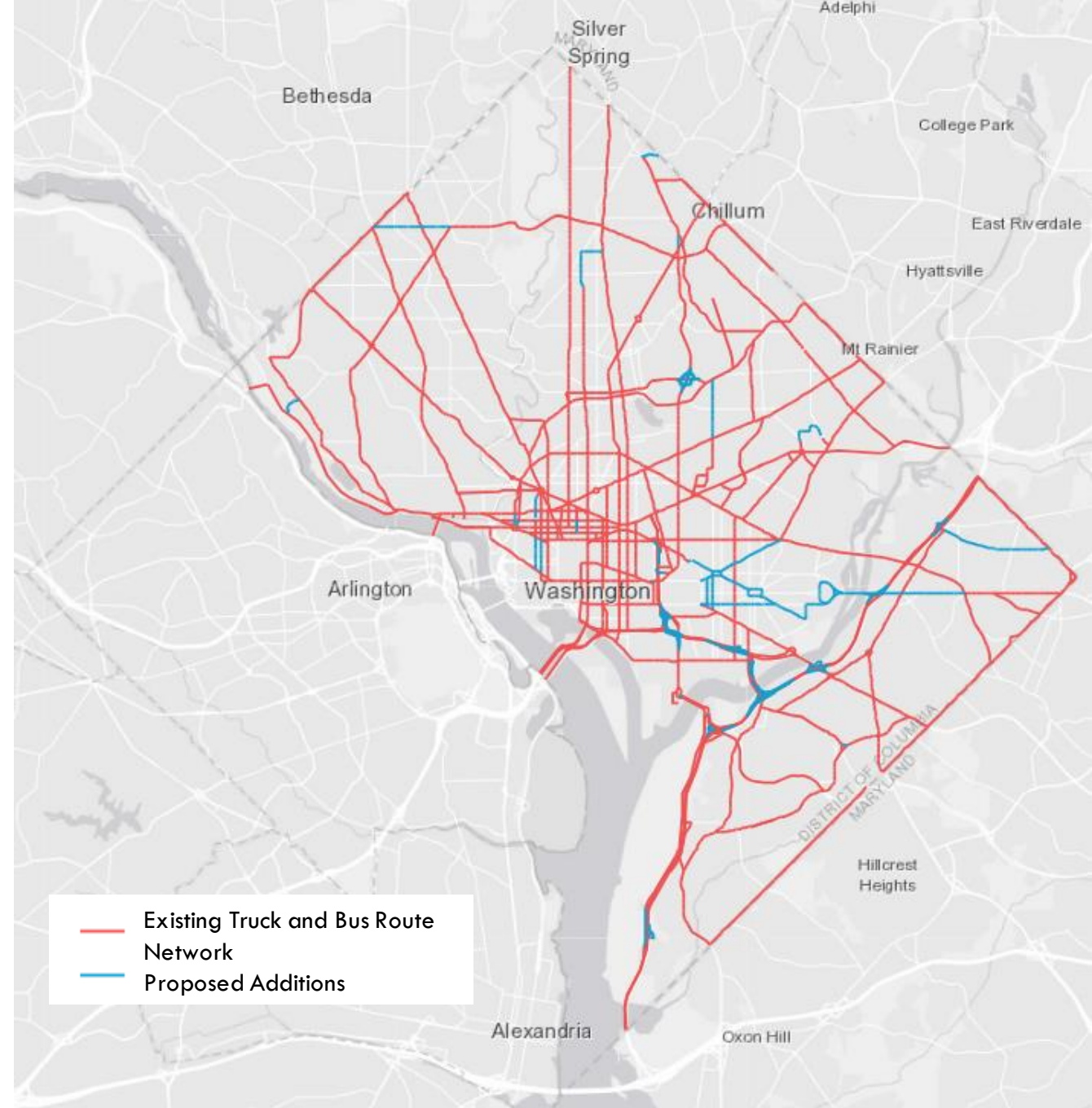
Maintenance Plan

Develop standard operating procedures for DDOT Maintenance to manage and replace signage

Route Recommendations

The Proposed Network is:

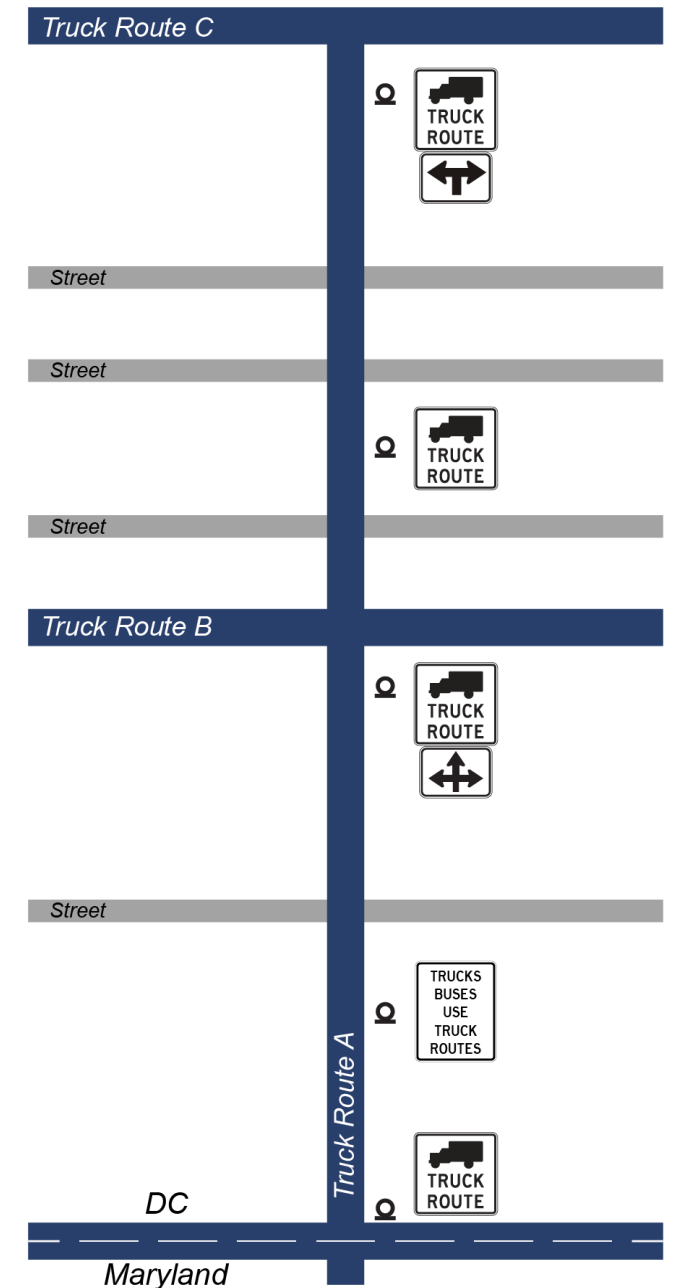
- Based on Results of Gap Analysis
- Builds on current Truck and Bus Route Network
- Closes gaps in existing system
- Provides practical roadway connectivity for freight operations



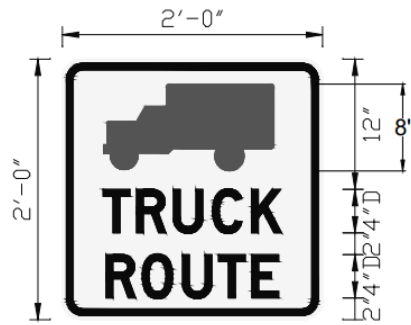
Sign Location Model

Positive Truck Route Signage will be installed:

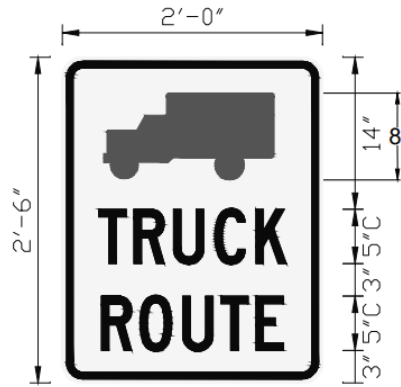
- At the intersection of two truck routes;
- At District border access points to truck routes;
- and
- Every 0.5 miles along truck routes.



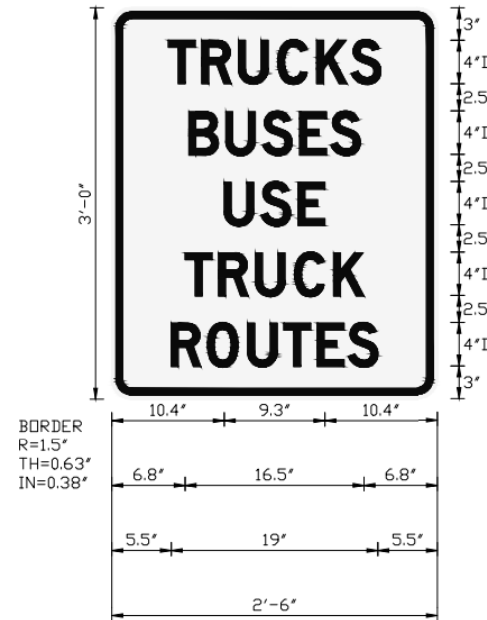
Sign Type Examples



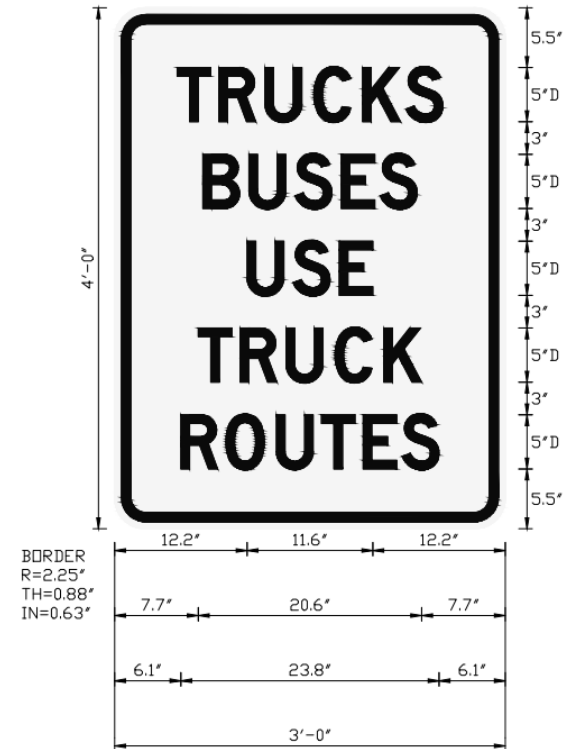
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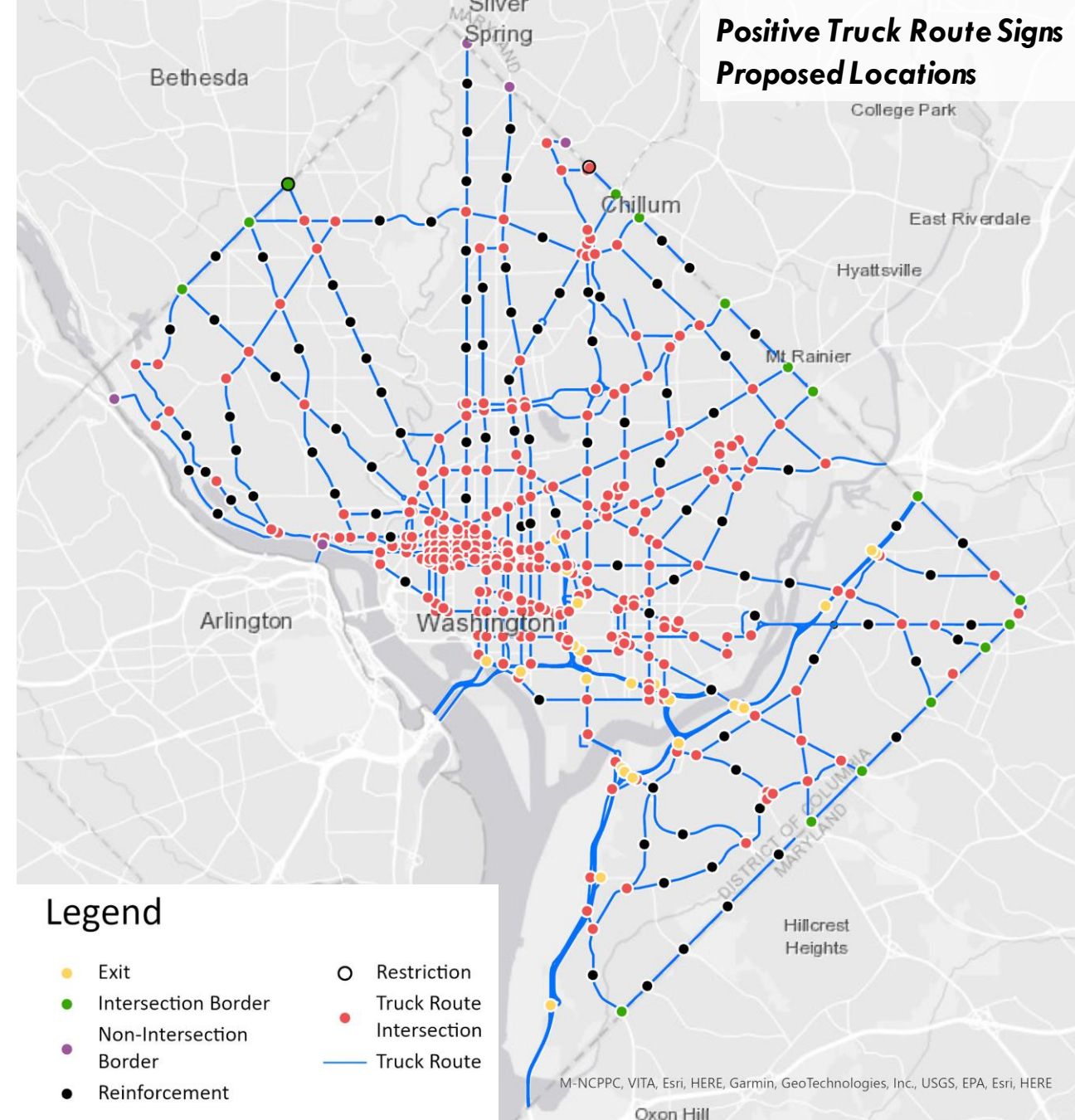
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Sign Plans

| Location Type | # of Locations | Total Signs |
|---|----------------|--------------|
| Intersecting Truck Routes | 296 | 1,944 |
| District Border Point, Non-Intersection | 5 | 10 |
| District Border Point, Intersection | 16 | 57 |
| Route Reinforcement | 100 | 196 |
| Limited Access Freeway Exits | 23 | 113 |
| Restriction | 2 | 2 |
| Total | 442 | 2,322 |



Next Steps

Incorporate Feedback from Public, Industry, and Government Stakeholders

Complete Positive Truck Route Signage Study:

- Finalize truck route recommendations
- Develop plans, specifications, and engineer's estimate for positive truck signage
- Develop positive truck route map, branding, and signage design
- Understand the components of a potential transition plan

Share Study Deliverables with Public, Industry, and Government Stakeholders

Contact Information

If you have any other feedback, please reach out to the project team via email.

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DDOT Freight Program

DDOT.Freight@dc.gov

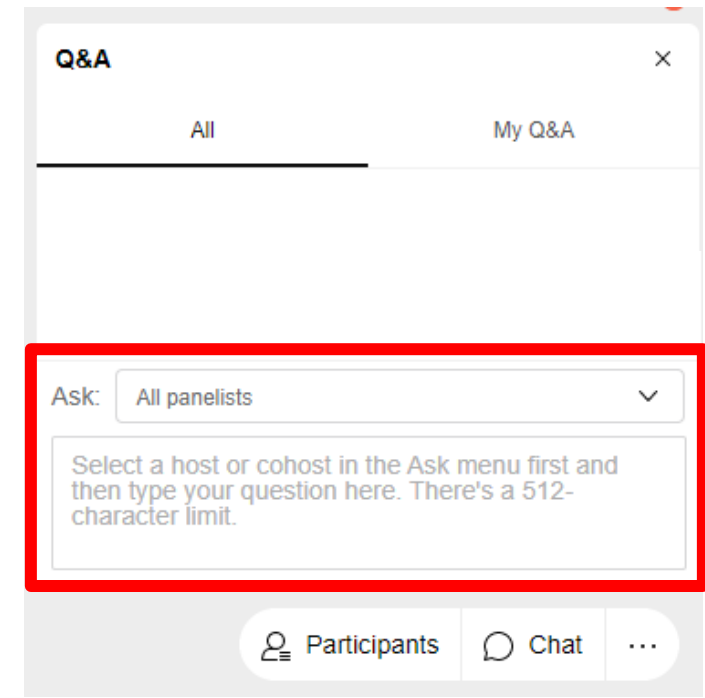
<https://ddot.dc.gov/service/commercial-vehicles>

Please Note: The presentation will be shared on the project team's website at: <https://ddot.dc.gov/service/commercial-vehicles>

Q&A Session

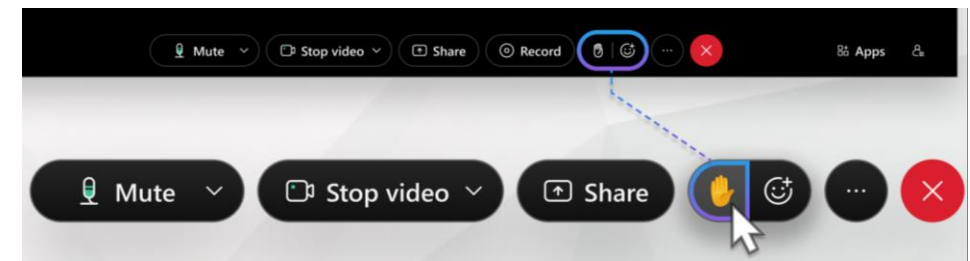
1. Ask question using the Q&A Panel:

- Click on the question mark icon at the bottom of your screen to access the Q&A panel.
- Select the option to ask "All panelists."
- Type your question in the box at the bottom of the panel.
- Hit "enter" on your keyboard to submit.



2. Ask a question verbally:

- Verbal questions will be limited to three (3) minutes.
- *Web and app users:* click on the Raise Hand icon.
- *Dial-in participants:* **Dial *3** to raise your hand.
- The raised hand icon will appear next to your name in the participant list and alert the panel to call on you.



*Note: If icons are not available at the bottom of your screen, click the three dot icon to access the raised hand and/or Q&A panel.
Participants who dial in will not have access to the Q&A panel.*

Title VI Public Involvement Questionnaire - DDOT Public Meetings (Positive Truck Signage)





District Department of Transportation

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