

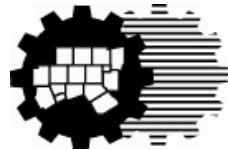
# **Clean Fleets North Texas 2019 Call for Projects**

**Surface Transportation Technical Committee**

**October 25, 2019**

**Nancy Luong**

**Air Quality Planner**



**North Central Texas  
Council of Governments**

# Available Funding

**Funding Source:** Environmental Protection Agency (EPA) National Clean Diesel Funding Assistance Program

<b>Funding Category</b>	<b>Amount</b>
Remaining Funds from 2017 Award*	\$847,224
New Funds from 2018 Award**	\$1,110,350
Call For Projects Funds Available	\$1,957,574

\*Funds from 2017 award distributed through Clean Fleets North Texas 2018 Call For Projects. Any funds released from project awards under the Clean Fleets North Texas 2018 Call For Projects will be added to this initiative.

\*\*EPA award included \$39,789 for staff administration.

# Project Eligibility

**Eligible Applicants:** Local Governments; Private Companies who Contract with Local Governments; and Must Adopt RTC Clean Fleet Policy or Similar

<b>Eligible Activities</b>	<b>Funding Threshold</b>
<u>Replace On-Road Diesel Trucks*</u> 16,001 GVWR and Up; Model Year 1996-2006; (Also Model Year 2007-2009 if Replacing with Electric)	45% Cost if New is Electric  35% Cost if New is Powered by Engine Certified to CARB Optional Low-NO <sub>x</sub> Standards (Both Natural Gas and Propane Engines Currently Available)
<u>Replace Non-Road Diesel Equipment*</u> Must Operate >500 Hours/Year; Eligible Model Years Vary	25% Cost for All Others

\*All Old Vehicles/Equipment Must be Scrapped; Other Model Years Eligible On Case-By-Case Basis.

# Approved Eligibility and Selection Criteria

## Eligibility Screens:

Fleet Policy Adoption

Purpose: Reserve Funding for Fleets that are Engaged Beyond Grant Opportunities; Consistent with RTC Adoption of Clean Fleet Policy

Minimum Allowable Subaward: \$100,000

Purpose: Reduce Risk and Administrative Burden by Limiting Number of Subawards

## Scoring Criteria:

Cost Per Ton NO<sub>x</sub> Emissions Reduced 75%

Purpose: Maximize Emissions Reductions

Subrecipient Oversight Criteria 25%

Purpose: Balance Project Benefits with Administrative Burden

# Summary of Applications Received

	Requested	Eligible	Recommended
Number of Applicants	2	2	2
Number of Activities	12	11	11
Funding Requested	\$1,306,108	\$1,254,608	\$1,254,608
Funds Remaining after Recommended Awards			\$702,967

Total Tons NO<sub>x</sub> Reduced Over 6 Years: ~~45.37~~ **25.96**

Cost per Ton NO<sub>x</sub> Reduced Across Entire Call for Projects: ~~\$27,650~~  
**\$48,329**

Refer to Electronic Item 3.2 for more details.

# Feedback Sought to Inform Next Steps

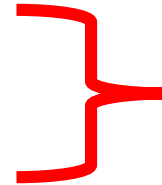
## Feedback from Prospective Applicants:

\$100,000 Grant Minimum Too Difficult to Reach

Annual Budget Caps and Application Window Not Aligned

Funding Percentages Too Low

Eligible Model Years Too Restrictive



**Governed By Funding Agency**

## Recommended Next Steps to Exhaust Funding:

Reopen Mid-November for ~90 Day Application Window

Reduce Minimum Allowable Subaward to \$50,000

Increased Communication to Prospective Applicants

Implementation Window

Non-Road Equipment Eligibility

# Call For Projects Schedule

<b>Milestone</b>	<b>Estimated Timeframe</b>
STTC Approval to Open CFP	May 24, 2019
RTC Approval to Open CFP	June 13, 2019
CFP Opens	June 14, 2019
Kickoff Webinar	July 9, 2019, at 2 PM
Application Deadline	Friday, September 6, 2019 at 5 pm
Staff Funding Recommendations Finalized	September 2019
STTC Action	September/October 2019
RTC Action	October 2019
Executive Board Authorization	November 2019
Reopen CFP on Rolling 90-Day Basis to Fully Award Funds	Anticipated November 15, 2019
Next Application Deadline	Anticipated Mid-February 2020
Project Implementation Deadline	March 31, 2021

# Action Requested

## **Recommend RTC Approval of Funding Recommendations:**

\$929,608 to the City of Dallas to Replace Six Vehicles & Four Equipment

\$325,000 to the City of Benbrook to Replace One Fire Truck

## **Recommend Second Round of Project Solicitation:**

~90 Days Application Window Beginning Mid-November

Reduced Minimum Award Threshold \$50,000

Maintain Scoring Structure:

Up to 75 Points Cost per Ton NO<sub>x</sub> Reduced

Up to 25 Points Subrecipient Oversight



# For More Information

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**Website**

[www.nctcog.org/aqfunding](http://www.nctcog.org/aqfunding)

# METROPOLITAN PLANNING ORGANIZATION (MPO) MILESTONE POLICY UPDATE

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Surface Transportation Technical Committee

October 25, 2019



North Central Texas  
Council of Governments  
Transportation Department

# Background

- The last Metropolitan Planning Organization (MPO) Milestone Policy was adopted by the Regional Transportation Council (RTC) in June 2015.
- Staff identified projects that were funded 10 or more years prior to the policy being approved and had not gone to construction.
- New estimated start dates for projects to go to construction by were established by each implementing agency.
- In April 2016, the RTC approved a policy to give agencies one additional fiscal year from their proposed construction start date to advance projects (i.e., A project with an estimated start date of June 2017 (FY 2017) would have until the end of FY 2018 to start construction).
- The policy stipulates that if a project does not go to construction by the established deadline, the project's funding will be removed.

# Project Monitoring Efforts

- Projects included on the 2016 Milestone List have been monitored to ensure timely implementation has occurred.
- Reminder letters were sent to all agencies with a project on the list in December 2016.
- Staff highlighted the projects and their deadlines during 2019-2022 Transportation Improvement Program (TIP) Development process.
- Staff provided an update on the status of all projects in the Fall of 2018.
- Staff provided an update on the status of the projects that did not meet their deadline of the end of FY 2018 in the Spring of 2019.
- Staff highlighted the projects and their deadlines during 2021-2024 TIP Development process.

# Outcomes to Date

- Of the 57 projects on the initial list:
  - 4 projects were canceled initially based on input from the implementing agencies
  - 2 projects were canceled as a result of being on the Federal Highway Administration (FHWA) 10-Year Preliminary Engineering Audit list and replaced with a new project\*
  - 1 project was canceled and the funding moved to another project
  - 46 projects have let for construction on time or have been completed
  - 1 project remains that does not have an established deadline and will continue to be monitored
  - **2 projects that had previously let prior to the deadline are being re-bid\***
  - **2 projects did not meet their deadline of the end of FY 2019**

\*The new project had a December 2018 letting deadline, which it met, but is being re-bid. Project being actively monitored.

# Status Update

## (Projects That Did Not Begin By End of FY 2018)

Agency	Facility/Limits	Scope	Let Date
Dallas County	Camp Wisdom Road from Carrier Parkway to FM 1382	Widen 2 to 4 lane divided	May 2019 (Actual)
TxDOT Dallas	Northwest Highway (Spur 244) at Jupiter	Traffic signal and pedestrian improvements	April 2019 (Actual)
TxDOT Dallas	Northwest Highway (Spur 244) at Plano Road	Traffic signal and pedestrian improvements	April 2019 (Actual)
TxDOT Dallas	SH 78 from IH 635 to Forest Lane	Traffic signals and intersection improvements	April 2019 (Actual)
City of Denton	McKinney Street (Old FM 426) from 1.4 miles west of SL 288 to 1.1 miles east of SL 288	Widen 2 lane roadway to 4 lane divided urban	October 2019 (Actual)

# Projects That Did Not Meet Deadline or Had to Be Re-Bid

TIP Code	Agency	Facility/Limits	Scope	Funding
11258.9	City of Dallas	8 Intersections at KCS RR in Dallas at E Dallas/KCS RR Crossings - Peavy Rd, Gus Thomasson Rd, Barnes Bridge Rd, Centerville Rd, Lakeland Dr, Highland Dr, Santa Anna Ave, & St. Francis Ave at KCS RR	Upgrade gates and install medians at all locations; Install signage at Peavy, Gus Thomasson, Lakeland, Highland, & St. Francis; Resurface at Lakeland and St. Francis	\$1,828,070
533	City of Dallas	Lemmon Avenue at Bluffview	Access improvements to Love Field Airport and construct a pedestrian safety crossing	\$800,000*
633	City of Dallas	Dolphin Rd from Spring Ave to North of Haskell Ave/Military Pkwy	Reconstruct existing roadway from 4 lane undivided to 4 lane divided with intersection improvements at Haskell	\$3,755,560
25043	City of Dallas	Park Lane at US 75; Walnut St at Greenville Ave, Abrams Rd, Richland College	Construct intersection improvements including traffic signal upgrades with radar detection, pedestrian improvements with crosswalks and ADA ramps	\$960,000

\*Local funds part of a defederalization package

# Action Requested

- Recommend RTC approval of the following proposals for each project:
  - TIP Code 533: Monitor for timely letting; Agency may need to repay federal funds from defederalization package if not implemented on time
  - TIP Code 11258.9: Remove funding and return to the regional pool
  - TIP Code 633: Project must re-bid by March 2020 or funding will be returned to regional pool
  - TIP Code 25043: Project must start by March 2020 or funding will be returned to regional pool



# Next Steps

- Continue monitoring projects with deadlines after September 30, 2019
- Bring an item to the Surface Transportation Technical Committee (STTC) and the RTC in December 2019 detailing the next group of Milestone Policy Projects, including:
  - Previously let projects with implementation issues (e.g., projects that are being re-bid)
  - Projects selected in 2006-2010 that have not advanced to construction

# Questions?

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# HYPERLOOP CERTIFICATION FACILITY

Regional Transportation Council

October 10, 2019

Michael Morris, P.E.



North Central Texas  
Council of Governments



# Hyperloop Certification Facility Submittal

DRAFT

Assume Specification Table

Assume Stand Alone Hyperloop Cross Section (example 1 or 2)

Requested Information by Entity

- Approximate alignment on map
- Assume cross section (1 or 2)
- Right of way status
- Will there be any additional funding commitment?

Deadline November 22, 2019, at 5:00 pm to Angela Alcedo via  
Electronic or Regular Mail

# VHO Phases & Timing

(Dates Will Be Pushed Back)

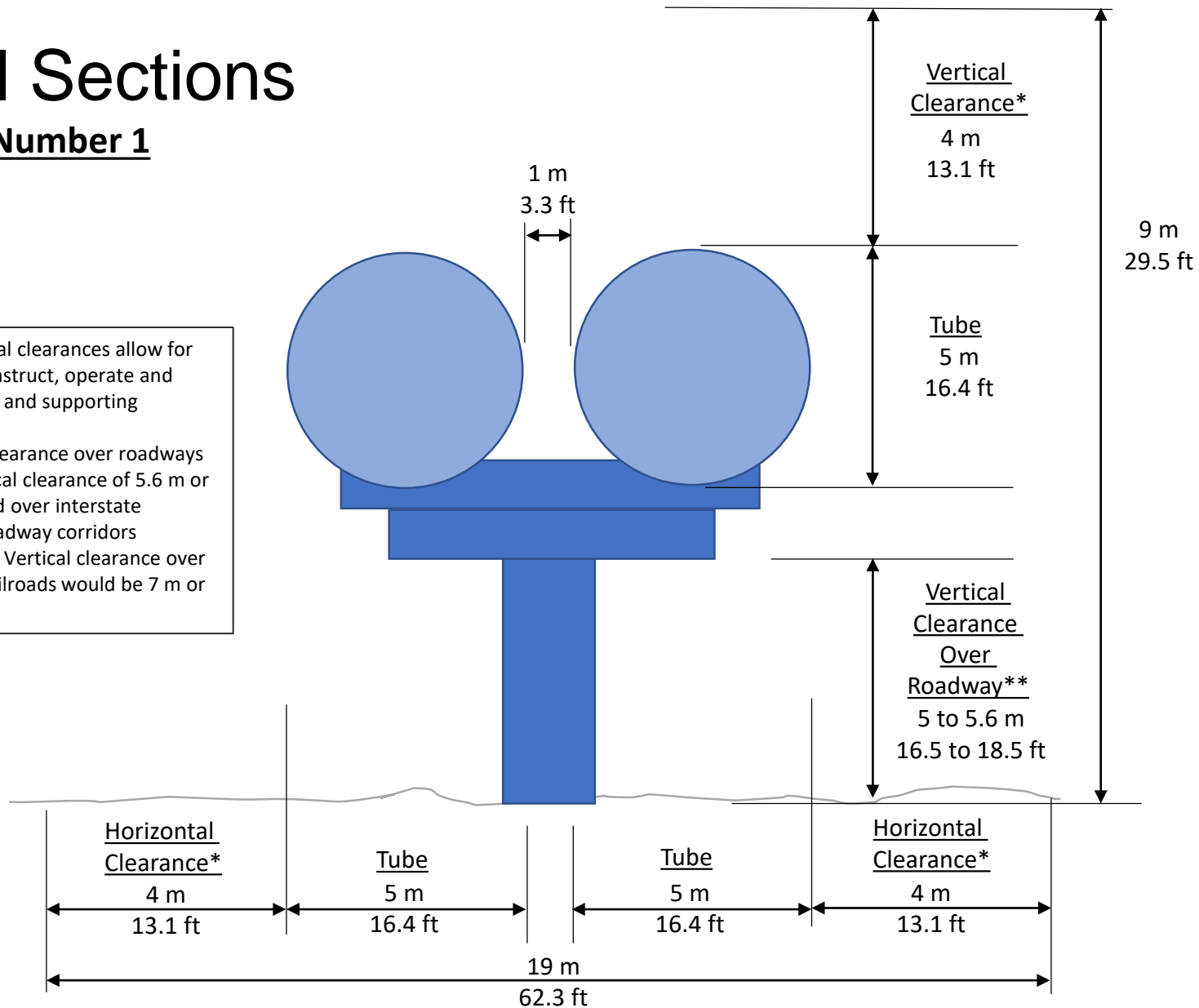
VHO Phase	Timing	Length of Track Built in Phase	Total Length of Track	Number of Tubes	Number of Vacuum Buildings
A	18 months (Estimate Feb 2020 to Aug 2021)	1.5 km (straight) (0.9 mi)	1.5 km (straight) (0.9 mi)	1	1
B	9 months (Estimate Aug 2021 to May 2022)	3 to 5 km (1.9 to 3.1 mi)	4.5 to 6.5 km (2.8 to 4.0 mi)	?	?
C	9 Months (Estimate May 2022 to Jan 2023)	0	4.5 to 6.5 km (2.8 to 4.0 mi)	?	?
D	9 Months (Estimate Jan 2023 to Nov 2023)	6 to 8 km (3.7 to 5.0 mi)	10.5 to 14.5 km (6.5 to 9.0 mi)	?	2

# Typical Sections

## Number 1

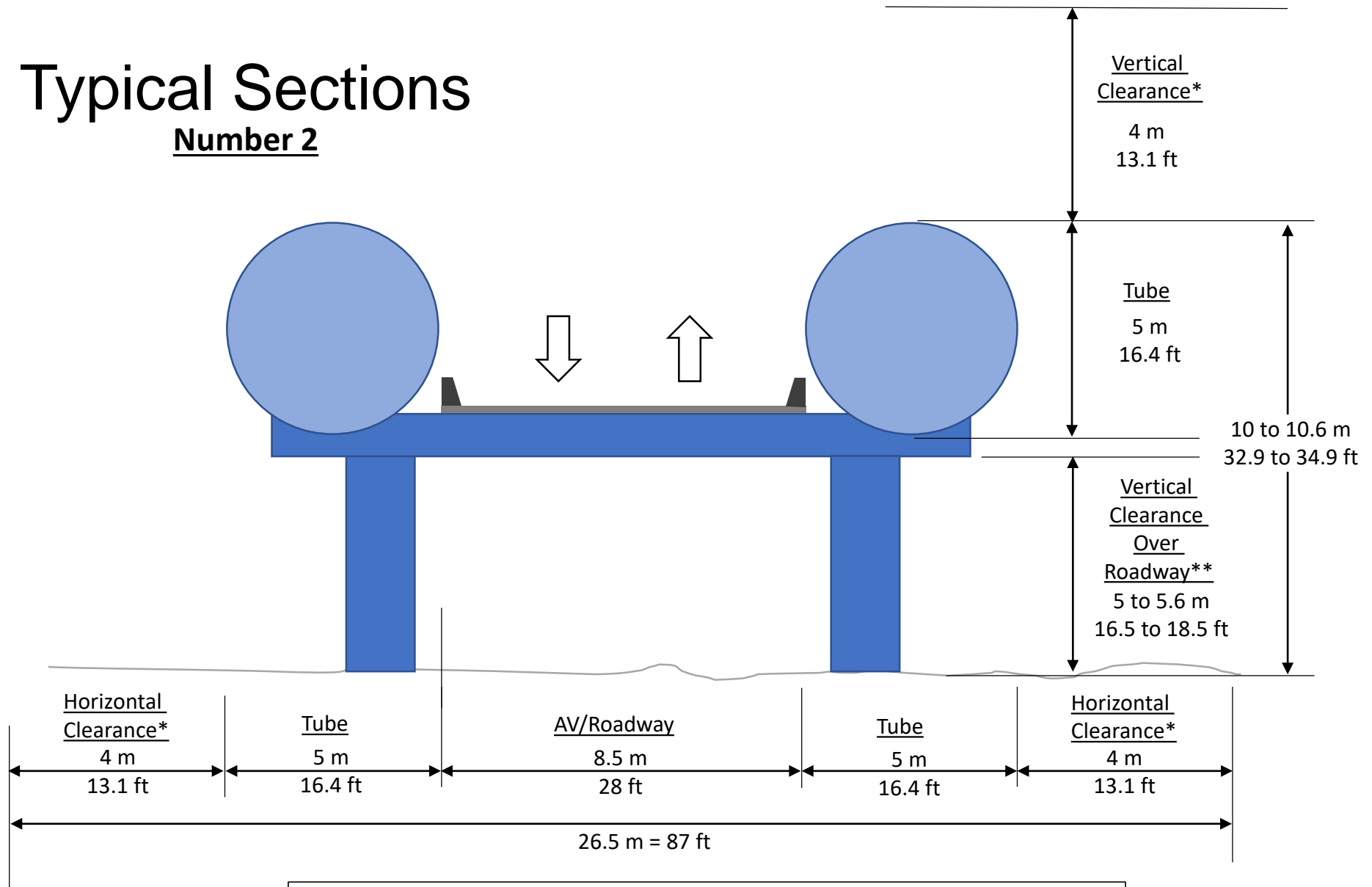
\* Horizontal and vertical clearances allow for the area needed to construct, operate and maintain the guideway and supporting facilities.

\*\* Minimum vertical clearance over roadways is 5 m or 16.5 ft. Vertical clearance of 5.6 m or 18 ft would be required over interstate highways and other roadway corridors designated for freight. Vertical clearance over passenger or freight railroads would be 7 m or 23 ft.



# Typical Sections

## Number 2



\* Horizontal and vertical clearances allow for the area needed to construct, operate and maintain the guideway and supporting facilities.  
 \*\* Minimum vertical clearance over roadways is 5 m or 16.5 ft. Vertical clearance of 5.6 m or 18 ft would be required over interstate highways and other roadway corridors designated for freight. Vertical clearance over passenger or freight railroads would be 7 m or 23 ft.

# Buy America Act Proposed Safety Equipment Exception

Rebekah Hernandez

North Central Texas Council of Governments

Surface Transportation Technical Committee

October 25, 2019



North Central Texas  
Council of Governments



# Overview

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Buy America Background

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Safety Initiatives

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Unintended Challenges

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Proposed Legislative Solution

## Buy America Background

- Restrictions on federally funded transportation projects
- Requires the use of iron, steel, and manufactured products produced in the U.S.
- FHWA Buy America provisions are found under 23 U.S. Code Section 313

# Safety Initiatives

- Incident management equipment
- Photogrammetry training courses for first responders
  - Image-based 3D system allows investigators to quickly clear crashes
- Helps to improve mobility and safety

# Unintended Challenges

- Buy America requirements are restricting the purchase of vital safety equipment
- Cameras and photogrammetry equipment are made up of complex components from all over world

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## RTC Letter to the North Texas Congressional Delegation

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Propose adding an exception in Title 23  
USC Section 313 for traffic incident  
management safety equipment

**Proposed  
Legislative  
Solution**

# Contact Information

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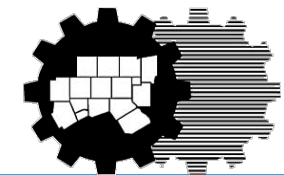
# HIGH OCCUPANCY VEHICLE TRANSPORTATION CONTROL MEASURES: APPLICATION OF MANAGED LANES AND SUBSTITUTION OF TRAFFIC SIGNAL PROGRESSION

SURFACE TRANSPORTATION TECHNICAL COMMITTEE

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OCTOBER 25, 2019

JENNY NARVAEZ, PROGRAM MANAGER



North Central Texas  
Council of Governments

**DRAFT**

# EVOLUTION TO MANAGED LANES

**Interim HOV lanes were added in the 1990's**

**Temporary and static mobility option to alleviate congestion**

**Interim HOV lane emission benefits were committed to in the regions State Implementation Plan**

**Interim HOV lanes have evolved to Managed Lanes in response to changing conditions by maximizing efficiency of a roadway through active management of the lane(s)**

**Benefits of Managed Lanes include:**

**HOV 2+ discounts during peak commute periods**

**Includes options for High-intensity bus**

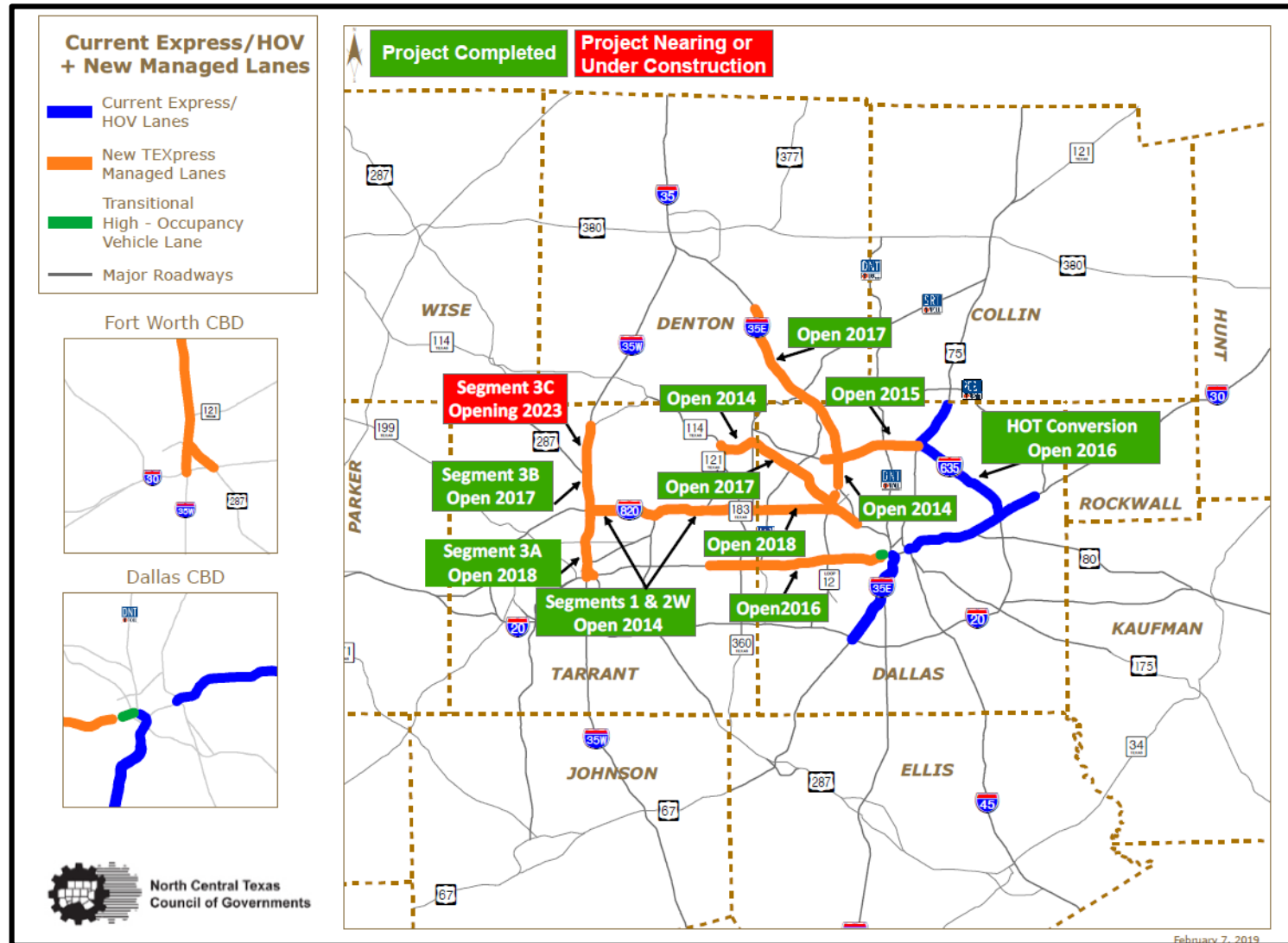
**Variable pricing**

**Guaranteed speeds**



# EVOLUTION TO MANAGED LANES

## Near Term Managed Lane System Openings



# HOV TCM SUBSTITUTION

## OVERVIEW

Three Interim HOV lanes remain in the following State Implementation Plan (SIP) as TCMs:

*Dallas-Fort Worth 1-Hour Ozone Attainment Demonstration State Implementation Plan Revision - April 2000*

*Dallas-Fort Worth 1997 8-Hour Ozone Attainment Demonstration and Reasonable Further Progress State Implementation Plan Revision - May 2007*

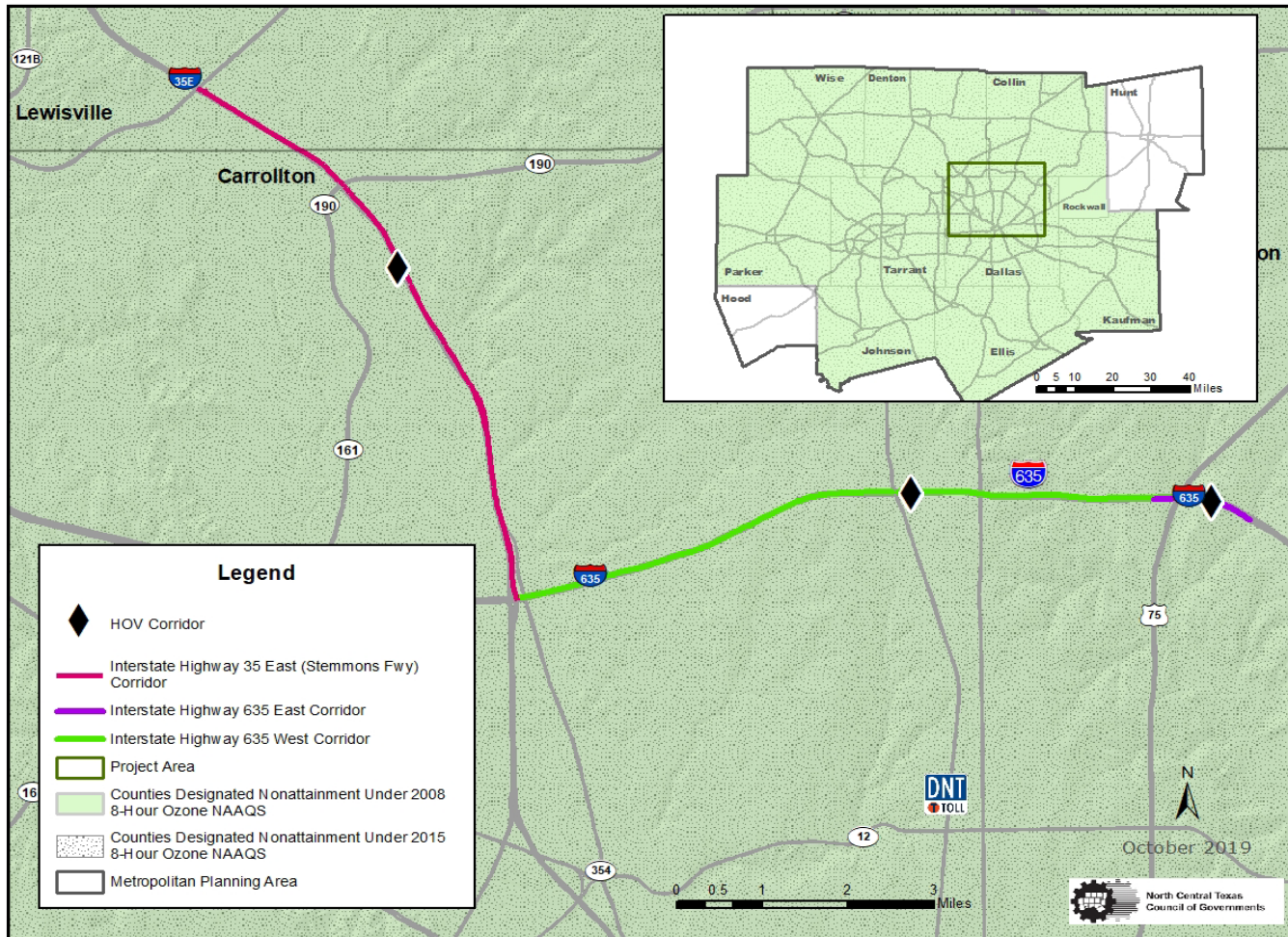
These Interim HOV lanes are being removed as a TCM in the SIP documentations due to being changed to Managed Lanes.

Removing them requires substituting alternate TCM projects that achieve equivalent emissions benefits.

# HOV TCM SUBSTITUTION

## HOV LANES TO BE SUBSTITUTED

### Location of HOV Lanes to be Substituted



**IH 35E corridor (Stemmons Fwy)  
between IH 635 and SH 121**

**IH 635 east corridor (LBJ Fwy)  
between Coit Rd and Greenville Ave**

**IH 635 west corridor (LBJ Fwy)  
between Luna Rd/IH 35E and US 75**

# HOV TCM SUBSTITUTION

## POTENTIAL TRAFFIC SIGNALIZATION PROJECTS TO BE USED AS SUBSTITUTES

### 7 Corridors:

**Parker Rd (Midway Rd to Preston Rd)**

**9 signals**

**Park Blvd (Midway Rd to Coit Rd)**

**16 signals**

**Custer Rd (Legacy Dr to SH 121 NB)**

**8 signals**

**Coit Rd (Legacy Dr to SH 121 NB)**

**8 signals**

**Spring Creek Pkwy/Shiloh Rd (Custer Rd to Plano Pkwy)**

**14 signals**

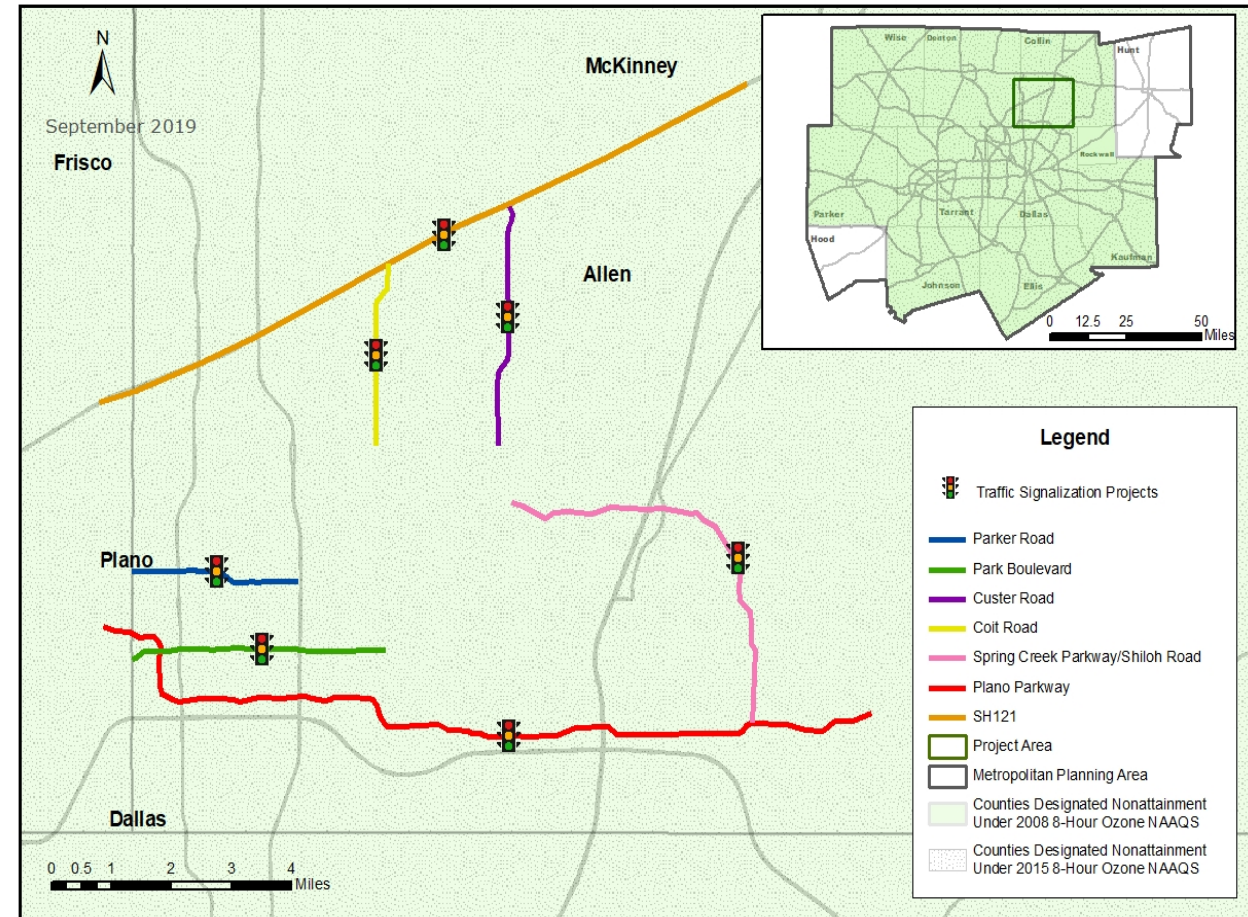
**Plano Parkway (Dublin Rd to Marsh Ln)**

**30 signals**

**SH 121 (Spring Creek Pkwy to Hardin Rd)**

**34 signals**

### Location of Plano Traffic Signals



# HOV TCM SUBSTITUTION

## Transportation Control Measure Substitution

Transportation Control Measures (TCM) specified in an implementation plan may be replaced with Control Measures if the substitute measures achieve equivalent or greater emissions reductions than the TCMs to be replaced.

Pollutants	Emissions Impact of Three HOV Projects
NO <sub>x</sub>	-0.108 tpd
VOC	-0.061 tpd

# HOV TCM SUBSTITUTION

## TIMELINE

AGENCY	ACTION	DATE
NCTCOG	Calculate emissions reductions attributable to the selected project to be used for substitution	Complete
ESL Substitution Working Group <sup>1</sup>	Present projects to be used as the substitute TCMs to Working Group	Complete
STTC	HOV TCM Substitution – Information	October 25, 2019
NCTCOG	Request concurrence from Working Group on Pre-Analysis Plan via email, including: <ul style="list-style-type: none"> <li>&gt; Selected projects to be used for substitution;</li> <li>&gt; Emission off-sets and methodology; and</li> <li>&gt; Documentation of implemented projects</li> </ul>	October 25, 2019
RTC	HOV TCM Substitution – Information	November 14, 2019
NCTCOG	NCTCOG Public Meetings <ul style="list-style-type: none"> <li>&gt; 30-day public notice and comment period</li> </ul>	November 2019
STTC	HOV TCM Substitution – Action	December 2019
NCTCOG	Comment period closes <ul style="list-style-type: none"> <li>&gt; Review and provide comments and responses to Working Group</li> </ul>	December 2019
SWG	Conference call for Working Group to concur on TCM Substitution	December 2019
RTC	HOV TCM Substitution – Action	January 2020
NCTCOG	Distribute RTC adopted resolution to the TCM Working Group	January 2020
TCEQ and EPA	Send concurrence letters to the TCM Working Group	February 2020
TCEQ	Documentation of approved substitution provided to EPA regional office (must occur within 90 days)	May 2020
EPA	Region 6 office to publish action notice in the <i>Federal Register</i> without a comment period	May 2020

# HOV TCM SUBSTITUTION

## CONTACTS

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# Truck Stop Electrification (TSE) Study Results

Surface Transportation Technical Committee

October 25, 2019

Huong Duong, Air Quality Planner



UNIVERSITY OF  
**TEXAS**  
ARLINGTON

Department of  
Civil Engineering



North Central Texas  
Council of Governments



# Purpose of Truck Stop Electrification Study

- ▶ Assess overnight idling by diesel-fueled long-haul trucks not using the electrification service
- ▶ Assess the extent of overnight idling issues
- ▶ Determine why truck stop electrification services are not working effectively
- ▶ Identify recommendations for drivers to use TSE Services



# Types of Electrification Systems

## Single-System

- ▶ A single-system electrification is an off-board equipment at truck stops and terminals contained in a structure above the truck (called a gantry) or on a pedestal beside the truck.
- ▶ This system provides heating, ventilation, air conditioning (HVAC), and internet access.



# Types of Electrification Systems



## Dual-System

- ▶ A dual-system electrification needs both onboard and off-board equipment so that trucks can plug into electrical outlets at truck stops and terminals.

# Methodology



**STUDY DESIGN**



**COLLECT DATA**



**ANALYZE  
RESULTS**

# Study Design: Information Source

1. Developed data collection sheet to collect data from observation sites.
  - ✓ Three public truck stops, and
  - ✓ One private truck terminal
2. Developed survey questionnaires to ask
  - ✓ TSE system providers (Single System vs Dual System)
  - ✓ Onsite TSE system representatives
  - ✓ Truck stop owners/managers
  - ✓ Truck drivers idling their trucks
  - ✓ Truck drivers using TSE systems

Station 1



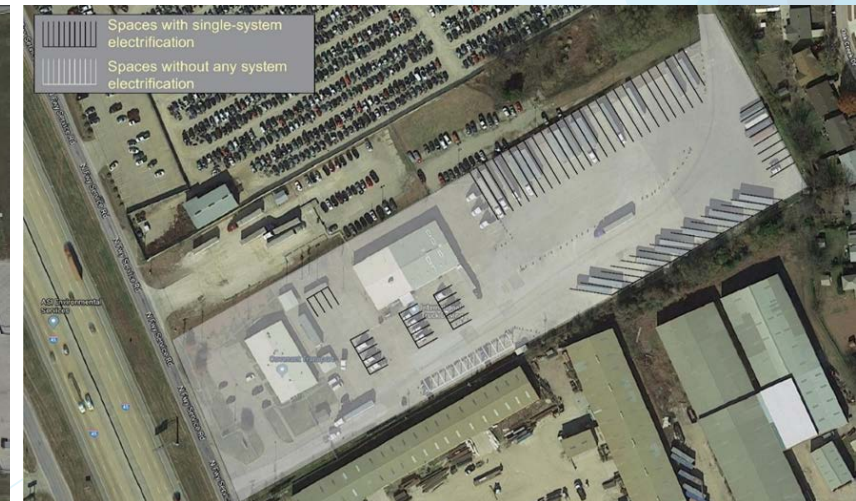
Station 2



Station 3



Station 4





# Study Design: Information Collected

- ▶ Observational data collected at the site include:
  - ▶ Available amenities
  - ▶ Type of TSE system(s)
  - ▶ Total available parking spaces
  - ▶ Occupied Spaces
  - ▶ Connected Trucks
  - ▶ Certified Clean Idle Trucks
  - ▶ Diesel Prices
  - ▶ Temperature
  - ▶ Humidity Rate

# Data Collection Results



TSE/EPS systems were not working effectively



Engine idling rates and TSE/EPS usage rates are different among the four stations.



Stations controlled by a manager or a representative had a higher usage rate compared to stations without any control.



Single drivers often idle their trucks more than team drivers.

# TSE Utilization Rates

$$\text{TSE/EPS Utilization Rate} = \frac{\text{Number of Connected Trucks}}{\text{Number of Occupied Spaces (with TSE/EPS Systems)}}$$

$$\text{Adjusted TSE/EPS Utilization Rate} = \frac{\text{Number of Connected Trucks}}{\text{Number of Occupied Spaces (with Functional TSE/EPS Systems)}}$$

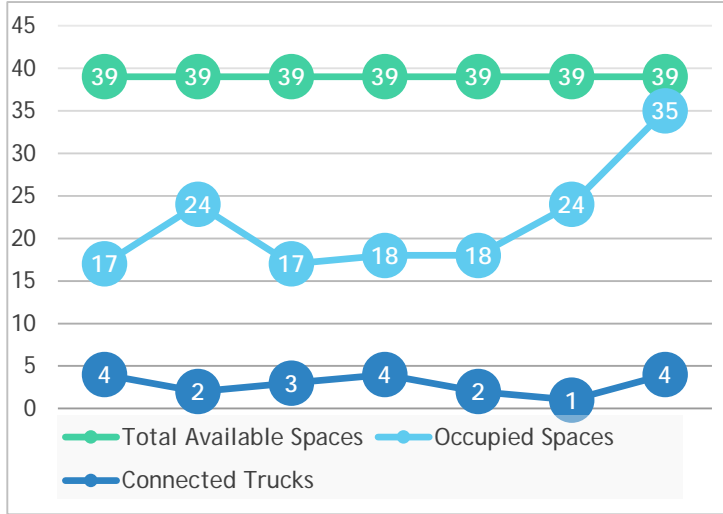
$$\text{Space Utilization Rate} = \frac{\text{Number of Connected Trucks}}{\text{All Available Spaces (with TSE/EPS Systems)}}$$

Usage Rates (Weekly Average Rate)	Station 1- Single System	Station 2- Single System	Station 2- Dual System	Station 3- Single System	Station 4- Single System
TSE Utilization Rate	14%	37%	0%	0%	100%
Adjusted TSE Utilization Rate	19%	44%	0%	0%	100%
Space Utilization Rate	7%	34%	0%	0%	37%

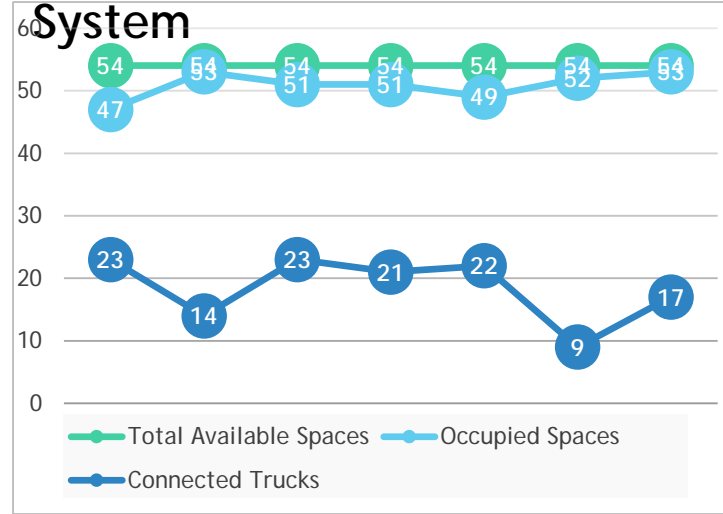


# Data Collection

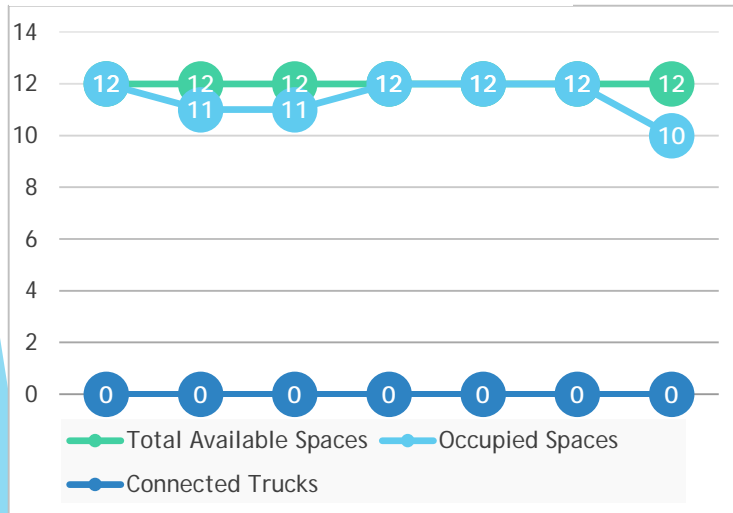
## Station 1- Single System



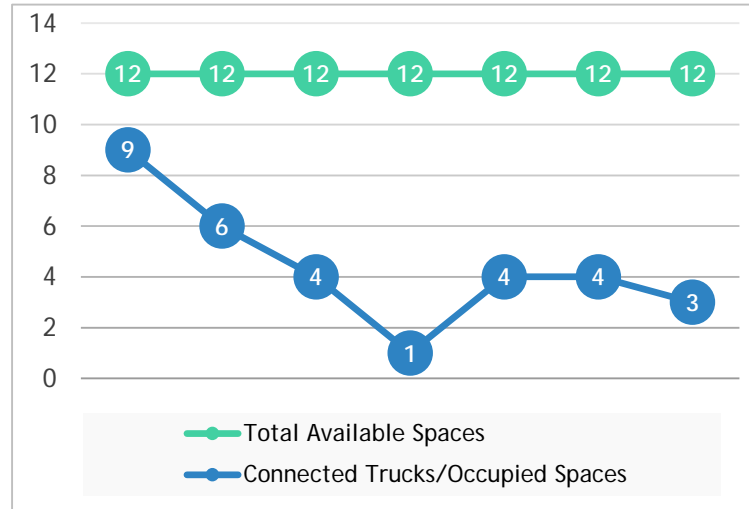
## Station 2- Single System



## Station 2- Dual System



## Station 4- Single System



Number of available spaces with single and dual-system electrification systems, occupied spaces, and connected trucks at Station 1-4 during a week.

# Survey Responses

- ▶ Common reasons for idling engines during rest periods instead of using TSE systems:
  - ▶ Low-quality service
  - ▶ Cigarette and diesel fume smell
  - ▶ Broken screen
- ▶ Not easy to use service
- ▶ Complicated and difficult procedure to connect heavy modules
- ▶ Staff unavailability at truck stops
- ▶ Non-availability of easy to use instructions

# Recommendations



Offer truck drivers discounts and coupons



Design large and informative banners



Design quiet zones at truck stops



Conduct educational demonstration at truck stops/terminals



Integrate educational programs with truck company driver training courses



Communicate with trucking companies and terminals to motivate deployment of electrified parking spaces at freight terminals

## Study Impacts on NCTCOG Decisions

Shift focus towards freight terminal electrification due to more control over EPS usage

Pursuing grant funding for electrified parking spaces at freight terminal locations

# Staff Contacts

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## UTA Staff

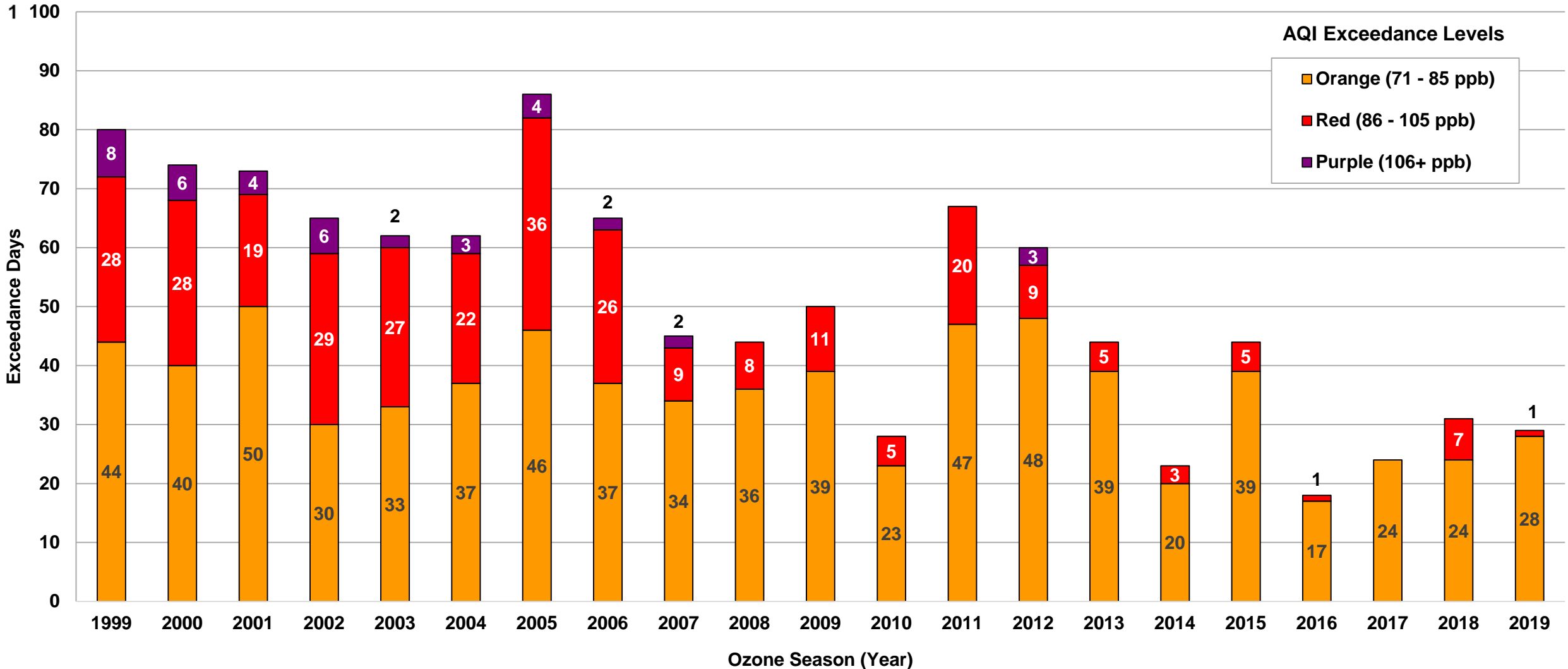
Mohsen Shahandashti, Ph.D.,  
P.E.

Principle Investigator

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# 8-HOUR OZONE NAAQS HISTORICAL TRENDS

Based on  $\leq 70$  ppb (As of October 25, 2019)

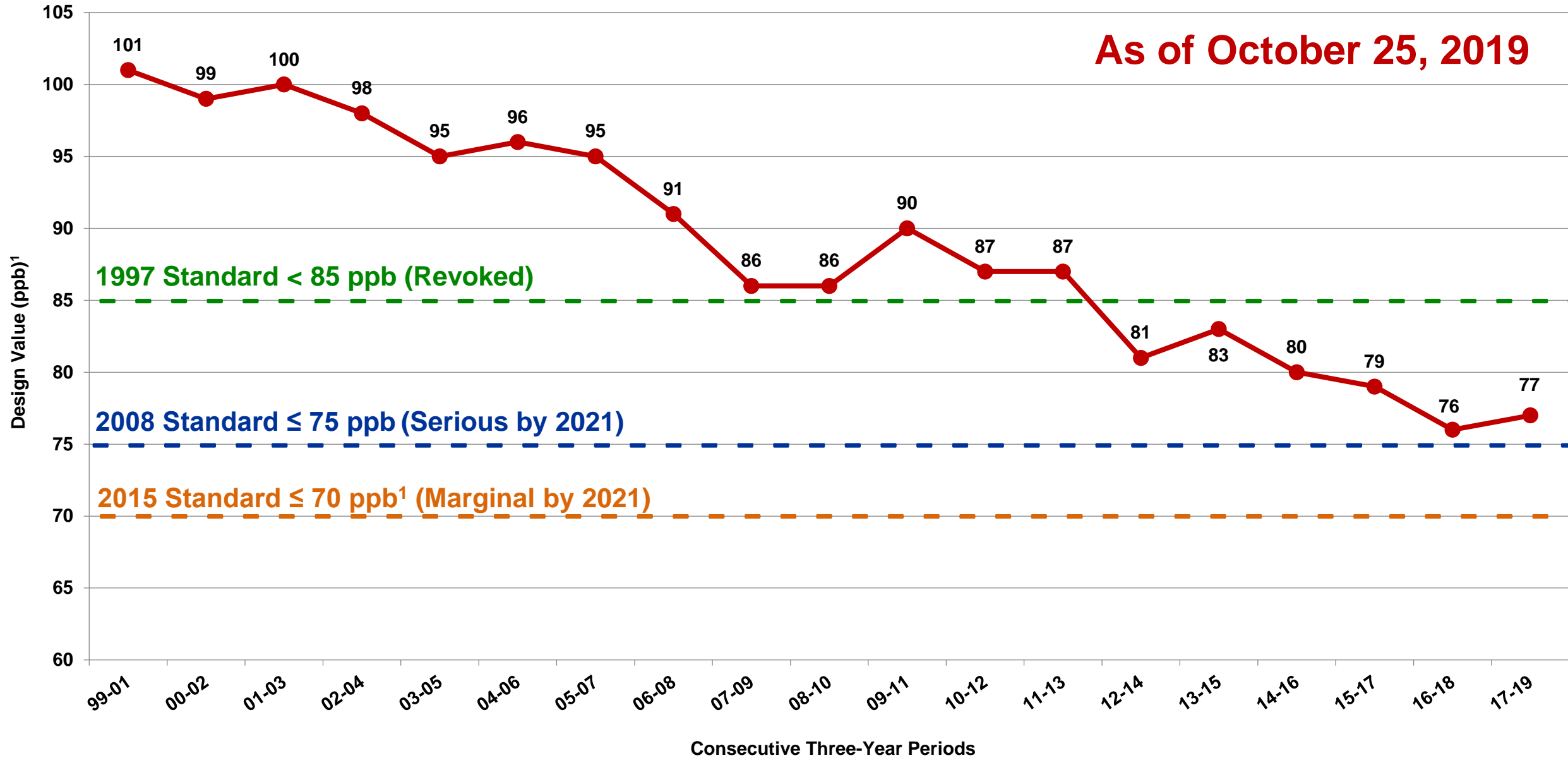


Exceedance Level indicates daily maximum eight-hour average ozone concentration.  
Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

Source: TCEQ, [http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr\\_monthly.pl](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl)  
ppb = parts per billion

# 8-HOUR OZONE NAAQS HISTORICAL TRENDS

As of October 25, 2019



<sup>1</sup>Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

# For More Information

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