

APPENDIX P: Air Quality

Appendix P-1: Congestion Management Process Disclosure Summary



Congestion Management Process Disclosure Statement

US 380 McKinney
CSJs 0135-02-065, 0135-03-053, 0135-15-002

Texas Department of Transportation, Dallas District

October 2022

1.0 Introduction and Project Description

The congestion management process is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The project was developed from the North Central Texas Council of Government's (NCTCOG) Congestion Management Process (CMP), which meets all requirements of 23 CFR 450.320 and 500.109, as applicable. The CMP was adopted by the NCTCOG in August 2021.

The project would construct an 8-lane freeway primarily on new location from existing US 380 and Coit Road in the Town of Prosper around the north portion of the McKinney to connect to existing US 380 near FM 1827 in the City of McKinney. The freeway would provide 2-lane, one-way frontage roads on both sides of the mainlanes and shared-use paths (SUPs) along the outside of the frontage roads. The section of existing US 380 between Coit Road eastward to near the proposed extension of Ridge Road to the north would be incorporated into the new freeway facility.

The Preferred Alternative – Blue Alternative – is composed of the following three segments as described below:

- **Segment A – Coit Road to CR 161/Future Ridge Road**
- **Segment E – CR 161/Future Ridge Road to East of SH 5**
- **Segment C – East of SH 5 to Existing US 380/FM 1827**

Segment A – Coit Road to CR 161/Future Ridge Road - Segment A begins at an at-grade intersection at existing US 380 and Coit Road with three travel lanes in the eastbound direction and three travel lanes with two left-turn lanes in the westbound direction separated by a wide median (intended as an interim design solution with the travel lanes converting to frontage roads and the median reserved to accommodate future freeway mainlanes). Just east of Lakewood Drive, the at-grade freeway section along the existing US 380 alignment would begin with four travel lanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. The freeway would bridge over future Independence Parkway and continue east where it would be elevated over N. Custer Road where a directional diamond (DDI) interchange would be constructed to connect local traffic with the frontage road system. As the alignment continues east, it would be elevated over N. Stonebridge Drive. After crossing N. Stonebridge Drive, the alignment would be lowered (depressed) passing under Fleetwood Street before climbing back above grade as it curves north on new location past the future connection to W. University Drive (existing US 380). The alignment would stay elevated on bridge over Wilson Creek then on earthen embankment with bridged/grade-separated crossings of CR 124/future Wilmeth Drive, future Bloomdale Road, and CR 161/future Ridge Road before tying into Segment E. Frontage roads on both sides of the mainlanes would be carried throughout Segment A from Lakewood Drive to CR 161/Future Ridge Road.

Segment E – CR 161/Future Ridge Road to East of SH 5 - Segment E, common to all of the Build Alternatives, primarily follows the alignment of existing Bloomdale Road along the northern edge of McKinney. The anticipated ROW width along Segment E varies from approximately 350 feet and 1,580 feet to accommodate the new multi-level interchange with US 75. Segment E begins at CR 161/future Ridge Road continuing the four elevated-

mainlanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. Segment E would be elevated on earthen fill embankment with retaining walls and grade-separations provided at FM 1461/Lake Forest Drive, future CR 1006, Bloomdale Road East, CR 164/future Hardin Boulevard, and Community Avenue. At Community Avenue the bridge structure would extend northeast on new location to cross the Honey Creek floodplain, accommodate the new multi-level interchange at US 75, span Spur 195, and cross the East Fork Trinity River floodplain and connect to SH 5. Frontage roads on both sides of the mainlanes would be carried throughout Segment E from CR 161/future Ridge Road through the interchange with SH 5.

Segment C – East of SH 5 to Existing US 380/FM 1827 - Segment C joins the east end of Segment E to cross the East Fork Trinity River floodplain and travels roughly south, parallel to, and east of the floodplain until it turns to the east-southeast to connect to existing US 380 near FM 1827. Segment C would be elevated on bridge over the East Fork Trinity River floodplain and the DART/Dallas, Garland, and Northeastern (DGNO) rail line continuing the four elevated-mainlanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. After crossing the floodplain, the new location alignment would remain elevated on earthen embankment with grade-separated crossings of CR 338, tributaries to the East Fork Trinity River, and FM 1827. Existing local roadways including CR 338, CR 331/future Wilmeth Road, CR 335, CR 332, and FM 2933 would be accessible from the frontage roads. Frontage roads on both sides of the mainlanes would be carried throughout Segment C from east of SH 5 through the interchange at FM 1827 tying into existing US 380 west of Private Road 5446.

In addition, a project to improve US 380 east of McKinney from Airport Drive to CR 458 (CSJs 0135-03-046 and 0135-04-033), at the eastern terminus of the proposed US 380 McKinney project, would widen the existing 4-lane 7.2 mile-long section of US 380 to a 6-lane divided urban facility with a raised median and new curb and gutter drainage within the existing highway ROW. This US 380 project was environmentally cleared on January 15, 2020, and is anticipated to let for construction in February 2024.

2.0 Congestion Management Process Disclosure Statement

The region commits to operational improvements and travel demand reduction strategies at two levels of implementation: program level and project level. Program level commitments are inventoried in the regional CMP, which was adopted by the NCTCOG; they are included in the financially constrained Metropolitan Transportation Plan (MTP), and future resources are reserved for their implementation.

The CMP element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) that details the type of strategy, implementing responsibilities, schedules, and expected costs. At the project's programming stage, travel demand reduction strategies and commitments will be added to the regional Transportation Improvement Program (TIP) or included in the construction plans. The regional TIP provides for programming of these projects at the appropriate time with respect to the single occupancy vehicle (SOV) facility implementation and project-specific elements.

Committed congestion reduction strategies and operational improvements within the study boundary will consist of system reliability improvements including addition of new travel lanes, frontage roads, shared-use paths, and interchange and intersection improvements.

3.0 Congestion Reduction Strategies

Committed congestion reduction strategies and operational improvements within the US 380 McKinney Study Area boundary will consist of traffic signal and ITS/communication improvements, the addition of travel lanes and frontage roads, access management improvements along frontage roads (e.g., turn-lanes, signalized intersections, driveway/crossroad closures), and construction of SUPs along the outside of frontage roads to provide connectivity to existing and proposed sidewalk and trail networks. Individual projects are listed in **Table 1**.

Table 1: Congestion Management Strategies for the Preferred Alternative

Location	Type	Implementation Date
Citywide Signal System, Video Detectors and Communication ITS	Travel Time Index Travel Time Reliability	2007-ongoing
SH5 Improvements from South of FM 1378 to South of CR 275)	Addition of Travel Lanes	Existing Condition (presumed w/implementation of the SH 5 Improvement Project by June 2027)
US 380 Widening from Airport Drive to CR 458	Addition of Travel Lanes	Existing Condition (presumed w/implementation of the US 380 Widening Project by February 2024)
Collin County Outer Loop FM 2478 to US 75	Addition of Travel Lanes	Undetermined
FM 546 Phase I Bridgefarmer Road to US 380	Addition of Travel Lanes	Undetermined
FM 546 Phase II Airport Drive to CR 393	Addition of Travel Lanes	Undetermined
SH 5 from US 75/SRT-SH-121 to Stewart Road and FM 546/Harry McKillop Boulevard	Addition of Travel Lanes	2027 (proposed project)
Spur 399 Extension from SH5 to Airport Drive/Old Mill Road to US 380	Addition of Travel Lanes	2027 (proposed project)
Airport Drive "Parkway Trail" from SH 5 to US 380 (City of McKinney)	Bike/Ped Improvements	Undetermined
US 380 Prosper-Frisco Teel Parkway/Championship Drive to West of Lakewood Drive	Addition of Travel Lanes	Submitted for listing in the MTP Update
US 380 Princeton FM 1827 to CR 560	Addition of Travel Lanes	Submitted for listing in the MTP Update

Source: TxDOT Dallas District, www.keeptimovingdallas.com; City of McKinney Proposed City-Wide Trail Master Plan, Conceptual Trail Network Plan, May 21, 2021; NCTCOG Transportation Improvement Program Information System (TIPINS), Collin County https://www.collincountytx.gov/county_projects.

In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and NCTCOG will continue to promote appropriate congestion reduction strategies through the Congestion Mitigation and Air Quality Improvement (CMAQ) program, the CMP, and the MTP. The congestion reduction strategies considered for this project would help alleviate congestion in the SOV study boundary, but would not eliminate it. Therefore, the proposed project is justified. The CMP analysis for added SOV capacity projects in the TMA is on file and available for review at the NCTCOG's office in Arlington, Texas.

Attachment 1 – CMP Implementation Form

Fill in orange fields ONLY

2022 Congestion Management Process Project Form

Submitter Name	Agency Name	Date
Christine Polito	TxDOT Dallas District	10/14/2022
Email	Phone Number	
christine.polito@txdot.gov	214-320-6141	



City
McKinney-Prospers-New Hope

Project Name
US 380 McKinney

Facility Name
US 380

Project Limits (From)
Coit Road

Project Limits (To)
FM 1827

Does project add roadway capacity?
Yes

Project Description (Including TSM&O and TDM Strategies)
Construct 8-lane freeway primarily on new location extending from existing US 380/Coit Road around north side of McKinney to connect to existing US 380 near FM 1827 (approx. 15.6 miles). Typical section - 4 10-foot-wide travel lanes in each direction with 10-foot-wide inside and outside shoulders and 2-lane, one-way frontage roads on both sides of the mainlanes with 10-foot wide travel lanes. Grade-separated interchanges include 14-foot-wide ramps with 2-foot-wide inside shoulders and 6-foot-wide outside shoulders. Shared-use paths built along outside of frontage roads.

Complementary TDM and TSM&O Projects in TIP (2020-2025) [Link to TIPINS Database](#)

Project Name	TIP Code	CSJ #
ITS	11455	
Existing Interconnected Traffic Signal System, Hardware	11084	
Communications and Software/Traffic Control Updates	11842	

Other Complementary Projects not in TIP

Project Name	Implementing Agency
Spur 399 Extension	TxDOT Dallas District
US 380 Prosper-Frisco	TxDOT Dallas District
US 380 Princeton	TxDOT Dallas District

Are the project limits within a current Metropolitan Transportation Plan Corridor?

No	MTP Reference #

[MTP Webpage](#)
[Roadway Recommendations Listing](#)
[Non-Regionally Significant Arterials](#)

Was the segment evaluated in the 2021 CMP Update?

No

[Link to CMP Corridor Fact Sheets](#)

CMP Segment Number	CMP Segment Facility	Facility Limit (From)	Facility Limit (To)

Functional Class

Number	Description
2	Other Freeways and Expressways

Area Type
Suburban Residential

Divided/Undivided
Divided

Number of Lanes

Enter Current	Enter Proposed
0	8

Next Step:
Consult CMP Fact Sheets for more information

CMP Corridor Evaluation Sheet

Facility Type: New Roadway

Performance Measures:

Crash Rate 0.5 **Travel Time Reliability** 0.5
Travel Time Index 1 **Bridge/Pavement Condition**

Performance Measure Deficiencies?

2

Eligibility

Corridor is eligible, continue to asset evaluation and strategy selection

Asset Category Scores

Roadway Infrastructure	High
Modal Options	Medium
Roadway Operations	Low

Potential CMP Strategy Matches

Specify deficiency-correcting congestion mitigation strategy that will be implemented as part of the project.

Strategies can be selected from above or from Appendix C of the 2021 Congestion Management Process.

[Link to Appendix C](#)

Travel Time Reliability, Travel Time Index, Crash Rate

If not implementing a congestion mitigation strategy, please select an exemption category from dropdown list.

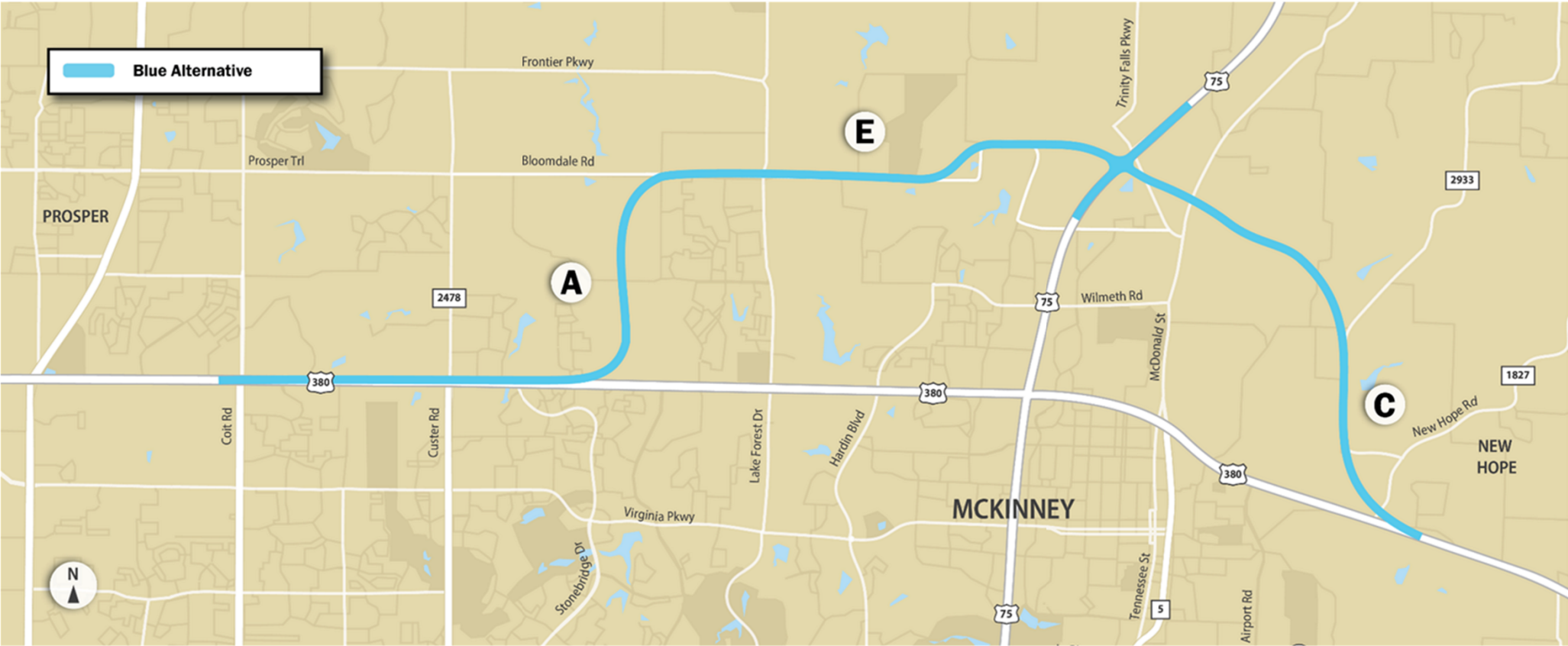
Click to Select

Please provide a description of reason for exemption below.

Form Status **(Select one from option)**

Information completed, ready for corridor analysis

US 380 MCKINNEY – COIT ROAD TO FM 1827 CSJs 0315-02-065, 0135-03-053, AND 0135-15-002



Appendix P-2: Carbon Monoxide Traffic Air Quality Analysis (CO TAQA)



Carbon Monoxide Traffic Air Quality Analysis

US 380 McKinney

CSJs 0135-02-065, 0135-03-053, 0135-15-002

From Coit Road to FM 1827

Collin County

Texas Department of Transportation, Dallas District

October 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

Table of Contents

Project Background	1
1.1. Existing Facility	1
1.2. Proposed Facility	2
1.2.1 Segment A – Coit Road to CR 161/Future Ridge Road	3
1.2.2 Segment B - Coit Road to CR 161/Future Ridge Road	3
1.2.3 Segment E – CR 161/Future Ridge Road to East of SH 5	3
1.2.3 Segment C – East of SH 5 to Existing US 380/FM 1827	4
1.2.3 Segment D - East of SH 5 to Existing US 380/FM 1827	4
2. Carbon Monoxide Traffic Air Quality Analysis.....	5
2.1. Background Information	5
2.2. Analysis Methodology.....	5
2.3. Receptor Determination.....	18
2.4. CO Modeling Results.....	19

Tables

Table 1: US 380 Proposed Segment Average Annual Daily Traffic Volumes	5
Table 2: Segment A Build Traffic Volumes by Link	7
Table 3: Segment B Build Traffic Volumes by Link	8
Table 4: Segment C Build Traffic Volumes by Link	9
Table 5: Segment D Build Traffic Volumes by Link	10
Table 6: Segment E Build Traffic Volumes by Link	11
Table 7: Segment A CO Emission Factors by Link	13
Table 8: Segment B CO Emission Factors by Link	14
Table 9: Segment C CO Emission Factors by Link	15
Table 10: Segment D CO Emission Factors by Link.....	16
Table 11: Segment E CO Emission Factors by Link.....	17
Table 12: CAL3QHC Modeling Parameters	18
Table 13: Queuing Parameters.....	18
Table 14: Carbon Monoxide 1-Hour Modeling Results.....	19
Table 15: Carbon Monoxide 8-Hour Modeling Results.....	20

Attachments

Attachment A: Exhibits

Exhibit 1- Project Location Map

Exhibit 2- Typical Sections

Exhibit 3- Roadway Cross Sections and Receptor Locations

Attachment B: Meeting Minutes

Attachment C: Traffic Data used in the Analysis

1.0 Project Background

In 2020, the Texas Department of Transportation (TxDOT) completed the *US 380 Collin County Feasibility Study* that recommended the development of a new freeway facility extending across the county from the Denton County to the Hunt County line. One of the projects of independent utility identified in the Feasibility Study was improving east-west traffic along US 380 near downtown McKinney. The Project location and termini are shown in the Project Location Map provided in **Attachment A**. The purpose of this Project is to improve east-west mobility and connectivity for travelers in the Study Area by constructing an 8-lane freeway on new location north of existing US 380 including frontage roads and grade-separated interchanges.

The need for the proposed action is because population growth within the central portion of Collin County, primarily the City of McKinney, has caused increases in current and forecasted traffic volumes that exceed the capacity of US 380 between Coit Road and Farm to Market (FM) 1827, leading to increased congestion, reduced mobility, and higher crash rates compared to other similar roadways in the region.

Roadway projects may be subject to a quantitative Carbon Monoxide Traffic Air Quality Analysis (CO TAQA) analysis if the project will add capacity, is a Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) project, has a design year annual average daily traffic (AADT) greater than 140,000 vehicles per day (vpd), affects a major intermodal facility or port located in proximity to a populated area, or public concern has been raised regarding CO emissions. The proposed Project would increase capacity and the AADT in the design year is above 140,000 vpd for several segments analyzed; therefore, a CO TAQA is required. This assessment is based on the issues discussed and the resolutions agreed upon during a conference call with TxDOT ENV, the North Central Texas Council of Governments (NCTCOG), and Burns & McDonnell on March 11, 2022. Notes from this coordination call may be found in **Attachment B**.

1.1. Existing Facility

The existing highway system consists of US 380 (University Drive) from Coit Road through the City of McKinney to FM 1827/New Hope Road W. Existing US 380 and its connections to US 75 and SH 5 near the center of the Study Area serves as the primary connection between the eastern and western portions of Collin County and the rest of the Dallas Metroplex. In 2022, US 380 through the Study Area is a 6-lane divided arterial with a variable curbed median and right- and left-turn lanes at numerous at-grade intersections and driveways and a grade-separated interchange at US 75. The at-grade intersections from Coit Road to FM 1827 are all signalized. Inside shoulders vary from non-existent to 4 feet in width with 8-foot-wide outside shoulders consistent throughout the section. The pavement width, including intermittent turn lanes both eastbound and westbound, ranges from 85 to 124 feet. The existing right-of-way (ROW) width varies from 121 feet to 241 feet.

A project to widen existing US 380 east of McKinney from Airport Drive to County Road (CR) 458 (CSJs 0135-03-046 and 0135-04-033) was environmentally cleared on January 15, 2020, and is anticipated to let for construction in February 2024. This project would widen the existing 4-lane 7.2 mile-long section of US 380 to a 6-lane divided urban facility with a raised median and new curb and gutter drainage within the existing highway ROW.

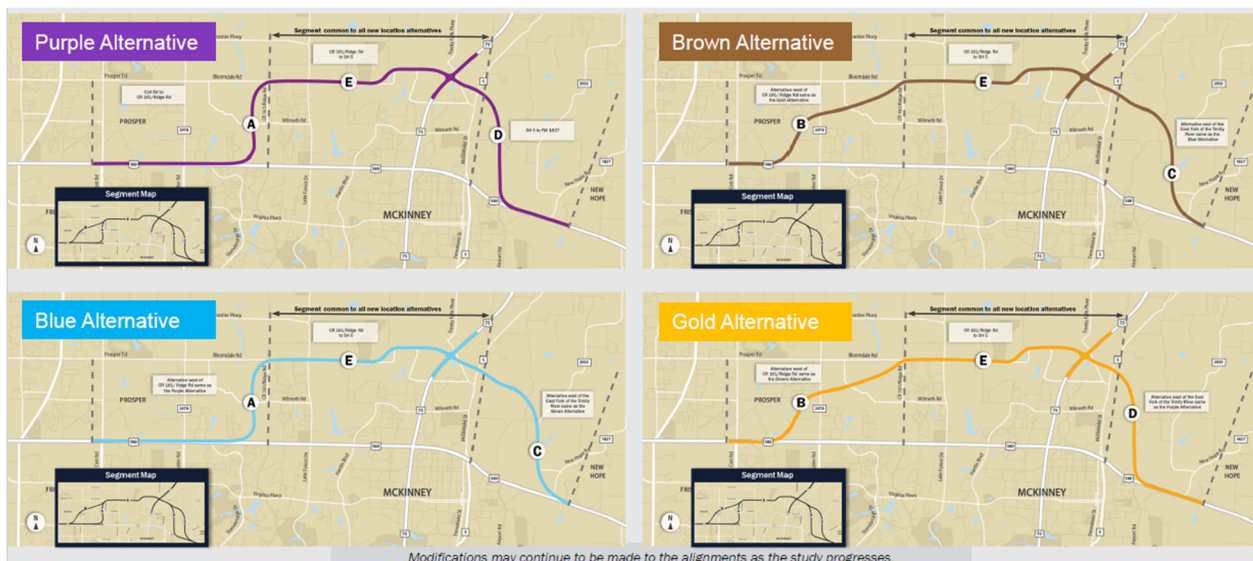
1.2. Proposed Facility

The proposed US 380 McKinney Project would construct an 8-lane, access-controlled freeway with 2-lane, 1-way frontage roads on each side connecting Coit Road and existing US 380 on the west within the Town of Prosper with FM 1827 and existing US 380 on the east within the City of McKinney. The freeway would be constructed, primarily on new location, within an anticipated ROW width ranging from 350 feet to 1,580 feet depending on location, with an average width of 420 feet. The end-to-end Build Alternatives (illustrated in **Figure 1-1**) range in length from approximately 14.8 miles to approximately 16.3 miles. Frontage roads may be eliminated, and the primary travel lanes may be depressed (lowered) or elevated (on bridge/viaduct) to minimize impacts on sensitive resources. The freeway facility would include ramps, direct connector roadways, frontage roads, and arterial roadways to support connectivity to the existing roadway network. A multi-level interchange is proposed at US 75/SH 5 with grade-separated interchanges at other primary local roadways within each segment. The western end of the project would transition to an at-grade intersection near Coit Road with a grade-separated interchange connecting the east end of the new location alignment to existing US 380 near FM 1827.

The four Build Alternatives (Purple, Blue, Brown, and Gold) are considered under the US 380 future Build scenarios. Each Build Alternative is comprised of three segments with all Build Alternatives sharing a common central segment – Segment E. The Build Alternatives are comprised of the following lettered segments as illustrated in **Figure 1**:

- Purple Alternative – A+E+D
- Blue Alternative – A+E+C
- Brown Alternative – B+E+C
- Gold Alternative – B+E+D

Figure 1: Proposed US 380 Build Alternatives



The individual segments are discussed in detail in the sections below. Detailed figures of each Build Alternative are included in **Exhibit 3**. In some areas, auxiliary lanes may be constructed along the mainlanes and extended turn lanes may be provided along the frontage roads.

1.2.1 Segment A – Coit Road to CR 161/Future Ridge Road

Segment A would begin at an at-grade intersection at existing US 380 and Coit Road with three travel lanes in the eastbound direction and three travel lanes with two left-turn lanes in the westbound direction separated by a wide median (intended as an interim design solution with the travel lanes converting to frontage roads and the median reserved to accommodate future freeway mainlanes). Just east of Lakewood Drive, the at-grade freeway section along the existing US 380 alignment would transition to an elevated roadway with four travel lanes in each direction separated by a center concrete barrier and 2-lane, 1-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. The freeway would bridge over future Independence Parkway and continue east where it would be elevated over N. Custer Road where a directional diamond (DDI) interchange would be constructed to connect local traffic with the frontage road system. As the alignment continues east, it would be elevated over N. Stonebridge Drive. After crossing N. Stonebridge Drive, the alignment would be lowered (depressed) passing under Fleetwood Street before climbing back above grade as it curves north on new location past the future connection to W. University Drive (existing US 380). The alignment would stay elevated on bridge over Wilson Creek then on earthen embankment with bridged/grade-separated crossings of CR 124/future Wilmeth Drive, future Bloomdale Road, and CR 161/future Ridge Road before tying into Segment E. Frontage roads on both sides of the mainlanes would be carried throughout Segment A from Lakewood Drive to CR 161/Future Ridge Road.

1.2.2 Segment B - Coit Road to CR 161/Future Ridge Road

Like Segment A, Segment B would begin at an at-grade intersection at existing US 380 and Coit Road with three travel lanes in the eastbound direction and three travel lanes with two left-turn lanes in the westbound direction separated by a wide median (intended as an interim design solution with the travel lanes converting to frontage roads and the median reserved to accommodate future freeway mainlanes). East of Lakewood Drive near Red Bud Drive, the alignment would turn northward on new location carrying the four travel lanes in each direction separated by a center concrete barrier and 2-lane, 1-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. The freeway would bridge over future Independence Parkway, a Soil Conservation Service Reservoir, and a new connection back to future University Drive (existing US 380). The alignment would continue elevated in a northeasterly direction on an earthen embankment with bridged/grade-separated crossings of Rutherford Branch, FM 2478/N. Custer Road, and Wilson Creek, then transitioning back to an elevated roadway on earthen fill with bridged/grade-separated crossings of future N. Stonebridge Drive, Stover Creek, and future Bloomdale Road West before tying into Segment E. Frontage roads on both sides of the mainlanes would be carried throughout Segment B from Lakewood Drive through future Bloomdale Road West.

1.2.3 Segment E – CR 161/Future Ridge Road to East of SH 5

Segment E is common to all of the Build Alternatives and primarily follows the alignment of existing Bloomdale Road along the northern edge of McKinney. The anticipated ROW width along Segment E varies from approximately 350 feet to 1,580 feet to accommodate the new multi-level interchange with US 75. Segment E

begins at CR 161/future Ridge Road continuing the four elevated-mainlanes in each direction separated by a center concrete barrier and 2-lane, 1-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. Segment E would be elevated on earthen fill embankment with retaining walls and grade-separations provided at FM 1461/Lake Forest Drive, future CR 1006, Bloomdale Road East, CR 164/future Hardin Boulevard, and Community Avenue. At Community Avenue the bridge structure would extend northeast on new location to cross the Honey Creek floodplain, accommodate the new multi-level interchange at US 75, span Spur 195, and cross the East Fork Trinity River floodplain and connect to SH 5. Frontage roads on both sides of the mainlanes would be carried throughout Segment E from CR 161/future Ridge Road through the interchange with SH 5.

1.2.3 Segment C – East of SH 5 to Existing US 380/FM 1827

Segment C joins the east end of Segment E to cross the East Fork Trinity River floodplain and travels roughly south, parallel to, and east of the floodplain until it turns to the east-southeast to connect to existing US 380 near FM 1827. Segment C would be elevated on bridge over the East Fork Trinity River floodplain and the Dallas Area Rapid Transit (DART)/Dallas, Garland, and Northeastern (DGNO) rail line continuing the four elevated-mainlanes in each direction separated by a center concrete barrier and 2-lane, 1-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. After crossing the floodplain, the new location alignment would remain elevated on earthen embankment with grade-separated crossings of CR 338, tributaries to the East Fork Trinity River, and FM 1827. Existing local roadways including CR 338, CR 331/future Wilmeth Road, CR 335, CR 332, and FM 2933 would be accessible from the frontage roads. Frontage roads on both sides of the mainlanes would be carried throughout Segment C from east of SH 5 through the interchange at FM 1827 tying into existing US 380 west of Private Road 5446.

1.2.3 Segment D - East of SH 5 to Existing US 380/FM 1827

Segment D joins the east end of Segment E to cross through the East Fork Trinity River floodplain and extends roughly south, parallel to, and west of the East Fork Trinity River until it connects to existing US 380 near Airport Drive and then follows existing US 380 to FM 1827. Segment D would be elevated on bridge over the East Fork Trinity River floodplain and McIntyre Road/future Wilmeth Road for the full length of the new location alignment until it ties into existing US 380. The 2-lane, 1 way frontage roads on both sides of the mainlanes would be carried throughout Segment D from east of SH 5 through the interchange at Airport Drive and then connect at-grade to US 380 near FM 1827. Woodlawn Road would connect to the frontage roads.

2.0 Carbon Monoxide Traffic Air Quality Analysis

The purpose of this Project is to improve east-west mobility and connectivity for travelers in the Study Area by constructing an 8-lane, access controlled freeway with 2-lane, 1-way frontage roads on both sides of the mainlanes between Coit Road and FM 1827. This CO TAQA was performed in accordance with TxDOT's "Environmental Guide: Volume 2 Activity Instructions". The methodology, assumptions, and procedure used in the CO TAQA are discussed in detail in the following sections. The Build Alternatives (described in Section 1.2) was reviewed as a part of the CO TAQA performed for the ETC year (2030) and the Design year (2050).

2.1. Background Information

If a roadway project has Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) involvement, is adding capacity, and has an AADT greater than 140,000 vpd combined volume along the mainlanes and frontage roads, a quantitative CO TAQA is required to be performed for the Project. Several cross-sections were taken along each study segment to determine the 2050 AADT for each cross-section along the proposed alignments. These cross-sections included the mainlanes for the new construction, frontage roads, as well as any ramps. The cross-sections analyzed for each study segment were detailed in a memo dated August 3, 2022. See **Attachment B** for detailed cross-section analysis information. The maximum AADT traffic counts for the US 380 McKinney study segments are detailed in **Table 1**.

Table 1: US 380 McKinney Proposed Study Segment Average Annual Daily Traffic Volumes

Segment	2030 Maximum AADT	2050 Maximum AADT	Exceeds 140,000 CO TAQA Threshold?
A	96,700	148,100	Yes
B	93,000	142,900	Yes
C	75,800	117,300	No
D	84,600	130,900	No
E	100,500	154,200	Yes

(a) AADT = average annual daily traffic in vehicles per day (vpd)

Since the Design year (2050) vehicle volumes for Segments A, B, and E are predicted to exceed the 140,000 vpd threshold, a quantitative analysis is required for the Project. While only three segments were determined to exceed the 140,000 thresholds, a quantitative CO TAQA was performed on each study segment (A through E) for consistency. An Air Quality Consultative Call was held on March 11, 2022, with TxDOT to discuss the modeling procedure. Because there are signalized intersections included as part of the Project in the area where the daily volume threshold was exceeded, it was determined in the call that the CAL3QHC air dispersion model would be used in the analysis.

2.2. Analysis Methodology

In this CO TAQA analysis, both the ETC and Design years, 2030 and 2050 respectively, were reviewed, since they the Design year is predicted to exceed the analysis threshold of 140,000 vpd for Segments A, B, and E. Additionally, even though the ADT threshold was not exceeded for Segments C and D, these segments were also

analyzed. The Annual Daily Traffic (ADT) was determined from the information received from the TxDOT Transportation Planning and Programming Division and analyzed by HDR, Inc. HDR, Inc. also provided peak hourly traffic volumes for the ETC and Design years using a VISSIM analysis. The future roadway links were determined based on roadway geometries and traffic volumes provided. The ADT was used to determine which cross-sections of the road have the highest traffic counts for the future build scenarios (ETC and Design year). It was determined that the same areas have the highest traffic counts for both the ETC and Design year within each study segment. HDR, Inc. provided AM and PM peak hourly traffic volumes, the maximum of which was chosen for each roadway segment to be modeled. **Table 2** through **Table 6** show the information for the links analyzed in the build scenarios for the ETC and Design year models.

Table 2: Segment A Build Traffic Volumes by Link

Modeled Link	Link Type	ETC (2030)		Design Year (2050)	
		ADT	Peak Hour	ADT	Peak Hour
WB US380 A West	Mainlanes	26,600	2,420	40,400	3,610
WB US380 A East	Mainlanes	37,600	3,200	57,400	4,810
EB US380 A East	Mainlanes	37,400	3,420	57,400	5,230
EB US380 A West	Mainlanes	30,100	2,940	46,200	4,440
WB US380 A ONR	Ramps	11,000	1,000	17,000	1,520
EB US380 A OFR	Ramps	7,300	740	11,200	1,150
EB US380A Front1	Frontage Roads	10,500	980	16,200	1,480
EB US380A Front2	Frontage Roads	10,600	990	16,400	1,500
EB US380A Front3	Frontage Roads	8,400	780	13,000	1,180
EB US380A Front4	Frontage Roads	8,300	770	12,800	1,160
WB US380A Front1	Frontage Roads	21,900	2,040	33,600	3,100
WB US380A Front2	Frontage Roads	11,000	1,060	16,800	1,610
WB US380A Front3	Frontage Roads	11,100	1,040	16,900	1,590
WB US380A Front4	Frontage Roads	11,000	1,030	16,700	1,570
SB Tremont	Local Road	2,500	210	3,800	330
NB Tremont	Local Road	2,400	220	3,700	330
SB Driveway	Local Road	2,200	210	3,400	320
NB Driveway ^B	Local Road	2,200	210	3,400	320
SB Stonebridge N	Local Road	9,200	760	13,900	1,170
SB Stonebridge M	Local Road	10,100	860	15,300	1,280
SB Stonebridge S	Local Road	10,800	920	16,400	1,390
NB Stonebridge N	Local Road	9,900	900	15,000	1,380
NB Stonebridge M	Local Road	9,900	920	15,100	1,410
NB Stonebridge S	Local Road	10,500	910	16,000	1,360
Stonebridge U	Local Road	100	10	200	20
SB University N	Local Road	3,400	440	5,200	670
SB University M	Local Road	3,700	480	5,700	730
SB University S	Local Road	11,000	1,220	16,900	1,880
University U	Local Road	100	20	200	30
NB University N	Local Road	11,400	1,120	17,600	1,710
NB University S	Local Road	13,200	1,280	20,300	1,960

- (a) SB = southbound, FR = frontage road, NB = northbound, ML = mainlane, ADT = average daily traffic, DHV = design hour volume
- (b) Traffic information provided by HDR, Inc indicated zero traffic on this road. The southbound direction of this roadway was used to approximate the traffic on this road segment.

Table 3: Segment B Build Traffic Volumes by Link

Modeled Link	Link Type	ETC (2030)		Design Year (2050)	
		ADT	Peak Hour	ADT	Peak Hour
WB US380 B West	Frontage Roads	47,000	3,980	72,100	6,100
WB US 380 B	Mainlanes	37,700	3,380	57,900	5,180
EB US380B West	Frontage Roads	46,000	4,040	70,800	6,180
EB US 380 B	Mainlanes	38,300	3,500	59,000	5,280
WB US380B Front1	Frontage Roads	8,600	670	13,100	1,040
WB US380B Front2	Frontage Roads	9,200	690	14,000	1,030
WB US380B Front3	Frontage Roads	9,300	710	14,200	1,060
EB US380B Front1	Frontage Roads	7,700	720	11,800	1,120
EB US380B Front2	Frontage Roads	7,600	710	11,600	1,100
EB US380B Front3	Frontage Roads	7,200	680	11,000	1,060
SB University N	Local Road	2,400	280	3,700	440
SB University M	Local Road	8,100	870	12,400	1,370
SB University S	Local Road	9,800	980	14,900	1,540
NB University S	Local Road	12,000	780	18,500	1,180
NB University M	Local Road	9,300	540	14,300	850
NB University N	Local Road	6,700	520	10,300	830
SB Prestwick N	Local Road	1600	170	2,500	270
SB Prestwick S	Local Road	1200	120	1,900	200
NB Prestwick N	Local Road	1800	150	2,800	210
NB Prestwick S	Local Road	1800	140	2,800	200
SB Indep N	Local Road	1,200	120	1,900	200
SB Indep M	Local Road	1,600	170	2,500	270
SB Indep S	Local Road	4,200	380	6,500	560
NB Indep S	Local Road	3,400	230	5,100	350
NB Indep M	Local Road	1,800	150	2,800	210
NB Indep N	Local Road	1,800	140	2,800	200
WB Connector	Local Road	2,900	260	4,600	370
EB Connector	Local Road	1,900	130	2,900	220

- (c) SB = southbound, FR = frontage road, NB = northbound, ML = mainlane, ADT = average daily traffic, DHV = design hour volume
- (d) Traffic information provided by HDR, Inc indicated zero traffic on this road. The traffic for these roads was approximated using similar road types.

Table 4: Segment C Build Traffic Volumes by Link

Modeled Link	Link Type	ETC (2030)		Design Year (2050)	
		ADT	Peak Hour	ADT	Peak Hour
EB Front 1	Frontage Roads	13,400	1,300	20,400	1,910
EB Front 2	Frontage Roads	12,800	1,230	19,400	1,820
EB Front 3	Frontage Roads	12,500	1,200	18,900	1,770
EB Front 4	Frontage Roads	14,400	1,350	22,100	2,050
EB Front 5	Frontage Roads	14,500	1,360	22,300	2,070
EB US380C West	Mainlanes	23,600	2,140	36,100	3,360
EB US380C East	Mainlanes	24,200	2,210	37,100	3,450
EB Exist US380	Frontage Roads	38,700	3,570	59,400	5,520
EB US380C ONR	Ramps	600	80	1,000	110
West U	Local Road	300	30	500	50
East U	Local Road	100	10	200	20
WB US380C ONR	Ramps	8,600	840	13,300	1,250
WB Exist US80	Frontage Roads	37,100	3,510	57,900	5,270
WB US380C West	Mainlanes	20,500	2,100	32,600	3,150
WB US380C East	Mainlanes	29,100	2,940	45,900	4,400
WB Front 1	Frontage Roads	16,600	1,410	25,300	2,120
WB Front 2	Frontage Roads	16,500	1,400	25,100	2,100
WB Front 3	Frontage Roads	13,400	1,250	20,400	1,870
WB Front 4	Frontage Roads	13,700	1,270	20,900	1,910
WB Front 5	Frontage Roads	5,100	510	7,600	690
NB University	Local Road	13,300	1,280	20,000	1,920
NB FM1827 S	Local Road	8,900	910	13,300	1,290
NB FM1827 N	Local Road	6,700	650	10,000	850
SB FM1827 N	Local Road	5,700	570	8,800	850
SB FM1827 S	Local Road	11,000	900	16,800	1,340
SB University	Local Road	13,500	1,140	20,300	1,720

(a) SB = southbound, FR = frontage road, NB = northbound, ML = mainlane, ADT = average daily traffic, DHV = design hour volume

Table 5: Segment D Build Traffic Volumes by Link

Modeled Link	Link Type	ETC (2030)		Design Year (2050)	
		ADT	Peak Hour	ADT	Peak Hour
EB US380D Front1	Frontage Roads	900	80	1,400	120
EB US380D Front2	Frontage Roads	13,300	1,260	20,000	1,810
EB US380D Front3	Frontage Roads	17,400	1,640	26,200	2,350
EB US380D Front4	Frontage Roads	17,300	1,630	26,000	2,330
EB US380D Front5	Frontage Roads	12,500	1,130	18,900	1,630
EB US380D Front6	Frontage Roads	12,600	1,140	19,100	1,650
EB US380D West	Mainlanes	30,200	2,810	46,500	4,410
EB US380D East	Mainlanes	26,100	2,430	40,300	3,870
EB US380 Exist	Frontage Roads	38,700	3,570	59,400	5,520
WB US380 Exist	Frontage Roads	37,100	3,510	57,900	5,270
WB US380D East	Mainlanes	21,000	2,090	33,800	3,150
WB US380D West	Mainlanes	25,700	2,610	41,300	3,900
WB US380D Front1	Frontage Roads	16,100	1,420	24,100	2,120
WB US380D Front2	Frontage Roads	16,000	1,410	23,900	2,100
WB US380D Front3	Frontage Roads	20,000	1,910	30,400	2,830
WB US380D Front4	Frontage Roads	20,100	1,920	30,600	2,850
WB US380D Front5	Frontage Roads	15,400	1,400	23,100	2,100
WB US380D Front6	Frontage Roads	2,700	270	4,100	400
EB US380D OFR	Ramps	4,100	380	6,200	540
West U	Local Road	100	10	200	20
East U	Local Road	100	10	200	20
WB US380D ONR	Ramps	4,700	520	7,500	750
SB FM1827 S	Local Road	800	110	1,300	150
SB FM1827 N	Local Road	5,600	650	9,000	920
NB FM1827 S	Local Road	6,400	640	9,600	930
NB FM1827 N	Local Road	5,600	570	8,400	810

(a) SB = southbound, FR = frontage road, NB = northbound, ML = mainlane, ADT = average daily traffic, DHV = design hour volume

Table 6: Segment E Build Traffic Volumes by Link

Modeled Link	Link Type	ETC (2030)		Design Year (2050)	
		ADT	Peak Hour	ADT	Peak Hour
WB US380E Frnt1	Frontage Roads	16,500	1,570	25,300	2,370
WB US380E Frnt2	Frontage Roads	4,800	600	7,400	900
WB US380E Frnt3	Frontage Roads	4,700	590	7,200	880
WB US380E Frnt4	Frontage Roads	9,500	970	14,600	1,460
WB US380E Frnt5	Frontage Roads	9,600	980	14,800	1,480
WB US380E Frnt6	Frontage Roads	13,300	1,190	20,300	1,800
WB US380E Frnt7	Frontage Roads	5,900	480	9,000	740
WB US 380 E 1	Mainlanes	44,900	4,280	68,900	6,420
WB US 380 E 2	Mainlanes	37,500	3,570	57,600	5,360
WB US 380 E 3	Mainlanes	41,200	3,780	63,100	5,680
WB US 380 E 4	Mainlanes	29,500	2,810	45,200	4,210
WB US380E OFR1	Ramps	7,400	720	11,300	1,080
WB US380E ONR	Ramps	3,700	210	5,500	320
WB US380E OFR2	Ramps	11,700	970	17,900	1,470
EB US380E Frnt1	Frontage Roads	14,200	1,300	22,200	1,920
EB US380E Frnt2	Frontage Roads	6,100	700	9,600	1,050
EB US380E Frnt3	Frontage Roads	6,000	690	9,400	1,030
EB US380E Frnt4	Frontage Roads	10,800	1,160	16,200	1,850
EB US380E Frnt5	Frontage Roads	10,900	1,170	16,400	1,870
EB US380E Frnt6	Frontage Roads	13,900	1,380	21,300	2,090
EB US380E Frnt7	Frontage Roads	5,000	410	7,600	630
EB US380 E 1	Mainlanes	30,700	2,800	47,300	4,170
EB US380 E 2	Mainlanes	38,800	3,400	59,900	5,040
EB US380 E 3	Mainlanes	35,800	3,170	55,000	4,730
EB US380 E 4	Mainlanes	44,700	4,030	68,700	6,010
EB US380E ONR1	Ramps	8,900	970	13,700	1,460
EB US380E OFR	Ramps	3,000	230	4,900	310
EB US380E ONR2	Ramps	8,100	600	12,600	870
SB Lake Forest N	Local Road	15,900	1,610	24,200	2,410
SB Lake Forest M	Local Road	14,700	1,480	22,400	2,220
SB Lake Forest S	Local Road	8,500	880	13,200	1,340
NB Lake Forest S	Local Road	8,000	790	13,300	1,190
NB Lake Forest M	Local Road	9,400	950	15,700	1,300
NB Lake Forest N	Local Road	15,400	1,550	24,900	2,200
Lake Forest U E	Local Road	100	10	200	20
Lake Forest U W	Local Road	100	10	200	20

(a) SB = southbound, FR = frontage road, NB = northbound, ML = mainlane, ADT = average daily traffic, DHV = design hour volume

In discussions with TxDOT, it was determined the Dallas District Area emission rate look up tables (ERLT) would be used in this analysis to determine the carbon monoxide (CO) emission rates for each of the links. The ERLT were created by TxDOT using MOVES2014; the inputs are discussed and detailed in TxDOT's "Useful Information: Carbon Monoxide (CO) Traffic Air Quality Analysis (TAQA) Emission Rate Lookup Tables (ERLT)" which came into effect June 2016 and were updated in June 2021. The free-flow lookup tables are divided up by roadway type (Urban Unrestricted Access, Urban Restricted Access, Rural Unrestricted Access, and Rural Restricted Access) and vehicle speed. The area was determined to be urban, so only the Urban ELRTs were utilized in this analysis. The mainlanes and ramps were determined to be restricted use, and thus the Urban Restricted emission table was utilized for those emission factors while frontage and local roads utilized the Urban Unrestricted emission tables. The idling lookup tables provide expected idling emissions for each year starting in 2020 and extending to 2050. Traffic speed information was provided by HDR, Inc. and was used to determine the CO emission factors to use from the ERLT. The emission factors used in the CAL3QHC model are listed in **Table 7** through **Table 11**.

Table 7: Segment A CO Emission Factors by Link

Road Name	2030		2050	
	Average Speed (miles per hour)	CO Emission Factor (grams per mile)	Average Speed (miles per hour)	CO Emission Factor (grams per mile)
WB US380 A West	70	1.332	70	0.842
WB US380 A East	69	1.282	69	0.807
EB US380 A East	67	1.177	67	0.734
EB US380 A West	68	1.230	68	0.771
WB US380 A ONR	43	0.989	43	0.581
EB US380 A OFR	58	0.963	58	0.577
EB US380A Front1	44	1.017	44	0.593
EB US380A Front2	43	1.027	43	0.598
EB US380A Front3	44	1.017	44	0.593
EB US380A Front4	13	1.851	13	1.043
WB US380A Front1	30	1.260	30	0.715
WB US380A Front2	43	0.989	43	0.598
WB US380A Front3	43	1.027	43	0.598
WB US380A Front4	15	1.789	15	1.014
SB Tremont	12	1.889	12	1.061
NB Tremont	25	1.285	25	0.708
SB Driveway	31	1.237	31	0.703
NB Driveway	31	1.237	31	0.703
SB Stonebridge N	13	1.851	13	1.043
SB Stonebridge M	18	1.660	18	0.941
SB Stonebridge S	38	1.096	38	0.632
NB Stonebridge N	38	1.096	38	0.632
NB Stonebridge M	17	1.698	17	0.963
NB Stonebridge S	6	2.393	6	1.300
Stonebridge U	19	1.626	19	0.922
SB University N	6	2.393	6	1.300
SB University M	42	1.038	42	0.603
SB University S	54	1.014	54	0.611
University U	20	1.595	20	0.904
NB University N	10	1.988	10	1.107
NB University S	27	1.274	27	0.711
Idling ^a	--	1.435	--	0.532

(a) Idling emissions are in grams per vehicle per hour (g/veh-hr)

Table 8: Segment B CO Emission Factors by Link

Road Name	2030		2050	
	Average Speed (miles per hour)	CO Emission Factor (grams per mile)	Average Speed (miles per hour)	CO Emission Factor (grams per mile)
WB US380 B West	44	0.984	44	0.579
WB US 380 B	59	0.964	59	0.579
EB US380B West	45	0.979	45	0.578
EB US 380 B	68	1.230	68	0.771
WB US380B Front1	40	1.006	40	0.586
WB US380B Front2	43	0.989	43	0.581
WB US380B Front3	43	1.027	43	0.598
EB US380B Front1	45	1.007	45	0.589
EB US380B Front2	45	0.979	45	0.589
EB US380B Front3	32	1.215	32	0.692
SB University N	6	2.393	6	1.300
SB University M	42	1.038	42	0.603
SB University S	53	1.010	53	0.607
NB University S	54	1.014	54	0.611
NB University M	4	2.901	4	1.542
NB University N	17	1.698	17	0.963
SB Prestwick N	26	1.279	26	0.710
SB Prestwick S	11	1.934	11	1.082
NB Prestwick N	14	1.818	14	1.027
NB Prestwick S	11	1.934	11	1.082
SB Indep N	11	1.934	11	1.082
SB Indep M	26	1.279	26	0.710
SB Indep S	28	1.269	28	0.712
NB Indep S	25	1.285	25	0.708
NB Indep M	14	1.818	14	1.027
NB Indep N	11	1.934	11	1.082
WB Connector	29	1.264	29	0.713
EB Connector	27	1.274	27	0.711
Idling ^a	--	1.435	--	0.532

(a) Idling emissions are in grams per vehicle per hour (g/veh-hr)

Table 9: Segment C CO Emission Factors by Link

Road Name	2030		2050	
	Average Speed (miles per hour)	CO Emission Factor (grams per mile)	Average Speed (miles per hour)	CO Emission Factor (grams per mile)
EB Front 1	45	1.007	45	0.589
EB Front 2	44	1.017	44	0.593
EB Front 3	13	1.851	13	1.043
EB Front 4	40	1.061	40	0.613
EB Front 5	40	1.061	40	0.613
EB US380C West	71	1.434	71	0.911
EB US380C East	69	1.282	69	0.807
EB Exist US380	62	1.104	62	0.683
EB US380C ONR	47	0.974	47	0.576
West U	22	1.454	22	0.815
East U	19	1.626	19	0.922
WB US380C ONR	45	0.979	45	0.578
WB Exist US80	63	1.123	63	0.697
WB US380C West	69	1.282	69	0.807
WB US380C East	69	1.282	69	0.807
WB Front 1	44	1.017	44	0.593
WB Front 2	10	1.988	10	1.107
WB Front 3	41	1.049	41	0.608
WB Front 4	41	1.049	41	0.608
WB Front 5	44	1.017	44	0.593
NB University	31	1.237	31	0.703
NB FM1827 S	16	1.741	16	0.987
NB FM1827 N	36	1.135	36	0.652
SB FM1827 N	8	2.140	8	1.179
SB FM1827 S	23	1.393	23	0.776
SB University	44	1.017	44	0.593
Idling ^a	--	1.435	--	0.532

(a) Idling emissions are in grams per vehicle per hour (g/veh-hr)

Table 10: Segment D CO Emission Factors by Link

Road Name	2030		2050	
	Average Speed (miles per hour)	CO Emission Factor (grams per mile)	Average Speed (miles per hour)	CO Emission Factor (grams per mile)
EB US380D Front1	45	1.007	45	0.589
EB US380D Front2	59	1.056	59	0.647
EB US380D Front3	59	1.056	59	0.647
EB US380D Front4	35	1.157	35	0.663
EB US380D Front5	56	1.027	56	0.624
EB US380D Front6	56	1.027	56	0.624
EB US380D West	69	1.282	69	0.807
EB US380D East	67	1.177	67	0.734
EB US380 Exist	64	1.141	64	0.710
WB US380 Exist	42	1.038	42	0.603
WB US380D East	53	0.960	53	0.572
WB US380D West	59	0.964	59	0.579
WB US380D Front1	56	1.027	56	0.624
WB US380D Front2	17	1.698	17	0.963
WB US380D Front3	52	1.006	52	0.603
WB US380D Front4	52	1.006	52	0.603
WB US380D Front5	59	1.056	59	0.647
WB US380D Front6	60	1.065	60	0.654
EB US380D OFR	64	1.047	64	0.642
West U	21	1.522	21	0.858
East U	19	1.626	19	0.922
WB US380D ONR	58	0.963	58	0.577
SB FM1827 S	4	2.901	4	1.542
SB FM1827 N	31	1.237	31	0.703
NB FM1827 S	41	1.049	41	0.608
NB FM1827 N	11	1.934	11	1.082
Idling ^a	--	1.435	--	0.532

(a) Idling emissions are in grams per vehicle per hour (g/veh-hr)

Table 11: Segment E CO Emission Factors by Link

Road Name	2030		2050	
	Average Speed (miles per hour)	CO Emission Factor (grams per mile)	Average Speed (miles per hour)	CO Emission Factor (grams per mile)
WB US380E Frnt1	44	1.017	44	0.593
WB US380E Frnt2	43	1.027	43	0.598
WB US380E Frnt3	43	1.027	43	0.598
WB US380E Frnt4	10	1.988	10	1.107
WB US380E Frnt5	44	1.017	44	0.593
WB US380E Frnt6	45	1.007	45	0.589
WB US380E Frnt7	43	1.027	43	0.598
WB US 380 E 1	67	1.177	67	0.734
WB US 380 E 2	68	1.230	68	0.771
WB US 380 E 3	68	1.230	68	0.771
WB US 380 E 4	70	1.332	70	0.842
WB US380E OFR1	54	0.959	54	0.572
WB US380E ONR	47	0.974	47	0.576
WB US380E OFR2	52	0.962	52	0.573
EB US380E Frnt1	44	1.017	44	0.593
EB US380E Frnt2	45	1.007	45	0.589
EB US380E Frnt3	12	1.889	12	1.061
EB US380E Frnt4	41	1.049	41	0.608
EB US380E Frnt5	41	1.049	41	0.608
EB US380E Frnt6	42	1.038	42	0.603
EB US380E Frnt7	45	1.007	45	0.589
EB US380 E 1	71	1.434	71	0.911
EB US380 E 2	69	1.282	69	0.807
EB US380 E 3	69	1.282	69	0.807
EB US380 E 4	68	1.230	68	0.771
EB US380E ONR1	45	0.979	45	0.578
EB US380E OFR	61	0.987	61	0.597
EB US380E ONR2	46	0.976	46	0.577
SB Lake Forest N	7	2.249	7	1.231
SB Lake Forest M	15	1.789	15	1.014
SB Lake Forest S	47	1.003	47	0.591
NB Lake Forest S	4	2.901	4	1.542
NB Lake Forest M	26	1.279	26	0.710
NB Lake Forest N	47	1.003	47	0.591
Lake Forest U E	19	1.626	19	0.922
Lake Forest U W	19	1.626	19	0.922
Idling ^a	--	1.435	--	0.532

(a) Idling emissions are in grams per vehicle per hour (g/veh-hr)

The TxDOT “Environmental Guide: Volume 2 Activity Instructions” specifies parameters to be used in the CAL3QHC air dispersion model. These parameters are listed below. Number of queuing lanes was dependent on specific queuing road. Detailed queuing data can be found in **Attachment C**.

Table 12: CAL3QHC Modeling Parameters

Model Parameter	Model Input
Wind Speed	1 m/s
Stability Class	4/Class D (Urban)
Settling Velocity	0 cm/s
Deposition Velocity	0 cm/s
Mixing Height	1000 m
Wind Directions	0 to 360 degrees in 10-degree increments
Surface Roughness	1 cm
Background CO Concentration	1-hour: 1.7 ppm 8-hour: 1.4 ppm

(a) m/s = meter per second, cm/s = centimeter per second, m = meter, cm = centimeter, ppm = parts per million

Because signalized intersections are expected to be constructed at crossroads along US 380, it was determined that CAL3QHC was to be used, which requires additional inputs for the queuing lanes. The inputs for used for the queuing lanes at intersections in the areas analyzed for US 380 frontage roads and local roads are shown below. It was assumed that the queuing parameters would not change between the ETC year (2030) and Design year (2050); these parameters are utilized in both modeling scenarios.

Table 13: Queuing Parameters

Model Parameter	Model Input
Average Total Signal Cycle Length	90 seconds
Average Red Total Signal Length	Frontage Road: 40 seconds
Clearance Lost time	2 seconds ^a
Approach Volume	Peak Hourly Volume
Saturation Flow Rate	1,600 ^a
Signal Type	Pre-timed ^a
Arrival Rate	Average progression ^a

(a) Denotes default parameters used in the model

2.3. Receptor Determination

ADT traffic counts for the build (ETC and Design year) scenarios were analyzed to determine the areas where the cross-sections have the largest traffic counts. The same area was determined to have the highest traffic counts for both the ETC and Design year build scenarios for each segment. Once these areas were determined, receptors were placed at either end of the thinnest cross-section of the roadway and at the location of the closest expected ambient area. The receptor locations can be seen in **Exhibit 3** located in **Attachment A**.

The tables used to create the input files, as well as the modeling files (both input and output), are included in **Attachment C**. The traffic data used to perform the CO TAQA is included in **Attachment D**.

2.4. CO Modeling Results

Based on the information discussed above, CAL3QHC was run for the area of concern for both the ETC year (2030) and the 2050 design year. The 1-hour and 8-hour CO concentrations are listed in **Table 14** and **Table 15** below.

Table 14: Carbon Monoxide 1-Hour Modeling Results

Receptor Name	2030 Build Concentration (ppm ^A)			2050 Build Concentration (ppm ^A)			NAAQS ^A (ppm)
	Modeled Concentration	Background Value	Total	Modeled Concentration	Background Value	Total	
Receptor A1	0.1	1.7	1.8	0.0	1.7	1.7	35
Receptor A2	0.2	1.7	1.9	0.2	1.7	1.9	35
Receptor A3	0.2	1.7	1.9	0.2	1.7	1.9	35
Receptor A4	0.1	1.7	1.8	0.0	1.7	1.7	35
Receptor B1	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor B2	0.1	1.7	1.8	0.1	1.7	1.8	35
Receptor B3	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor C1	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor C2	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor C3	0.1	1.7	1.8	0.1	1.7	1.8	35
Receptor C4	0.2	1.7	1.9	0.2	1.7	1.9	35
Receptor C5	0.1	1.7	1.8	0.1	1.7	1.8	35
Receptor C6	0.1	1.7	1.8	0.1	1.7	1.8	35
Receptor D1	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor D2	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor D3	0.0	1.7	1.7	0.0	1.7	1.7	35
Receptor D4	0.1	1.7	1.8	0.1	1.7	1.8	35
Receptor E1	0.2	1.7	1.9	0.2	1.7	1.9	35
Receptor E2	0.1	1.7	1.8	0.1	1.7	1.8	35

(A) ppm = parts per million, NAAQS = National Ambient Air Quality Standards

Table 15: Carbon Monoxide 8-Hour Modeling Results

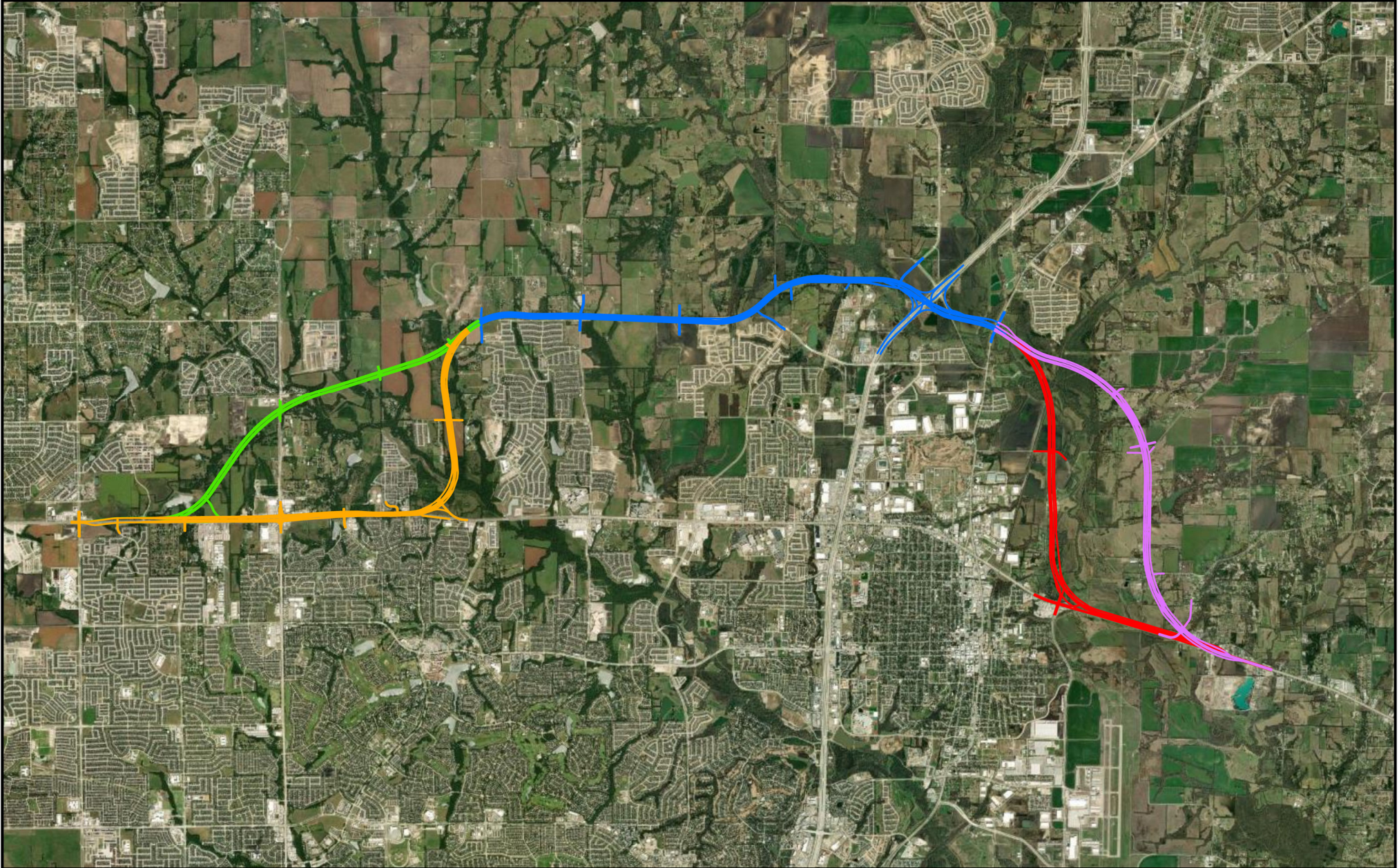
Receptor Name	2030 Build Concentration (ppm ^A)			2050 Build Concentration (ppm ^A)			NAAQS ^A (ppm)
	Modeled Concentration	Background Value	Total	Modeled Concentration	Background Value	Total	
Receptor A1	0.1	1.4	1.5	0.0	1.4	1.4	9
Receptor A2	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor A3	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor A4	0.1	1.4	1.5	0.0	1.4	1.4	9
Receptor B1	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor B2	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor B3	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor C1	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor C2	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor C3	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor C4	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor C5	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor C6	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor D1	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor D2	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor D3	0.0	1.4	1.4	0.0	1.4	1.4	9
Receptor D4	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor E1	0.1	1.4	1.5	0.1	1.4	1.5	9
Receptor E2	0.1	1.4	1.5	0.1	1.4	1.5	9

(A) ppm = parts per million, NAAQS = National Ambient Air Quality Standards

None of the modeled concentrations exceeded the 1-hour or 8-hour National Ambient Air Quality Standards (NAAQS) for carbon monoxide. The modeled 8-hour concentrations are between 15.6 percent and 18.7 percent of the standard. The 1-hour concentrations vary between 4.9 percent and 6.0 percent of the standard. CO concentrations are expected to decrease between the 2030 scenario to the 2050 scenario. This is due the expectation that air pollutant emissions from vehicles will continue to decrease as more electric vehicles enter the roadways and new technologies are introduced to reduce the release of the pollutants from internal combustion engines.

Therefore, it is not expected that the carbon monoxide concentrations predicted in any of the modeled scenarios would cause significant ambient air impacts along any of the study segments.

ATTACHMENT A: EXHIBITS



- Segment A
- Segment B
- Segment C
- Segment D
- Segment E

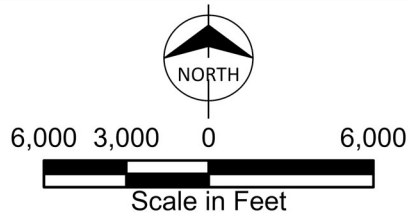
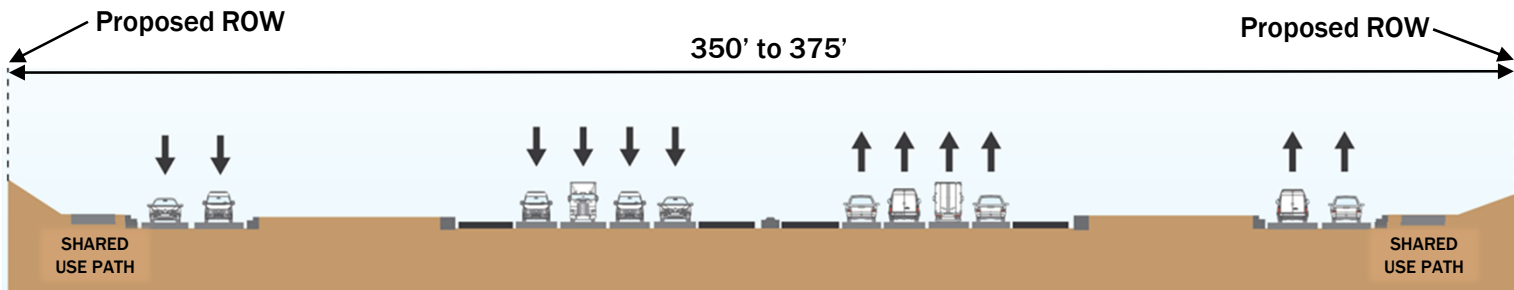


Exhibit 1
2050 Build Segments
Project Location Map
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

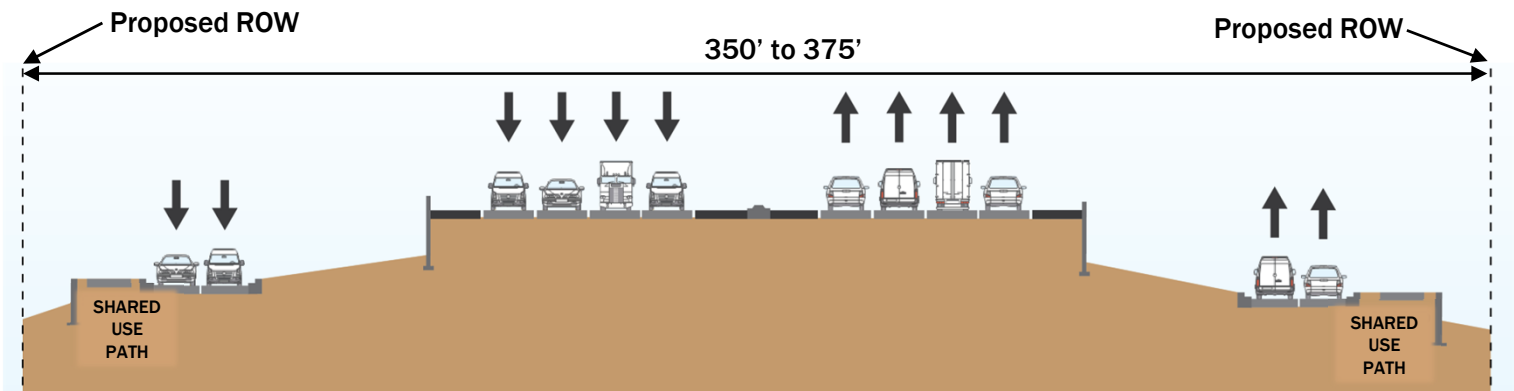
8-LANE TYPICAL SECTION

ROW width varies by location.



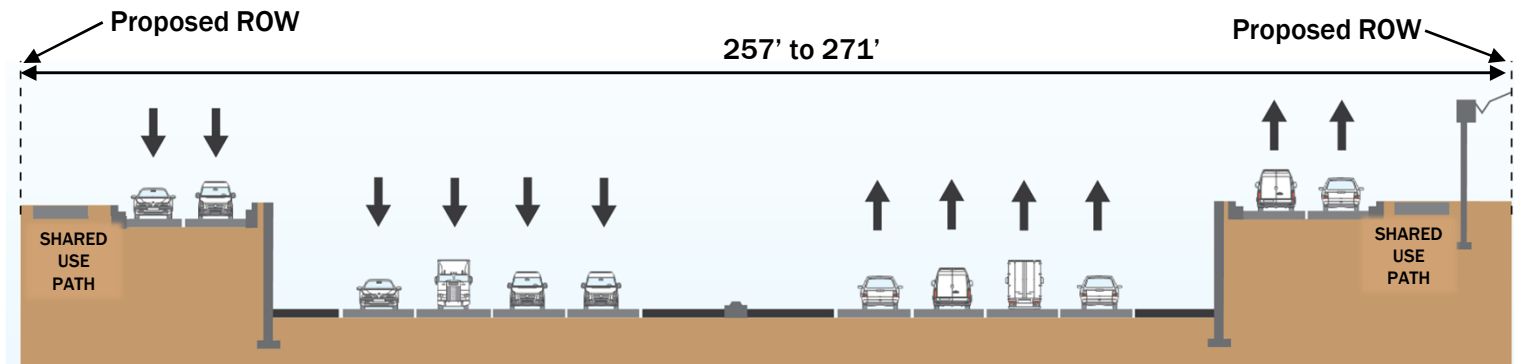
8-LANE TYPICAL SECTION – Below-grade Frontage Roads

ROW width varies by location.



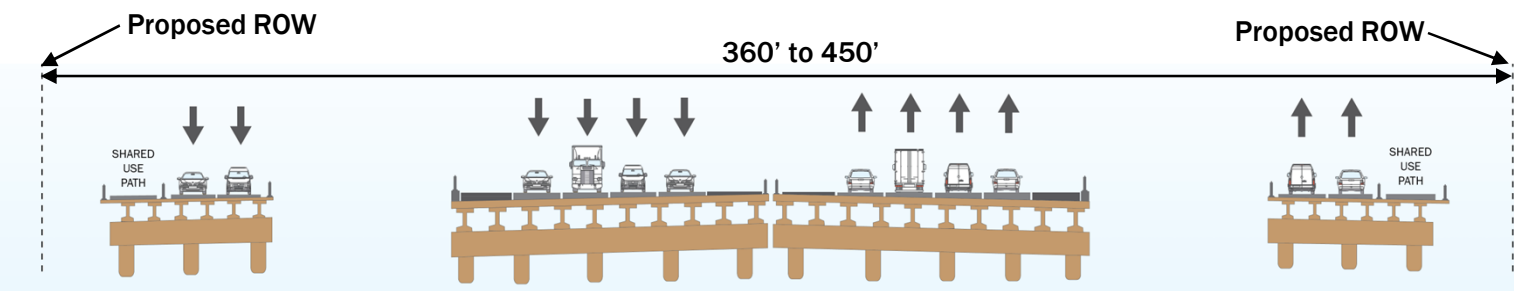
8-LANE TYPICAL SECTION – Below-grade Mainlanes

ROW width varies by location.



8-LANE TYPICAL SECTION – Elevated on Bridge

ROW width varies by location.



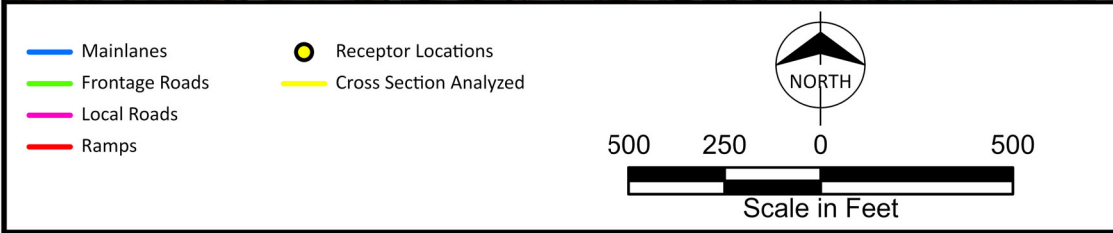
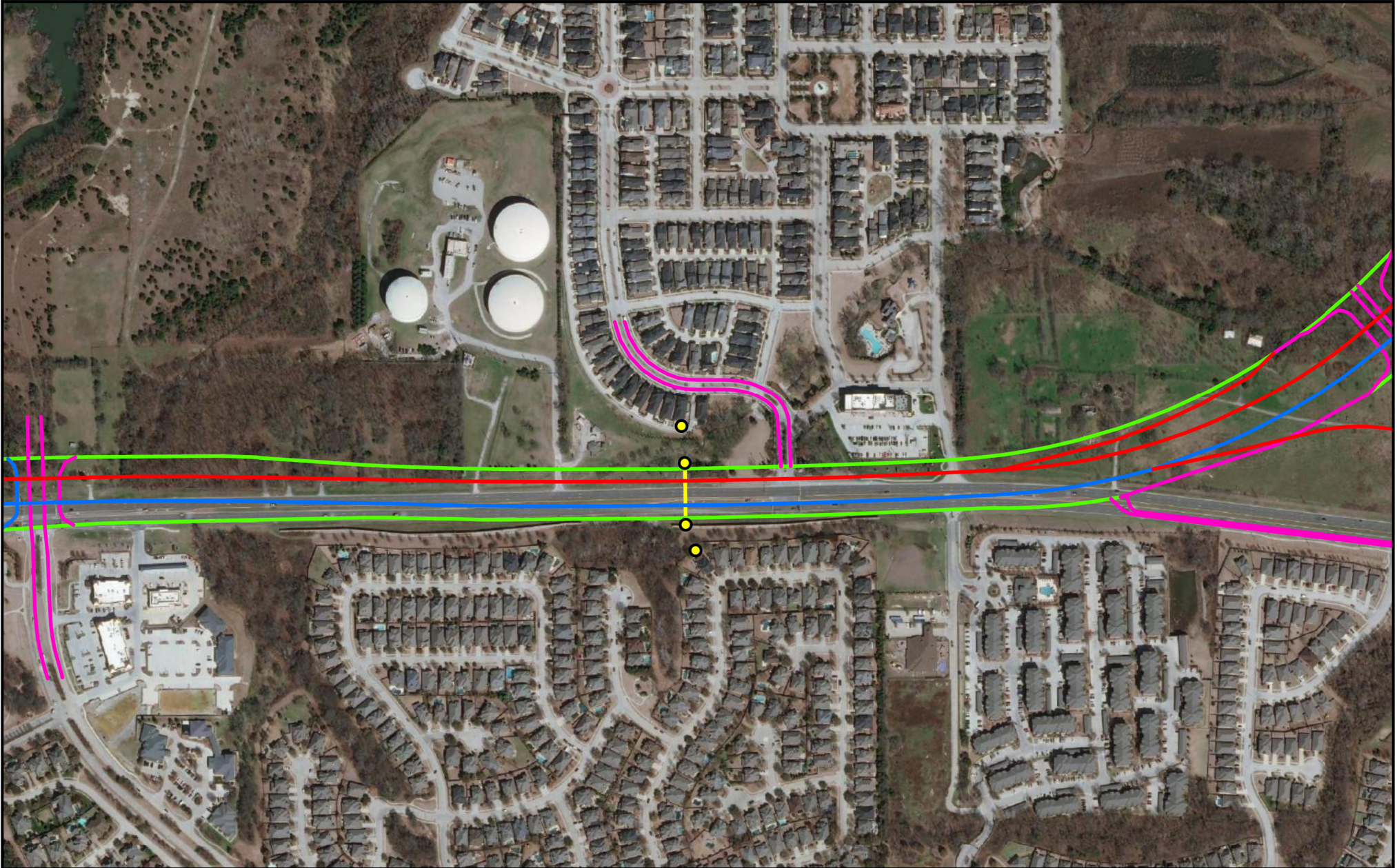


Exhibit 3
Segment A Roadway Cross Sections Analyzed
And Receptors
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

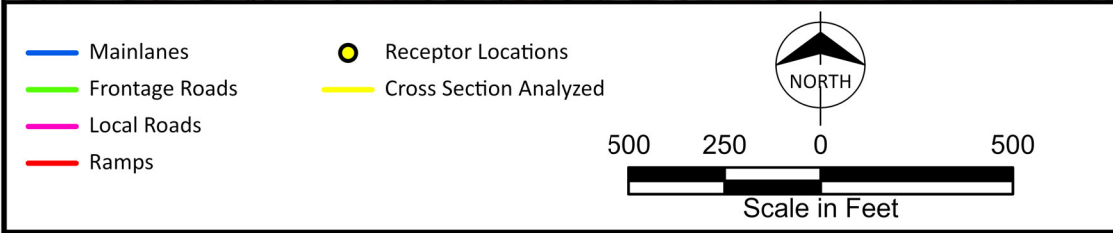
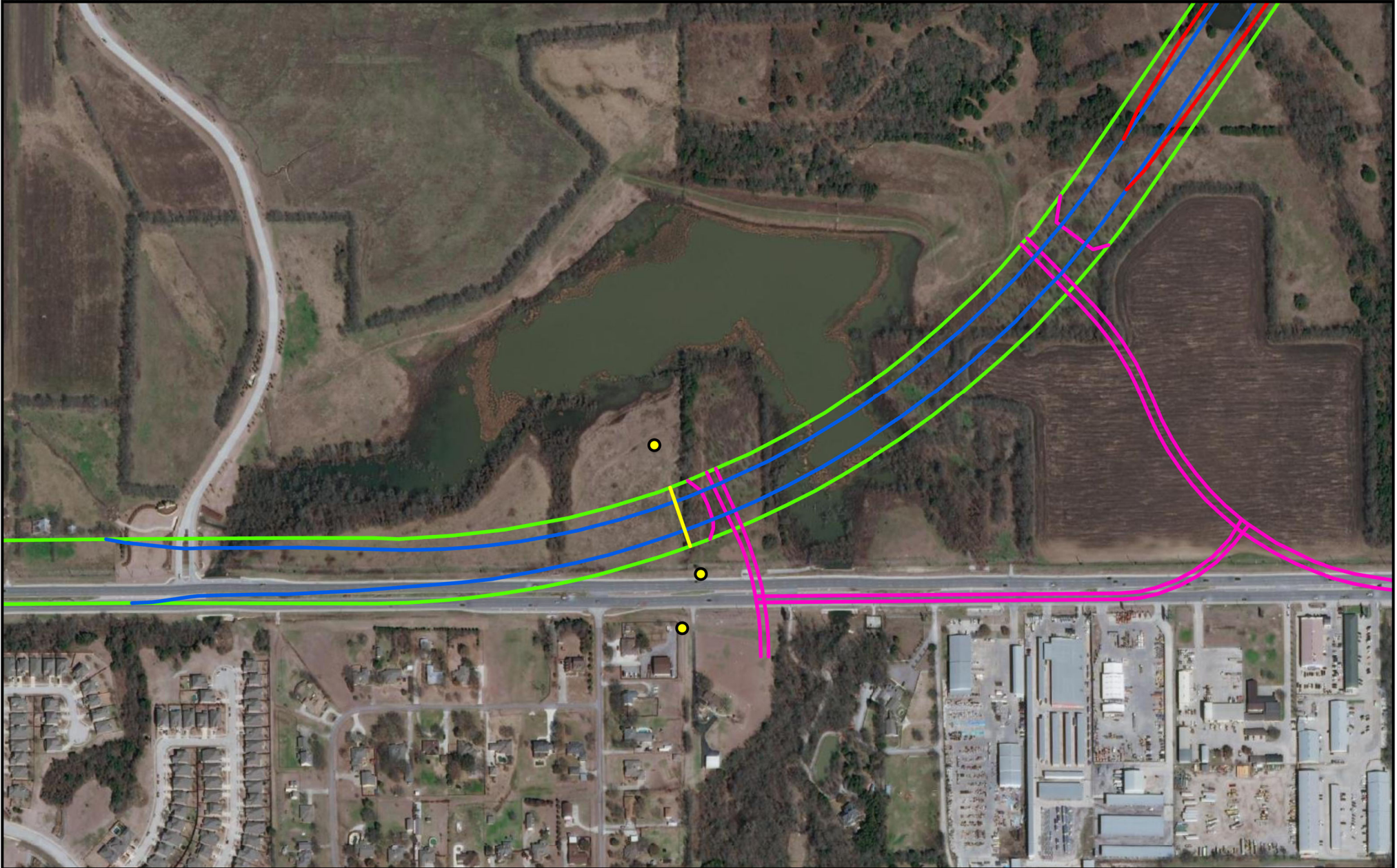


Exhibit 3
Segment B Roadway Cross Section Analyzed
And Receptors
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

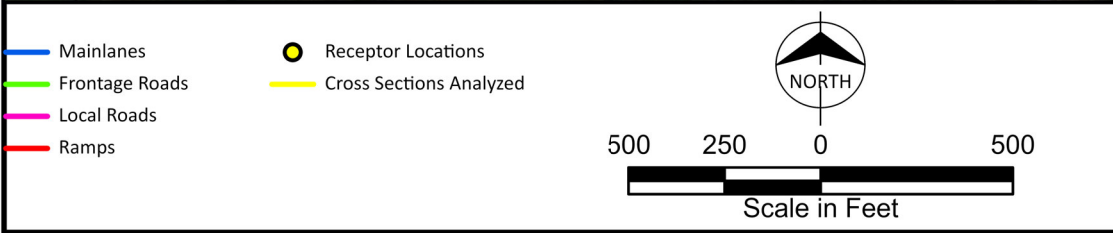
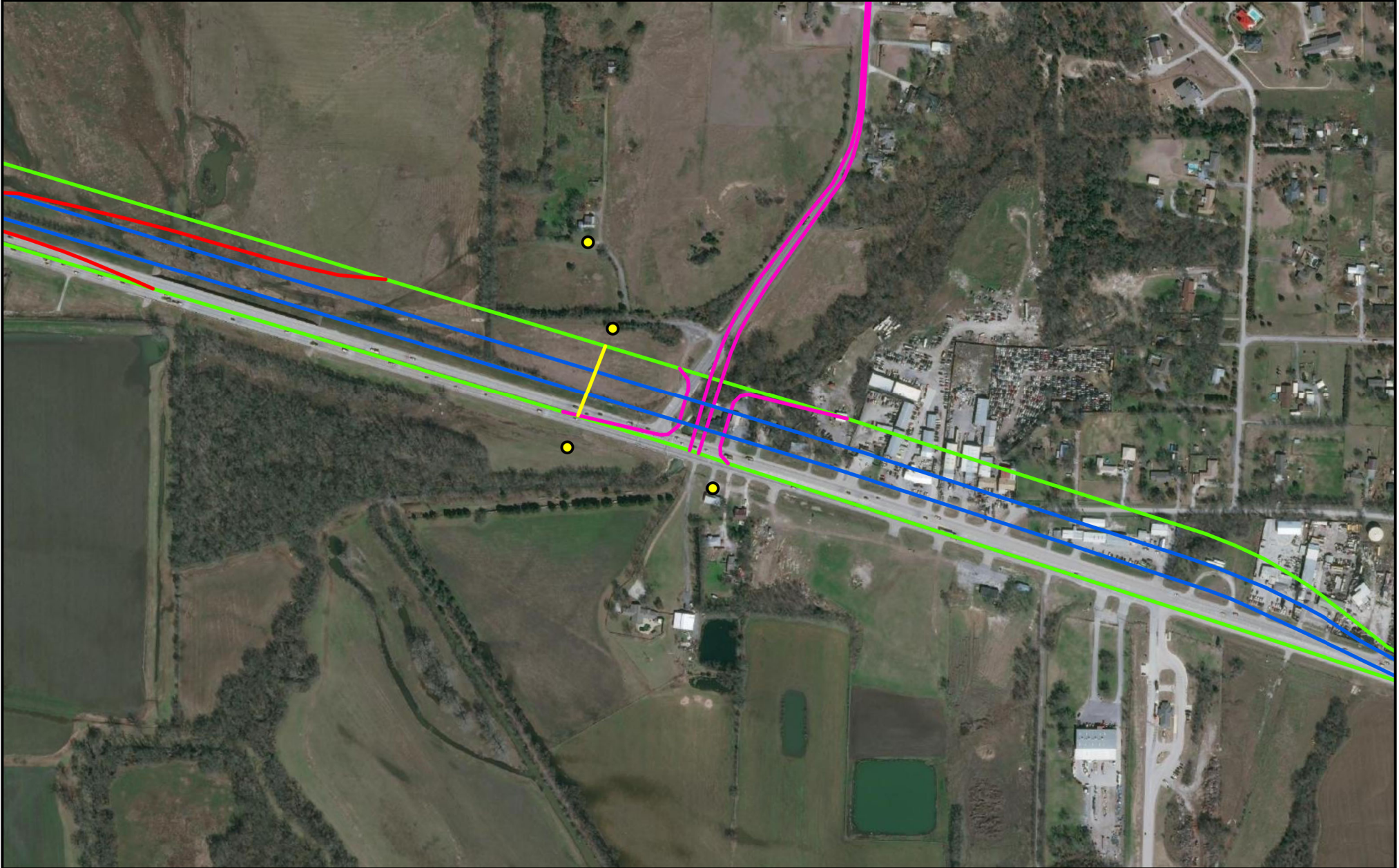


Exhibit 3
Segment C Roadway Cross Sections Analyzed
And Receptors
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County



- Mainlanes
- Frontage Roads
- Local Road
- Ramps
- Receptor Locations
- Cross Section Analyzed

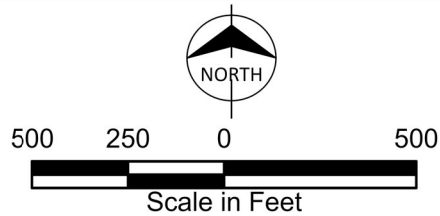


Exhibit 3
Segment D Roadway Cross Sections Analyzed
And Receptors
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

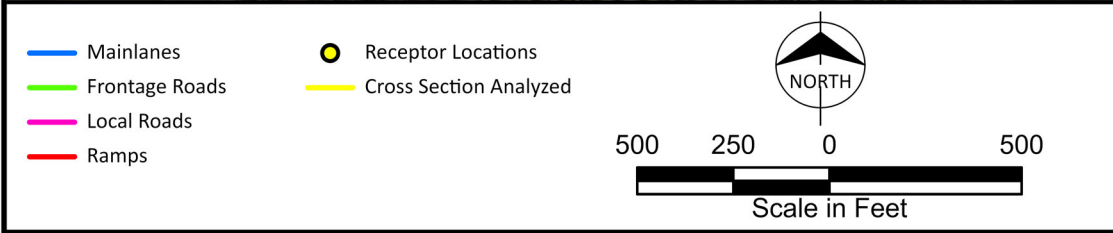
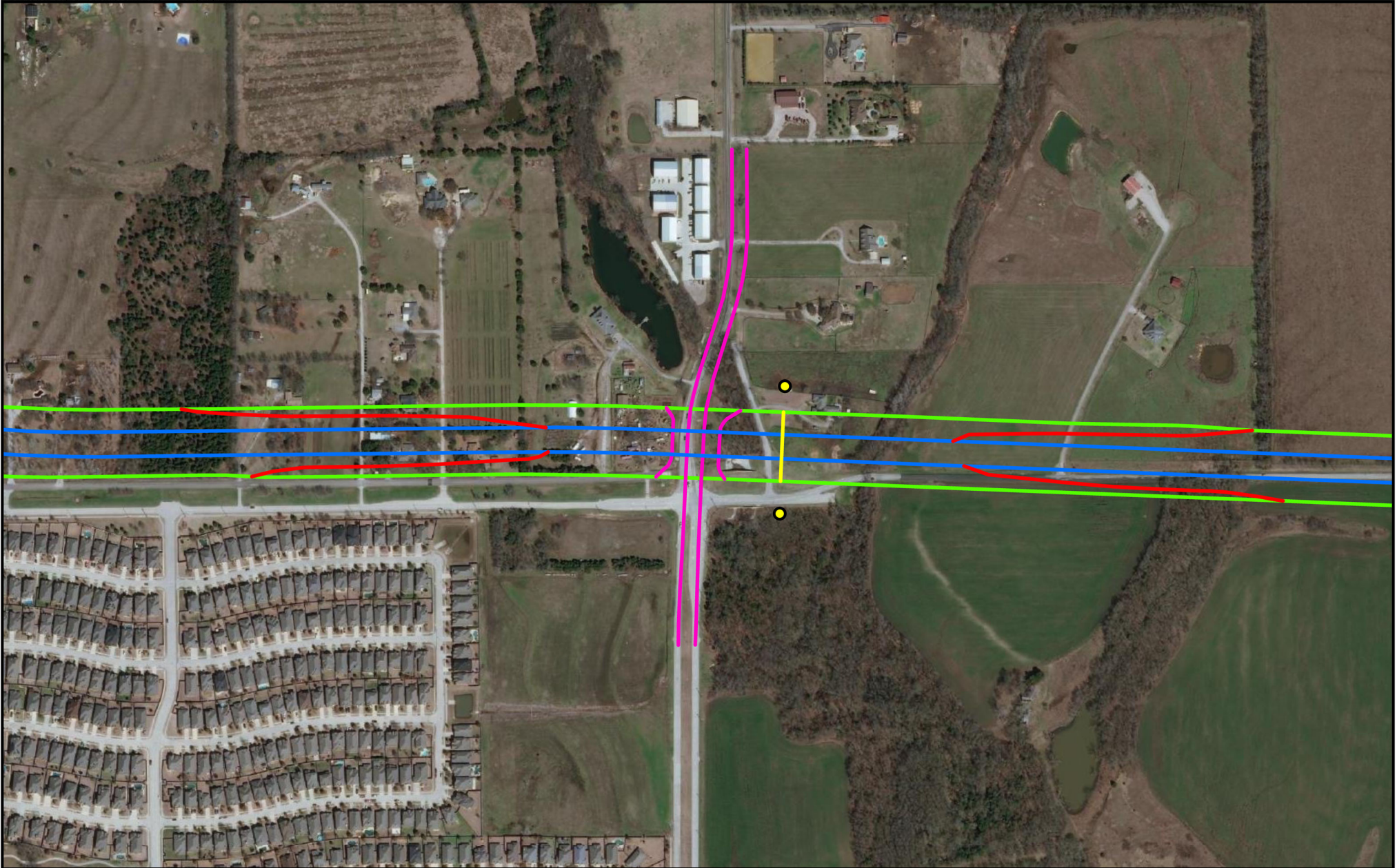


Exhibit 3
Segment E Roadway Cross Section Analyzed
And Receptors
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

ATTACHMENT B: MEETING MINUTES



US 380 McKinney EIS MSAT Conference Call

US 380 EIS - Coit Road to FM 1827

CSJs 0135-02-065, 0135-03-053, 0135-15-002

March 11, 2022

Discussion Agenda



Welcome, Introductions, and Opening Remarks - *Stephen Endres, PE – TxDOT PM and attendees*

TxDOT Invitees:

- Stephen Endres, PE – Dallas District PM
- Christine Polito – Dallas District Environmental Manager
- Dan Perge – Assistant APD Engineer
- Michelle Lueck – ENV Project Delivery Manager
- Tim Wright – Dallas District Traffic Specialist
- Tim Wood – ENV Lead Air Quality Specialist
- Glendora Lopez – ENV Air Quality Subject Matter Expert/Reviewer

NCTCOG Invitees:

- Jeff Neal – Senior Program Manager, Streamlined Project Delivery and Data Management
- Berrien Barks – Program Manager, Roadway Corridor and Subarea Studies
- Samuel Simmons – Senior Transportation Planner, Transportation Planning
- Nathan Drozd – Principal Transportation Planner
- Sandy Wesch, PE, AICP – Principal Transportation Planner

Burns & McDonnell Invitees:

- Josh Robertson, PE – Schematic/Environmental PM
- Shari Cannon-Mackey, CEP, ENV SP – NEPA Lead
- Tess Fuller – Air Quality Lead

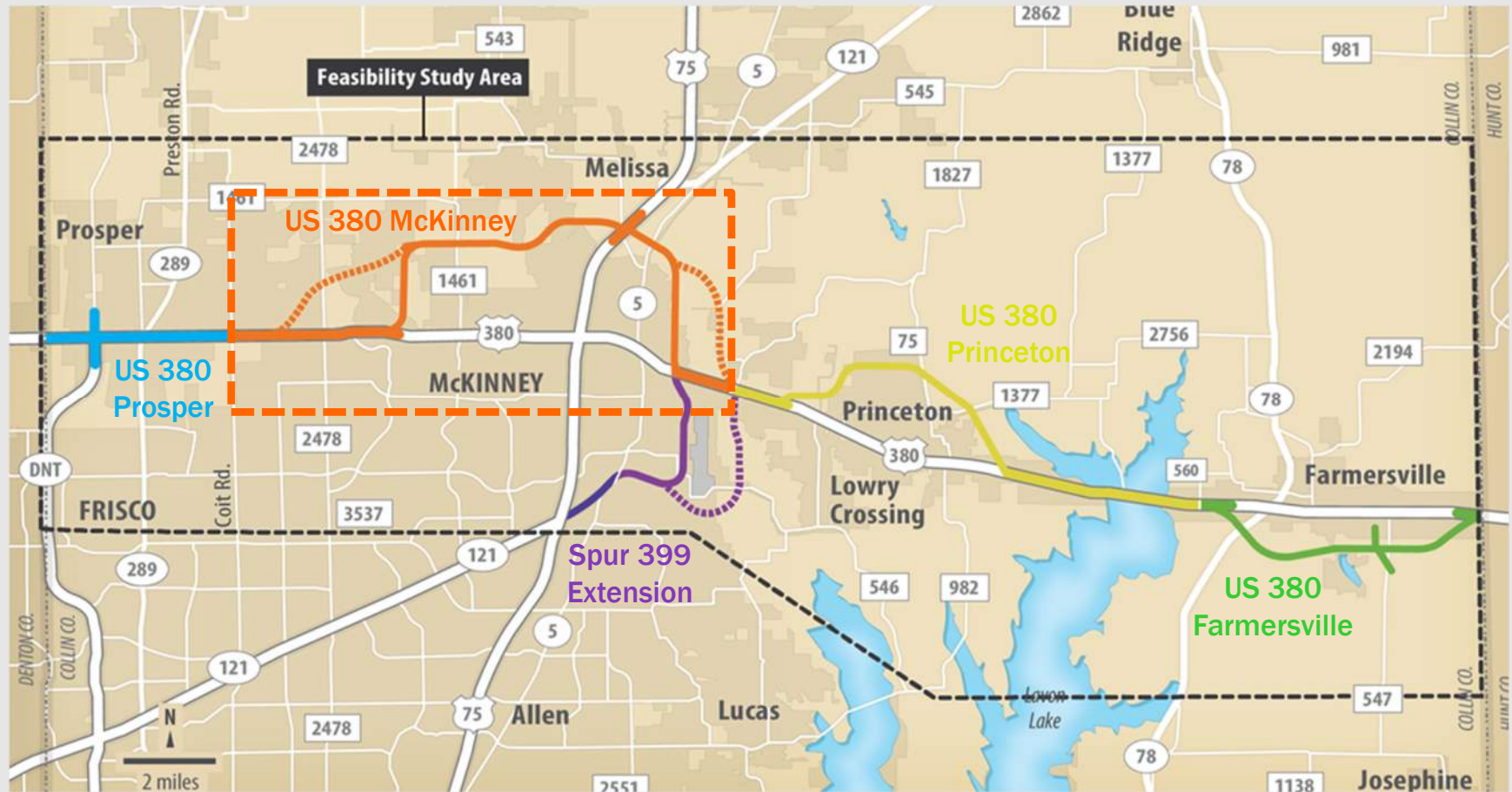
Project Description - *Stephen Endres*

Reason for Initiating the MSAT Conference Call – *Shari Cannon-Mackey – NEPA Lead, Burns & McDonnell*
Josh Robertson, PE – PM, Burns & McDonnell

Status of Current Schematic/Environmental Process for the US 380 McKinney Project
- *Shari Cannon-Mackey / Josh Robertson*

Discussion and Adjournment - *All*

Project Description – US 380 Feasibility Study – 5 Independent Projects



US 380 McKinney – Study Process and Schedule



US 380 McKinney EIS – Coit Road to FM 1827

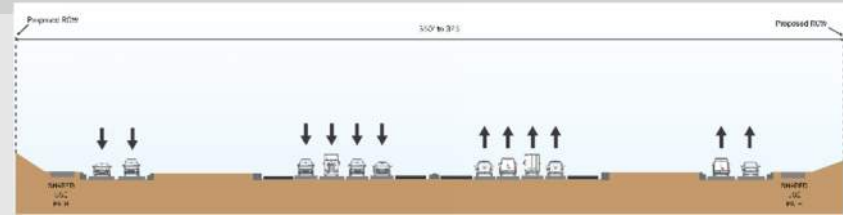
Milestone	Date
Agency Scoping	October 29, 2020
NOI – Published in FR	December 11, 2020
Public Scoping	Jan 21-Feb 5, 2021
Public Meeting	March 22, 2022
Public Hearing*	Fall 2022
ROD (target)*	Spring 2023

**Anticipated timeframes, actual dates to be determined*

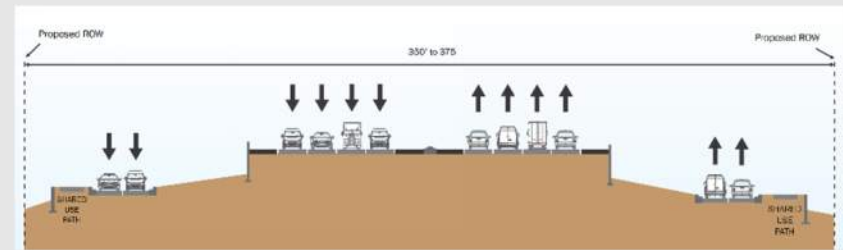
Project Description

US 380 is proposed to be an eight-lane, access-controlled freeway with one-way frontage roads on each side within an anticipated right-of-way width of between 350 to 450 feet depending on location. (Frontage roads may be eliminated, and the primary travel lanes may be depressed/lowered or elevated [on bridge/viaduct] to minimize impacts on sensitive resources). The freeway facility would also include ramps, direct connector roadways, frontage roads, and arterial roadways to support connectivity to the existing roadway network. Grade-separated interchanges would be constructed at major crossroads including US 75/ SH 5 (multi-level interchange), existing US 380 (both project termini), and other major local connectors as determined needed and feasible.

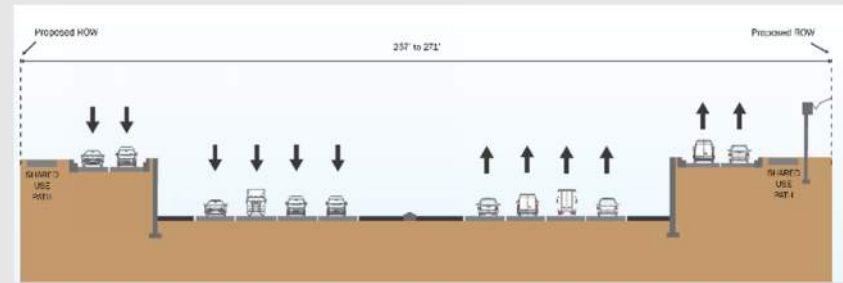
The typical freeway section would consist of: 4 12-foot-wide travel lanes in each direction, 12-foot-wide turn lanes, 10-foot-wide inside shoulders (4-foot-wide may be considered in some locations), and 10-foot-wide outside shoulders. Ramps would be 14 feet-wide with 2-foot-wide inside shoulders and 6-foot-wide outside shoulders, with curb & gutter. Bridges/overpasses along the main lanes would have a desirable vertical clearance of 18.5 feet (minimum of 16.5 feet); vertical clearance over railroads would be 23.5 feet. Ramps, direct connector roadways, frontage roads, and arterial roadway improvements would follow similar design criteria. Median barriers would be included. As the study advances, the following decisions will be made based on location and to minimize impacts if appropriate: bridge/structure type, type/location of permanent/temporary easements, minimum ROW width (compressed sections), locations of depressed/lowered roadway sections, safety lighting/signage/ITS.



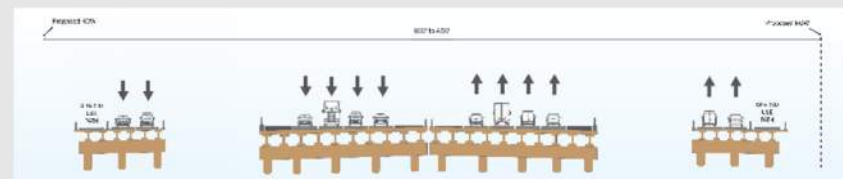
At-Grade
Typical Section



Depressed FR
Typical Section

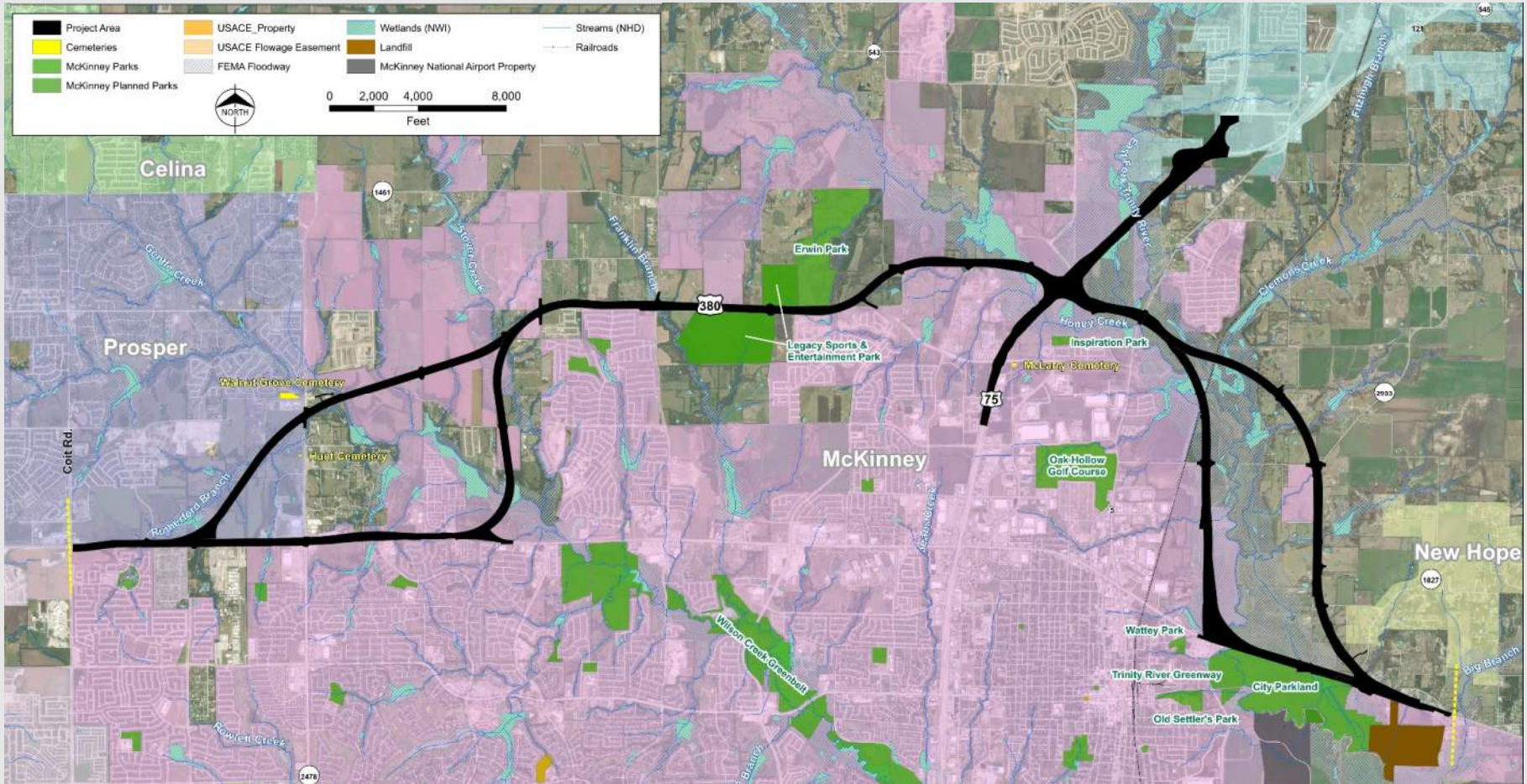


Depressed ML
Typical Section

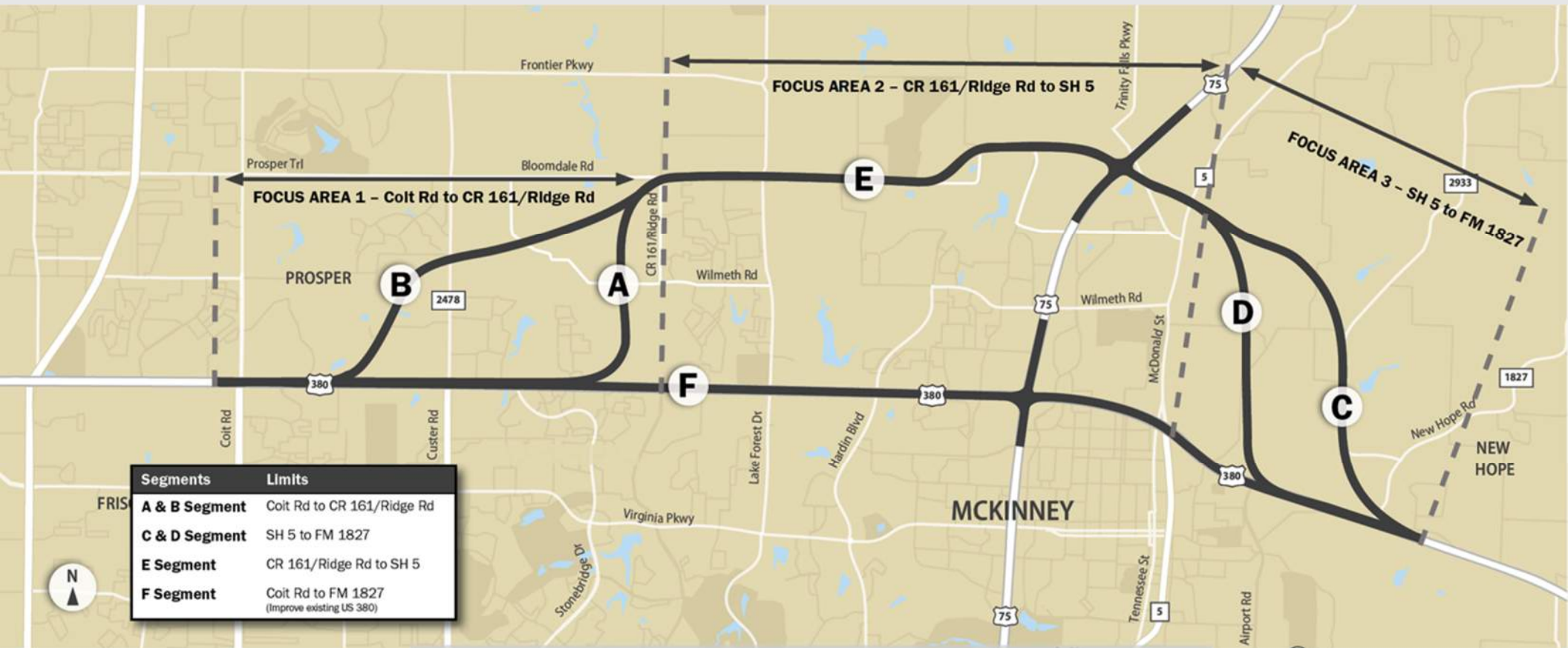


Elevated
Typical Section

US 380 McKinney Study Area

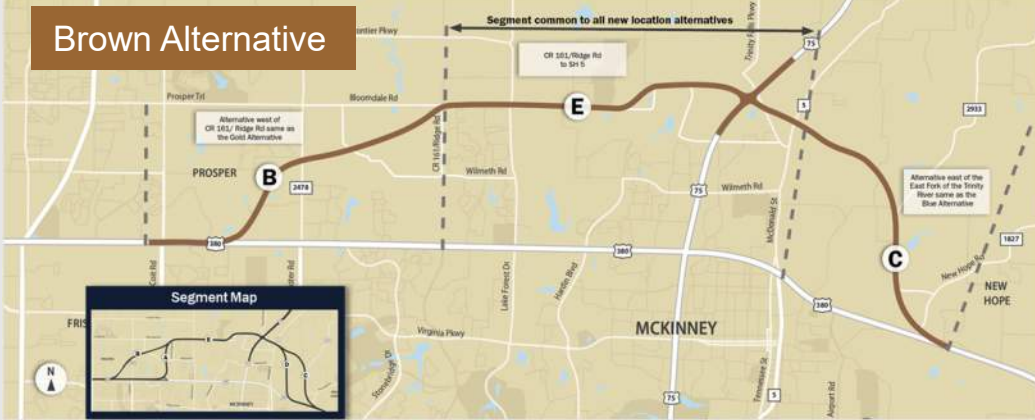


US 380 McKinney – Study Segments



Modifications may continue to be made to the alignments as the study progresses.

US 380 McKinney – End-to-End Alternatives to be Carried Forward



Modifications may continue to be made to the alignments as the study progresses.

US 380 McKinney



Based on findings of the US 380 Feasibility Study - the high number of residential and commercial displacements, the effects on community cohesion and access, and potential impacts to public facilities including parks - improvement of the existing US 380 corridor between Coit Road and FM 1827 is not considered a reasonable alternative and is not being studied further in the EIS.



PURPOSE



MANAGE
CONGESTION



IMPROVE
EAST-WEST MOBILITY



IMPROVE
SAFETY

NEED

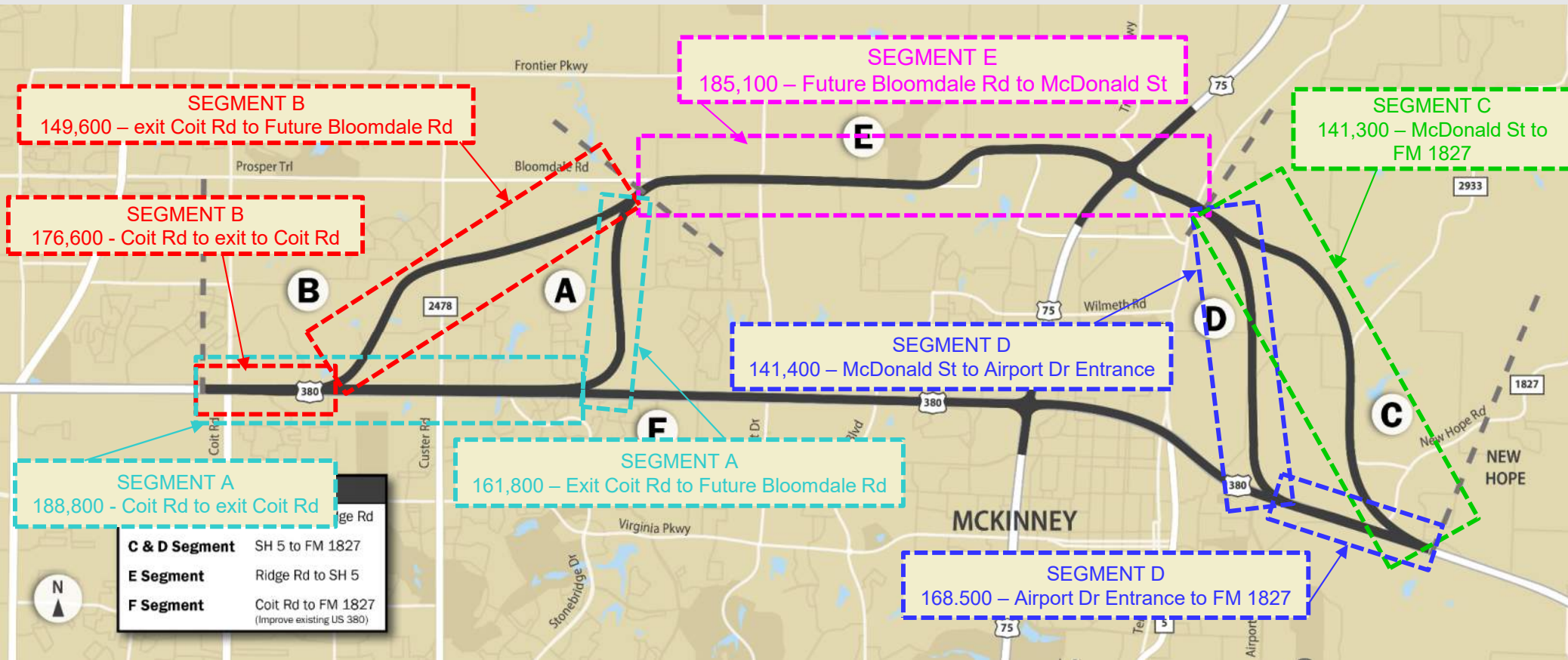
Population growth within the central portion of Collin County has caused increases in current and forecasted traffic volumes that exceed the capacity of US 380 between Coit Road and FM 1827, leading to increased congestion, reduced mobility, and higher crash rates compared to other similar roadways in the region.

US 380 McKinney – Traffic Data

Design Year = 2050



TPP Approved Traffic Volumes (TAHD and ESALs) received 16-FEB-2022



US 380 McKinney – Traffic Data



SEG A	Coit Rd to Exit to Coit Rd	Exit Coit Rd to Future Bloomdale Rd W
MAINLANES	142,900	115,900
FRONTAGE ROADS	45,900	
TOTAL	188,800	161,800

SEG B	Coit Rd to Exit to Coit Rd	Exit Coit Rd to Future Bloomdale Rd W
MAINLANES	142,900	115,900
FRONTAGE ROADS	33,700	
TOTAL	176,600	149,600

SEG C	McDonald St to FM 1827
MAINLANES	109,000
FRONTAGE ROADS	32,300
TOTAL	141,300

SEG D	McDonald St to FM 1827	McDonald St to Entrance from Airport Dr	Entrance from Airport Dr to FM 1827
MAINLANES	130,900		
FRONTAGE ROADS		10,500	37,600
TOTAL		141,400	168,500

SEG E	Future Bloomdale Rd to McDonald St
MAINLANES	137,600
FRONTAGE ROADS	47,500
TOTAL	185,100

- ✓ Letting Year = 2026
- ✓ ETC Year = 2030
- ✓ Design Year = 2050

- ✓ No-Build Traffic Volumes (US 380) 2050:
 - East of US 75 = 89,100 ADT
 - West of US 75 = 114,400 ADT

- ✓ Emission Rate (ERLT) Look-up tables are available for Collin County

- ✓ Methodology to determine VMT

US 380 McKinney – MSAT Quantitative Analysis



- Traffic data
- Obtaining VMT breakdowns for various timeframes
- Obtaining congested speeds for each timeframe
- Anticipated project schedule, including environmental approval date and ETC year
- MSAT analysis base year, design year, interim year (if recommended)
- Emissions model to be used
- MSAT emission rate tables/methodology for developing emission rates

- ✓ Letting Year = 2026
- ✓ ETC Year = 2030
- ✓ Design Year = 2050
- ✓ No-Build Traffic Volumes (US 380) 2050:
 - East of US 75 = 89,100 ADT
 - West of US 75 = 114,400 ADT
- ✓ Emission Rate (ERLT) Look-up tables are available for Collin County
- ✓ Methodology to determine VMT



Additional questions or concerns
regarding the US 380 Project?



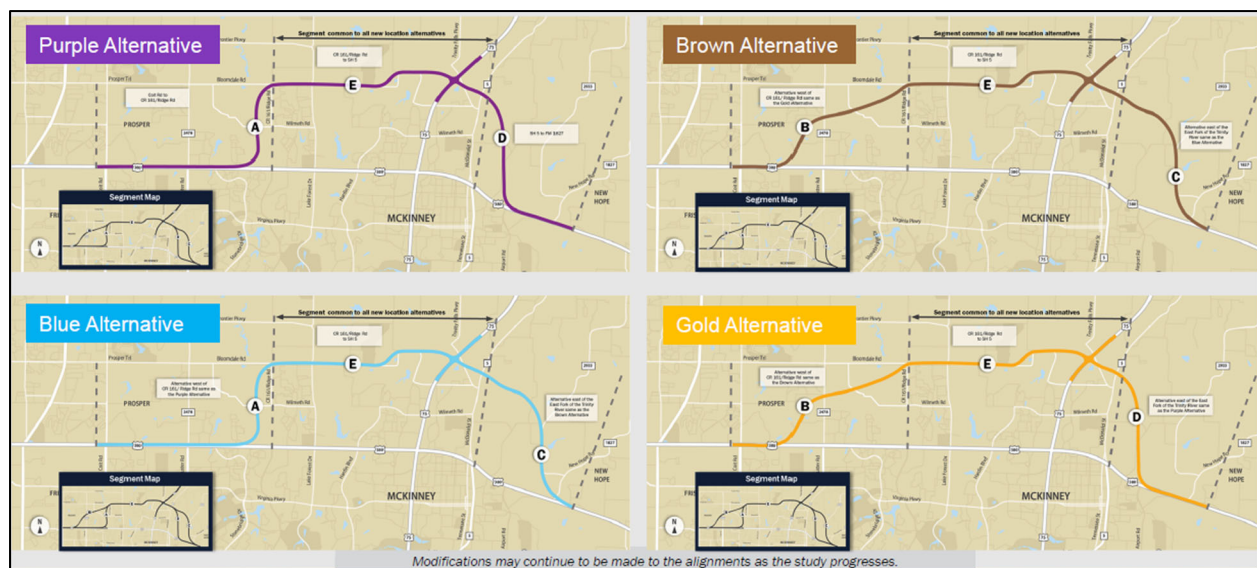
Memorandum



Date: 08/03/2022
To: Glendora Lopez, TxDOT
From: Tess Fuller, Burns & McDonnell
Subject: US 380 CO TAQA Segments to be Analyzed

A Carbon Monoxide Traffic Air Quality Analysis (CO TAQA) is being prepared for the US 380 McKinney Project. The Project is an 8-lane, access-controlled freeway with 2-lane, one-way frontage roads on each side connecting US380 from Coit Road in the west to New Hope Road in the east. Four proposed Build Alternatives are being considered for this route. The Build Alternatives are comprised of the following lettered segments as illustrated in **Figure 1**.

Figure 1 – Build Alternatives



A quantitative CO TAQA is required for projects with FHWA/FTA involvement that add capacity and have an average annual daily traffic (AADT) volume greater than 140,000 vehicles per day (vpd). The US 380 McKinney project has a design year of 2050. In order to determine which of the future-build segments would require modeling for the CO TAQA, cross-sections of the road which included, mainlanes, ramps, and frontage roads were taken between each cross road for each of the five sections. The AADT for each segment included in the cross-section were added for comparison to the 140,000 AADT threshold. The maximum 2050 Build Alternative traffic volumes that occur along segments in the various US 380 2050 Build Alternatives are shown in **Table 1** below. Each cross-section analyzed in summarized in Table A, attached.

08/03/2022

Page 2

Table 1 – Maximum Segment Average Annual Daily Traffic Volumes

Segment	Maximum AADT ^a
A	147,000
B	142,900
C	110,000
D	130,900
E	154,200

(a) AADT = average annual daily traffic in vehicles per day (vpd)

Segments A, B, and E have AADT exceeding 140,000 vpd; therefore, CO TAQA analyses are required for those sections. Segments C and D do not have traffic volumes exceeding 140,000 AADT; therefore, no CO TAQA is required for Segments C or D.

A call between Burns & McDonnell and Texas Department of Transportation (TxDOT) was held on March 11, 2022 to discuss the CO TAQA modelling procedure. It was determined that the CAL3QHC air model would be used in the analysis. TxDOT advised Burns & McDonnell to utilize the Dallas emission rate look up tables (ERLT) to determine CO emission rates for each of the links.

If you have any questions, please contact Shari Cannon-Mackey at 737-787-6683 or scannonmackey@burnsmcd.com or Tess Fuller at 816-894-8190 or tfuller@burnsmcd.com.

TEF

Attachment

Table A-1: Segment A Cross Section Analysis



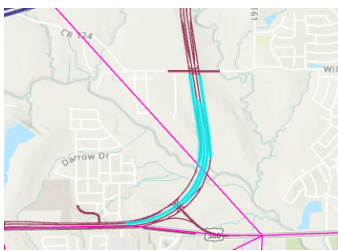

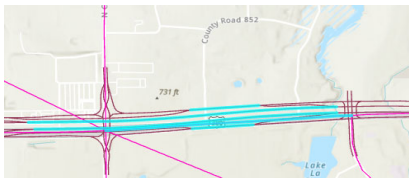
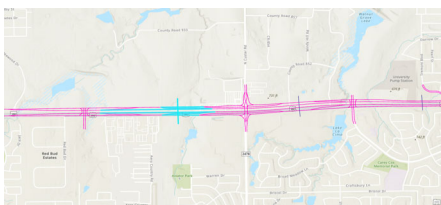
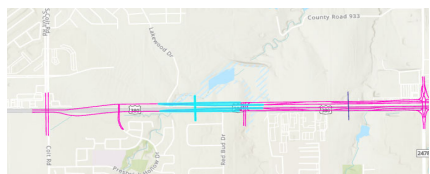
Cross Section	Road Name	2050 AADT	Picture
A-0	WB US 380 Start to CR214 OFR	52900	
	EB CR124 ONR to Lake Forest OFR	54200	
	WB US 380 to Bloomdale U	12500	
	EB Bloomdale U to Ridge	12000	
	Total	131600	
A-1	WB Bloomdale ONR to CR124 U	12100	
	EB CR124 U to Bloomdale OFR	16100	
	WB Bloomdale ONR	7100	
	WB CR124 OFR to Bloomdale ONR	44100	
	EB Bloomdale OFR to CR124 ONR	44200	
	EB Bloomdale OFR	3900	
Total	127500		
A-2	EB CR124 OFR to Exist US 380 ONR	41900	
	WB CR124 U to Exist US 380 OFR	10600	
	WB Exist US380 OFR	10800	
	EB Exist US 380 ONR to CR124 U	13300	
	EB Exist US 380 ONR	6200	
	WB Exist US 380 OFR to Exist US 380 ONR	40400	
Total	123200		
A-3	EB Custer ONR to Exist US 380 OFR	57400	
	WB Tremont to Stonebridge U	16900	
	EB Stonebridge U to Driveway	16400	
	WB Exist US 380 ONR to Custer OFR	57400	
Total	148100		
A-4	WB Custer OFR to Independence OFR	48900	
	EB Independence ONR to Custer ONR	50900	
	EB Custer CD to Custer ONR	23100	
	WB Custer OFR to Custer CD	24100	
Total	147000		
A-5	WB Independence OFR to Custer ONR	42800	
	EB Custer OFR to Independence ONR	43000	
	WB Custer CD to Independence OFR	23200	
	WB Independence OFR	6100	
	EB Independence ONR	7900	
	EB Independence ONR to Custer CD	19900	
Total	142900		
A-6	WB Independence U to Mainlane OFR	14200	
	EB Mainlane ONR to Independence U	12800	
	WB Custer ONR to US 380 WB	57900	
	EB US 380 Start to Custer OFR	58000	
Total	142900		

Table A-2: Segment B Cross Section Analysis





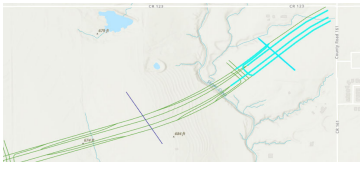
Cross Section	Road Name	2050 AADT	Picture
B-0	EB US 380 Start to Custer OFR	59000	
	WB Custer ONR to WB US 380 Start	57900	
	WB Independence U to Mainlane OFR	14200	
	EB Mainlane ONR to Independence U	11800	
	Total	142900	
B-1	EB University ONR to EB Custer U	10800	
	WB Custer U to WB University OFR	10600	
	EB Custer OFR to EB University ONR	48200	
	WB University OFR to WB Custer ONR	47500	
	EB University ONR	6500	
	WB University OFR	6500	
Total	130100		
B-2	EB Stonebridge OFR to EB Custer ONR	11000	
	WB Custer OFR to WB Stonebridge ONR	13900	
	EB Stonebridge OFR to EB Custer ONR	51600	
	WB Custer OFR to WB Stonebridge ONR	48300	
Total	124800		
B-3	WB Stonebridge OFR to WB Bloomdale ONR	14400	
	EB Bloomdale OFR to EB Stonebridge ONR	51100	
	EB Bloomdale OFR to EB Stonebridge ONR	13100	
	WB Stonebridge OFR to WB Bloomdale ONR	48300	
Total	126900		
B-4	WB Bloomdale U to WB Bloomdale	12300	
	WB US 380 to WB Stonebridge OFR	52900	
	EB Stonebridge ONR to US 380 EB	54200	
	EB Bloomdale U to US 380 EB	12000	
	SB Bloomdale U	200	
Total	131600		

Table A-3: Segment C Cross Section Analysis

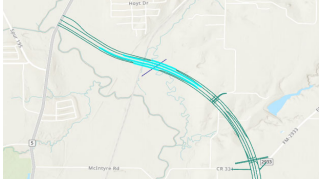
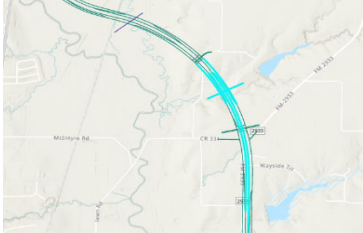


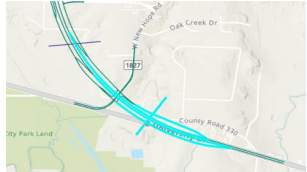
Cross Section	Road Name	2050 AADT	Picture
C-0	EB CR 338 OFR to EB McDonald ONR	43800	
	EB CR 338 OFR to McDonald ONR	10100	
	WB McDonald OFR to WB CR 338 ONR	42200	
	WB McDonald OFR to CR 338 ONR	10600	
	Total	106700	
C-1	EB CR 338 U to CR 331 OFR	2900	
	EB CR 331 OFR to EB CR 331 ONR	40800	
	WB CR 331 OFR to CR 331 ONR	41400	
	EB CR 331 OFR	9900	
	WB CR 331 ONR	4600	
	WB CR 331 ONR to CR 338 U	5900	
Total	105500		
C-2	EB CR 331 OFR to EB CR 331 ONR	40800	
	WB CR 331 OFR to CR 331 ONR	41400	
	EB CR 331 ONR	5700	
	EB CR 331 ONR to U-Turn	9000	
	WB U-Turn to CR 331 OFR	5800	
	WB CR 331 OFR	4500	
Total	107200		
C-3	EB FM 1827 OFR to EB CR 335 ONR	36100	
	WB US 380 Diverge to WB FM1827 ONR	32600	
	EB FM 1827 OFR to CR 335 ONR	20400	
	WB FM1827 ONR	13300	
	WB FM 1827 ONR to FM 2933	7600	
Total	110000		
C-4	EB CR 335 ONR to US 380 EB	37100	
	WB US 380 Diverge to WB FM1827 ONR	32600	
	WB US 380 Diverge to FM 1827 U	25300	
	EB FM 1827 U to US 380 EB Merge	22300	
Total	117300		

Table A-4: Segment D Cross Section Analysis

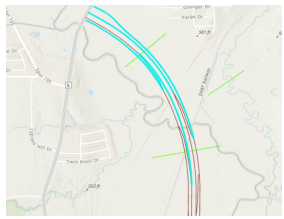
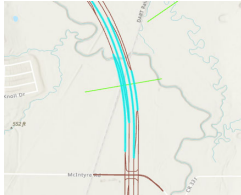
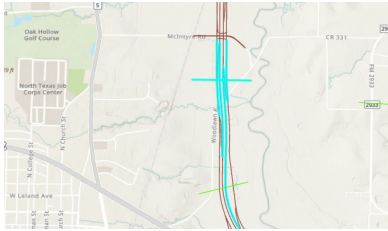

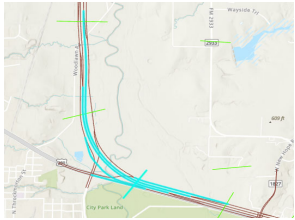
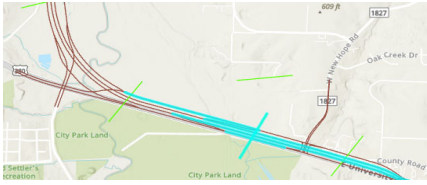
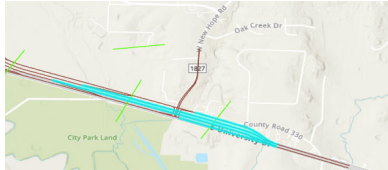
Cross Section	Road Name	2050 AADT	Picture
D-0	EB McIntyre OFR to McDonalds ONR	43100	
	EB McIntyre OFR	3900	
	WB McIntyre ONR to US 380 End	49000	
	EB McDonalds to McIntyre OFR	6900	
	WB McIntyre ONR to US 380 End	3800	
	Total	106700	
D-1	EB McIntyre OFR to McDonalds ONR	43100	
	EB McDonalds ONR	6900	
	WB McDonalds OFR to McIntyre ONR	43800	
	EB McDonalds ONR to McIntyre U	3900	
	WB McDonalds OFR to McIntyre ONR	9000	
	Total	106700	
D-2	EB Airport OFR to McIntyre ONR	41600	
	WB FM 1827 ONR to Airport ONR	41300	
	WB Airport ONR	6300	
	EB McIntyre U to Airport OFR	5800	
	EB Airport OFR	8400	
	EB Airport OFR to McIntyre ONR	14200	
	WB Airport ONR to McIntyre U	4700	
	Total	122300	
D-3	EB McIntyre ONR to FM 1827 OFR	46500	
	WB FM 1827 ONR to Airport ONR	41300	
	EB McIntyre ONR to Airport	9300	
	WB Airport to Airport ONR	11000	
	Total	108100	
D-4	EB McIntyre ONR to FM 1827 OFR	46500	
	WB FM 1827 ONR to Airport ONR	41300	
	EB Airport to US 380 FR	1400	
	Existing University EB-2	18600	
	WB FM 1827 ONR to Airport	23100	
Total	130900		
D-5	EB New Hope OFR to US 380 Merge	40300	
	WB US 380 Diverge to FM 1827 ONR	33800	
	WB FM 1827 ONR	7500	
	EB FM 1827 OFR to New Hope U	26200	
	WB FM 1827 ONR to Airport	23100	
	Total	130900	
D-6	EB New Hope OFR to US 380 Merge	40300	
	WB US 380 Diverge to FM 1827 ONR	33800	
	EB FM 1827 U to US 380 Merge	19100	
	WB US 380 Diverge to FM 1827 U	24100	
	Total	117300	

Table A-5: Segment E Cross Section Analysis

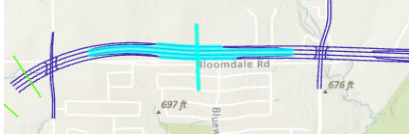

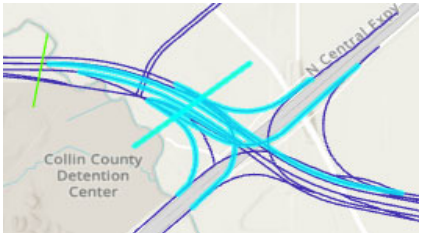


Cross Section	Road Name	2050 AADT	Picture
E-0	EB US 380 to Lake Forest Dr OFR	54200	
	WB Lake Forest Dr ONR to US 380 WB	52900	
	EB Frontage to Ridge Rd U	12000	
	WB Ridge Rd U to Bloomdale Rd W U	12500	
	Total	131600	
E-1	EB Lake Forest Dr OFR to Ridge Rd ONR	22200	
	EB Lake Forest Dr OFR to Ridge Rd ONR	47300	
	WB Ridge Rd OFR to Lake Forest Dr ONR	45200	
	WB Ridge Rd OFR to Lake Forest Dr ONR	25300	
	Total	140000	
E-2	CR 1006 OFR to Lake Forest Dr ONR	21300	
	WB Lake Forest Dr OFR to CR 1006 ONR	20300	
	EB CR 1006 OFR to Lake Forest Dr ONR	55000	
	WB Lake Forest Dr OFR to CR 1006 ONR	57600	
	Total	154200	
E-3	EB Bloomdale Rd E OFR to CR 1006	21100	
	WB CR 1006 OFR to Bloomdale Rd E ONR	22000	
	WB CR 1006 OFR to Bloomdale Rd E ONR	55100	
	EB Bloomdale Rd E OFR to CR 1006 ONR	55000	
	Total	153200	
E-4	EB CR 1006 ONR to Hardin ONR	57800	
	EB Bloomdale Rd E U to Hardin U	9000	
	WB Community Ave ONR to CR 1006 OFR	58500	
	WB CR 201 to Bloomdale Rd E U	9800	
	Total	135100	
E-5	EB CR 1006 ONR to Hardin ONR	57800	
	EB Bloomdale Rd E U to Hardin U	9000	
	WB Community Ave ONR to CR 1006 OFR	58500	
	WB Hardin U to CR 201	9400	
	Total	134700	
E-6	WB US 75 ONR to Hardin OFR	62100	
	EB Hardin ONR to Community Ave U	2300	
	EB Hardin ONR to Trinity Falls Pkwy OFR	66200	
	WB Community Ave U to Community Ave ONR	6600	
	Total	137200	
E-7	EB Community Ave U to Trinity Falls OFR	3300	
	EB Trinity Falls Pkwy OFR	4900	
	EB Trinity Falls Pkwy OFR to US 75 OFR	61300	
	WB US 75 ONR to Hardin OFR	62100	
	WB Trinity Falls Pkwy to Community Ave U	7900	
	Total	139500	

Table A-5: Segment E Cross Section Analysis

Cross Section	Road Name	2050 AADT	Picture
E-8	EB US 75 OFR to Trinity Falls Pkwy ONR	44100	
	WB Trinity Falls Pkwy OFR to US 75 ONR	45400	
	EB DC US 380 to US 75 SB	7100	
	EB DC US 380 to US 75 NB	10100	
	EB Trinity Falls Pkwy ONR to US 380 FR RT	5800	
	EB Trinity Falls Pkwy ONR	3800	
	WB US 380 FR Exit to Trinity Falls Pkwy OFR	2100	
	WB Trinity Falls Pkwy OFR	6200	
	SB DC US 75 to US 380 WB	9800	
	NB DC US 75 to US 380 WB	6900	
	Total	141300	
E-9	EB McDonald St OFR to US 75 ONR	35000	
	WB US 75 OFR to McDonald St ONR	37000	
	EB McDonald St OFR to Mcdonald St	18300	
	EB US 75 ONR	12000	
	WB US 75 OFR	12000	
	WB McDonald St ONR to US 380 FR Exit	3200	
	WB McDonalds St ONR	14600	
	Total	132100	
E-10	EB US 75 ONR to US 380 EB	47000	
	WB US 380 to US 75 OFR	49000	
	EB McDonald St to CR 338 OFR	6900	
	WB Frontage to McDonald St	3800	
	Total	106700	

From: [Glendora Lopez](#)
To: [Cannon-Mackey, Shari](#); [Christine Polito](#); [Tim Wood](#)
Cc: [Fuller, Tess](#); [Robertson, Josh R](#); [Michelle Lueck](#)
Subject: RE: 0135-02-065 US 380 McKinney CO TAQA Memo Confirming Segments for Modeling
Date: Thursday, August 4, 2022 2:48:00 PM

Good afternoon Shari and Tess,

I have read through the memorandum and understand the alternatives C and D do not contain segments that exceed the 140,000 vpd threshold to trigger a CO-TAQA. However, I would recommend evaluating all alternatives similarly so there is no claim that the alternatives were evaluated differently or inconsistently.

Thank you,

Glendora Lopez
TxDOT ENV
512-840-9720

From: Cannon-Mackey, Shari <scannonmackey@burnsmcd.com>
Sent: Thursday, August 4, 2022 1:21 PM
To: Glendora Lopez <Glendora.Lopez@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Cc: Fuller, Tess <tfuller@burnsmcd.com>; Robertson, Josh R <jrrobertson@burnsmcd.com>; Michelle Lueck <Michelle.Lueck@txdot.gov>
Subject: 0135-02-065 US 380 McKinney CO TAQA Memo Confirming Segments for Modeling

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Glendora/Christine –

Please see the attached memo providing the AADT volumes used to determine the segments to be modeled in the CO TAQA. Based on the traffic data generated for the air quality analyses, Segments C and D on the east end of the study area do not exceed the 140,000 vpd threshold, so the CO TAQA will show modeling results for Segments A, B, and E. In our initial discussions and during the MSAT Conference call, we indicated, based on the data from the ESALs that all study segments exceeded the threshold.

Please let us know if you have any questions. We are proceeding with the CO TAQA and wanted to share this update prior to its submittal.

Shari Cannon-Mackey, CEP, ENV SP
Burns & McDonnell
O 737-787-6683 \ M 512-750-2475

ATTACHMENT C: MODELING INFORMATION

Table C-1a: Additional CALQ3HC Modeling Parameters for CO TAQA Quantitative Analysis- Segment A

Road Type	Road Name	Model Road Name	2030 Peak Traffic Count (veh/hr)	2030 Speed (mph)	2030 CO Emission Factor (gram/mile)	2050 Peak Traffic Count (veh/hr)	2050 Speed (mph)	2050 CO Emission Factor (gram/mile)	Barrier Segment Types	Number of Lanes	Mixing Width (feet)
Mainlanes	WB Exist US 380 OFR to Exist US 380 ONR	WB US380 A West	2,420	70	1.332	3,610	70	0.842	BR, FL, AG, DP	4	58
Mainlanes	WB Exist US 380 ONR to Custer OFR	WB US380 A East	3,200	69	1.282	4,810	69	0.807	BR, FL, AG, DP	4	58
Mainlanes	EB Custer ONR to Exist US 380 OFR	EB US380 A East	3,420	67	1.177	5,230	67	0.734	BR, FL, AG, DP	4	58
Mainlanes	EB Exist US 380 OFR to CR124 OFR	EB US380 A West	2,940	68	1.230	4,440	68	0.771	AG, FL, BR	4	58
Ramps	WB Exist US 380 ONR	WB US380 A ONR	1,000	43	0.989	1,520	43	0.581	DP	1	22
Ramps	EB Exist US 380 OFR	EB US380 A OFR	740	58	0.963	1,150	58	0.577	BR, AG	1	22
Frontage Roads	EB Stonebridge to Stonebridge U	EB US380A Front1	980	44	1.017	1,480	44	0.593	DP	2	32
Frontage Roads	EB Stonebridge U to Driveway	EB US380A Front2	990	43	1.027	1,500	43	0.598	AG, BR	2	32
Frontage Roads	EB Driveway to Exist US 380 U	EB US380A Front3	780	44	1.017	1,180	44	0.593	DP	2	32
Frontage Roads	EB Exist US 380 U to Exist US 380	EB US380A Front4	770	13	1.851	1,160	13	1.043	DP	2	32
Frontage Roads	WB Exist US 380 to Exist US 380 U	WB US380A Front1	2,040	30	1.260	3,100	30	0.715	AG	2	32
Frontage Roads	WB Exist US 380 ONR to Tremont	WB US380A Front2	1,060	43	0.989	1,610	43	0.581	AG	2	32
Frontage Roads	WB Tremont to Stonebridge U	WB US380A Front3	1,040	43	1.027	1,590	43	0.598	AG	2	32
Frontage Roads	WB Stonebridge U to Stonebridge	WB US380A Front4	1,030	15	1.789	1,570	15	1.014	AG	2	32
Local Road	Tremont SB	SB Tremont	210	12	1.889	330	12	1.061	AG	1	22
Local Road	Tremont NB	NB Tremont	220	25	1.285	330	25	0.708	AG	1	22
Local Road	Driveway SB	SB Driveway	210	31	1.237	320	31	0.703	AG	1	22
Local Road	Driveway NB**	NB Driveway	210	31	1.237	320	31	0.703	AG	1	22
Local Road	Stonebridge SB-1	SB Stonebridge N	760	13	1.851	1,170	13	1.043	AG	3	46
Local Road	Stonebridge SB-2	SB Stonebridge M	860	18	1.660	1,280	18	0.941	AG	3	46
Local Road	Stonebridge SB-3	SB Stonebridge S	920	38	1.096	1,390	38	0.632	AG	3	46
Local Road	Stonebridge NB-3	NB Stonebridge N	900	38	1.096	1,380	38	0.632	AG	3	46
Local Road	Stonebridge NB-2	NB Stonebridge M	920	17	1.698	1,410	17	0.963	AG	3	46
Local Road	Stonebridge NB-1	NB Stonebridge S	910	6	2.393	1,360	6	1.300	AG	3	46
Local Road	Stonebridge SB U	Stonebridge U	10	19	1.626	20	19	0.922	AG	1	22
Local Road	Exist US 380 SB-1	SB University N	440	6	2.393	670	6	1.300	AG	2	34
Local Road	Exist US 380 SB-2	SB University M	480	42	1.038	730	42	0.603	AG	2	34
Local Road	Exist US 380 SB-3	SB University S	1,220	54	1.014	1,880	54	0.611	AG	2	34
Local Road	Exist US 380 NB U	University U	20	20	1.595	30	20	0.904	AG	2	34
Local Road	Exist US 380 NB-2	NB University N	1,120	10	1.988	1,710	10	1.107	AG	2	34
Local Road	Exist US 380 NB-1	NB University S	1,280	27	1.274	1,960	27	0.711	AG	2	34

**Traffic information provided by HDR, Inc indicated zero traffic on this road. The southbound direction of this roadway was used to approximate the traffic on this road segment.

Table C-1b: Queuing Information Used in CO TAQA Quantitative Analysis- Segment A

Queuing Road Name	Idle Emission Factor		VPH		Mixing Zone Width	# of Queue Lanes	Link Type	Average Total Signal Cycle Length	Ave Red Total Signal Cycle Length	Clearnace lost time	Saturation Flow Rate ^A	Signal Type ^A	Arrival Rate ^A
	2030	2050	2030	2050									
NB Stonebridge S	1.435	0.532	910	1,360	46	3	'AG'	90	50	2	1,600	1	3
NB Stonebridge M	1.435	0.532	920	1,410	46	3	'AG'	90	50	2	1,600	1	3
SB Stonebridge N	1.435	0.532	760	1,170	46	3	'AG'	90	50	2	1,600	1	3
SB Stonebridge M	1.435	0.532	860	1,280	46	3	'AG'	90	50	2	1,600	1	3
WB US380A Front4	1.435	0.532	1,030	1,570	32	2	'AG'	90	40	2	1,600	1	3
WB US380A Front2	1.435	0.532	1,060	1,610	32	2	'AG'	90	40	2	1,600	1	3
SB Tremont	1.435	0.532	210	330	22	1	'AG'	90	50	2	1,600	1	3
EB US380A Front2	1.435	0.532	990	1,500	32	2	'AG'	90	40	2	1,600	1	3
NB Driveway	1.435	0.532	210	320	22	1	'AG'	90	50	2	1,600	1	3
EB US380A Front4	1.435	0.532	770	1,160	32	2	'DP'	90	40	2	1,600	1	3
NB University N	1.435	0.532	1,120	1,710	34	2	'AG'	90	50	2	1,600	1	3
NB University S	1.435	0.532	1,280	1,960	34	2	'AG'	90	50	2	1,600	1	3
SB University N	1.435	0.532	440	670	34	2	'AG'	90	50	2	1600	1	3

(a) default values

Table C-2a: Additional CALQ3HC Modeling Parameters for CO TAQA Quantitative Analysis- Segment B

Road Type	Road Name	Model Road Name	Traffic Count	Speed (mph)	Emission Factor	Traffic Count	Speed (mph)	Emission Factor	Barrier Segment Types	Number of Lanes	Segment Length (feet)	Mixing Width (feet)
Frontage Roads	WB Mainlane OFR to Prestwick Hollow	WB US380 B West	3,980	44	1.017	6,100	44	0.593	AG	4	1,061	58
Mainlanes	WB Custer ONR to WB US 380 Start	WB US 380 B	3,380	59	0.964	5,180	59	0.579	BR, FL, AG	4	4,391	58
Frontage Roads	EB Prestick Hollow to Mainlane ONR**	EB US380B West	4,040	45	1.007	6,180	45	0.589	AG	3	1,163	46
Mainlanes	EB US 380 Start to Custer OFR	EB US 380 B	3,500	68	1.230	5,280	68	0.771	AG, FL, BR	4	4,256	58
Frontage Roads	WB University to WB Independence	WB US380B Front1	670	40	1.061	1,040	40	0.613	BR, FL	2	1,480	32
Frontage Roads	WB Independence to Independence U	WB US380B Front2	690	43	1.027	1,030	43	0.598	AG	2	97	32
Frontage Roads	WB Independence U to Mainlane OFR	WB US380B Front3	710	43	1.027	1,060	43	0.598	AG, BR	2	2,225	32
Frontage Roads	EB Mainlane ONR to Independence U	EB US380B Front1	720	45	1.007	1,120	45	0.589	AG	2	2,215	32
Frontage Roads	EB Independence U to Independence	EB US380B Front2	710	45	1.007	1,100	45	0.589	AG	4	114	54
Frontage Roads	EB Independence U to EB University	EB US380B Front3	680	32	1.215	1,060	32	0.692	BR, AG	2	1,560	32
Local Road	University SB-1	SB University N	280	6	2.393	440	6	1.300	AG	3	254	46
Local Road	University SB-2	SB University M	870	42	1.038	1,370	42	0.603	AG	3	1,121	46
Local Road	University SB-3	SB University S	980	53	1.010	1,540	53	0.607	AG	3	1,797	46
Local Road	University NB-1	NB University S	780	54	1.014	1,180	54	0.611	AG	3	1,774	46
Local Road	University NB-2	NB University M	540	4	2.901	850	4	1.542	AG	3	1,116	46
Local Road	University NB-3	NB University N	520	17	1.698	830	17	0.963	AG	2	253	34
Local Road	Prestwick Hollow SB-2**	SB Prestwick N	170	26	1.279	270	26	0.710	AG	2	566	34
Local Road	Prestwick Hollow SB-1**	SB Prestwick S	120	11	1.934	200	11	1.082	AG	1	254	22
Local Road	Prestwick Hollow NB-2**	NB Prestwick N	150	14	1.818	210	14	1.027	AG	1	253	22
Local Road	Prestwick Hollow NB-1**	NB Prestwick S	140	11	1.934	200	11	1.082	AG	3	332	46
Local Road	Independence SB-1	SB Indep N	120	11	1.934	200	11	1.082	AG	2	238	46
Local Road	Independence SB-2	SB Indep M	170	26	1.279	270	26	0.710	AG	4	278	46
Local Road	Independence SB-3	SB Indep S	380	28	1.269	560	28	0.712	AG	3	218	46
Local Road	Independence NB-1	NB Indep S	230	25	1.285	350	25	0.708	AG	3	218	46
Local Road	Independence NB-2	NB Indep M	150	14	1.818	210	14	1.027	AG	3	290	44
Local Road	Independence NB-3	NB Indep N	140	11	1.934	200	11	1.082	AG	2	238	44
Local Road	EB Connector Independence to University	WB Connector	260	29	1.264	370	29	0.713	AG	2	1,939	34
Local Road	EB Connector Independence to University	EB Connector	130	27	1.274	220	27	0.711	AG	2	1,957	34

**Traffic information provided by HDR, Inc indicated zero traffic on this road. Similar roadway segment data was utilized to approximate the traffic data on these roads.

Table 4-2b: Queuing Information Used in CO TAQA Quantitative Analysis- Segment B

Queuing Road Name	Idle Emission Factor		VPH		Mixing Zone Width	# of Queue Lanes	Link Type	Average Total Signal Cycle Length	Ave Red Total Signal Cycle Length	Clearnace lost time	Saturation Flow Rate ^A	Signal Type ^A	Arrival Rate ^A
	2030	2050	2030	2050									
NB Prestwick S	1.435	0.532	140	200	34	2	'AG'	90	50	2	1,600	1	3
NB Prestwick N	1.435	0.532	150	210	22	1	'AG'	90	50	2	1,600	1	3
SB Prestwick S	1.435	0.532	120	200	22	1	'AG'	90	50	2	1,600	1	3
EB US380B Front2	1.435	0.532	710	1,100	54	4	'AG'	90	40	2	1,600	1	3
NB Indep M	1.435	0.532	150	210	44	3	'AG'	90	50	2	1,600	1	3
NB Indep N	1.435	0.532	140	200	44	2	'AG'	90	50	2	1,600	1	3
SB Indep N	1.435	0.532	120	200	46	2	'AG'	90	50	2	1,600	1	3
WB US380B Front1	1.435	0.532	670	1,040	43	3	'FL'	90	40	2	1,600	1	3
WB US380 B West	1.435	0.532	3,980	6,100	58	4	'AG'	90	40	2	1,600	1	3
EB US380B Front3	1.435	0.532	680	1,060	54	4	'AG'	90	40	2	1,600	1	3
SB University N	1.435	0.532	280	440	46	3	'AG'	90	50	2	1,600	1	3
NB University M	1.435	0.532	540	850	46	3	'AG'	90	50	2	1,600	1	3
NB University N	1.435	0.532	520	830	34	2	'AG'	90	50	2	1,600	1	3
NB University S	1.435	0.532	780	1,180	46	3	'AG'	90	50	2	1,600	1	3
SB University M	1.435	0.532	870	1,370	46	3	'AG'	90	50	2	1,600	1	3
SB Indep M	1.435	0.532	170	270	46	4	'AG'	90	50	2	1,600	1	3
WB Connector	1.435	0.532	260	370	34	2	'AG'	90	40	2	1,600	1	3
EB Connector	1.435	0.532	130	220	34	2	'AG'	90	40	2	1,600	1	3
NB Indep S	1.435	0.532	230	350	46	3	'AG'	90	50	2	1,600	1	3

(a) default values

Table C-3a: Additional CALQ3HC Modeling Parameters for CO TAQA Quantitative Analysis- Segment C

Road Type	Road Name	Model Road Name	2030 Peak Traffic Count (veh/hr)	2030 Speed (mph)	2030 CO Emission Factor (gram/mile)	2050 Peak Traffic Count (veh/hr)	2050 Speed (mph)	2050 CO Emission Factor (gram/mile)	Barrier Segment Types	Number of Lanes	Mixing Width (feet)
Frontage Roads	EB FM 1827 OFR to CR 335 ONR	EB Front 1	1,300	45	1.007	1,910	45	0.589	AG	3	43
Frontage Roads	EB CR 335 ONR to FM1827 U	EB Front 2	1,230	44	1.017	1,820	44	0.593	AG	3	43
Frontage Roads	EB FM 1827 U to FM1827	EB Front 3	1,200	13	1.851	1,770	13	1.043	AG	5	65
Frontage Roads	EB FM 1827 to FM 1827 U	EB Front 4	1,350	40	1.061	2,050	40	0.613	AG	2	32
Frontage Roads	EB FM 1827 U to US 380 EB Merge	EB Front 5	1,360	40	1.061	2,070	40	0.613	AG	3	43
Mainlanes	EB FM 1827 OFR to EB CR 335 ONR	EB US380C West	2,140	71	1.434	3,360	71	0.911	AG	3	46
Mainlanes	EB CR 335 ONR to US 380 EB	EB US380C East	2,210	69	1.282	3,450	69	0.807	AG, BR	4	58
Frontage Roads	EB US 380 Merge to Existing US 380	EB Exist US380	3,570	62	1.104	5,520	62	0.683	AG	4	58
Ramps	EB CR 335 ONR	EB US380C ONR	80	47	0.974	110	47	0.576	AG	1	24
Local Road	FM 1827 U NB	West U	30	22	1.454	50	22	0.815	AG	1	24
Local Road	FM 1827 SB U	East U	10	19	1.626	20	19	0.922	AG	1	24
Ramps	WB FM1827 ONR	WB US380C ONR	840	45	0.979	1,250	45	0.578	AG	1	24
Frontage Roads	WB Existing US 380 to US 380 Diverge	WB Exist US80	3,510	63	1.123	5,270	63	0.697	AG	4	58
Mainlanes	WB US 380 Diverge to WB FM1827 ONR	WB US380C West	2,100	69	1.282	3,150	69	0.807	AG, BR	3	46
Mainlanes	WB FM1827 ONR to CR 331 OFR	WB US380C East	2,940	69	1.282	4,400	69	0.807	AG	4	58
Frontage Roads	WB US 380 Diverge to FM 1827 U	WB Front 1	1,410	44	1.017	2,120	44	0.593	AG	2	34
Frontage Roads	WB FM 1827 U to FM 1827	WB Front 2	1,400	10	1.988	2,100	10	1.107	AG	6	82
Frontage Roads	WB FM 1827 to FM 1827 U	WB Front 3	1,250	41	1.049	1,870	41	0.608	AG	3	46
Frontage Roads	WB FM 1827 U to FM 1827 ONR	WB Front 4	1,270	41	1.049	1,910	41	0.608	AG	3	46
Frontage Roads	WB FM 1827 ONR to FM 2933	WB Front 5	510	44	1.017	690	44	0.593	AG	3	46
Local Road	University Dr NB-1	NB University	1,280	31	1.237	1,920	31	0.703	AG	3	46
Local Road	FM 1827 NB-2	NB FM1827 S	910	16	1.741	1,290	16	0.987	AG	3	46
Local Road	FM 1827 NB-3	NB FM1827 N	650	36	1.135	850	36	0.652	AG	2	34
Local Road	FM 1827 SB-1	SB FM1827 N	570	8	2.140	850	8	1.179	AG	3	46
Local Road	FM 1827 SB-2	SB FM1827 S	900	23	1.393	1,340	23	0.776	AG	3	46
Local Road	University Dr SB-3	SB University	1,140	44	1.017	1,720	44	0.593	AG	3	46

Table C-3b: Queuing Information Used in CO TAQA Quantitative Analysis- Segment C

Queuing Road Name	Idle Emission Factor		VPH		Mixing Zone Width	# of Queue Lanes	Link Type	Average Total Signal Cycle Length	Ave Red Total Signal Cycle Length	Clearnace lost time	Saturation Flow Rate ^A	Signal Type ^A	Arrival Rate ^A
	2030	2050	2030	2050									
SB FM1827 N	1.435	0.532	570	850	46	3	'AG'	90	50	2	1,600	1	3
SB FM1827 S	1.435	0.532	900	1,340	46	3	'AG'	90	50	2	1,600	1	3
NB FM1827 S	1.435	0.532	910	1,290	46	3	'AG'	90	50	2	1,600	1	3
NB University	1.435	0.532	1,280	1,920	46	3	'AG'	90	50	2	1,600	1	3
WB Front 2	1.435	0.532	1,400	2,100	58	4	'AG'	90	40	2	1,600	1	3
EB Front 3	1.435	0.532	1,200	1,770	43	3	'AG'	90	40	2	1,600	1	3

(a) default values

Table C-4a: Additional CALQ3HC Modeling Parameters for CO TAQA Quantitative Analysis- Segment D

Road Type	Road Name	Model Road Name	2030 Peak Traffic Count (veh/hr)	2030 Speed (mph)	2030 CO Emission Factor (gram/mile)	2050 Peak Traffic Count (veh/hr)	2050 Speed (mph)	2050 CO Emission Factor (gram/mile)	Barrier Segment Types	Number of Lanes	Mixing Width (feet)
Frontage Roads	EB Airport to US 380 FR	EB US380D Front1	80	45	1.007	120	45	0.589	FL, BR, AG	2	32
Frontage Roads	EB US 380 FR to FM 1827 OFR	EB US380D Front2	1,260	59	1.056	1,810	59	0.647	AG, BR	4	54
Frontage Roads	EB FM 1827 OFR to New Hope U	EB US380D Front3	1,640	59	1.056	2,350	59	0.647	BR, AG	4	54
Frontage Roads	EB FM 1827 U to FM 1827	EB US380D Front4	1,630	35	1.157	2,330	35	0.663	AG	5	65
Frontage Roads	EB FM 1827 to FM 1827 U	EB US380D Front5	1,130	56	1.027	1,630	56	0.624	AG	2	32
Frontage Roads	EB FM 1827 U to US 380 Merge	EB US380D Front6	1,140	56	1.027	1,650	56	0.624	AG	2	32
Mainlanes	EB McIntyre ONR to FM 1827 OFR	EB US380D West	2,810	69	1.282	4,410	69	0.807	BR	3	46
Mainlanes	EB New Hope OFR to US 380 Merge	EB US380D East	2,430	67	1.177	3,870	67	0.734	BR, FL, AG	3	46
Frontage Roads	EB US 380 Merge to Existing US380 EB	EB US380 Exist	3,570	64	1.141	5,520	64	0.710	AG	2	34
Frontage Roads	WB Existing US 380 to US 380 Diverge	WB US380 Exist	3,510	42	1.038	5,270	42	0.603	AG	2	34
Mainlanes	WB US 380 Diverge to FM 1827 ONR	WB US380D East	2,090	53	0.960	3,150	53	0.572	AG, FL, BR	2	34
Mainlanes	WB FM 1827 ONR to Airport ONR	WB US380D West	2,610	59	0.964	3,900	59	0.579	BR	3	46
Frontage Roads	WB US 380 Diverge to FM 1827 U	WB US380D Front1	1,420	56	1.027	2,120	56	0.624	AG	1	21
Frontage Roads	WB FM 1827 U to FM 1827	WB US380D Front2	1,410	17	1.698	2,100	17	0.963	AG	2	32
Frontage Roads	WB FM 1827 to FM 1827 U	WB US380D Front3	1,910	52	1.006	2,830	52	0.603	AG	3	43
Frontage Roads	WB FM 1827 U to FM 1827 ONR	WB US380D Front4	1,920	52	1.006	2,850	52	0.603	AG	3	43
Frontage Roads	WB FM 1827 ONR to Airport	WB US380D Front5	1,400	59	1.056	2,100	59	0.647	AG, BR	3	43
Frontage Roads	WB US 380 FR to Airport	WB US380D Front6	270	60	1.065	400	60	0.654	BR, AG	2	32
Ramps	EB FM 1827 OFR	EB US380D OFR	380	64	1.047	540	64	0.642	BR	1	21
Local Road	FM 1827 NB U	West U	10	21	1.522	20	21	0.858	AG, BR	1	21
Local Road	FM 1827 SB U	East U	10	19	1.626	20	19	0.922	BR,AG	1	21
Ramps	WB FM 1827 ONR	WB US380D ONR	520	58	0.963	750	58	0.577	AG,BT	1	21
Local Road	FM 1827 SB-2	SB FM1827 S	110	4	2.901	150	4	1.542	AG	2	32
Local Road	FM 1827 SB-1	SB FM1827 N	650	31	1.237	920	31	0.703	AG	2	32
Local Road	FM 1827 NB-2	NB FM1827 S	640	41	1.049	930	41	0.608	AG	2	32
Local Road	FM 1827 NB-1	NB FM1827 N	570	11	1.934	810	11	1.082	AG	2	32

Table C-4b: Queuing Information Used in CO TAQA Quantitative Analysis- Segment D

Queuing Road Name	Idle Emission Factor		VPH		Mixing Zone Width	# of Queue Lanes	Link Type	Average Total Signal Cycle Length	Ave Red Total Signal Cycle Length	Clearnace lost time	Saturation Flow Rate ^A	Signal Type ^A	Arrival Rate ^A
	2030	2050	2030	2050									
SB FM1827 S	1.435	0.532	110	150	32	2	'AG'	90	50	2	1,600	1	3
NB FM1827 N	1.435	0.532	570	810	32	2	'AG'	90	50	2	1,600	1	3
EB US380D Front4	1.435	0.532	1,630	2,330	54	4	'AG'	90	40	2	1,600	1	3
WB US380D Front2	1.435	0.532	1,410	2,100	65	5	'AG'	90	40	2	1,600	1	3
SB FM1827 N	1.435	0.532	650	920	32	2	'AG'	90	50	2	1,600	1	3

(a) default values

Table C-5a: Additional CALQ3HC Modeling Parameters for CO TAQA Quantitative Analysis- Segment E

Road Type	Road Name	Model Road Name	2030 Peak Traffic Count (veh/hr)	2030 Speed (mph)	2030 CO Emission Factor (gram/mile)	2050 Peak Traffic Count (veh/hr)	2050 Speed (mph)	2050 CO Emission Factor (gram/mile)	Segment Length (feet)	Barrier Segment Types	Number of Lanes	Mixing Width (feet)
Frontage Roads	WB Ridge Rd OFR to Lake Forest Dr ONR	WB US380E Frnt1	1,570	44	1.017	2,370	44	0.593	1,231	AG	2	34
Frontage Roads	WB Lake Forest Dr U to Ridge Rd OFR	WB US380E Frnt2	600	43	1.027	900	43	0.598	1,833	AG	2	34
Frontage Roads	WB Lake Forest Dr to Lake Forest Dr U	WB US380E Frnt3	590	43	1.027	880	43	0.598	125	AG	2	34
Frontage Roads	WB Lake Forest Dr U to Lake Forest Dr	WB US380E Frnt4	970	10	1.988	1,460	10	1.107	155	AG	2	34
Frontage Roads	WB CR 1006 ONR to Lake Forest Dr U	WB US380E Frnt5	980	44	1.017	1,480	44	0.593	1,933	AG	3	46
Frontage Roads	WB Lake Forest Dr OFR to CR 1006 ONR	WB US380E Frnt6	1,190	45	1.007	1,800	45	0.589	781	AG	3	46
Frontage Roads	WB CR 1006 U to Lake Forest Dr OFR	WB US380E Frnt7	480	43	1.027	740	43	0.598	2,221	AG	2	34
Mainlanes	WB Bloomdale Rd E ONR to Lake Forest Dr OFR	WB US 380 E 1	4,280	67	1.177	6,420	67	0.734	1,614	AG	4	58
Mainlanes	WB Lake Forest Dr OFR to CR 1006 ONR	WB US 380 E 2	3,570	68	1.230	5,360	68	0.771	3,062	AG	4	58
Mainlanes	WB CR 1006 ONR to Ridge Rd OFR	WB US 380 E 3	3,780	68	1.230	5,680	68	0.771	1,539	FL, BR	4	58
Mainlanes	WB Ridge Rd OFR to Lake Forest Dr ONR	WB US 380 E 4	2,810	70	1.332	4,210	70	0.842	3,950	AG	4	58
Ramps	WB Lake Forest Dr OFR	WB US380E OFR1	720	54	0.959	1,080	54	0.572	1,163	AG	1	22
Ramps	WB CR 1006 ONR	WB US380E ONR	210	47	0.974	320	47	0.576	1,133	FL, AG	1	22
Ramps	WB Ridge Rd OFR	WB US380E OFR2	970	52	0.962	1,470	52	0.573	1,382	FL, AG	1	22
Frontage Roads	EB Lake Forest Dr OFR to Ridge Rd ONR	EB US380E Frnt1	1,300	44	1.017	1,920	44	0.593	1,443	AG	3	46
Frontage Roads	EB Ridge Rd ONR to Lake Forest Dr U	EB US380E Frnt2	700	45	1.007	1,050	45	0.589	1,528	AG	3	46
Frontage Roads	EB Lake Forest Dr U to Lake Forest Dr	EB US380E Frnt3	690	12	1.889	1,030	12	1.061	144	AG	5	70
Frontage Roads	EB Lake Forest Dr to Lake Forest Dr U	EB US380E Frnt4	1,160	41	1.049	1,850	41	0.608	115	AG	2	34
Frontage Roads	EB Lake Forest Dr U to CR 1006 OFR	EB US380E Frnt5	1,170	41	1.049	1,870	41	0.608	2,109	AG	2	34
Frontage Roads	CR 1006 OFR to Lake Forest Dr ONR	EB US380E Frnt6	1,380	42	1.038	2,090	42	0.603	775	AG	3	46
Frontage Roads	Lake Forest Dr ONR to CR 1006 U	EB US380E Frnt7	410	45	1.007	630	45	0.589	2,067	AG	3	46
Mainlanes	EB Lake Forest Dr OFR to Ridge Rd ONR	EB US380 E 1	2,800	71	1.434	4,170	71	0.911	3,943	AG	4	58
Mainlanes	EB Ridge Rd ONR to CR 1006 OFR	EB US380 E 2	3,400	69	1.282	5,040	69	0.807	1,572	FL, BR	4	58
Mainlanes	EB CR 1006 OFR to Lake Forest Dr ONR	EB US380 E 3	3,170	69	1.282	4,730	69	0.807	3,081	AG	4	58
Mainlanes	EB Lake Forest Dr ONR to Bloomdale Rd E OFR	EB US380 E 4	4,030	68	1.230	6,010	68	0.771	1,949	DP	4	58
Ramps	EB Lake Forest Dr ONR	EB US380E ONR1	970	45	0.979	1,460	45	0.578	1,106	AG	1	22
Ramps	EB CR 1006 OFR	EB US380E OFR	230	61	0.987	310	61	0.597	1,213	AG	1	22
Ramps	EB Ridge Rd ONR	EB US380E ONR2	600	46	0.976	870	46	0.577	1,130	AG, FL	1	22
Local Road	Lake Forest Dr SB-1	SB Lake Forest N	1,610	7	2.249	2,410	7	1.231	1,002	AG	3	46
Local Road	Lake Forest Dr SB-2	SB Lake Forest M	1,480	15	1.789	2,220	15	1.014	261	AG	4	58
Local Road	Lake Forest Dr SB-3	SB Lake Forest S	880	47	1.003	1,340	47	0.591	632	AG	2	34
Local Road	Lake Forest Dr NB-1	NB Lake Forest S	790	4	2.901	1,190	4	1.542	629	AG	5	70
Local Road	Lake Forest Dr NB-2	NB Lake Forest M	950	26	1.279	1,300	26	0.710	260	AG	4	58
Local Road	Lake Forest Dr NB-3	NB Lake Forest N	1,550	47	1.003	2,200	47	0.591	1,004	AG	2	34
Local Road	Lake Forest Dr SB U	Lake Forest U E	10	19	1.626	20	19	0.922	301	AG	1	22
Local Road	Lake Forest Dr NB U	Lake Forest U W	10	19	1.626	20	19	0.922	291	AG	1	22

Table C-5b: Queuing Information Used in CO TAQA Quantitative Analysis- Segment D

Queuing Road Name	Idle Emission Factor		VPH		Mixing Zone Width	# of Queue Lanes	Link Type	Average Total Signal Cycle Length	Ave Red Total Signal Cycle Length	Clearnace lost time	Saturation Flow Rate ^A	Signal Type ^A	Arrival Rate ^A
	2030	2050	2030	2050									
EB US380E Frnt3	1.435	0.532	690	1,030	70	5	'AG'	90	40	2	1,600	1	3
WB US380E Frnt4	1.435	0.532	590	880	34	2	'AG'	90	40	2	1,600	1	3
NB Lake Forest S	1.435	0.532	1,480	2,220	58	4	'AG'	90	50	2	1,600	1	3
NB Lake Forest M	1.435	0.532	880	1,340	34	2	'AG'	90	50	2	1,600	1	3
SB Lake Forest N	1.435	0.532	1,610	2,410	46	3	'AG'	90	50	2	1,600	1	3
SB Lake Forest M	1.435	0.532	1,610	2,410	46	3	'AG'	90	50	2	1,600	1	3

(a) default values

'US380 McKinney' 60 0.75 0 0 4 0.3048 1 1

'A1' 4728.44 907.1 32

'A2' 4691.38 1004.17 32

'A3' 4687.85 1237.13 14

'A4' 4675.49 1376.56 15

'Segment A - 2030' 113 1 1 'C'

1

'WB US380 A West_1' 'BR' 7594.92 2087.52 7451.33 1922.34 2420 1.332 -23 58

1

'WB US380 A West_2' 'BR' 7451.33 1922.34 7204.68 1700.81 2420 1.332 -16 58

1

'WB US380 A West_3' 'FL' 7204.68 1700.81 7006.57 1560.7 2420 1.332 -14 58

1

'WB US380 A West_4' 'AG' 7006.57 1560.7 6868.43 1481.26 2420 1.332 -14 58

1

'WB US380 A West_5' 'DP' 6868.43 1481.26 6688.64 1394.83 2420 1.332 -16 58

1

'WB US380 A West_6' 'DP' 6688.64 1394.83 6468.38 1313.35 2420 1.332 -18 58

1

'WB US380 A West_7' 'DP' 6468.38 1313.35 6158.18 1239.42 2420 1.332 -17 58

1

'WB US380 A West_8' 'DP' 6158.18 1239.42 5885.79 1211.5 2420 1.332 -14 58

1

'WB US380 A East_1' 'DP' 5885.79 1211.5 5307.41 1183.76 3200 1.282 -9 58

1

'WB US380 A East_2' 'DP' 5307.41 1183.76 4708.72 1169.66 3200 1.282 1 58

1

'WB US380 A East_3' 'DP' 4708.72 1169.66 3910.4 1167.49 3200 1.282 15 58

1

'WB US380 A East_4' 'AG' 3910.4 1167.49 2845.89 1185.94 3200 1.282 30 58

1

'WB US380 A East_5' 'FL' 2845.89 1185.94 2399.08 1187.06 3200 1.282 32 58

1

'WB US380 A East_6' 'BR' 2399.08 1187.06 2053.41 1174.26 3200 1.282 32 58

1

'EB US380 A East_1' 'BR' 2057.78 1082.13 2392.36 1092.96 3420 1.177 32 58

1

'EB US380 A East_2' 'FL' 2392.36 1092.96 2685.06 1094.62 3420 1.177 32 58

1

'EB US380 A East_3' 'AG' 2685.06 1094.62 4012.2 1074.65 3420 1.177 25 58

1

'EB US380 A East_4' 'DP' 4012.2 1074.65 5159.35 1086.46 3420 1.177 -3 58

1

'EB US380 A East_5' 'DP' 5159.35 1086.46 5616.36 1104.18 3420 1.177 -13 58

1

'EB US380 A East_6' 'DP' 5616.36 1104.18 6027.43 1129.75 3420 1.177 -16 58

1

'EB US380 A East_7' 'DP' 6027.43 1129.75 6178.84 1150.71 3420 1.177 -18 58

1

'EB US380 A East_8' 'DP' 6178.84 1150.71 6456.64 1214.02 3420 1.177 -17 58

1

'EB US380 A West_1' 'AG' 6456.64 1214.02 6720.38 1308.2 2940 1.23 -16 58

1

'EB US380 A West_2' 'AG' 6720.38 1308.2 6971.58 1433.79 2940 1.23 -14 58
1
'EB US380 A West_3' 'FL' 6971.58 1433.79 7174.77 1562.96 2940 1.23 -14 58
1
'EB US380 A West_4' 'BR' 7174.77 1562.96 7370.09 1717.83 2940 1.23 -16 58
1
'WB US380 A ONR_1' 'DP' 6909.59 1653.65 6820.46 1565.23 1000 0.989 -32 22
1
'WB US380 A ONR_2' 'DP' 6820.46 1565.23 6642.64 1462.87 1000 0.989 -23 22
1
'WB US380 A ONR_3' 'DP' 6642.64 1462.87 6471.06 1382.13 1000 0.989 -20 22
1
'WB US380 A ONR_4' 'DP' 6471.06 1382.13 6306.32 1320.64 1000 0.989 -21 22
1
'WB US380 A ONR_5' 'DP' 6306.32 1320.64 5885.79 1211.5 1000 0.989 -18 22
1
'EB US380 A OFR_1' 'BR' 6456.64 1214.02 6782.53 1284.53 740 0.963 -10 22
1
'EB US380 A OFR_2' 'BR' 6782.53 1284.53 7076.8 1358.31 740 0.963 -12 22
1
'EB US380 A OFR_3' 'AG' 7076.8 1358.31 7482.79 1347.8 740 0.963 -21 22
1
'EB US380 A OFR_4' 'AG' 7482.79 1347.8 7802.34 1214.83 740 0.963 -31 22
1
'EB US380A Front2_1' 'AG' 2378.41 1003.2 3487.94 1031.05 990 1.027 29 32
1
'EB US380A Front2_2' 'AG' 3487.94 1031.05 4676.12 1032.36 990 1.027 32 32
1
'EB US380A Front2_3' 'BR' 4676.12 1032.36 5147.31 1039.39 990 1.027 26 32
1
'EB US380A Front2_4' 'AG' 5147.31 1039.39 6019.51 1070.29 990 1.027 17 32
1
'EB US380A Front2_5' 'AG' 6019.51 1070.29 6333.4 1108.49 990 1.027 -1 32
1
'EB US380A Front3_6' 'DP' 6333.4 1108.49 6921.83 1306.92 780 1.017 -31 32
1
'EB US380A Front3_7' 'DP' 6921.83 1306.92 7273.29 1502.9 780 1.017 -32 32
1
'EB US380A Front1_8' 'DP' 2250.79 994.49 2378.41 1003.2 980 1.017 17 32
1
'EB US380A Front4_9' 'DP' 7273.29 1502.9 7447.12 1637.42 770 1.851 -32 32
1
'WB US380A Front2_1' 'AG' 6909.59 1653.65 6770.73 1566.73 1060 0.989 -32 32
1
'WB US380A Front2_2' 'AG' 6770.73 1566.73 6513.35 1437.83 1060 0.989 -24 32
1
'WB US380A Front2_3' 'AG' 6513.35 1437.83 6324.55 1367.08 1060 0.989 -11 32
1
'WB US380A Front2_4' 'AG' 6324.55 1367.08 6168.3 1321.94 1060 0.989 3 32
1
'WB US380A Front2_5' 'AG' 6168.3 1321.94 5895.29 1268.56 1060 0.989 7 32
1
'WB US380A Front2_6' 'AG' 5895.29 1268.56 5698.27 1248.8 1060 0.989 10 32
1

'WB US380A Front2_7' 'AG' 5698.27 1248.8 5071.51 1224.31 1060 0.989 16 32
1
'WB US380A Front3_8' 'AG' 5071.43 1224.31 4642.12 1214.41 1040 1.027 22 32
1
'WB US380A Front3_9' 'AG' 4642.12 1214.41 3829.72 1216.5 1040 1.027 32 32
1
'WB US380A Front3_10' 'AG' 3829.72 1216.5 3470.95 1230.06 1040 1.027 32 32
1
'WB US380A Front3_11' 'AG' 3470.95 1230.06 3066.22 1258.85 1040 1.027 21 32
1
'WB US380A Front3_12' 'AG' 3066.22 1258.85 2385.7 1259.17 1040 1.027 15 32
1
'WB US380A Front4_13' 'AG' 2385.7 1259.17 2242.05 1256.4 1030 1.789 17 32
1
'WB US380A Front1_14' 'AG' 7217.75 1896.57 7006.95 1721.08 2040 1.26 -32 32
1
'SB Tremont_1' 'AG' 4423.73 1771.73 4481.3 1641.16 210 1.889 29 22
1
'SB Tremont_2' 'AG' 4481.3 1641.16 4572.25 1560.89 210 1.889 23 22
1
'SB Tremont_3' 'AG' 4572.25 1560.89 4694.24 1518.41 210 1.889 14 22
1
'SB Tremont_4' 'AG' 4694.24 1518.41 4921.8 1505.95 210 1.889 0 22
1
'SB Tremont_5' 'AG' 4921.8 1505.95 5036.4 1417.19 210 1.889 -10 22
1
'SB Tremont_6' 'AG' 5036.4 1417.19 5051.01 1223.82 210 1.889 5 22
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'NB Tremont_1' 'AG' 4550.47 1620.66 4698.03 1554.69 220 1.285 15 22
1
'NB Tremont_2' 'AG' 4698.03 1554.69 4931.11 1541.23 220 1.285 -1 22
1
'NB Tremont_3' 'AG' 4931.11 1541.23 5041.35 1480.9 220 1.285 -11 22
1
'NB Tremont_4' 'AG' 5041.35 1480.9 5079.55 1399.74 220 1.285 -11 22
1
'NB Tremont_5' 'AG' 5079.55 1399.74 5087.48 1224.8 220 1.285 5 22
1
'SB Driveway_1' 'AG' 6296.65 1102.4 6334.66 1064.26 210 1.237 5 22
1
'SB Driveway_2' 'AG' 6334.66 1064.26 6392.88 1041.57 210 1.237 2 22
1
'SB Driveway_3' 'AG' 6392.88 1041.57 7827.49 867.1 210 1.237 -23 22
1
'NB Driveway_1' 'AG' 6354.48 1115.59 6395.97 1053.28 210 1.237 1 22
1
'NB Driveway_2' 'AG' 6395.97 1053.28 7828.94 879.01 210 1.237 -23 22
1
'SB Stonebridge N_1' 'AG' 2205.45 1410.64 2207.62 1255.27 760 1.851 11 46
1
'SB Stonebridge M_1' 'AG' 2207.62 1255.27 2218.71 994.92 860 1.66 18 46
1
'SB Stonebridge S_1' 'AG' 2218.71 994.92 2243.21 578.43 920 1.096 29 46
1

'NB Stonebridge N_1' 'AG' 2262.4 1256.79 2256.52 1412.09 900 1.096 19 46
1
'NB Stonebridge M_1' 'AG' 2270.84 995.86 2262.4 1256.79 920 1.698 23 46
1
'NB Stonebridge S_1' 'AG' 2294.2 618.15 2270.84 995.86 910 2.393 32 46
1
'Stonebridge U_1' 'AG' 2385.7 1259.17 2347.82 1238.51 10 1.626 20 22
1
'Stonebridge U_2' 'AG' 2347.82 1238.51 2324.79 1188.17 10 1.626 20 22
1
'Stonebridge U_3' 'AG' 2324.79 1188.17 2328.96 1050.67 10 1.626 24 22
1
'Stonebridge U_4' 'AG' 2328.96 1050.67 2341.54 1024.98 10 1.626 27 22
1
'Stonebridge U_5' 'AG' 2341.54 1024.98 2378.41 1003.2 10 1.626 29 22
1
'SB University N_1' 'AG' 7205.89 1885.84 7434.1 1627.34 440 2.393 -32 34
1
'SB University M_2' 'AG' 7434.1 1627.34 7802.34 1214.83 480 1.038 -32 34
1
'SB University S_1' 'AG' 7802.34 1214.83 8031.54 1013.56 1220 1.014 -32 34
1
'SB University S_2' 'AG' 8031.54 1013.56 8472.25 824.3 1220 1.014 -32 34
1
'University U_1' 'AG' 7273.29 1502.9 7337.99 1581.14 20 1.595 -32 34
1
'University U_2' 'AG' 7337.99 1581.14 7332.01 1653.62 20 1.595 -32 34
1
'University U_3' 'AG' 7332.01 1653.62 7205.62 1797.37 20 1.595 -32 34
1
'University U_4' 'AG' 7205.62 1797.37 7154.93 1815.43 20 1.595 -32 34
1
'University U_5' 'AG' 7154.93 1815.43 7041.45 1734.75 20 1.595 -32 34
1
'University U_6' 'AG' 7041.45 1734.75 7006.95 1721.08 20 1.595 -32 34
1
'NB University N_1' 'AG' 7458.82 1647.18 7230.2 1908.64 1120 1.988 -32 34
1
'NB University S_2' 'AG' 7816.26 1245.57 7458.82 1647.18 1280 1.274 -32 34
1
'NB University S_3' 'AG' 7816.29 1245.54 8020.41 1060.69 1280 1.274 -32 34
1
'NB University S_4' 'AG' 8020.41 1060.69 8385.07 880.11 1280 1.274 -32 34
1
'NB University S_5' 'AG' 8385.07 880.11 8637.56 832.76 1280 1.274 -32 34
2
'NB Stonebridge S_1_Q' 'AG' 2294.2 618.15 2270.84 995.86 32 46 3
90 50 2 910 1.43476792532601 910 1 3
2
'NB Stonebridge M_1_Q' 'AG' 2270.84 995.86 2262.4 1256.79 23 46 3
90 50 2 920 1.43476792532601 920 1 3
2
'SB Stonebridge N_1_Q' 'AG' 2205.45 1410.64 2207.62 1255.27 11 46 3
90 50 2 760 1.43476792532601 760 1 3

2

'SB Stonebridge M_1_Q' 'AG' 2207.62 1255.27 2218.71 994.92 18 46 3
90 50 2 860 1.43476792532601 860 1 3

2

'WB US380A Front4_13_Q' 'AG' 3066.22 1258.85 2242.05 1256.4 17 32 2
90 40 2 1030 1.43476792532601 1030 1 3

2

'WB US380A Front2_7_Q' 'AG' 5698.27 1248.8 5071.51 1224.31 16 32 2
90 40 2 1060 1.43476792532601 1060 1 3

2

'SB Tremont_6_Q' 'AG' 5036.4 1417.19 5051.01 1223.82 5 22 1
90 50 2 210 1.43476792532601 210 1 3

2

'EB US380A Front2_5_Q' 'AG' 6019.51 1070.29 6333.4 1108.49 -1 32 2
90 40 2 990 1.43476792532601 990 1 3

2

'NB Driveway_1_Q' 'AG' 6354.48 1115.59 6395.97 1053.28 1 22 1
90 50 2 210 1.43476792532601 210 1 3

2

'EB US380A Front4_9_Q' 'DP' 7273.29 1502.9 7447.12 1637.42 -32 32 2
90 40 2 770 1.43476792532601 770 1 3

2

'NB University N_1_Q' 'AG' 7458.82 1647.18 7230.2 1908.64 -32 34 2
90 50 2 1120 1.43476792532601 1120 1 3

2

'NB University S_2_Q' 'AG' 7816.26 1245.57 7458.82 1647.18 -32 34 2
90 50 2 1280 1.43476792532601 1280 1 3

2

'SB University N_1_Q' 'AG' 7205.89 1885.84 7434.1 1627.34 -32 34 2
90 50 2 440 1.43476792532601 440 1 3

1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment A - 2030

DATE : 9/15/22

TIME : 14:55:33

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	* V/C QUEUE	* X1	Y1	X2	Y2	* (FT) (DEG)	* (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
1.	WB US380 A West_1	*	7594.9	2087.5	7451.3	1922.3	*	219.	221.	BR	2420.	1.3	-23.0 58.0
2.	WB US380 A West_2	*	7451.3	1922.3	7204.7	1700.8	*	332.	228.	BR	2420.	1.3	-16.0 58.0
3.	WB US380 A West_3	*	7204.7	1700.8	7006.6	1560.7	*	243.	235.	FL	2420.	1.3	-14.0 58.0
4.	WB US380 A West_4	*	7006.6	1560.7	6868.4	1481.3	*	159.	240.	AG	2420.	1.3	-14.0 58.0
5.	WB US380 A West_5	*	6868.4	1481.3	6688.6	1394.8	*	199.	244.	DP	2420.	1.3	-16.0 58.0
6.	WB US380 A West_6	*	6688.6	1394.8	6468.4	1313.4	*	235.	250.	DP	2420.	1.3	-18.0 58.0
7.	WB US380 A West_7	*	6468.4	1313.4	6158.2	1239.4	*	319.	257.	DP	2420.	1.3	-17.0 58.0
8.	WB US380 A West_8	*	6158.2	1239.4	5885.8	1211.5	*	274.	264.	DP	2420.	1.3	-14.0 58.0
9.	WB US380 A East_1	*	5885.8	1211.5	5307.4	1183.8	*	579.	267.	DP	3200.	1.3	-9.0 58.0
10.	WB US380 A East_2	*	5307.4	1183.8	4708.7	1169.7	*	599.	269.	DP	3200.	1.3	1.0 58.0
11.	WB US380 A East_3	*	4708.7	1169.7	3910.4	1167.5	*	798.	270.	DP	3200.	1.3	15.0 58.0
12.	WB US380 A East_4	*	3910.4	1167.5	2845.9	1185.9	*	1065.	271.	AG	3200.	1.3	30.0 58.0
13.	WB US380 A East_5	*	2845.9	1185.9	2399.1	1187.1	*	447.	270.	FL	3200.	1.3	32.0 58.0
14.	WB US380 A East_6	*	2399.1	1187.1	2053.4	1174.3	*	346.	268.	BR	3200.	1.3	32.0 58.0
15.	EB US380 A East_1	*	2057.8	1082.1	2392.4	1093.0	*	335.	88.	BR	3420.	1.2	32.0 58.0
16.	EB US380 A East_2	*	2392.4	1093.0	2685.1	1094.6	*	293.	90.	FL	3420.	1.2	32.0 58.0
17.	EB US380 A East_3	*	2685.1	1094.6	4012.2	1074.7	*	1327.	91.	AG	3420.	1.2	25.0 58.0
18.	EB US380 A East_4	*	4012.2	1074.7	5159.4	1086.5	*	1147.	89.	DP	3420.	1.2	-3.0 58.0
19.	EB US380 A East_5	*	5159.4	1086.5	5616.4	1104.2	*	457.	88.	DP	3420.	1.2	-13.0 58.0
20.	EB US380 A East_6	*	5616.4	1104.2	6027.4	1129.8	*	412.	86.	DP	3420.	1.2	-16.0 58.0
21.	EB US380 A East_7	*	6027.4	1129.8	6178.8	1150.7	*	153.	82.	DP	3420.	1.2	-18.0 58.0
22.	EB US380 A East_8	*	6178.8	1150.7	6456.6	1214.0	*	285.	77.	DP	3420.	1.2	-17.0 58.0
23.	EB US380 A West_1	*	6456.6	1214.0	6720.4	1308.2	*	280.	70.	AG	2940.	1.2	-16.0 58.0
24.	EB US380 A West_2	*	6720.4	1308.2	6971.6	1433.8	*	281.	63.	AG	2940.	1.2	-14.0 58.0
25.	EB US380 A West_3	*	6971.6	1433.8	7174.8	1563.0	*	241.	58.	FL	2940.	1.2	-14.0 58.0
26.	EB US380 A West_4	*	7174.8	1563.0	7370.1	1717.8	*	249.	52.	BR	2940.	1.2	-16.0 58.0
27.	WB US380 A ONR_1	*	6909.6	1653.7	6820.5	1565.2	*	126.	225.	DP	1000.	1.0	-32.0 22.0
28.	WB US380 A ONR_2	*	6820.5	1565.2	6642.6	1462.9	*	205.	240.	DP	1000.	1.0	-23.0 22.0
29.	WB US380 A ONR_3	*	6642.6	1462.9	6471.1	1382.1	*	190.	245.	DP	1000.	1.0	-20.0 22.0
30.	WB US380 A ONR_4	*	6471.1	1382.1	6306.3	1320.6	*	176.	250.	DP	1000.	1.0	-21.0 22.0
31.	WB US380 A ONR_5	*	6306.3	1320.6	5885.8	1211.5	*	434.	255.	DP	1000.	1.0	-18.0 22.0
32.	EB US380 A OFR_1	*	6456.6	1214.0	6782.5	1284.5	*	333.	78.	BR	740.	1.0	-10.0 22.0

33.	EB	US380 A OFR_2	*	6782.5	1284.5	7076.8	1358.3	*	303.	76.	BR	740.	1.0	-12.0	22.0
34.	EB	US380 A OFR_3	*	7076.8	1358.3	7482.8	1347.8	*	406.	91.	AG	740.	1.0	-21.0	22.0
35.	EB	US380 A OFR_4	*	7482.8	1347.8	7802.3	1214.8	*	346.	113.	AG	740.	1.0	-31.0	22.0
36.	EB	US380A Front2_1	*	2378.4	1003.2	3487.9	1031.1	*	1110.	89.	AG	990.	1.0	29.0	32.0
37.	EB	US380A Front2_2	*	3487.9	1031.1	4676.1	1032.4	*	1188.	90.	AG	990.	1.0	32.0	32.0
38.	EB	US380A Front2_3	*	4676.1	1032.4	5147.3	1039.4	*	471.	89.	BR	990.	1.0	26.0	32.0
39.	EB	US380A Front2_4	*	5147.3	1039.4	6019.5	1070.3	*	873.	88.	AG	990.	1.0	17.0	32.0
40.	EB	US380A Front2_5	*	6019.5	1070.3	6333.4	1108.5	*	316.	83.	AG	990.	1.0	-1.0	32.0
41.	EB	US380A Front3_6	*	6333.4	1108.5	6921.8	1306.9	*	621.	71.	DP	780.	1.0	-31.0	32.0
42.	EB	US380A Front3_7	*	6921.8	1306.9	7273.3	1502.9	*	402.	61.	DP	780.	1.0	-32.0	32.0
43.	EB	US380A Front1_8	*	2250.8	994.5	2378.4	1003.2	*	128.	86.	DP	980.	1.0	17.0	32.0
44.	EB	US380A Front4_9	*	7273.3	1502.9	7447.1	1637.4	*	220.	52.	DP	770.	1.9	-32.0	32.0

PAGE 2

JOB: US380 McKinney

RUN: Segment A - 2030

DATE : 9/15/22

TIME : 14:55:33

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
			*			*								
45.	WB US380A Front2_1	*	6909.6	1653.7	6770.7	1566.7	*	164.	238.	AG	1060.	1.0	-32.0	32.0
46.	WB US380A Front2_2	*	6770.7	1566.7	6513.4	1437.8	*	288.	243.	AG	1060.	1.0	-24.0	32.0
47.	WB US380A Front2_3	*	6513.4	1437.8	6324.5	1367.1	*	202.	249.	AG	1060.	1.0	-11.0	32.0
48.	WB US380A Front2_4	*	6324.5	1367.1	6168.3	1321.9	*	163.	254.	AG	1060.	1.0	3.0	32.0
49.	WB US380A Front2_5	*	6168.3	1321.9	5895.3	1268.6	*	278.	259.	AG	1060.	1.0	7.0	32.0
50.	WB US380A Front2_6	*	5895.3	1268.6	5698.3	1248.8	*	198.	264.	AG	1060.	1.0	10.0	32.0
51.	WB US380A Front2_7	*	5698.3	1248.8	5071.5	1224.3	*	627.	268.	AG	1060.	1.0	16.0	32.0
52.	WB US380A Front3_8	*	5071.4	1224.3	4642.1	1214.4	*	429.	269.	AG	1040.	1.0	22.0	32.0
53.	WB US380A Front3_9	*	4642.1	1214.4	3829.7	1216.5	*	812.	270.	AG	1040.	1.0	32.0	32.0
54.	WB US380A Front3_10	*	3829.7	1216.5	3471.0	1230.1	*	359.	272.	AG	1040.	1.0	32.0	32.0
55.	WB US380A Front3_11	*	3471.0	1230.1	3066.2	1258.9	*	406.	274.	AG	1040.	1.0	21.0	32.0
56.	WB US380A Front3_12	*	3066.2	1258.9	2385.7	1259.2	*	681.	270.	AG	1040.	1.0	15.0	32.0
57.	WB US380A Front4_13	*	2385.7	1259.2	2242.1	1256.4	*	144.	269.	AG	1030.	1.8	17.0	32.0
58.	WB US380A Front1_14	*	7217.8	1896.6	7007.0	1721.1	*	274.	230.	AG	2040.	1.3	-32.0	32.0
59.	SB Tremont_1	*	4423.7	1771.7	4481.3	1641.2	*	143.	156.	AG	210.	1.9	29.0	22.0
60.	SB Tremont_2	*	4481.3	1641.2	4572.3	1560.9	*	121.	131.	AG	210.	1.9	23.0	22.0
61.	SB Tremont_3	*	4572.3	1560.9	4694.2	1518.4	*	129.	109.	AG	210.	1.9	14.0	22.0
62.	SB Tremont_4	*	4694.2	1518.4	4921.8	1505.9	*	228.	93.	AG	210.	1.9	0.0	22.0
63.	SB Tremont_5	*	4921.8	1505.9	5036.4	1417.2	*	145.	128.	AG	210.	1.9	-10.0	22.0
64.	SB Tremont_6	*	5036.4	1417.2	5051.0	1223.8	*	194.	176.	AG	210.	1.9	5.0	22.0
65.	NB Tremont_1	*	4550.5	1620.7	4698.0	1554.7	*	162.	114.	AG	220.	1.3	15.0	22.0
66.	NB Tremont_2	*	4698.0	1554.7	4931.1	1541.2	*	233.	93.	AG	220.	1.3	-1.0	22.0
67.	NB Tremont_3	*	4931.1	1541.2	5041.4	1480.9	*	126.	119.	AG	220.	1.3	-11.0	22.0
68.	NB Tremont_4	*	5041.4	1480.9	5079.5	1399.7	*	90.	155.	AG	220.	1.3	-11.0	22.0
69.	NB Tremont_5	*	5079.5	1399.7	5087.5	1224.8	*	175.	177.	AG	220.	1.3	5.0	22.0
70.	SB Driveway_1	*	6296.6	1102.4	6334.7	1064.3	*	54.	135.	AG	210.	1.2	5.0	22.0
71.	SB Driveway_2	*	6334.7	1064.3	6392.9	1041.6	*	62.	111.	AG	210.	1.2	2.0	22.0
72.	SB Driveway_3	*	6392.9	1041.6	7827.5	867.1	*	1445.	97.	AG	210.	1.2	-23.0	22.0
73.	NB Driveway_1	*	6354.5	1115.6	6396.0	1053.3	*	75.	146.	AG	210.	1.2	1.0	22.0
74.	NB Driveway_2	*	6396.0	1053.3	7828.9	879.0	*	1444.	97.	AG	210.	1.2	-23.0	22.0

75. SB Stonebridge N_1 * 2205.4 1410.6 2207.6 1255.3 * 155. 179. AG 760. 1.9 11.0 46.0
76. SB Stonebridge M_1 * 2207.6 1255.3 2218.7 994.9 * 261. 178. AG 860. 1.7 18.0 46.0
77. SB Stonebridge S_1 * 2218.7 994.9 2243.2 578.4 * 417. 177. AG 920. 1.1 29.0 46.0
78. NB Stonebridge N_1 * 2262.4 1256.8 2256.5 1412.1 * 155. 358. AG 900. 1.1 19.0 46.0
79. NB Stonebridge M_1 * 2270.8 995.9 2262.4 1256.8 * 261. 358. AG 920. 1.7 23.0 46.0
80. NB Stonebridge S_1 * 2294.2 618.2 2270.8 995.9 * 378. 356. AG 910. 2.4 32.0 46.0
81. Stonebridge U_1 * 2385.7 1259.2 2347.8 1238.5 * 43. 241. AG 10. 1.6 20.0 22.0
82. Stonebridge U_2 * 2347.8 1238.5 2324.8 1188.2 * 55. 205. AG 10. 1.6 20.0 22.0
83. Stonebridge U_3 * 2324.8 1188.2 2329.0 1050.7 * 138. 178. AG 10. 1.6 24.0 22.0
84. Stonebridge U_4 * 2329.0 1050.7 2341.5 1025.0 * 29. 154. AG 10. 1.6 27.0 22.0
85. Stonebridge U_5 * 2341.5 1025.0 2378.4 1003.2 * 43. 121. AG 10. 1.6 29.0 22.0
86. SB University N_1 * 7205.9 1885.8 7434.1 1627.3 * 345. 139. AG 440. 2.4 -32.0 34.0
87. SB University M_2 * 7434.1 1627.3 7802.3 1214.8 * 553. 138. AG 480. 1.0 -32.0 34.0
88. SB University S_1 * 7802.3 1214.8 8031.5 1013.6 * 305. 131. AG 1220. 1.0 -32.0 34.0
89. SB University S_2 * 8031.5 1013.6 8472.3 824.3 * 480. 113. AG 1220. 1.0 -32.0 34.0
90. University U_1 * 7273.3 1502.9 7338.0 1581.1 * 102. 40. AG 20. 1.6 -32.0 34.0
91. University U_2 * 7338.0 1581.1 7332.0 1653.6 * 73. 355. AG 20. 1.6 -32.0 34.0
92. University U_3 * 7332.0 1653.6 7205.6 1797.4 * 191. 319. AG 20. 1.6 -32.0 34.0
93. University U_4 * 7205.6 1797.4 7154.9 1815.4 * 54. 290. AG 20. 1.6 -32.0 34.0
94. University U_5 * 7154.9 1815.4 7041.5 1734.8 * 139. 235. AG 20. 1.6 -32.0 34.0
95. University U_6 * 7041.5 1734.8 7007.0 1721.1 * 37. 248. AG 20. 1.6 -32.0 34.0

PAGE 3

JOB: US380 McKinney

RUN: Segment A - 2030

DATE : 9/15/22

TIME : 14:55:33

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	96. NB University N_1	* 7458.8	1647.2	7230.2	1908.6	* 347. 319. AG	1120.	2.0	-32.0	34.0		
	97. NB University S_2	* 7816.3	1245.6	7458.8	1647.2	* 538. 318. AG	1280.	1.3	-32.0	34.0		
	98. NB University S_3	* 7816.3	1245.5	8020.4	1060.7	* 275. 132. AG	1280.	1.3	-32.0	34.0		
	99. NB University S_4	* 8020.4	1060.7	8385.1	880.1	* 407. 116. AG	1280.	1.3	-32.0	34.0		
	100. NB University S_5	* 8385.1	880.1	8637.6	832.8	* 257. 101. AG	1280.	1.3	-32.0	34.0		
5.1	101. NB Stonebridge S_1_Q	* 2294.2	618.2	2288.0	718.3	* 100. 356. AG	6. 100.0	32.0	46.0	0.83		
5.1	102. NB Stonebridge M_1_Q	* 2270.8	995.9	2267.6	1096.3	* 101. 358. AG	6. 100.0	23.0	46.0	0.83		
4.4	103. SB Stonebridge N_1_Q	* 2205.4	1410.6	2206.7	1324.3	* 86. 179. AG	6. 100.0	11.0	46.0	0.83		
4.9	104. SB Stonebridge M_1_Q	* 2207.6	1255.3	2211.7	1159.7	* 96. 178. AG	6. 100.0	18.0	46.0	0.83		
10.3	105. WB US380A Front4_13Q	* 3066.2	1258.9	2862.8	1258.2	* 203. 270. AG	3. 100.0	17.0	32.0	0.98		
10.6	106. WB US380A Front2_7_Q	* 5698.3	1248.8	5490.1	1240.7	* 208. 268. AG	3. 100.0	16.0	32.0	0.98		
10.0	107. SB Tremont_6_Q	* 5036.4	1417.2	5143.4	0.8	* 1420. 176. AG	2. 100.0	5.0	22.0	2.53	72.2	
	108. EB US380A Front2_5_Q	* 6019.5	1070.3	6214.8	1094.1	* 197. 83. AG	3. 100.0	-1.0	32.0	0.98		
	109. NB Driveway_1_Q	* 6354.5	1115.6	7141.8	-66.7	* 1420. 146. AG	2. 100.0	1.0	22.0	2.53		

72.2

110. EB US380A Front4_9_Q* 7273.3 1502.9 7403.5 1603.7 * 165. 52. DP 3. 100.0 -32.0 32.0 0.98
8.4

111. NB University N_1_Q * 7458.8 1647.2 6547.3 2689.6 * 1385. 319. AG 4. 100.0 -32.0 34.0 1.25
70.3

112. NB University S_2_Q * 7816.3 1245.6 6770.5 2420.5 * 1573. 318. AG 4. 100.0 -32.0 34.0 1.25
79.9

113. SB University N_1_Q * 7205.9 1885.8 7592.7 1447.7 * 585. 139. AG 4. 100.0 -32.0 34.0 1.26
29.7

PAGE 4

JOB: US380 McKinney

RUN: Segment A - 2030

DATE : 9/15/22

TIME : 14:55:33

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
* (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
101. NB Stonebridge S_1_Q*	90	50	2.0	910	910	1.43	1 3
102. NB Stonebridge M_1_Q*	90	50	2.0	920	920	1.43	1 3
103. SB Stonebridge N_1_Q*	90	50	2.0	760	760	1.43	1 3
104. SB Stonebridge M_1_Q*	90	50	2.0	860	860	1.43	1 3
105. WB US380A Front4_13Q*	90	40	2.0	1030	1030	1.43	1 3
106. WB US380A Front2_7_Q*	90	40	2.0	1060	1060	1.43	1 3
107. SB Tremont_6_Q *	90	50	2.0	210	210	1.43	1 3
108. EB US380A Front2_5_Q*	90	40	2.0	990	990	1.43	1 3
109. NB Driveway_1_Q *	90	50	2.0	210	210	1.43	1 3
110. EB US380A Front4_9_Q*	90	40	2.0	770	770	1.43	1 3
111. NB University N_1_Q *	90	50	2.0	1120	1120	1.43	1 3
112. NB University S_2_Q *	90	50	2.0	1280	1280	1.43	1 3
113. SB University N_1_Q *	90	50	2.0	440	440	1.43	1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. A1	* 4728.4	907.1	32.0	*	
2. A2	* 4691.4	1004.2	32.0	*	
3. A3	* 4687.9	1237.1	14.0	*	
4. A4	* 4675.5	1376.6	15.0	*	

PAGE 5

JOB: US380 McKinney

RUN: Segment A - 2030

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum

concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4

-----*

0. *	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0
30. *	0.0	0.0	0.0	0.0
40. *	0.0	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0
60. *	0.0	0.2	0.0	0.0
70. *	0.0	0.1	0.0	0.0
80. *	0.0	0.1	0.0	0.0
90. *	0.0	0.0	0.0	0.0
100. *	0.0	0.0	0.2	0.0
110. *	0.0	0.0	0.1	0.0
120. *	0.0	0.0	0.2	0.0
130. *	0.0	0.0	0.2	0.0
140. *	0.0	0.0	0.2	0.0
150. *	0.0	0.0	0.1	0.0
160. *	0.0	0.0	0.0	0.0
170. *	0.0	0.0	0.1	0.0
180. *	0.0	0.0	0.1	0.0
190. *	0.0	0.0	0.1	0.0
200. *	0.0	0.0	0.1	0.0
210. *	0.0	0.0	0.1	0.0
220. *	0.0	0.0	0.2	0.0
230. *	0.0	0.0	0.2	0.0
240. *	0.0	0.0	0.2	0.1
250. *	0.0	0.0	0.2	0.0
260. *	0.0	0.0	0.1	0.0
270. *	0.0	0.0	0.0	0.0
280. *	0.0	0.1	0.0	0.0
290. *	0.1	0.2	0.0	0.0
300. *	0.0	0.2	0.0	0.0
310. *	0.0	0.0	0.0	0.0
320. *	0.0	0.0	0.0	0.0
330. *	0.0	0.0	0.0	0.0
340. *	0.0	0.0	0.0	0.0
350. *	0.0	0.0	0.0	0.0
360. *	0.0	0.0	0.0	0.0

-----*

MAX * 0.1 0.2 0.2 0.1
DEGR. * 290 60 100 240

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC2 .

PAGE 6

JOB: US380 McKinney

RUN: Segment A - 2030

DATE : 9/15/22

TIME : 14:55:33

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)				
	* ANGLE (DEGREES)				
	* REC1 REC2 REC3 REC4				
LINK #	* 290 60 100 240				
	* -----				
1	* 0.0 0.0 0.0 0.0				
2	* 0.0 0.0 0.0 0.0				
3	* 0.0 0.0 0.0 0.0				
4	* 0.0 0.0 0.0 0.0				
5	* 0.0 0.0 0.0 0.0				
6	* 0.0 0.0 0.0 0.0				
7	* 0.0 0.0 0.0 0.0				
8	* 0.0 0.0 0.0 0.0				
9	* 0.0 0.0 0.0 0.0				
10	* 0.0 0.1 0.1 0.0				
11	* 0.0 0.0 0.0 0.1				
12	* 0.0 0.0 0.0 0.0				
13	* 0.0 0.0 0.0 0.0				
14	* 0.0 0.0 0.0 0.0				
15	* 0.0 0.0 0.0 0.0				
16	* 0.0 0.0 0.0 0.0				
17	* 0.0 0.0 0.0 0.0				
18	* 0.1 0.1 0.0 0.0				
19	* 0.0 0.0 0.0 0.0				
20	* 0.0 0.0 0.0 0.0				
21	* 0.0 0.0 0.0 0.0				
22	* 0.0 0.0 0.0 0.0				
23	* 0.0 0.0 0.0 0.0				
24	* 0.0 0.0 0.0 0.0				
25	* 0.0 0.0 0.0 0.0				
26	* 0.0 0.0 0.0 0.0				
27	* 0.0 0.0 0.0 0.0				
28	* 0.0 0.0 0.0 0.0				
29	* 0.0 0.0 0.0 0.0				
30	* 0.0 0.0 0.0 0.0				
31	* 0.0 0.0 0.0 0.0				
32	* 0.0 0.0 0.0 0.0				
33	* 0.0 0.0 0.0 0.0				
34	* 0.0 0.0 0.0 0.0				
35	* 0.0 0.0 0.0 0.0				
36	* 0.0 0.0 0.0 0.0				
37	* 0.0 0.0 0.0 0.0				
38	* 0.0 0.0 0.0 0.0				
39	* 0.0 0.0 0.0 0.0				
40	* 0.0 0.0 0.0 0.0				
41	* 0.0 0.0 0.0 0.0				
42	* 0.0 0.0 0.0 0.0				
43	* 0.0 0.0 0.0 0.0				

44 * 0.0 0.0 0.0 0.0
45 * 0.0 0.0 0.0 0.0

JOB: US380 McKinney

RUN: Segment A - 2030

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 290 60 100 240

46 * 0.0 0.0 0.0 0.0
47 * 0.0 0.0 0.0 0.0
48 * 0.0 0.0 0.0 0.0
49 * 0.0 0.0 0.0 0.0
50 * 0.0 0.0 0.0 0.0
51 * 0.0 0.0 0.0 0.0
52 * 0.0 0.0 0.1 0.0
53 * 0.0 0.0 0.0 0.0
54 * 0.0 0.0 0.0 0.0
55 * 0.0 0.0 0.0 0.0
56 * 0.0 0.0 0.0 0.0
57 * 0.0 0.0 0.0 0.0
58 * 0.0 0.0 0.0 0.0
59 * 0.0 0.0 0.0 0.0
60 * 0.0 0.0 0.0 0.0
61 * 0.0 0.0 0.0 0.0
62 * 0.0 0.0 0.0 0.0
63 * 0.0 0.0 0.0 0.0
64 * 0.0 0.0 0.0 0.0
65 * 0.0 0.0 0.0 0.0
66 * 0.0 0.0 0.0 0.0
67 * 0.0 0.0 0.0 0.0
68 * 0.0 0.0 0.0 0.0
69 * 0.0 0.0 0.0 0.0
70 * 0.0 0.0 0.0 0.0
71 * 0.0 0.0 0.0 0.0
72 * 0.0 0.0 0.0 0.0
73 * 0.0 0.0 0.0 0.0
74 * 0.0 0.0 0.0 0.0
75 * 0.0 0.0 0.0 0.0
76 * 0.0 0.0 0.0 0.0
77 * 0.0 0.0 0.0 0.0
78 * 0.0 0.0 0.0 0.0
79 * 0.0 0.0 0.0 0.0
80 * 0.0 0.0 0.0 0.0
81 * 0.0 0.0 0.0 0.0
82 * 0.0 0.0 0.0 0.0
83 * 0.0 0.0 0.0 0.0
84 * 0.0 0.0 0.0 0.0
85 * 0.0 0.0 0.0 0.0
86 * 0.0 0.0 0.0 0.0
87 * 0.0 0.0 0.0 0.0
88 * 0.0 0.0 0.0 0.0
89 * 0.0 0.0 0.0 0.0

90 * 0.0 0.0 0.0 0.0
91 * 0.0 0.0 0.0 0.0
92 * 0.0 0.0 0.0 0.0
93 * 0.0 0.0 0.0 0.0
94 * 0.0 0.0 0.0 0.0
95 * 0.0 0.0 0.0 0.0
96 * 0.0 0.0 0.0 0.0
97 * 0.0 0.0 0.0 0.0
98 * 0.0 0.0 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment A - 2030

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 290 60 100 240

99 * 0.0 0.0 0.0 0.0
100 * 0.0 0.0 0.0 0.0
101 * 0.0 0.0 0.0 0.0
102 * 0.0 0.0 0.0 0.0
103 * 0.0 0.0 0.0 0.0
104 * 0.0 0.0 0.0 0.0
105 * 0.0 0.0 0.0 0.0
106 * 0.0 0.0 0.0 0.0
107 * 0.0 0.0 0.0 0.0
108 * 0.0 0.0 0.0 0.0
109 * 0.0 0.0 0.0 0.0
110 * 0.0 0.0 0.0 0.0
111 * 0.0 0.0 0.0 0.0
112 * 0.0 0.0 0.0 0.0
113 * 0.0 0.0 0.0 0.0

'US380 McKinney' 60 0.75 0 0 4 0.3048 1 1
'A1' 4728.44 907.1 32
'A2' 4691.38 1004.17 32
'A3' 4687.85 1237.13 14
'A4' 4675.49 1376.56 15
'Segment A - 2050' 113 1 1 'C'
1
'WB US380 A West_1' 'BR' 7594.92 2087.52 7451.33 1922.34 3610 0.842 -23 58
1
'WB US380 A West_2' 'BR' 7451.33 1922.34 7204.68 1700.81 3610 0.842 -16 58
1
'WB US380 A West_3' 'FL' 7204.68 1700.81 7006.57 1560.7 3610 0.842 -14 58
1
'WB US380 A West_4' 'AG' 7006.57 1560.7 6868.43 1481.26 3610 0.842 -14 58
1
'WB US380 A West_5' 'DP' 6868.43 1481.26 6688.64 1394.83 3610 0.842 -16 58
1
'WB US380 A West_6' 'DP' 6688.64 1394.83 6468.38 1313.35 3610 0.842 -18 58
1
'WB US380 A West_7' 'DP' 6468.38 1313.35 6158.18 1239.42 3610 0.842 -17 58
1
'WB US380 A West_8' 'DP' 6158.18 1239.42 5885.79 1211.5 3610 0.842 -14 58
1
'WB US380 A East_1' 'DP' 5885.79 1211.5 5307.41 1183.76 4810 0.807 -9 58
1
'WB US380 A East_2' 'DP' 5307.41 1183.76 4708.72 1169.66 4810 0.807 1 58
1
'WB US380 A East_3' 'DP' 4708.72 1169.66 3910.4 1167.49 4810 0.807 15 58
1
'WB US380 A East_4' 'AG' 3910.4 1167.49 2845.89 1185.94 4810 0.807 30 58
1
'WB US380 A East_5' 'FL' 2845.89 1185.94 2399.08 1187.06 4810 0.807 32 58
1
'WB US380 A East_6' 'BR' 2399.08 1187.06 2053.41 1174.26 4810 0.807 32 58
1
'EB US380 A East_1' 'BR' 2057.78 1082.13 2392.36 1092.96 5230 0.734 32 58
1
'EB US380 A East_2' 'FL' 2392.36 1092.96 2685.06 1094.62 5230 0.734 32 58
1
'EB US380 A East_3' 'AG' 2685.06 1094.62 4012.2 1074.65 5230 0.734 25 58
1
'EB US380 A East_4' 'DP' 4012.2 1074.65 5159.35 1086.46 5230 0.734 -3 58
1
'EB US380 A East_5' 'DP' 5159.35 1086.46 5616.36 1104.18 5230 0.734 -13 58
1
'EB US380 A East_6' 'DP' 5616.36 1104.18 6027.43 1129.75 5230 0.734 -16 58
1
'EB US380 A East_7' 'DP' 6027.43 1129.75 6178.84 1150.71 5230 0.734 -18 58
1
'EB US380 A East_8' 'DP' 6178.84 1150.71 6456.64 1214.02 5230 0.734 -17 58
1
'EB US380 A West_1' 'AG' 6456.64 1214.02 6720.38 1308.2 4440 0.771 -16 58
1

'EB US380 A West_2' 'AG' 6720.38 1308.2 6971.58 1433.79 4440 0.771 -14 58
1
'EB US380 A West_3' 'FL' 6971.58 1433.79 7174.77 1562.96 4440 0.771 -14 58
1
'EB US380 A West_4' 'BR' 7174.77 1562.96 7370.09 1717.83 4440 0.771 -16 58
1
'WB US380 A ONR_1' 'DP' 6909.59 1653.65 6820.46 1565.23 1520 0.581 -32 22
1
'WB US380 A ONR_2' 'DP' 6820.46 1565.23 6642.64 1462.87 1520 0.581 -23 22
1
'WB US380 A ONR_3' 'DP' 6642.64 1462.87 6471.06 1382.13 1520 0.581 -20 22
1
'WB US380 A ONR_4' 'DP' 6471.06 1382.13 6306.32 1320.64 1520 0.581 -21 22
1
'WB US380 A ONR_5' 'DP' 6306.32 1320.64 5885.79 1211.5 1520 0.581 -18 22
1
'EB US380 A OFR_1' 'BR' 6456.64 1214.02 6782.53 1284.53 1150 0.577 -10 22
1
'EB US380 A OFR_2' 'BR' 6782.53 1284.53 7076.8 1358.31 1150 0.577 -12 22
1
'EB US380 A OFR_3' 'AG' 7076.8 1358.31 7482.79 1347.8 1150 0.577 -21 22
1
'EB US380 A OFR_4' 'AG' 7482.79 1347.8 7802.34 1214.83 1150 0.577 -31 22
1
'EB US380A Front2_1' 'AG' 2378.41 1003.2 3487.94 1031.05 1500 0.598 29 32
1
'EB US380A Front2_2' 'AG' 3487.94 1031.05 4676.12 1032.36 1500 0.598 32 32
1
'EB US380A Front2_3' 'BR' 4676.12 1032.36 5147.31 1039.39 1500 0.598 26 32
1
'EB US380A Front2_4' 'AG' 5147.31 1039.39 6019.51 1070.29 1500 0.598 17 32
1
'EB US380A Front2_5' 'AG' 6019.51 1070.29 6333.4 1108.49 1500 0.598 -1 32
1
'EB US380A Front3_6' 'DP' 6333.4 1108.49 6921.83 1306.92 1180 0.593 -31 32
1
'EB US380A Front3_7' 'DP' 6921.83 1306.92 7273.29 1502.9 1180 0.593 -32 32
1
'EB US380A Front1_8' 'DP' 2250.79 994.49 2378.41 1003.2 1480 0.593 17 32
1
'EB US380A Front4_9' 'DP' 7273.29 1502.9 7447.12 1637.42 1160 1.043 -32 32
1
'WB US380A Front2_1' 'AG' 6909.59 1653.65 6770.73 1566.73 1610 0.581 -32 32
1
'WB US380A Front2_2' 'AG' 6770.73 1566.73 6513.35 1437.83 1610 0.581 -24 32
1
'WB US380A Front2_3' 'AG' 6513.35 1437.83 6324.55 1367.08 1610 0.581 -11 32
1
'WB US380A Front2_4' 'AG' 6324.55 1367.08 6168.3 1321.94 1610 0.581 3 32
1
'WB US380A Front2_5' 'AG' 6168.3 1321.94 5895.29 1268.56 1610 0.581 7 32
1
'WB US380A Front2_6' 'AG' 5895.29 1268.56 5698.27 1248.8 1610 0.581 10 32
1

'WB US380A Front2_7' 'AG' 5698.27 1248.8 5071.51 1224.31 1610 0.581 16 32
1
'WB US380A Front3_8' 'AG' 5071.43 1224.31 4642.12 1214.41 1590 0.598 22 32
1
'WB US380A Front3_9' 'AG' 4642.12 1214.41 3829.72 1216.5 1590 0.598 32 32
1
'WB US380A Front3_10' 'AG' 3829.72 1216.5 3470.95 1230.06 1590 0.598 32 32
1
'WB US380A Front3_11' 'AG' 3470.95 1230.06 3066.22 1258.85 1590 0.598 21 32
1
'WB US380A Front3_12' 'AG' 3066.22 1258.85 2385.7 1259.17 1590 0.598 15 32
1
'WB US380A Front4_13' 'AG' 2385.7 1259.17 2242.05 1256.4 1570 1.014 17 32
1
'WB US380A Front1_14' 'AG' 7217.75 1896.57 7006.95 1721.08 3100 0.715 -32 32
1
'SB Tremont_1' 'AG' 4423.73 1771.73 4481.3 1641.16 330 1.061 29 22
1
'SB Tremont_2' 'AG' 4481.3 1641.16 4572.25 1560.89 330 1.061 23 22
1
'SB Tremont_3' 'AG' 4572.25 1560.89 4694.24 1518.41 330 1.061 14 22
1
'SB Tremont_4' 'AG' 4694.24 1518.41 4921.8 1505.95 330 1.061 0 22
1
'SB Tremont_5' 'AG' 4921.8 1505.95 5036.4 1417.19 330 1.061 -10 22
1
'SB Tremont_6' 'AG' 5036.4 1417.19 5051.01 1223.82 330 1.061 5 22
1
'NB Tremont_1' 'AG' 4550.47 1620.66 4698.03 1554.69 330 0.708 15 22
1
'NB Tremont_2' 'AG' 4698.03 1554.69 4931.11 1541.23 330 0.708 -1 22
1
'NB Tremont_3' 'AG' 4931.11 1541.23 5041.35 1480.9 330 0.708 -11 22
1
'NB Tremont_4' 'AG' 5041.35 1480.9 5079.55 1399.74 330 0.708 -11 22
1
'NB Tremont_5' 'AG' 5079.55 1399.74 5087.48 1224.8 330 0.708 5 22
1
'SB Driveway_1' 'AG' 6296.65 1102.4 6334.66 1064.26 320 0.703 5 22
1
'SB Driveway_2' 'AG' 6334.66 1064.26 6392.88 1041.57 320 0.703 2 22
1
'SB Driveway_3' 'AG' 6392.88 1041.57 7827.49 867.1 320 0.703 -23 22
1
'NB Driveway_1' 'AG' 6354.48 1115.59 6395.97 1053.28 320 0.703 1 22
1
'NB Driveway_2' 'AG' 6395.97 1053.28 7828.94 879.01 320 0.703 -23 22
1
'SB Stonebridge N_1' 'AG' 2205.45 1410.64 2207.62 1255.27 1170 1.043 11 46
1
'SB Stonebridge M_1' 'AG' 2207.62 1255.27 2218.71 994.92 1280 0.941 18 46
1
'SB Stonebridge S_1' 'AG' 2218.71 994.92 2243.21 578.43 1390 0.632 29 46
1

'NB Stonebridge N_1' 'AG' 2262.4 1256.79 2256.52 1412.09 1380 0.632 19 46
1
'NB Stonebridge M_1' 'AG' 2270.84 995.86 2262.4 1256.79 1410 0.963 23 46
1
'NB Stonebridge S_1' 'AG' 2294.2 618.15 2270.84 995.86 1360 1.3 32 46
1
'Stonebridge U_1' 'AG' 2385.7 1259.17 2347.82 1238.51 20 0.922 20 22
1
'Stonebridge U_2' 'AG' 2347.82 1238.51 2324.79 1188.17 20 0.922 20 22
1
'Stonebridge U_3' 'AG' 2324.79 1188.17 2328.96 1050.67 20 0.922 24 22
1
'Stonebridge U_4' 'AG' 2328.96 1050.67 2341.54 1024.98 20 0.922 27 22
1
'Stonebridge U_5' 'AG' 2341.54 1024.98 2378.41 1003.2 20 0.922 29 22
1
'SB University N_1' 'AG' 7205.89 1885.84 7434.1 1627.34 670 1.3 -32 34
1
'SB University M_2' 'AG' 7434.1 1627.34 7802.34 1214.83 730 0.603 -32 34
1
'SB University S_1' 'AG' 7802.34 1214.83 8031.54 1013.56 1880 0.611 -32 34
1
'SB University S_2' 'AG' 8031.54 1013.56 8472.25 824.3 1880 0.611 -32 34
1
'University U_1' 'AG' 7273.29 1502.9 7337.99 1581.14 30 0.904 -32 34
1
'University U_2' 'AG' 7337.99 1581.14 7332.01 1653.62 30 0.904 -32 34
1
'University U_3' 'AG' 7332.01 1653.62 7205.62 1797.37 30 0.904 -32 34
1
'University U_4' 'AG' 7205.62 1797.37 7154.93 1815.43 30 0.904 -32 34
1
'University U_5' 'AG' 7154.93 1815.43 7041.45 1734.75 30 0.904 -32 34
1
'University U_6' 'AG' 7041.45 1734.75 7006.95 1721.08 30 0.904 -32 34
1
'NB University N_1' 'AG' 7458.82 1647.18 7230.2 1908.64 1710 1.107 -32 34
1
'NB University S_2' 'AG' 7816.26 1245.57 7458.82 1647.18 1960 0.711 -32 34
1
'NB University S_3' 'AG' 7816.29 1245.54 8020.41 1060.69 1960 0.711 -32 34
1
'NB University S_4' 'AG' 8020.41 1060.69 8385.07 880.11 1960 0.711 -32 34
1
'NB University S_5' 'AG' 8385.07 880.11 8637.56 832.76 1960 0.711 -32 34
2
'NB Stonebridge S_1_Q' 'AG' 2294.2 618.15 2270.84 995.86 32 46 3
90 50 2 1360 0.53227696812246 1600 1 3
2
'NB Stonebridge M_1_Q' 'AG' 2270.84 995.86 2262.4 1256.79 23 46 3
90 50 2 1410 0.53227696812246 1600 1 3
2
'SB Stonebridge N_1_Q' 'AG' 2205.45 1410.64 2207.62 1255.27 11 46 3
90 50 2 1170 0.53227696812246 1600 1 3

2

'SB Stonebridge M_1_Q' 'AG' 2207.62 1255.27 2218.71 994.92 18 46 3
90 50 2 1280 0.53227696812246 1600 1 3

2

'WB US380A Front4_13_Q' 'AG' 3066.22 1258.85 2242.05 1256.4 17 32 2
90 40 2 1570 0.53227696812246 1600 1 3

2

'WB US380A Front2_7_Q' 'AG' 5698.27 1248.8 5071.51 1224.31 16 32 2
90 40 2 1610 0.53227696812246 1600 1 3

2

'SB Tremont_6_Q' 'AG' 5036.4 1417.19 5051.01 1223.82 5 22 1
90 50 2 330 0.53227696812246 1600 1 3

2

'EB US380A Front2_5_Q' 'AG' 6019.51 1070.29 6333.4 1108.49 -1 32 2
90 40 2 1500 0.53227696812246 1600 1 3

2

'NB Driveway_1_Q' 'AG' 6354.48 1115.59 6395.97 1053.28 1 22 1
90 50 2 320 0.53227696812246 1600 1 3

2

'EB US380A Front4_9_Q' 'DP' 7273.29 1502.9 7447.12 1637.42 -32 32 2
90 40 2 1160 0.53227696812246 1600 1 3

2

'NB University N_1_Q' 'AG' 7458.82 1647.18 7230.2 1908.64 -32 34 2
90 50 2 1710 0.53227696812246 1600 1 3

2

'NB University S_2_Q' 'AG' 7816.26 1245.57 7458.82 1647.18 -32 34 2
90 50 2 1960 0.53227696812246 1600 1 3

2

'SB University N_1_Q' 'AG' 7205.89 1885.84 7434.1 1627.34 -32 34 2
90 50 2 670 0.53227696812246 1600 1 3

1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment A - 2050

DATE : 9/20/22

TIME : 10:29:16

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)	
			*		*		*						
1.	WB US380 A West_1	*	7594.9	2087.5	7451.3	1922.3	*	219.	221.	BR	3610.	0.8 -23.0 58.0	
2.	WB US380 A West_2	*	7451.3	1922.3	7204.7	1700.8	*	332.	228.	BR	3610.	0.8 -16.0 58.0	
3.	WB US380 A West_3	*	7204.7	1700.8	7006.6	1560.7	*	243.	235.	FL	3610.	0.8 -14.0 58.0	
4.	WB US380 A West_4	*	7006.6	1560.7	6868.4	1481.3	*	159.	240.	AG	3610.	0.8 -14.0 58.0	
5.	WB US380 A West_5	*	6868.4	1481.3	6688.6	1394.8	*	199.	244.	DP	3610.	0.8 -16.0 58.0	
6.	WB US380 A West_6	*	6688.6	1394.8	6468.4	1313.4	*	235.	250.	DP	3610.	0.8 -18.0 58.0	
7.	WB US380 A West_7	*	6468.4	1313.4	6158.2	1239.4	*	319.	257.	DP	3610.	0.8 -17.0 58.0	
8.	WB US380 A West_8	*	6158.2	1239.4	5885.8	1211.5	*	274.	264.	DP	3610.	0.8 -14.0 58.0	
9.	WB US380 A East_1	*	5885.8	1211.5	5307.4	1183.8	*	579.	267.	DP	4810.	0.8 -9.0 58.0	
10.	WB US380 A East_2	*	5307.4	1183.8	4708.7	1169.7	*	599.	269.	DP	4810.	0.8 1.0 58.0	
11.	WB US380 A East_3	*	4708.7	1169.7	3910.4	1167.5	*	798.	270.	DP	4810.	0.8 15.0 58.0	
12.	WB US380 A East_4	*	3910.4	1167.5	2845.9	1185.9	*	1065.	271.	AG	4810.	0.8 30.0 58.0	
13.	WB US380 A East_5	*	2845.9	1185.9	2399.1	1187.1	*	447.	270.	FL	4810.	0.8 32.0 58.0	
14.	WB US380 A East_6	*	2399.1	1187.1	2053.4	1174.3	*	346.	268.	BR	4810.	0.8 32.0 58.0	
15.	EB US380 A East_1	*	2057.8	1082.1	2392.4	1093.0	*	335.	88.	BR	5230.	0.7 32.0 58.0	
16.	EB US380 A East_2	*	2392.4	1093.0	2685.1	1094.6	*	293.	90.	FL	5230.	0.7 32.0 58.0	
17.	EB US380 A East_3	*	2685.1	1094.6	4012.2	1074.7	*	1327.	91.	AG	5230.	0.7 25.0 58.0	
18.	EB US380 A East_4	*	4012.2	1074.7	5159.4	1086.5	*	1147.	89.	DP	5230.	0.7 -3.0 58.0	
19.	EB US380 A East_5	*	5159.4	1086.5	5616.4	1104.2	*	457.	88.	DP	5230.	0.7 -13.0 58.0	
20.	EB US380 A East_6	*	5616.4	1104.2	6027.4	1129.8	*	412.	86.	DP	5230.	0.7 -16.0 58.0	
21.	EB US380 A East_7	*	6027.4	1129.8	6178.8	1150.7	*	153.	82.	DP	5230.	0.7 -18.0 58.0	
22.	EB US380 A East_8	*	6178.8	1150.7	6456.6	1214.0	*	285.	77.	DP	5230.	0.7 -17.0 58.0	
23.	EB US380 A West_1	*	6456.6	1214.0	6720.4	1308.2	*	280.	70.	AG	4440.	0.8 -16.0 58.0	
24.	EB US380 A West_2	*	6720.4	1308.2	6971.6	1433.8	*	281.	63.	AG	4440.	0.8 -14.0 58.0	
25.	EB US380 A West_3	*	6971.6	1433.8	7174.8	1563.0	*	241.	58.	FL	4440.	0.8 -14.0 58.0	
26.	EB US380 A West_4	*	7174.8	1563.0	7370.1	1717.8	*	249.	52.	BR	4440.	0.8 -16.0 58.0	
27.	WB US380 A ONR_1	*	6909.6	1653.7	6820.5	1565.2	*	126.	225.	DP	1520.	0.6 -32.0 22.0	
28.	WB US380 A ONR_2	*	6820.5	1565.2	6642.6	1462.9	*	205.	240.	DP	1520.	0.6 -23.0 22.0	
29.	WB US380 A ONR_3	*	6642.6	1462.9	6471.1	1382.1	*	190.	245.	DP	1520.	0.6 -20.0 22.0	
30.	WB US380 A ONR_4	*	6471.1	1382.1	6306.3	1320.6	*	176.	250.	DP	1520.	0.6 -21.0 22.0	
31.	WB US380 A ONR_5	*	6306.3	1320.6	5885.8	1211.5	*	434.	255.	DP	1520.	0.6 -18.0 22.0	
32.	EB US380 A OFR_1	*	6456.6	1214.0	6782.5	1284.5	*	333.	78.	BR	1150.	0.6 -10.0 22.0	

33.	EB	US380 A OFR_2	*	6782.5	1284.5	7076.8	1358.3	*	303.	76.	BR	1150.	0.6	-12.0	22.0
34.	EB	US380 A OFR_3	*	7076.8	1358.3	7482.8	1347.8	*	406.	91.	AG	1150.	0.6	-21.0	22.0
35.	EB	US380 A OFR_4	*	7482.8	1347.8	7802.3	1214.8	*	346.	113.	AG	1150.	0.6	-31.0	22.0
36.	EB	US380A Front2_1	*	2378.4	1003.2	3487.9	1031.1	*	1110.	89.	AG	1500.	0.6	29.0	32.0
37.	EB	US380A Front2_2	*	3487.9	1031.1	4676.1	1032.4	*	1188.	90.	AG	1500.	0.6	32.0	32.0
38.	EB	US380A Front2_3	*	4676.1	1032.4	5147.3	1039.4	*	471.	89.	BR	1500.	0.6	26.0	32.0
39.	EB	US380A Front2_4	*	5147.3	1039.4	6019.5	1070.3	*	873.	88.	AG	1500.	0.6	17.0	32.0
40.	EB	US380A Front2_5	*	6019.5	1070.3	6333.4	1108.5	*	316.	83.	AG	1500.	0.6	-1.0	32.0
41.	EB	US380A Front3_6	*	6333.4	1108.5	6921.8	1306.9	*	621.	71.	DP	1180.	0.6	-31.0	32.0
42.	EB	US380A Front3_7	*	6921.8	1306.9	7273.3	1502.9	*	402.	61.	DP	1180.	0.6	-32.0	32.0
43.	EB	US380A Front1_8	*	2250.8	994.5	2378.4	1003.2	*	128.	86.	DP	1480.	0.6	17.0	32.0
44.	EB	US380A Front4_9	*	7273.3	1502.9	7447.1	1637.4	*	220.	52.	DP	1160.	1.0	-32.0	32.0

PAGE 2

JOB: US380 McKinney

RUN: Segment A - 2050

DATE : 9/20/22

TIME : 10:29:16

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
			*			*								
45.	WB US380A Front2_1	*	6909.6	1653.7	6770.7	1566.7	*	164.	238.	AG	1610.	0.6	-32.0	32.0
46.	WB US380A Front2_2	*	6770.7	1566.7	6513.4	1437.8	*	288.	243.	AG	1610.	0.6	-24.0	32.0
47.	WB US380A Front2_3	*	6513.4	1437.8	6324.5	1367.1	*	202.	249.	AG	1610.	0.6	-11.0	32.0
48.	WB US380A Front2_4	*	6324.5	1367.1	6168.3	1321.9	*	163.	254.	AG	1610.	0.6	3.0	32.0
49.	WB US380A Front2_5	*	6168.3	1321.9	5895.3	1268.6	*	278.	259.	AG	1610.	0.6	7.0	32.0
50.	WB US380A Front2_6	*	5895.3	1268.6	5698.3	1248.8	*	198.	264.	AG	1610.	0.6	10.0	32.0
51.	WB US380A Front2_7	*	5698.3	1248.8	5071.5	1224.3	*	627.	268.	AG	1610.	0.6	16.0	32.0
52.	WB US380A Front3_8	*	5071.4	1224.3	4642.1	1214.4	*	429.	269.	AG	1590.	0.6	22.0	32.0
53.	WB US380A Front3_9	*	4642.1	1214.4	3829.7	1216.5	*	812.	270.	AG	1590.	0.6	32.0	32.0
54.	WB US380A Front3_10	*	3829.7	1216.5	3471.0	1230.1	*	359.	272.	AG	1590.	0.6	32.0	32.0
55.	WB US380A Front3_11	*	3471.0	1230.1	3066.2	1258.9	*	406.	274.	AG	1590.	0.6	21.0	32.0
56.	WB US380A Front3_12	*	3066.2	1258.9	2385.7	1259.2	*	681.	270.	AG	1590.	0.6	15.0	32.0
57.	WB US380A Front4_13	*	2385.7	1259.2	2242.1	1256.4	*	144.	269.	AG	1570.	1.0	17.0	32.0
58.	WB US380A Front1_14	*	7217.8	1896.6	7007.0	1721.1	*	274.	230.	AG	3100.	0.7	-32.0	32.0
59.	SB Tremont_1	*	4423.7	1771.7	4481.3	1641.2	*	143.	156.	AG	330.	1.1	29.0	22.0
60.	SB Tremont_2	*	4481.3	1641.2	4572.3	1560.9	*	121.	131.	AG	330.	1.1	23.0	22.0
61.	SB Tremont_3	*	4572.3	1560.9	4694.2	1518.4	*	129.	109.	AG	330.	1.1	14.0	22.0
62.	SB Tremont_4	*	4694.2	1518.4	4921.8	1505.9	*	228.	93.	AG	330.	1.1	0.0	22.0
63.	SB Tremont_5	*	4921.8	1505.9	5036.4	1417.2	*	145.	128.	AG	330.	1.1	-10.0	22.0
64.	SB Tremont_6	*	5036.4	1417.2	5051.0	1223.8	*	194.	176.	AG	330.	1.1	5.0	22.0
65.	NB Tremont_1	*	4550.5	1620.7	4698.0	1554.7	*	162.	114.	AG	330.	0.7	15.0	22.0
66.	NB Tremont_2	*	4698.0	1554.7	4931.1	1541.2	*	233.	93.	AG	330.	0.7	-1.0	22.0
67.	NB Tremont_3	*	4931.1	1541.2	5041.4	1480.9	*	126.	119.	AG	330.	0.7	-11.0	22.0
68.	NB Tremont_4	*	5041.4	1480.9	5079.5	1399.7	*	90.	155.	AG	330.	0.7	-11.0	22.0
69.	NB Tremont_5	*	5079.5	1399.7	5087.5	1224.8	*	175.	177.	AG	330.	0.7	5.0	22.0
70.	SB Driveway_1	*	6296.6	1102.4	6334.7	1064.3	*	54.	135.	AG	320.	0.7	5.0	22.0
71.	SB Driveway_2	*	6334.7	1064.3	6392.9	1041.6	*	62.	111.	AG	320.	0.7	2.0	22.0
72.	SB Driveway_3	*	6392.9	1041.6	7827.5	867.1	*	1445.	97.	AG	320.	0.7	-23.0	22.0
73.	NB Driveway_1	*	6354.5	1115.6	6396.0	1053.3	*	75.	146.	AG	320.	0.7	1.0	22.0
74.	NB Driveway_2	*	6396.0	1053.3	7828.9	879.0	*	1444.	97.	AG	320.	0.7	-23.0	22.0

75. SB Stonebridge N_1 * 2205.4 1410.6 2207.6 1255.3 * 155. 179. AG 1170. 1.0 11.0 46.0
76. SB Stonebridge M_1 * 2207.6 1255.3 2218.7 994.9 * 261. 178. AG 1280. 0.9 18.0 46.0
77. SB Stonebridge S_1 * 2218.7 994.9 2243.2 578.4 * 417. 177. AG 1390. 0.6 29.0 46.0
78. NB Stonebridge N_1 * 2262.4 1256.8 2256.5 1412.1 * 155. 358. AG 1380. 0.6 19.0 46.0
79. NB Stonebridge M_1 * 2270.8 995.9 2262.4 1256.8 * 261. 358. AG 1410. 1.0 23.0 46.0
80. NB Stonebridge S_1 * 2294.2 618.2 2270.8 995.9 * 378. 356. AG 1360. 1.3 32.0 46.0
81. Stonebridge U_1 * 2385.7 1259.2 2347.8 1238.5 * 43. 241. AG 20. 0.9 20.0 22.0
82. Stonebridge U_2 * 2347.8 1238.5 2324.8 1188.2 * 55. 205. AG 20. 0.9 20.0 22.0
83. Stonebridge U_3 * 2324.8 1188.2 2329.0 1050.7 * 138. 178. AG 20. 0.9 24.0 22.0
84. Stonebridge U_4 * 2329.0 1050.7 2341.5 1025.0 * 29. 154. AG 20. 0.9 27.0 22.0
85. Stonebridge U_5 * 2341.5 1025.0 2378.4 1003.2 * 43. 121. AG 20. 0.9 29.0 22.0
86. SB University N_1 * 7205.9 1885.8 7434.1 1627.3 * 345. 139. AG 670. 1.3 -32.0 34.0
87. SB University M_2 * 7434.1 1627.3 7802.3 1214.8 * 553. 138. AG 730. 0.6 -32.0 34.0
88. SB University S_1 * 7802.3 1214.8 8031.5 1013.6 * 305. 131. AG 1880. 0.6 -32.0 34.0
89. SB University S_2 * 8031.5 1013.6 8472.3 824.3 * 480. 113. AG 1880. 0.6 -32.0 34.0
90. University U_1 * 7273.3 1502.9 7338.0 1581.1 * 102. 40. AG 30. 0.9 -32.0 34.0
91. University U_2 * 7338.0 1581.1 7332.0 1653.6 * 73. 355. AG 30. 0.9 -32.0 34.0
92. University U_3 * 7332.0 1653.6 7205.6 1797.4 * 191. 319. AG 30. 0.9 -32.0 34.0
93. University U_4 * 7205.6 1797.4 7154.9 1815.4 * 54. 290. AG 30. 0.9 -32.0 34.0
94. University U_5 * 7154.9 1815.4 7041.5 1734.8 * 139. 235. AG 30. 0.9 -32.0 34.0
95. University U_6 * 7041.5 1734.8 7007.0 1721.1 * 37. 248. AG 30. 0.9 -32.0 34.0

PAGE 3

JOB: US380 McKinney

RUN: Segment A - 2050

DATE : 9/20/22

TIME : 10:29:16

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	96. NB University N_1	* 7458.8	1647.2	7230.2	1908.6	* 347. 319. AG	1710.	1.1	-32.0	34.0		
	97. NB University S_2	* 7816.3	1245.6	7458.8	1647.2	* 538. 318. AG	1960.	0.7	-32.0	34.0		
	98. NB University S_3	* 7816.3	1245.5	8020.4	1060.7	* 275. 132. AG	1960.	0.7	-32.0	34.0		
	99. NB University S_4	* 8020.4	1060.7	8385.1	880.1	* 407. 116. AG	1960.	0.7	-32.0	34.0		
	100. NB University S_5	* 8385.1	880.1	8637.6	832.8	* 257. 101. AG	1960.	0.7	-32.0	34.0		
6.3	101. NB Stonebridge S_1_Q	* 2294.2	618.2	2286.6	741.8	* 124. 356. AG	2. 100.0	32.0	46.0	0.71		
6.5	102. NB Stonebridge M_1_Q	* 2270.8	995.9	2266.7	1124.3	* 128. 358. AG	2. 100.0	23.0	46.0	0.73		
5.4	103. SB Stonebridge N_1_Q	* 2205.4	1410.6	2206.9	1304.0	* 107. 179. AG	2. 100.0	11.0	46.0	0.61		
5.9	104. SB Stonebridge M_1_Q	* 2207.6	1255.3	2212.6	1138.9	* 116. 178. AG	2. 100.0	18.0	46.0	0.67		
13.2	105. WB US380A Front4_13Q	* 3066.2	1258.9	2807.3	1258.1	* 259. 270. AG	1. 100.0	17.0	32.0	0.96		
14.9	106. WB US380A Front2_7_Q	* 5698.3	1248.8	5404.9	1237.3	* 294. 268. AG	1. 100.0	16.0	32.0	0.99		
10.9	107. SB Tremont_6_Q	* 5036.4	1417.2	5043.2	1327.2	* 90. 176. AG	1. 100.0	5.0	22.0	0.52	4.6	
	108. EB US380A Front2_5_Q	* 6019.5	1070.3	6231.9	1096.1	* 214. 83. AG	1. 100.0	-1.0	32.0	0.92		
	109. NB Driveway_1_Q	* 6354.5	1115.6	6403.0	1042.8	* 87. 146. AG	1. 100.0	1.0	22.0	0.50	4.4	

110. EB US380A Front4_9_Q* 7273.3 1502.9 7373.6 1580.5 * 127. 52. DP 1. 100.0 -32.0 32.0 0.71
6.4
111. NB University N_1_Q * 7458.8 1647.2 5803.5 3540.3 * 2515. 319. AG 2. 100.0 -32.0 34.0 1.34
127.7
112. NB University S_2_Q * 7816.3 1245.6 5287.7 4086.6 * 3803. 318. AG 2. 100.0 -32.0 34.0 1.53
193.2
113. SB University N_1_Q * 7205.9 1885.8 7266.5 1817.2 * 92. 139. AG 2. 100.0 -32.0 34.0 0.52
4.7

PAGE 4

JOB: US380 McKinney

RUN: Segment A - 2050

DATE : 9/20/22

TIME : 10:29:16

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
ARRIVAL

	* LENGTH (SEC)	TIME (SEC)	LOST TIME (SEC)	VOL (VPH)	FLOW RATE (VPH)	EM FAC (gm/hr)	TYPE	RATE
101. NB Stonebridge S_1_Q*	90	50	2.0	1360	1600	0.53	1	3
102. NB Stonebridge M_1_Q*	90	50	2.0	1410	1600	0.53	1	3
103. SB Stonebridge N_1_Q*	90	50	2.0	1170	1600	0.53	1	3
104. SB Stonebridge M_1_Q*	90	50	2.0	1280	1600	0.53	1	3
105. WB US380A Front4_13Q*	90	40	2.0	1570	1600	0.53	1	3
106. WB US380A Front2_7_Q*	90	40	2.0	1610	1600	0.53	1	3
107. SB Tremont_6_Q *	90	50	2.0	330	1600	0.53	1	3
108. EB US380A Front2_5_Q*	90	40	2.0	1500	1600	0.53	1	3
109. NB Driveway_1_Q *	90	50	2.0	320	1600	0.53	1	3
110. EB US380A Front4_9_Q*	90	40	2.0	1160	1600	0.53	1	3
111. NB University N_1_Q*	90	50	2.0	1710	1600	0.53	1	3
112. NB University S_2_Q *	90	50	2.0	1960	1600	0.53	1	3
113. SB University N_1_Q*	90	50	2.0	670	1600	0.53	1	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	*
1. A1	* 4728.4	907.1	32.0	*
2. A2	* 4691.4	1004.2	32.0	*
3. A3	* 4687.9	1237.1	14.0	*
4. A4	* 4675.5	1376.6	15.0	*

PAGE 5

JOB: US380 McKinney

RUN: Segment A - 2050

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4

```
-----*-----
 0. * 0.0 0.0 0.0 0.0
10. * 0.0 0.0 0.0 0.0
20. * 0.0 0.0 0.0 0.0
30. * 0.0 0.0 0.0 0.0
40. * 0.0 0.0 0.0 0.0
50. * 0.0 0.0 0.0 0.0
60. * 0.0 0.1 0.0 0.0
70. * 0.0 0.1 0.0 0.0
80. * 0.0 0.1 0.0 0.0
90. * 0.0 0.0 0.0 0.0
100. * 0.0 0.0 0.1 0.0
110. * 0.0 0.0 0.1 0.0
120. * 0.0 0.0 0.2 0.0
130. * 0.0 0.0 0.2 0.0
140. * 0.0 0.0 0.2 0.0
150. * 0.0 0.0 0.1 0.0
160. * 0.0 0.0 0.0 0.0
170. * 0.0 0.0 0.1 0.0
180. * 0.0 0.0 0.1 0.0
190. * 0.0 0.0 0.1 0.0
200. * 0.0 0.0 0.1 0.0
210. * 0.0 0.0 0.1 0.0
220. * 0.0 0.0 0.1 0.0
230. * 0.0 0.0 0.2 0.0
240. * 0.0 0.0 0.2 0.0
250. * 0.0 0.0 0.2 0.0
260. * 0.0 0.0 0.1 0.0
270. * 0.0 0.0 0.0 0.0
280. * 0.0 0.1 0.0 0.0
290. * 0.0 0.2 0.0 0.0
300. * 0.0 0.1 0.0 0.0
310. * 0.0 0.0 0.0 0.0
320. * 0.0 0.0 0.0 0.0
330. * 0.0 0.0 0.0 0.0
340. * 0.0 0.0 0.0 0.0
350. * 0.0 0.0 0.0 0.0
360. * 0.0 0.0 0.0 0.0
-----*-----
MAX * 0.0 0.2 0.2 0.0
DEGR.* 0 290 120 0
```

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC3 .

PAGE 6

JOB: US380 McKinney

RUN: Segment A - 2050

DATE : 9/20/22

TIME : 10:29:16

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)				
	* ANGLE (DEGREES)				
	* REC1 REC2 REC3 REC4				
LINK #	*	0	290	120	0
	*				
1	*	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0
3	*	0.0	0.0	0.0	0.0
4	*	0.0	0.0	0.0	0.0
5	*	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.1	0.0
11	*	0.0	0.1	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.0
17	*	0.0	0.0	0.0	0.0
18	*	0.0	0.1	0.1	0.0
19	*	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0
21	*	0.0	0.0	0.0	0.0
22	*	0.0	0.0	0.0	0.0
23	*	0.0	0.0	0.0	0.0
24	*	0.0	0.0	0.0	0.0
25	*	0.0	0.0	0.0	0.0
26	*	0.0	0.0	0.0	0.0
27	*	0.0	0.0	0.0	0.0
28	*	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0
33	*	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0

45 * 0.0 0.0 0.0 0.0

JOB: US380 McKinney

RUN: Segment A - 2050

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 0 290 120 0

46 * 0.0 0.0 0.0 0.0

47 * 0.0 0.0 0.0 0.0

48 * 0.0 0.0 0.0 0.0

49 * 0.0 0.0 0.0 0.0

50 * 0.0 0.0 0.0 0.0

51 * 0.0 0.0 0.0 0.0

52 * 0.0 0.0 0.0 0.0

53 * 0.0 0.0 0.0 0.0

54 * 0.0 0.0 0.0 0.0

55 * 0.0 0.0 0.0 0.0

56 * 0.0 0.0 0.0 0.0

57 * 0.0 0.0 0.0 0.0

58 * 0.0 0.0 0.0 0.0

59 * 0.0 0.0 0.0 0.0

60 * 0.0 0.0 0.0 0.0

61 * 0.0 0.0 0.0 0.0

62 * 0.0 0.0 0.0 0.0

63 * 0.0 0.0 0.0 0.0

64 * 0.0 0.0 0.0 0.0

65 * 0.0 0.0 0.0 0.0

66 * 0.0 0.0 0.0 0.0

67 * 0.0 0.0 0.0 0.0

68 * 0.0 0.0 0.0 0.0

69 * 0.0 0.0 0.0 0.0

70 * 0.0 0.0 0.0 0.0

71 * 0.0 0.0 0.0 0.0

72 * 0.0 0.0 0.0 0.0

73 * 0.0 0.0 0.0 0.0

74 * 0.0 0.0 0.0 0.0

75 * 0.0 0.0 0.0 0.0

76 * 0.0 0.0 0.0 0.0

77 * 0.0 0.0 0.0 0.0

78 * 0.0 0.0 0.0 0.0

79 * 0.0 0.0 0.0 0.0

80 * 0.0 0.0 0.0 0.0

81 * 0.0 0.0 0.0 0.0

82 * 0.0 0.0 0.0 0.0

83 * 0.0 0.0 0.0 0.0

84 * 0.0 0.0 0.0 0.0

85 * 0.0 0.0 0.0 0.0

86 * 0.0 0.0 0.0 0.0

87 * 0.0 0.0 0.0 0.0

88 * 0.0 0.0 0.0 0.0

89 * 0.0 0.0 0.0 0.0

90 * 0.0 0.0 0.0 0.0

91 * 0.0 0.0 0.0 0.0
92 * 0.0 0.0 0.0 0.0
93 * 0.0 0.0 0.0 0.0
94 * 0.0 0.0 0.0 0.0
95 * 0.0 0.0 0.0 0.0
96 * 0.0 0.0 0.0 0.0
97 * 0.0 0.0 0.0 0.0
98 * 0.0 0.0 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment A - 2050

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 0 290 120 0

99 * 0.0 0.0 0.0 0.0
100 * 0.0 0.0 0.0 0.0
101 * 0.0 0.0 0.0 0.0
102 * 0.0 0.0 0.0 0.0
103 * 0.0 0.0 0.0 0.0
104 * 0.0 0.0 0.0 0.0
105 * 0.0 0.0 0.0 0.0
106 * 0.0 0.0 0.0 0.0
107 * 0.0 0.0 0.0 0.0
108 * 0.0 0.0 0.0 0.0
109 * 0.0 0.0 0.0 0.0
110 * 0.0 0.0 0.0 0.0
111 * 0.0 0.0 0.0 0.0
112 * 0.0 0.0 0.0 0.0
113 * 0.0 0.0 0.0 0.0

'US380 McKinney' 60 0.75 0 0 3 0.3048 1 1
'B1' 3428.96 1287.6 -14
'B2' 3604.45 801.21 -5
'B3' 3533.75 596.82 1
'Segment B - 2030' 118 1 1 'C'
1
'WB US 380 B_1' 'BR' 4872.84 2009.72 4795.67 1923.45 3380 0.964 8 58
1
'WB US 380 B_2' 'BR' 4795.67 1923.45 4591.98 1727.55 3380 0.964 11 58
1
'WB US 380 B_3' 'BR' 4591.98 1727.55 4309.09 1501.75 3380 0.964 13 58
1
'WB US 380 B_4' 'BR' 4309.09 1501.75 4009.29 1309.68 3380 0.964 18 58
1
'WB US 380 B_5' 'BR' 4009.29 1309.68 3857.57 1226.69 3380 0.964 20 58
1
'WB US 380 B_6' 'BR' 3857.57 1226.69 3672.72 1141.34 3380 0.964 21 58
1
'WB US 380 B_7' 'BR' 3672.72 1141.34 3423 1045.06 3380 0.964 19 58
1
'WB US 380 B_8' 'FL' 3423 1045.06 3141.48 965.92 3380 0.964 15 58
1
'WB US 380 B_9' 'FL' 3141.48 965.92 2923.63 924.43 3380 0.964 8 58
1
'WB US 380 B_10' 'FL' 2923.63 924.43 2722.68 901.09 3380 0.964 4 58
1
'WB US 380 B_11' 'FL' 2722.68 901.09 2481.48 892.01 3380 0.964 -1 58
1
'WB US 380 B_12' 'FL' 2481.48 892.01 2098.74 901.13 3380 0.964 -8 58
1
'WB US 380 B_13' 'BR' 2098.74 901.13 1660.02 897.23 3380 0.964 -15 58
1
'WB US 380 B_14' 'AG' 1660.02 897.23 1357.32 932.61 3380 0.964 -15 58
1
'WB US380 B West_15' 'AG' 1357.32 932.61 296.58 919.59 3980 1.017 1 58
1
'EB US380B West_16' 'AG' 292.53 666.19 647.54 684.13 4040 1.007 5 46
1
'EB US380B West_17' 'AG' 647.54 684.13 1455.02 691.73 4040 1.007 -9 46
1
'EB US 380 B_1' 'AG' 1455.02 691.73 1705.4 718.55 3500 1.23 -15 58
1
'EB US 380 B_2' 'AG' 1705.4 718.55 2280.92 736.78 3500 1.23 -15 58
1
'EB US 380 B_3' 'FL' 2280.92 736.78 2818.68 782.36 3500 1.23 -3 58
1
'EB US 380 B_4' 'FL' 2818.68 782.36 3252.28 872.2 3500 1.23 6 58
1
'EB US 380 B_5' 'FL' 3252.28 872.2 3487.95 946.42 3500 1.23 14 58
1
'EB US 380 B_6' 'BR' 3487.95 946.42 3720.31 1035.95 3500 1.23 19 58
1
'EB US 380 B_7' 'BR' 3720.66 1036.1 3921.82 1129.75 3500 1.23 21 58

1
'EB US 380 B_8' 'BR' 3921.82 1129.75 4060.29 1204.21 3500 1.23 20 58
1
'EB US 380 B_9' 'BR' 4060.29 1204.21 4367.28 1398.86 3500 1.23 18 58
1
'EB US 380 B_10' 'BR' 4367.28 1398.86 4633.88 1610.57 3500 1.23 13 58
1
'EB US 380 B_11' 'BR' 4633.88 1610.57 4793.28 1756.9 3500 1.23 11 58
1
'EB US 380 B_12' 'BR' 4793.28 1756.9 4962.79 1934.23 3500 1.23 8 58
1
'WB US380B Front1_1' 'BR' 4825.03 2059.52 4648.11 1865.69 670 1.061 -17 32
1
'WB US380B Front1_2' 'BR' 4648.11 1865.69 4506.18 1734.18 670 1.061 -14 32
1
'WB US380B Front1_3' 'BR' 4506.18 1734.18 4305.66 1568.81 670 1.061 -13 32
1
'WB US380B Front1_4' 'BR' 4305.66 1568.81 4072.59 1409.96 670 1.061 -12 43
1
'WB US380B Front1_5' 'BR' 4072.59 1409.96 3788.74 1255.01 670 1.061 -10 43
1
'WB US380B Front1_6' 'FL' 3788.74 1255.01 3643.58 1192.08 670 1.061 -9 43
1
'WB US380B Front2_7' 'AG' 3643.58 1192.08 3554.91 1153.63 690 1.027 -8 32
1
'WB US380B Front3_8' 'AG' 3554.91 1153.63 3444.99 1110.48 710 1.027 -7 32
1
'WB US380B Front3_9' 'AG' 3444.99 1110.48 3105.14 1012.82 710 1.027 -8 32
1
'WB US380B Front3_10' 'AG' 3105.14 1012.82 2864.26 968.55 710 1.027 -12 32
1
'WB US380B Front3_11' 'AG' 2864.26 968.55 2668.94 946.42 710 1.027 -14 32
1
'WB US380B Front3_12' 'AG' 2668.94 946.42 2463.21 933.4 710 1.027 -16 32
1
'WB US380B Front3_13' 'AG' 2463.21 933.4 2057.4 935.47 710 1.027 -19 32
1
'WB US380B Front3_14' 'BR' 2057.4 935.47 1657.48 933.79 710 1.027 -21 32
1
'WB US380B Front3_15' 'AG' 1657.48 933.79 1357.32 932.61 710 1.027 -19 21
1
'EB US380B Front1_1' 'AG' 1455.02 691.73 2379.15 689.56 720 1.007 -12 32
1
'EB US380B Front1_2' 'AG' 2379.15 689.56 2732.63 711.19 720 1.007 -6 32
1
'EB US380B Front1_3' 'AG' 2732.63 711.19 3008.49 752.3 720 1.007 -7 43
1
'EB US380B Front1_4' 'AG' 3008.49 752.3 3210.55 796.67 720 1.007 -8 43
1
'EB US380B Front1_5' 'AG' 3210.55 796.67 3442.82 864.13 720 1.007 -9 54
1
'EB US380B Front1_6' 'AG' 3442.82 864.13 3639.26 933.92 720 1.007 -10 54
1
'EB US380B Front2_7' 'AG' 3639.26 933.92 3744.73 976.67 710 1.007 -10 54

1
'EB US380B Front3_8' 'BR' 3744.39 976.53 4037.54 1116.09 680 1.215 -10 32
1
'EB US380B Front3_9' 'BR' 4037.54 1116.09 4355.49 1309.66 680 1.215 -9 32
1
'EB US380B Front3_10' 'BR' 4355.49 1309.66 4597.63 1492.36 680 1.215 -12 32
1
'EB US380B Front3_11' 'AG' 4597.63 1492.36 4741.6 1616.83 680 1.215 -16 54
1
'EB US380B Front3_12' 'AG' 4741.6 1616.83 4864.84 1731.43 680 1.215 -19 54
1
'EB US380B Front3_13' 'AG' 4864.84 1731.43 5002.87 1877.95 680 1.215 -21 54
1
'SB University N_1' 'AG' 4815 2047.9 4990.23 1864.53 280 2.393 -19 46
1
'SB University M_2' 'AG' 4990.23 1864.53 5099.51 1749.41 870 1.038 -9 46
1
'SB University M_3' 'AG' 5099.51 1749.41 5221.31 1570.56 870 1.038 -5 46
1
'SB University M_4' 'AG' 5221.31 1570.56 5341.76 1311.19 870 1.038 1 46
1
'SB University M_5' 'AG' 5341.76 1311.19 5509.12 1081.63 870 1.038 7 46
1
'SB University M_6' 'AG' 5509.12 1081.63 5638.82 964.44 870 1.038 10 46
1
'SB University S_7' 'AG' 5638.82 964.44 5847.95 841.07 980 1.01 10 46
1
'SB University S_8' 'AG' 5847.95 841.07 6148.68 749.77 980 1.01 9 46
1
'SB University S_9' 'AG' 6148.68 749.77 7386.88 734.85 980 1.01 -7 46
1
'NB University S_1' 'AG' 7384.83 771.58 6227.18 775.84 780 1.014 -9 46
1
'NB University S_2' 'AG' 6227.18 775.84 5918.79 848.29 780 1.014 8 46
1
'NB University S_3' 'AG' 5918.79 848.29 5659.69 996.07 780 1.014 10 46
1
'NB University M_4' 'AG' 5659.69 996.07 5525.96 1117.16 540 2.901 10 46
1
'NB University M_5' 'AG' 5525.96 1117.16 5343.84 1384.87 540 2.901 6 46
1
'NB University M_6' 'AG' 5343.84 1384.87 5247.6 1599.07 540 2.901 0 46
1
'NB University M_7' 'AG' 5247.6 1599.07 5091.91 1813.81 540 2.901 -5 46
1
'NB University M_8' 'AG' 5091.91 1813.81 5015.34 1892.27 540 2.901 -9 46
1
'NB University N_9' 'AG' 5015.34 1892.27 4836.91 2071.41 520 1.698 -18 34
1
'SB Prestwick N_1' 'AG' 279.97 665.39 277.03 443.48 170 1.279 7 34
1
'SB Prestwick N_2' 'AG' 277.03 443.48 294.1 340.11 170 1.279 2 34
1
'SB Prestwick N_3' 'AG' 294.1 340.11 330.09 237.46 170 1.279 1 34

1
'SB Prestwick N_4' 'AG' 330.09 237.46 392.68 123.49 170 1.279 2 34
1
'SB Prestwick S_5' 'AG' 279.94 918.9 279.97 665.39 120 1.934 10 22
1
'NB Prestwick N_1' 'AG' 307.8 667.11 308.52 919.93 150 1.818 10 22
1
'NB Prestwick S_2' 'AG' 319.47 336.53 302.68 438.72 140 1.934 1 46
1
'NB Prestwick S_3' 'AG' 302.68 438.72 307.8 667.11 140 1.934 6 34
1
'SB Indep N_1' 'AG' 3729.11 970.34 3626.56 1184.69 120 1.934 -15 46
1
'SB Indep M_2' 'AG' 3729.11 970.34 3774.7 861.84 170 1.279 -16 46
1
'SB Indep M_3' 'AG' 3774.7 861.84 3812.03 706.22 170 1.279 -16 46
1
'SB Indep S_4' 'AG' 3812.03 706.22 3830.61 489.79 380 1.269 -14 46
1
'NB Indep S_1' 'AG' 3859.79 489.22 3841.97 706 230 1.285 -16 46
1
'NB Indep M_2' 'AG' 3841.97 706 3814.7 826.5 150 1.818 -17 44
1
'NB Indep M_3' 'AG' 3814.7 826.5 3758.88 982.92 150 1.818 -17 44
1
'NB Indep N_4' 'AG' 3758.88 982.92 3660.72 1199.51 140 1.934 -16 44
1
'WB Connector_1' 'AG' 5645.29 1007.48 5535.11 865.18 260 1.264 10 34
1
'WB Connector_2' 'AG' 5535.11 865.18 5400.08 778.55 260 1.264 10 34
1
'WB Connector_3' 'AG' 5400.08 778.55 5258.24 734.35 260 1.264 10 34
1
'WB Connector_4' 'AG' 5258.24 734.35 3810.11 717.59 260 1.264 10 34
1
'EB Connector_1' 'AG' 3814.05 694.2 5261.94 710.57 130 1.274 -3 34
1
'EB Connector_2' 'AG' 5261.94 710.57 5410.03 756.65 130 1.274 10 34
1
'EB Connector_3' 'AG' 5410.03 756.65 5551.04 847.1 130 1.274 10 34
1
'EB Connector_4' 'AG' 5551.04 847.1 5672.65 987.4 130 1.274 10 34
2
'NB Prestwick S_3_Q' 'AG' 302.68 438.72 307.8 667.11 6 34 2
90 50 2 1600 1.435 1600 1 3
2
'NB Prestwick N_1_Q' 'AG' 307.8 667.11 308.52 919.93 10 22 1
90 50 2 1600 1.435 1600 1 3
2
'SB Prestwick S_5_Q' 'AG' 279.94 918.9 279.97 665.39 10 22 1
90 50 2 1600 1.435 1600 1 3
2
'EB US380B Front2_7_Q' 'AG' 3639.26 933.92 3744.73 976.67 -10 54 4
90 40 2 1600 1.435 1600 1 3

2

'NB Indep M_3_Q' 'AG' 3814.7 826.5 3758.88 982.92 -17 44 3
90 50 2 1600 1.435 1600 1 3

2

'NB Indep N_4_Q' 'AG' 3758.88 982.92 3660.72 1199.51 -16 44 2
90 50 2 1600 1.435 1600 1 3

2

'SB Indep N_1_Q' 'AG' 3729.11 970.34 3626.56 1184.69 -15 46 2
90 50 2 1600 1.435 1600 1 3

2

'WB US380B Front1_6_Q' 'FL' 3788.74 1255.01 3643.58 1192.08 -9 43 3
90 40 2 1600 1.435 1600 1 3

2

'WB US380 B West_15_Q' 'AG' 1357.32 932.61 296.58 919.59 1 58 4
90 40 2 1600 1.435 1600 1 3

2

'EB US380B Front3_13Q' 'AG' 4864.84 1731.43 5002.87 1877.95 -21 54 4
90 40 2 1600 1.435 1600 1 3

2

'SB University N_1_Q' 'AG' 4815 2047.9 4990.23 1864.53 -19 46 3
90 50 2 1600 1.435 1600 1 3

2

'NB University M_8_Q' 'AG' 5091.91 1813.81 5015.34 1892.27 -9 46 3
90 50 2 1600 1.435 1600 1 3

2

'NB University N_9_Q' 'AG' 5015.34 1892.27 4836.91 2071.41 -18 34 2
90 50 2 1600 1.435 1600 1 3

2

'NB University S_3_Q' 'AG' 5918.79 848.29 5659.69 996.07 10 46 3
90 50 2 1600 1.435 1600 1 3

2

'SB University M_6_Q' 'AG' 5509.12 1081.63 5638.82 964.44 10 46 3
90 50 2 1600 1.435 1600 1 3

2

'SB Indep M_3_Q' 'AG' 3774.7 861.84 3812.03 706.22 -16 46 4
90 50 2 1600 1.435 1600 1 3

2

'WB Connector_4_Q' 'AG' 5258.24 734.35 3810.11 717.59 10 34 2
90 40 2 1600 1.435 1600 1 3

2

'EB Connector_4_Q' 'AG' 5551.04 847.1 5672.65 987.4 10 34 2
90 40 2 1600 1.435 1600 1 3

2

'NB Indep S_1_Q' 'AG' 3859.79 489.22 3841.97 706 -16 46 3
90 50 2 1600 1.435 1600 1 3

1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment B - 2030

DATE : 9/15/22

TIME : 14:55:33

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)	
	1. WB US 380 B_1	*	4872.8	2009.7	4795.7	1923.5	*	116.	222.	BR	3380.	1.0	8.0 58.0
	2. WB US 380 B_2	*	4795.7	1923.5	4592.0	1727.6	*	283.	226.	BR	3380.	1.0	11.0 58.0
	3. WB US 380 B_3	*	4592.0	1727.6	4309.1	1501.8	*	362.	231.	BR	3380.	1.0	13.0 58.0
	4. WB US 380 B_4	*	4309.1	1501.8	4009.3	1309.7	*	356.	237.	BR	3380.	1.0	18.0 58.0
	5. WB US 380 B_5	*	4009.3	1309.7	3857.6	1226.7	*	173.	241.	BR	3380.	1.0	20.0 58.0
	6. WB US 380 B_6	*	3857.6	1226.7	3672.7	1141.3	*	204.	245.	BR	3380.	1.0	21.0 58.0
	7. WB US 380 B_7	*	3672.7	1141.3	3423.0	1045.1	*	268.	249.	BR	3380.	1.0	19.0 58.0
	8. WB US 380 B_8	*	3423.0	1045.1	3141.5	965.9	*	292.	254.	FL	3380.	1.0	15.0 58.0
	9. WB US 380 B_9	*	3141.5	965.9	2923.6	924.4	*	222.	259.	FL	3380.	1.0	8.0 58.0
	10. WB US 380 B_10	*	2923.6	924.4	2722.7	901.1	*	202.	263.	FL	3380.	1.0	4.0 58.0
	11. WB US 380 B_11	*	2722.7	901.1	2481.5	892.0	*	241.	268.	FL	3380.	1.0	-1.0 58.0
	12. WB US 380 B_12	*	2481.5	892.0	2098.7	901.1	*	383.	271.	FL	3380.	1.0	-8.0 58.0
	13. WB US 380 B_13	*	2098.7	901.1	1660.0	897.2	*	439.	269.	BR	3380.	1.0	-15.0 58.0
	14. WB US 380 B_14	*	1660.0	897.2	1357.3	932.6	*	305.	277.	AG	3380.	1.0	-15.0 58.0
	15. WB US380 B West_15	*	1357.3	932.6	296.6	919.6	*	1061.	269.	AG	3980.	1.0	1.0 58.0
	16. EB US380B West_16	*	292.5	666.2	647.5	684.1	*	355.	87.	AG	4040.	1.0	5.0 46.0
	17. EB US380B West_17	*	647.5	684.1	1455.0	691.7	*	808.	89.	AG	4040.	1.0	-9.0 46.0
	18. EB US 380 B_1	*	1455.0	691.7	1705.4	718.5	*	252.	84.	AG	3500.	1.2	-15.0 58.0
	19. EB US 380 B_2	*	1705.4	718.5	2280.9	736.8	*	576.	88.	AG	3500.	1.2	-15.0 58.0
	20. EB US 380 B_3	*	2280.9	736.8	2818.7	782.4	*	540.	85.	FL	3500.	1.2	-3.0 58.0
	21. EB US 380 B_4	*	2818.7	782.4	3252.3	872.2	*	443.	78.	FL	3500.	1.2	6.0 58.0
	22. EB US 380 B_5	*	3252.3	872.2	3488.0	946.4	*	247.	73.	FL	3500.	1.2	14.0 58.0
	23. EB US 380 B_6	*	3488.0	946.4	3720.3	1035.9	*	249.	69.	BR	3500.	1.2	19.0 58.0
	24. EB US 380 B_7	*	3720.7	1036.1	3921.8	1129.8	*	222.	65.	BR	3500.	1.2	21.0 58.0
	25. EB US 380 B_8	*	3921.8	1129.8	4060.3	1204.2	*	157.	62.	BR	3500.	1.2	20.0 58.0
	26. EB US 380 B_9	*	4060.3	1204.2	4367.3	1398.9	*	363.	58.	BR	3500.	1.2	18.0 58.0
	27. EB US 380 B_10	*	4367.3	1398.9	4633.9	1610.6	*	340.	52.	BR	3500.	1.2	13.0 58.0
	28. EB US 380 B_11	*	4633.9	1610.6	4793.3	1756.9	*	216.	47.	BR	3500.	1.2	11.0 58.0
	29. EB US 380 B_12	*	4793.3	1756.9	4962.8	1934.2	*	245.	44.	BR	3500.	1.2	8.0 58.0
	30. WB US380B Front1_1	*	4825.0	2059.5	4648.1	1865.7	*	262.	222.	BR	670.	1.1	-17.0 32.0
	31. WB US380B Front1_2	*	4648.1	1865.7	4506.2	1734.2	*	193.	227.	BR	670.	1.1	-14.0 32.0
	32. WB US380B Front1_3	*	4506.2	1734.2	4305.7	1568.8	*	260.	230.	BR	670.	1.1	-13.0 32.0

33.	WB US380B Front1_4	*	4305.7	1568.8	4072.6	1410.0	*	282.	236.	BR	670.	1.1	-12.0	43.0
34.	WB US380B Front1_5	*	4072.6	1410.0	3788.7	1255.0	*	323.	241.	BR	670.	1.1	-10.0	43.0
35.	WB US380B Front1_6	*	3788.7	1255.0	3643.6	1192.1	*	158.	247.	FL	670.	1.1	-9.0	43.0
36.	WB US380B Front2_7	*	3643.6	1192.1	3554.9	1153.6	*	97.	247.	AG	690.	1.0	-8.0	32.0
37.	WB US380B Front3_8	*	3554.9	1153.6	3445.0	1110.5	*	118.	249.	AG	710.	1.0	-7.0	32.0
38.	WB US380B Front3_9	*	3445.0	1110.5	3105.1	1012.8	*	354.	254.	AG	710.	1.0	-8.0	32.0
39.	WB US380B Front3_10	*	3105.1	1012.8	2864.3	968.6	*	245.	260.	AG	710.	1.0	-12.0	32.0
40.	WB US380B Front3_11	*	2864.3	968.6	2668.9	946.4	*	197.	264.	AG	710.	1.0	-14.0	32.0
41.	WB US380B Front3_12	*	2668.9	946.4	2463.2	933.4	*	206.	266.	AG	710.	1.0	-16.0	32.0
42.	WB US380B Front3_13	*	2463.2	933.4	2057.4	935.5	*	406.	270.	AG	710.	1.0	-19.0	32.0
43.	WB US380B Front3_14	*	2057.4	935.5	1657.5	933.8	*	400.	270.	BR	710.	1.0	-21.0	32.0
44.	WB US380B Front3_15	*	1657.5	933.8	1357.3	932.6	*	300.	270.	AG	710.	1.0	-19.0	21.0

PAGE 2

JOB: US380 McKinney

RUN: Segment B - 2030

DATE : 9/15/22

TIME : 14:55:33

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
			*			*								
45.	EB US380B Front1_1	*	1455.0	691.7	2379.2	689.6	*	924.	90.	AG	720.	1.0	-12.0	32.0
46.	EB US380B Front1_2	*	2379.2	689.6	2732.6	711.2	*	354.	86.	AG	720.	1.0	-6.0	32.0
47.	EB US380B Front1_3	*	2732.6	711.2	3008.5	752.3	*	279.	82.	AG	720.	1.0	-7.0	43.0
48.	EB US380B Front1_4	*	3008.5	752.3	3210.6	796.7	*	207.	78.	AG	720.	1.0	-8.0	43.0
49.	EB US380B Front1_5	*	3210.6	796.7	3442.8	864.1	*	242.	74.	AG	720.	1.0	-9.0	54.0
50.	EB US380B Front1_6	*	3442.8	864.1	3639.3	933.9	*	208.	70.	AG	720.	1.0	-10.0	54.0
51.	EB US380B Front2_7	*	3639.3	933.9	3744.7	976.7	*	114.	68.	AG	710.	1.0	-10.0	54.0
52.	EB US380B Front3_8	*	3744.4	976.5	4037.5	1116.1	*	325.	65.	BR	680.	1.2	-10.0	32.0
53.	EB US380B Front3_9	*	4037.5	1116.1	4355.5	1309.7	*	372.	59.	BR	680.	1.2	-9.0	32.0
54.	EB US380B Front3_10	*	4355.5	1309.7	4597.6	1492.4	*	303.	53.	BR	680.	1.2	-12.0	32.0
55.	EB US380B Front3_11	*	4597.6	1492.4	4741.6	1616.8	*	190.	49.	AG	680.	1.2	-16.0	54.0
56.	EB US380B Front3_12	*	4741.6	1616.8	4864.8	1731.4	*	168.	47.	AG	680.	1.2	-19.0	54.0
57.	EB US380B Front3_13	*	4864.8	1731.4	5002.9	1878.0	*	201.	43.	AG	680.	1.2	-21.0	54.0
58.	SB University N_1	*	4815.0	2047.9	4990.2	1864.5	*	254.	136.	AG	280.	2.4	-19.0	46.0
59.	SB University M_2	*	4990.2	1864.5	5099.5	1749.4	*	159.	136.	AG	870.	1.0	-9.0	46.0
60.	SB University M_3	*	5099.5	1749.4	5221.3	1570.6	*	216.	146.	AG	870.	1.0	-5.0	46.0
61.	SB University M_4	*	5221.3	1570.6	5341.8	1311.2	*	286.	155.	AG	870.	1.0	1.0	46.0
62.	SB University M_5	*	5341.8	1311.2	5509.1	1081.6	*	284.	144.	AG	870.	1.0	7.0	46.0
63.	SB University M_6	*	5509.1	1081.6	5638.8	964.4	*	175.	132.	AG	870.	1.0	10.0	46.0
64.	SB University S_7	*	5638.8	964.4	5848.0	841.1	*	243.	121.	AG	980.	1.0	10.0	46.0
65.	SB University S_8	*	5848.0	841.1	6148.7	749.8	*	314.	107.	AG	980.	1.0	9.0	46.0
66.	SB University S_9	*	6148.7	749.8	7386.9	734.8	*	1238.	91.	AG	980.	1.0	-7.0	46.0
67.	NB University S_1	*	7384.8	771.6	6227.2	775.8	*	1158.	270.	AG	780.	1.0	-9.0	46.0
68.	NB University S_2	*	6227.2	775.8	5918.8	848.3	*	317.	283.	AG	780.	1.0	8.0	46.0
69.	NB University S_3	*	5918.8	848.3	5659.7	996.1	*	298.	300.	AG	780.	1.0	10.0	46.0
70.	NB University M_4	*	5659.7	996.1	5526.0	1117.2	*	180.	312.	AG	540.	2.9	10.0	46.0
71.	NB University M_5	*	5526.0	1117.2	5343.8	1384.9	*	324.	326.	AG	540.	2.9	6.0	46.0
72.	NB University M_6	*	5343.8	1384.9	5247.6	1599.1	*	235.	336.	AG	540.	2.9	0.0	46.0
73.	NB University M_7	*	5247.6	1599.1	5091.9	1813.8	*	265.	324.	AG	540.	2.9	-5.0	46.0
74.	NB University M_8	*	5091.9	1813.8	5015.3	1892.3	*	110.	316.	AG	540.	2.9	-9.0	46.0

110. SB University N_1_Q * 4815.0 2047.9 4926.1 1931.7 * 161. 136. AG 6. 100.0 -19.0 46.0 0.83
 8.2
 111. NB University M_8_Q * 5091.9 1813.8 4979.6 1928.9 * 161. 316. AG 6. 100.0 -9.0 46.0 0.83
 8.2
 112. NB University N_9_Q * 5015.3 1892.3 3640.8 3272.3 * 1948. 315. AG 4. 100.0 -18.0 34.0 1.25
 98.9
 113. NB University S_3_Q * 5918.8 848.3 5779.2 927.9 * 161. 300. AG 6. 100.0 10.0 46.0 0.83 8.2
 114. SB University M_6_Q * 5509.1 1081.6 5628.4 973.9 * 161. 132. AG 6. 100.0 10.0 46.0 0.83
 8.2
 115. SB Indep M_3_Q * 3774.7 861.8 3800.2 755.5 * 109. 167. AG 9. 100.0 -16.0 46.0 0.62 5.6
 116. WB Connector_4_Q * 5258.2 734.4 4974.1 731.1 * 284. 269. AG 3. 100.0 10.0 34.0 0.98
 14.4
 117. EB Connector_4_Q * 5551.0 847.1 5737.2 1061.9 * 284. 41. AG 3. 100.0 10.0 34.0 0.98 14.4
 118. NB Indep S_1_Q * 3859.8 489.2 3846.6 649.4 * 161. 355. AG 6. 100.0 -16.0 46.0 0.83 8.2

PAGE 4

JOB: US380 McKinney

RUN: Segment B - 2030

DATE : 9/15/22

TIME : 14:55:33

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

LINK DESCRIPTION	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	ARRIVAL
100. NB Prestwick S_3_Q *	90	50	2.0	1600	1600	1.43	1	3
101. NB Prestwick N_1_Q *	90	50	2.0	1600	1600	1.43	1	3
102. SB Prestwick S_5_Q *	90	50	2.0	1600	1600	1.43	1	3
103. EB US380B Front2_7_Q*	90	40	2.0	1600	1600	1.43	1	3
104. NB Indep M_3_Q *	90	50	2.0	1600	1600	1.43	1	3
105. NB Indep N_4_Q *	90	50	2.0	1600	1600	1.43	1	3
106. SB Indep N_1_Q *	90	50	2.0	1600	1600	1.43	1	3
107. WB US380B Front1_6_Q*	90	40	2.0	1600	1600	1.43	1	3
108. WB US380 B West_15_Q*	90	40	2.0	1600	1600	1.43	1	3
109. EB US380B Front3_13Q*	90	40	2.0	1600	1600	1.43	1	3
110. SB University N_1_Q *	90	50	2.0	1600	1600	1.43	1	3
111. NB University M_8_Q *	90	50	2.0	1600	1600	1.43	1	3
112. NB University N_9_Q *	90	50	2.0	1600	1600	1.43	1	3
113. NB University S_3_Q *	90	50	2.0	1600	1600	1.43	1	3
114. SB University M_6_Q *	90	50	2.0	1600	1600	1.43	1	3
115. SB Indep M_3_Q *	90	50	2.0	1600	1600	1.43	1	3
116. WB Connector_4_Q *	90	40	2.0	1600	1600	1.43	1	3
117. EB Connector_4_Q *	90	40	2.0	1600	1600	1.43	1	3
118. NB Indep S_1_Q *	90	50	2.0	1600	1600	1.43	1	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. B1	3429.0	1287.6	-14.0
2. B2	3604.5	801.2	-5.0

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3

ANGLE (DEGR)	REC1	REC2	REC3
0. *	0.0	0.0	0.0
10. *	0.0	0.0	0.0
20. *	0.0	0.0	0.0
30. *	0.0	0.0	0.0
40. *	0.0	0.0	0.0
50. *	0.0	0.0	0.0
60. *	0.0	0.0	0.0
70. *	0.0	0.0	0.0
80. *	0.0	0.0	0.0
90. *	0.0	0.0	0.0
100. *	0.0	0.0	0.0
110. *	0.0	0.0	0.0
120. *	0.0	0.0	0.0
130. *	0.0	0.0	0.0
140. *	0.0	0.0	0.0
150. *	0.0	0.0	0.0
160. *	0.0	0.0	0.0
170. *	0.0	0.0	0.0
180. *	0.0	0.0	0.0
190. *	0.0	0.0	0.0
200. *	0.0	0.0	0.0
210. *	0.0	0.0	0.0
220. *	0.0	0.0	0.0
230. *	0.0	0.0	0.0
240. *	0.0	0.0	0.0
250. *	0.0	0.0	0.0
260. *	0.0	0.0	0.0
270. *	0.0	0.1	0.0
280. *	0.0	0.0	0.0
290. *	0.0	0.1	0.0
300. *	0.0	0.1	0.0
310. *	0.0	0.0	0.0
320. *	0.0	0.0	0.0
330. *	0.0	0.0	0.0
340. *	0.0	0.0	0.0
350. *	0.0	0.0	0.0

360. * 0.0 0.0 0.0

-----*-----
MAX * 0.0 0.1 0.0
DEGR. * 0 270 0

THE HIGHEST CONCENTRATION OF 0.10 PPM OCCURRED AT RECEPTOR REC2 .

PAGE 6

JOB: US380 McKinney

RUN: Segment B - 2030

DATE : 9/15/22

TIME : 14:55:33

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3

LINK # * 0 270 0

-----*-----
1 * 0.0 0.0 0.0
2 * 0.0 0.0 0.0
3 * 0.0 0.0 0.0
4 * 0.0 0.0 0.0
5 * 0.0 0.0 0.0
6 * 0.0 0.0 0.0
7 * 0.0 0.0 0.0
8 * 0.0 0.0 0.0
9 * 0.0 0.0 0.0
10 * 0.0 0.0 0.0
11 * 0.0 0.0 0.0
12 * 0.0 0.0 0.0
13 * 0.0 0.0 0.0
14 * 0.0 0.0 0.0
15 * 0.0 0.0 0.0
16 * 0.0 0.0 0.0
17 * 0.0 0.0 0.0
18 * 0.0 0.0 0.0
19 * 0.0 0.0 0.0
20 * 0.0 0.0 0.0
21 * 0.0 0.1 0.0
22 * 0.0 0.0 0.0
23 * 0.0 0.0 0.0
24 * 0.0 0.0 0.0
25 * 0.0 0.0 0.0
26 * 0.0 0.0 0.0
27 * 0.0 0.0 0.0
28 * 0.0 0.0 0.0
29 * 0.0 0.0 0.0
30 * 0.0 0.0 0.0
31 * 0.0 0.0 0.0
32 * 0.0 0.0 0.0
33 * 0.0 0.0 0.0

34 * 0.0 0.0 0.0
35 * 0.0 0.0 0.0
36 * 0.0 0.0 0.0
37 * 0.0 0.0 0.0
38 * 0.0 0.0 0.0
39 * 0.0 0.0 0.0
40 * 0.0 0.0 0.0
41 * 0.0 0.0 0.0
42 * 0.0 0.0 0.0
43 * 0.0 0.0 0.0
44 * 0.0 0.0 0.0
45 * 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment B - 2030

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3

LINK # * 0 270 0

*-----
46 * 0.0 0.0 0.0
47 * 0.0 0.0 0.0
48 * 0.0 0.0 0.0
49 * 0.0 0.0 0.0
50 * 0.0 0.0 0.0
51 * 0.0 0.0 0.0
52 * 0.0 0.0 0.0
53 * 0.0 0.0 0.0
54 * 0.0 0.0 0.0
55 * 0.0 0.0 0.0
56 * 0.0 0.0 0.0
57 * 0.0 0.0 0.0
58 * 0.0 0.0 0.0
59 * 0.0 0.0 0.0
60 * 0.0 0.0 0.0
61 * 0.0 0.0 0.0
62 * 0.0 0.0 0.0
63 * 0.0 0.0 0.0
64 * 0.0 0.0 0.0
65 * 0.0 0.0 0.0
66 * 0.0 0.0 0.0
67 * 0.0 0.0 0.0
68 * 0.0 0.0 0.0
69 * 0.0 0.0 0.0
70 * 0.0 0.0 0.0
71 * 0.0 0.0 0.0
72 * 0.0 0.0 0.0
73 * 0.0 0.0 0.0
74 * 0.0 0.0 0.0
75 * 0.0 0.0 0.0
76 * 0.0 0.0 0.0
77 * 0.0 0.0 0.0
78 * 0.0 0.0 0.0
79 * 0.0 0.0 0.0

80 * 0.0 0.0 0.0
81 * 0.0 0.0 0.0
82 * 0.0 0.0 0.0
83 * 0.0 0.0 0.0
84 * 0.0 0.0 0.0
85 * 0.0 0.0 0.0
86 * 0.0 0.0 0.0
87 * 0.0 0.0 0.0
88 * 0.0 0.0 0.0
89 * 0.0 0.0 0.0
90 * 0.0 0.0 0.0
91 * 0.0 0.0 0.0
92 * 0.0 0.0 0.0
93 * 0.0 0.0 0.0
94 * 0.0 0.0 0.0
95 * 0.0 0.0 0.0
96 * 0.0 0.0 0.0
97 * 0.0 0.0 0.0
98 * 0.0 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment B - 2030

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3

LINK # * 0 270 0

*
99 * 0.0 0.0 0.0
100 * 0.0 0.0 0.0
101 * 0.0 0.0 0.0
102 * 0.0 0.0 0.0
103 * 0.0 0.0 0.0
104 * 0.0 0.0 0.0
105 * 0.0 0.0 0.0
106 * 0.0 0.0 0.0
107 * 0.0 0.0 0.0
108 * 0.0 0.0 0.0
109 * 0.0 0.0 0.0
110 * 0.0 0.0 0.0
111 * 0.0 0.0 0.0
112 * 0.0 0.0 0.0
113 * 0.0 0.0 0.0
114 * 0.0 0.0 0.0
115 * 0.0 0.0 0.0
116 * 0.0 0.0 0.0
117 * 0.0 0.0 0.0
118 * 0.0 0.0 0.0

'US380 McKinney' 60 0.75 0 0 3 0.3048 1 1
'B1' 3428.96 1287.6 -14
'B2' 3604.45 801.21 -5
'B3' 3533.75 596.82 1
'Segment B - 2050' 118 1 1 'C'
1
'WB US 380 B_1' 'BR' 4872.84 2009.72 4795.67 1923.45 5180 0.579 8 58
1
'WB US 380 B_2' 'BR' 4795.67 1923.45 4591.98 1727.55 5180 0.579 11 58
1
'WB US 380 B_3' 'BR' 4591.98 1727.55 4309.09 1501.75 5180 0.579 13 58
1
'WB US 380 B_4' 'BR' 4309.09 1501.75 4009.29 1309.68 5180 0.579 18 58
1
'WB US 380 B_5' 'BR' 4009.29 1309.68 3857.57 1226.69 5180 0.579 20 58
1
'WB US 380 B_6' 'BR' 3857.57 1226.69 3672.72 1141.34 5180 0.579 21 58
1
'WB US 380 B_7' 'BR' 3672.72 1141.34 3423 1045.06 5180 0.579 19 58
1
'WB US 380 B_8' 'FL' 3423 1045.06 3141.48 965.92 5180 0.579 15 58
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'WB US 380 B_9' 'FL' 3141.48 965.92 2923.63 924.43 5180 0.579 8 58
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'WB US 380 B_10' 'FL' 2923.63 924.43 2722.68 901.09 5180 0.579 4 58
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'WB US 380 B_11' 'FL' 2722.68 901.09 2481.48 892.01 5180 0.579 -1 58
1
'WB US 380 B_12' 'FL' 2481.48 892.01 2098.74 901.13 5180 0.579 -8 58
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'WB US 380 B_13' 'BR' 2098.74 901.13 1660.02 897.23 5180 0.579 -15 58
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'WB US 380 B_14' 'AG' 1660.02 897.23 1357.32 932.61 5180 0.579 -15 58
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'WB US380 B West_15' 'AG' 1357.32 932.61 296.58 919.59 6100 0.593 1 58
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'EB US380B West_16' 'AG' 292.53 666.19 647.54 684.13 6180 0.589 5 46
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'EB US380B West_17' 'AG' 647.54 684.13 1455.02 691.73 6180 0.589 -9 46
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'EB US 380 B_1' 'AG' 1455.02 691.73 1705.4 718.55 5280 0.771 -15 58
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'EB US 380 B_2' 'AG' 1705.4 718.55 2280.92 736.78 5280 0.771 -15 58
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'EB US 380 B_3' 'FL' 2280.92 736.78 2818.68 782.36 5280 0.771 -3 58
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'EB US 380 B_4' 'FL' 2818.68 782.36 3252.28 872.2 5280 0.771 6 58
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'EB US 380 B_5' 'FL' 3252.28 872.2 3487.95 946.42 5280 0.771 14 58
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'EB US 380 B_6' 'BR' 3487.95 946.42 3720.31 1035.95 5280 0.771 19 58
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'EB US 380 B_7' 'BR' 3720.66 1036.1 3921.82 1129.75 5280 0.771 21 58

1
'EB US 380 B_8' 'BR' 3921.82 1129.75 4060.29 1204.21 5280 0.771 20 58
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'EB US 380 B_9' 'BR' 4060.29 1204.21 4367.28 1398.86 5280 0.771 18 58
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'EB US 380 B_10' 'BR' 4367.28 1398.86 4633.88 1610.57 5280 0.771 13 58
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'EB US 380 B_11' 'BR' 4633.88 1610.57 4793.28 1756.9 5280 0.771 11 58
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'EB US 380 B_12' 'BR' 4793.28 1756.9 4962.79 1934.23 5280 0.771 8 58
1
'WB US380B Front1_1' 'BR' 4825.03 2059.52 4648.11 1865.69 1040 0.613 -17 32
1
'WB US380B Front1_2' 'BR' 4648.11 1865.69 4506.18 1734.18 1040 0.613 -14 32
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'WB US380B Front1_3' 'BR' 4506.18 1734.18 4305.66 1568.81 1040 0.613 -13 32
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'WB US380B Front1_4' 'BR' 4305.66 1568.81 4072.59 1409.96 1040 0.613 -12 43
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'WB US380B Front1_5' 'BR' 4072.59 1409.96 3788.74 1255.01 1040 0.613 -10 43
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'WB US380B Front1_6' 'FL' 3788.74 1255.01 3643.58 1192.08 1040 0.613 -9 43
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'WB US380B Front2_7' 'AG' 3643.58 1192.08 3554.91 1153.63 1030 0.598 -8 32
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'WB US380B Front3_8' 'AG' 3554.91 1153.63 3444.99 1110.48 1060 0.598 -7 32
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'WB US380B Front3_9' 'AG' 3444.99 1110.48 3105.14 1012.82 1060 0.598 -8 32
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'WB US380B Front3_10' 'AG' 3105.14 1012.82 2864.26 968.55 1060 0.598 -12 32
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'WB US380B Front3_11' 'AG' 2864.26 968.55 2668.94 946.42 1060 0.598 -14 32
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'WB US380B Front3_12' 'AG' 2668.94 946.42 2463.21 933.4 1060 0.598 -16 32
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'WB US380B Front3_13' 'AG' 2463.21 933.4 2057.4 935.47 1060 0.598 -19 32
1
'WB US380B Front3_14' 'BR' 2057.4 935.47 1657.48 933.79 1060 0.598 -21 32
1
'WB US380B Front3_15' 'AG' 1657.48 933.79 1357.32 932.61 1060 0.598 -19 21
1
'EB US380B Front1_1' 'AG' 1455.02 691.73 2379.15 689.56 1120 0.589 -12 32
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'EB US380B Front1_2' 'AG' 2379.15 689.56 2732.63 711.19 1120 0.589 -6 32
1
'EB US380B Front1_3' 'AG' 2732.63 711.19 3008.49 752.3 1120 0.589 -7 43
1
'EB US380B Front1_4' 'AG' 3008.49 752.3 3210.55 796.67 1120 0.589 -8 43
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'EB US380B Front1_5' 'AG' 3210.55 796.67 3442.82 864.13 1120 0.589 -9 54
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'EB US380B Front1_6' 'AG' 3442.82 864.13 3639.26 933.92 1120 0.589 -10 54
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'EB US380B Front2_7' 'AG' 3639.26 933.92 3744.73 976.67 1100 0.589 -10 54

1
'EB US380B Front3_8' 'BR' 3744.39 976.53 4037.54 1116.09 1060 0.692 -10 32
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'EB US380B Front3_9' 'BR' 4037.54 1116.09 4355.49 1309.66 1060 0.692 -9 32
1
'EB US380B Front3_10' 'BR' 4355.49 1309.66 4597.63 1492.36 1060 0.692 -12 32
1
'EB US380B Front3_11' 'AG' 4597.63 1492.36 4741.6 1616.83 1060 0.692 -16 54
1
'EB US380B Front3_12' 'AG' 4741.6 1616.83 4864.84 1731.43 1060 0.692 -19 54
1
'EB US380B Front3_13' 'AG' 4864.84 1731.43 5002.87 1877.95 1060 0.692 -21 54
1
'SB University N_1' 'AG' 4815 2047.9 4990.23 1864.53 440 1.3 -19 46
1
'SB University M_2' 'AG' 4990.23 1864.53 5099.51 1749.41 1370 0.603 -9 46
1
'SB University M_3' 'AG' 5099.51 1749.41 5221.31 1570.56 1370 0.603 -5 46
1
'SB University M_4' 'AG' 5221.31 1570.56 5341.76 1311.19 1370 0.603 1 46
1
'SB University M_5' 'AG' 5341.76 1311.19 5509.12 1081.63 1370 0.603 7 46
1
'SB University M_6' 'AG' 5509.12 1081.63 5638.82 964.44 1370 0.603 10 46
1
'SB University S_7' 'AG' 5638.82 964.44 5847.95 841.07 1540 0.607 10 46
1
'SB University S_8' 'AG' 5847.95 841.07 6148.68 749.77 1540 0.607 9 46
1
'SB University S_9' 'AG' 6148.68 749.77 7386.88 734.85 1540 0.607 -7 46
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'NB University S_1' 'AG' 7384.83 771.58 6227.18 775.84 1180 0.611 -9 46
1
'NB University S_2' 'AG' 6227.18 775.84 5918.79 848.29 1180 0.611 8 46
1
'NB University S_3' 'AG' 5918.79 848.29 5659.69 996.07 1180 0.611 10 46
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'NB University M_4' 'AG' 5659.69 996.07 5525.96 1117.16 850 1.542 10 46
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'NB University M_5' 'AG' 5525.96 1117.16 5343.84 1384.87 850 1.542 6 46
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'NB University M_6' 'AG' 5343.84 1384.87 5247.6 1599.07 850 1.542 0 46
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'NB University M_7' 'AG' 5247.6 1599.07 5091.91 1813.81 850 1.542 -5 46
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'NB University M_8' 'AG' 5091.91 1813.81 5015.34 1892.27 850 1.542 -9 46
1
'NB University N_9' 'AG' 5015.34 1892.27 4836.91 2071.41 830 0.963 -18 34
1
'SB Prestwick N_1' 'AG' 279.97 665.39 277.03 443.48 270 0.71 7 34
1
'SB Prestwick N_2' 'AG' 277.03 443.48 294.1 340.11 270 0.71 2 34
1
'SB Prestwick N_3' 'AG' 294.1 340.11 330.09 237.46 270 0.71 1 34

1
'SB Prestwick N_4' 'AG' 330.09 237.46 392.68 123.49 270 0.71 2 34
1
'SB Prestwick S_5' 'AG' 279.94 918.9 279.97 665.39 200 1.082 10 22
1
'NB Prestwick N_1' 'AG' 307.8 667.11 308.52 919.93 210 1.027 10 22
1
'NB Prestwick S_2' 'AG' 319.47 336.53 302.68 438.72 200 1.082 1 46
1
'NB Prestwick S_3' 'AG' 302.68 438.72 307.8 667.11 200 1.082 6 34
1
'SB Indep N_1' 'AG' 3729.11 970.34 3626.56 1184.69 200 1.082 -15 46
1
'SB Indep M_2' 'AG' 3729.11 970.34 3774.7 861.84 270 0.71 -16 46
1
'SB Indep M_3' 'AG' 3774.7 861.84 3812.03 706.22 270 0.71 -16 46
1
'SB Indep S_4' 'AG' 3812.03 706.22 3830.61 489.79 560 0.712 -14 46
1
'NB Indep S_1' 'AG' 3859.79 489.22 3841.97 706 350 0.708 -16 46
1
'NB Indep M_2' 'AG' 3841.97 706 3814.7 826.5 210 1.027 -17 44
1
'NB Indep M_3' 'AG' 3814.7 826.5 3758.88 982.92 210 1.027 -17 44
1
'NB Indep N_4' 'AG' 3758.88 982.92 3660.72 1199.51 200 1.082 -16 44
1
'WB Connector_1' 'AG' 5645.29 1007.48 5535.11 865.18 370 0.713 10 34
1
'WB Connector_2' 'AG' 5535.11 865.18 5400.08 778.55 370 0.713 10 34
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'WB Connector_3' 'AG' 5400.08 778.55 5258.24 734.35 370 0.713 10 34
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'WB Connector_4' 'AG' 5258.24 734.35 3810.11 717.59 370 0.713 10 34
1
'EB Connector_1' 'AG' 3814.05 694.2 5261.94 710.57 220 0.711 -3 34
1
'EB Connector_2' 'AG' 5261.94 710.57 5410.03 756.65 220 0.711 10 34
1
'EB Connector_3' 'AG' 5410.03 756.65 5551.04 847.1 220 0.711 10 34
1
'EB Connector_4' 'AG' 5551.04 847.1 5672.65 987.4 220 0.711 10 34
2
'NB Prestwick S_3_Q' 'AG' 302.68 438.72 307.8 667.11 6 34 2
90 50 2 200 0.532 1600 1 3
2
'NB Prestwick N_1_Q' 'AG' 307.8 667.11 308.52 919.93 10 22 1
90 50 2 210 0.532 1600 1 3
2
'SB Prestwick S_5_Q' 'AG' 279.94 918.9 279.97 665.39 10 22 1
90 50 2 200 0.532 1600 1 3
2
'EB US380B Front2_7_Q' 'AG' 3639.26 933.92 3744.73 976.67 -10 54 4
90 40 2 1100 0.532 1600 1 3

2

'NB Indep M_3_Q' 'AG' 3814.7 826.5 3758.88 982.92 -17 44 3
90 50 2 210 0.532 1600 1 3

2

'NB Indep N_4_Q' 'AG' 3758.88 982.92 3660.72 1199.51 -16 44 2
90 50 2 200 0.532 1600 1 3

2

'SB Indep N_1_Q' 'AG' 3729.11 970.34 3626.56 1184.69 -15 46 2
90 50 2 200 0.532 1600 1 3

2

'WB US380B Front1_6_Q' 'FL' 3788.74 1255.01 3643.58 1192.08 -9 43 3
90 40 2 1040 0.532 1600 1 3

2

'WB US380 B West_15_Q' 'AG' 1357.32 932.61 296.58 919.59 1 58 4
90 40 2 6100 0.532 1600 1 3

2

'EB US380B Front3_13Q' 'AG' 4864.84 1731.43 5002.87 1877.95 -21 54 4
90 40 2 1060 0.532 1600 1 3

2

'SB University N_1_Q' 'AG' 4815 2047.9 4990.23 1864.53 -19 46 3
90 50 2 440 0.532 1600 1 3

2

'NB University M_8_Q' 'AG' 5091.91 1813.81 5015.34 1892.27 -9 46 3
90 50 2 850 0.532 1600 1 3

2

'NB University N_9_Q' 'AG' 5015.34 1892.27 4836.91 2071.41 -18 34 2
90 50 2 830 0.532 1600 1 3

2

'NB University S_3_Q' 'AG' 5918.79 848.29 5659.69 996.07 10 46 3
90 50 2 1180 0.532 1600 1 3

2

'SB University M_6_Q' 'AG' 5509.12 1081.63 5638.82 964.44 10 46 3
90 50 2 1370 0.532 1600 1 3

2

'SB Indep M_3_Q' 'AG' 3774.7 861.84 3812.03 706.22 -16 46 4
90 50 2 270 0.532 1600 1 3

2

'WB Connector_4_Q' 'AG' 5258.24 734.35 3810.11 717.59 10 34 2
90 40 2 370 0.532 1600 1 3

2

'EB Connector_4_Q' 'AG' 5551.04 847.1 5672.65 987.4 10 34 2
90 40 2 220 0.532 1600 1 3

2

'NB Indep S_1_Q' 'AG' 3859.79 489.22 3841.97 706 -16 46 3
90 50 2 350 0.532 1600 1 3

1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment B - 2050

DATE : 9/15/22

TIME : 14:55:34

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H
	V/C QUEUE		X1	Y1	X2	Y2		(G/MI)	(FT)	(FT)	(VEH)		
		*	* (FT) (DEG)										
1.	WB US 380 B_1	*	4872.8	2009.7	4795.7	1923.5	*	116.	222.	BR	5180.	0.6	8.0 58.0
2.	WB US 380 B_2	*	4795.7	1923.5	4592.0	1727.6	*	283.	226.	BR	5180.	0.6	11.0 58.0
3.	WB US 380 B_3	*	4592.0	1727.6	4309.1	1501.8	*	362.	231.	BR	5180.	0.6	13.0 58.0
4.	WB US 380 B_4	*	4309.1	1501.8	4009.3	1309.7	*	356.	237.	BR	5180.	0.6	18.0 58.0
5.	WB US 380 B_5	*	4009.3	1309.7	3857.6	1226.7	*	173.	241.	BR	5180.	0.6	20.0 58.0
6.	WB US 380 B_6	*	3857.6	1226.7	3672.7	1141.3	*	204.	245.	BR	5180.	0.6	21.0 58.0
7.	WB US 380 B_7	*	3672.7	1141.3	3423.0	1045.1	*	268.	249.	BR	5180.	0.6	19.0 58.0
8.	WB US 380 B_8	*	3423.0	1045.1	3141.5	965.9	*	292.	254.	FL	5180.	0.6	15.0 58.0
9.	WB US 380 B_9	*	3141.5	965.9	2923.6	924.4	*	222.	259.	FL	5180.	0.6	8.0 58.0
10.	WB US 380 B_10	*	2923.6	924.4	2722.7	901.1	*	202.	263.	FL	5180.	0.6	4.0 58.0
11.	WB US 380 B_11	*	2722.7	901.1	2481.5	892.0	*	241.	268.	FL	5180.	0.6	-1.0 58.0
12.	WB US 380 B_12	*	2481.5	892.0	2098.7	901.1	*	383.	271.	FL	5180.	0.6	-8.0 58.0
13.	WB US 380 B_13	*	2098.7	901.1	1660.0	897.2	*	439.	269.	BR	5180.	0.6	-15.0 58.0
14.	WB US 380 B_14	*	1660.0	897.2	1357.3	932.6	*	305.	277.	AG	5180.	0.6	-15.0 58.0
15.	WB US380 B West_15	*	1357.3	932.6	296.6	919.6	*	1061.	269.	AG	6100.	0.6	1.0 58.0
16.	EB US380B West_16	*	292.5	666.2	647.5	684.1	*	355.	87.	AG	6180.	0.6	5.0 46.0
17.	EB US380B West_17	*	647.5	684.1	1455.0	691.7	*	808.	89.	AG	6180.	0.6	-9.0 46.0
18.	EB US 380 B_1	*	1455.0	691.7	1705.4	718.5	*	252.	84.	AG	5280.	0.8	-15.0 58.0
19.	EB US 380 B_2	*	1705.4	718.5	2280.9	736.8	*	576.	88.	AG	5280.	0.8	-15.0 58.0
20.	EB US 380 B_3	*	2280.9	736.8	2818.7	782.4	*	540.	85.	FL	5280.	0.8	-3.0 58.0
21.	EB US 380 B_4	*	2818.7	782.4	3252.3	872.2	*	443.	78.	FL	5280.	0.8	6.0 58.0
22.	EB US 380 B_5	*	3252.3	872.2	3488.0	946.4	*	247.	73.	FL	5280.	0.8	14.0 58.0
23.	EB US 380 B_6	*	3488.0	946.4	3720.3	1035.9	*	249.	69.	BR	5280.	0.8	19.0 58.0
24.	EB US 380 B_7	*	3720.7	1036.1	3921.8	1129.8	*	222.	65.	BR	5280.	0.8	21.0 58.0
25.	EB US 380 B_8	*	3921.8	1129.8	4060.3	1204.2	*	157.	62.	BR	5280.	0.8	20.0 58.0
26.	EB US 380 B_9	*	4060.3	1204.2	4367.3	1398.9	*	363.	58.	BR	5280.	0.8	18.0 58.0
27.	EB US 380 B_10	*	4367.3	1398.9	4633.9	1610.6	*	340.	52.	BR	5280.	0.8	13.0 58.0
28.	EB US 380 B_11	*	4633.9	1610.6	4793.3	1756.9	*	216.	47.	BR	5280.	0.8	11.0 58.0
29.	EB US 380 B_12	*	4793.3	1756.9	4962.8	1934.2	*	245.	44.	BR	5280.	0.8	8.0 58.0
30.	WB US380B Front1_1	*	4825.0	2059.5	4648.1	1865.7	*	262.	222.	BR	1040.	0.6	-17.0 32.0
31.	WB US380B Front1_2	*	4648.1	1865.7	4506.2	1734.2	*	193.	227.	BR	1040.	0.6	-14.0 32.0
32.	WB US380B Front1_3	*	4506.2	1734.2	4305.7	1568.8	*	260.	230.	BR	1040.	0.6	-13.0 32.0

33.	WB US380B Front1_4	*	4305.7	1568.8	4072.6	1410.0	*	282.	236.	BR	1040.	0.6	-12.0	43.0
34.	WB US380B Front1_5	*	4072.6	1410.0	3788.7	1255.0	*	323.	241.	BR	1040.	0.6	-10.0	43.0
35.	WB US380B Front1_6	*	3788.7	1255.0	3643.6	1192.1	*	158.	247.	FL	1040.	0.6	-9.0	43.0
36.	WB US380B Front2_7	*	3643.6	1192.1	3554.9	1153.6	*	97.	247.	AG	1030.	0.6	-8.0	32.0
37.	WB US380B Front3_8	*	3554.9	1153.6	3445.0	1110.5	*	118.	249.	AG	1060.	0.6	-7.0	32.0
38.	WB US380B Front3_9	*	3445.0	1110.5	3105.1	1012.8	*	354.	254.	AG	1060.	0.6	-8.0	32.0
39.	WB US380B Front3_10	*	3105.1	1012.8	2864.3	968.6	*	245.	260.	AG	1060.	0.6	-12.0	32.0
40.	WB US380B Front3_11	*	2864.3	968.6	2668.9	946.4	*	197.	264.	AG	1060.	0.6	-14.0	32.0
41.	WB US380B Front3_12	*	2668.9	946.4	2463.2	933.4	*	206.	266.	AG	1060.	0.6	-16.0	32.0
42.	WB US380B Front3_13	*	2463.2	933.4	2057.4	935.5	*	406.	270.	AG	1060.	0.6	-19.0	32.0
43.	WB US380B Front3_14	*	2057.4	935.5	1657.5	933.8	*	400.	270.	BR	1060.	0.6	-21.0	32.0
44.	WB US380B Front3_15	*	1657.5	933.8	1357.3	932.6	*	300.	270.	AG	1060.	0.6	-19.0	21.0

PAGE 2

JOB: US380 McKinney

RUN: Segment B - 2050

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
			*			*								
45.	EB US380B Front1_1	*	1455.0	691.7	2379.2	689.6	*	924.	90.	AG	1120.	0.6	-12.0	32.0
46.	EB US380B Front1_2	*	2379.2	689.6	2732.6	711.2	*	354.	86.	AG	1120.	0.6	-6.0	32.0
47.	EB US380B Front1_3	*	2732.6	711.2	3008.5	752.3	*	279.	82.	AG	1120.	0.6	-7.0	43.0
48.	EB US380B Front1_4	*	3008.5	752.3	3210.6	796.7	*	207.	78.	AG	1120.	0.6	-8.0	43.0
49.	EB US380B Front1_5	*	3210.6	796.7	3442.8	864.1	*	242.	74.	AG	1120.	0.6	-9.0	54.0
50.	EB US380B Front1_6	*	3442.8	864.1	3639.3	933.9	*	208.	70.	AG	1120.	0.6	-10.0	54.0
51.	EB US380B Front2_7	*	3639.3	933.9	3744.7	976.7	*	114.	68.	AG	1100.	0.6	-10.0	54.0
52.	EB US380B Front3_8	*	3744.4	976.5	4037.5	1116.1	*	325.	65.	BR	1060.	0.7	-10.0	32.0
53.	EB US380B Front3_9	*	4037.5	1116.1	4355.5	1309.7	*	372.	59.	BR	1060.	0.7	-9.0	32.0
54.	EB US380B Front3_10	*	4355.5	1309.7	4597.6	1492.4	*	303.	53.	BR	1060.	0.7	-12.0	32.0
55.	EB US380B Front3_11	*	4597.6	1492.4	4741.6	1616.8	*	190.	49.	AG	1060.	0.7	-16.0	54.0
56.	EB US380B Front3_12	*	4741.6	1616.8	4864.8	1731.4	*	168.	47.	AG	1060.	0.7	-19.0	54.0
57.	EB US380B Front3_13	*	4864.8	1731.4	5002.9	1878.0	*	201.	43.	AG	1060.	0.7	-21.0	54.0
58.	SB University N_1	*	4815.0	2047.9	4990.2	1864.5	*	254.	136.	AG	440.	1.3	-19.0	46.0
59.	SB University M_2	*	4990.2	1864.5	5099.5	1749.4	*	159.	136.	AG	1370.	0.6	-9.0	46.0
60.	SB University M_3	*	5099.5	1749.4	5221.3	1570.6	*	216.	146.	AG	1370.	0.6	-5.0	46.0
61.	SB University M_4	*	5221.3	1570.6	5341.8	1311.2	*	286.	155.	AG	1370.	0.6	1.0	46.0
62.	SB University M_5	*	5341.8	1311.2	5509.1	1081.6	*	284.	144.	AG	1370.	0.6	7.0	46.0
63.	SB University M_6	*	5509.1	1081.6	5638.8	964.4	*	175.	132.	AG	1370.	0.6	10.0	46.0
64.	SB University S_7	*	5638.8	964.4	5848.0	841.1	*	243.	121.	AG	1540.	0.6	10.0	46.0
65.	SB University S_8	*	5848.0	841.1	6148.7	749.8	*	314.	107.	AG	1540.	0.6	9.0	46.0
66.	SB University S_9	*	6148.7	749.8	7386.9	734.8	*	1238.	91.	AG	1540.	0.6	-7.0	46.0
67.	NB University S_1	*	7384.8	771.6	6227.2	775.8	*	1158.	270.	AG	1180.	0.6	-9.0	46.0
68.	NB University S_2	*	6227.2	775.8	5918.8	848.3	*	317.	283.	AG	1180.	0.6	8.0	46.0
69.	NB University S_3	*	5918.8	848.3	5659.7	996.1	*	298.	300.	AG	1180.	0.6	10.0	46.0
70.	NB University M_4	*	5659.7	996.1	5526.0	1117.2	*	180.	312.	AG	850.	1.5	10.0	46.0
71.	NB University M_5	*	5526.0	1117.2	5343.8	1384.9	*	324.	326.	AG	850.	1.5	6.0	46.0
72.	NB University M_6	*	5343.8	1384.9	5247.6	1599.1	*	235.	336.	AG	850.	1.5	0.0	46.0
73.	NB University M_7	*	5247.6	1599.1	5091.9	1813.8	*	265.	324.	AG	850.	1.5	-5.0	46.0
74.	NB University M_8	*	5091.9	1813.8	5015.3	1892.3	*	110.	316.	AG	850.	1.5	-9.0	46.0

75. NB University N_9	*	5015.3	1892.3	4836.9	2071.4	*	253.	315. AG	830.	1.0	-18.0	34.0
76. SB Prestwick N_1	*	280.0	665.4	277.0	443.5	*	222.	181. AG	270.	0.7	7.0	34.0
77. SB Prestwick N_2	*	277.0	443.5	294.1	340.1	*	105.	171. AG	270.	0.7	2.0	34.0
78. SB Prestwick N_3	*	294.1	340.1	330.1	237.5	*	109.	161. AG	270.	0.7	1.0	34.0
79. SB Prestwick N_4	*	330.1	237.5	392.7	123.5	*	130.	151. AG	270.	0.7	2.0	34.0
80. SB Prestwick S_5	*	279.9	918.9	280.0	665.4	*	254.	180. AG	200.	1.1	10.0	22.0
81. NB Prestwick N_1	*	307.8	667.1	308.5	919.9	*	253.	0. AG	210.	1.0	10.0	22.0
82. NB Prestwick S_2	*	319.5	336.5	302.7	438.7	*	104.	351. AG	200.	1.1	1.0	46.0
83. NB Prestwick S_3	*	302.7	438.7	307.8	667.1	*	228.	1. AG	200.	1.1	6.0	34.0
84. SB Indep N_1	*	3729.1	970.3	3626.6	1184.7	*	238.	334. AG	200.	1.1	-15.0	46.0
85. SB Indep M_2	*	3729.1	970.3	3774.7	861.8	*	118.	157. AG	270.	0.7	-16.0	46.0
86. SB Indep M_3	*	3774.7	861.8	3812.0	706.2	*	160.	167. AG	270.	0.7	-16.0	46.0
87. SB Indep S_4	*	3812.0	706.2	3830.6	489.8	*	217.	175. AG	560.	0.7	-14.0	46.0
88. NB Indep S_1	*	3859.8	489.2	3842.0	706.0	*	218.	355. AG	350.	0.7	-16.0	46.0
89. NB Indep M_2	*	3842.0	706.0	3814.7	826.5	*	124.	347. AG	210.	1.0	-17.0	44.0
90. NB Indep M_3	*	3814.7	826.5	3758.9	982.9	*	166.	340. AG	210.	1.0	-17.0	44.0
91. NB Indep N_4	*	3758.9	982.9	3660.7	1199.5	*	238.	336. AG	200.	1.1	-16.0	44.0
92. WB Connector_1	*	5645.3	1007.5	5535.1	865.2	*	180.	218. AG	370.	0.7	10.0	34.0
93. WB Connector_2	*	5535.1	865.2	5400.1	778.5	*	160.	237. AG	370.	0.7	10.0	34.0
94. WB Connector_3	*	5400.1	778.5	5258.2	734.4	*	149.	253. AG	370.	0.7	10.0	34.0
95. WB Connector_4	*	5258.2	734.4	3810.1	717.6	*	1448.	269. AG	370.	0.7	10.0	34.0

PAGE 3

JOB: US380 McKinney

RUN: Segment B - 2050

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION V/C QUEUE	LINK COORDINATES (FT)				LENGTH BRG TYPE			VPH	EF	H			
		* X1	Y1	X2	Y2	* (FT)	(DEG)	(G/MI)				(FT)	(FT)	(VEH)
	96. EB Connector_1	*	3814.1	694.2	5261.9	710.6	*	1448.	89. AG	220.	0.7	-3.0	34.0	
	97. EB Connector_2	*	5261.9	710.6	5410.0	756.7	*	155.	73. AG	220.	0.7	10.0	34.0	
	98. EB Connector_3	*	5410.0	756.7	5551.0	847.1	*	168.	57. AG	220.	0.7	10.0	34.0	
	99. EB Connector_4	*	5551.0	847.1	5672.6	987.4	*	186.	41. AG	220.	0.7	10.0	34.0	
	100. NB Prestwick S_3_Q	*	302.7	438.7	303.3	466.1	*	27.	1. AG	2.100.0	6.0	34.0	0.16	1.4
	101. NB Prestwick N_1_Q	*	307.8	667.1	308.0	724.5	*	57.	0. AG	1.100.0	10.0	22.0	0.33	2.9
	102. SB Prestwick S_5_Q	*	279.9	918.9	279.9	864.2	*	55.	180. AG	1.100.0	10.0	22.0	0.31	2.8
	103. EB US380B Front2_7_Q	*	3639.3	933.9	3695.0	956.5	*	60.	68. AG	3.100.0	-10.0	54.0	0.34	
3.1	104. NB Indep M_3_Q	*	3814.7	826.5	3808.3	844.5	*	19.	340. AG	2.100.0	-17.0	44.0	0.11	1.0
	105. NB Indep N_4_Q	*	3758.9	982.9	3747.6	1007.8	*	27.	336. AG	2.100.0	-16.0	44.0	0.16	1.4
	106. SB Indep N_1_Q	*	3729.1	970.3	3717.3	995.0	*	27.	334. AG	2.100.0	-15.0	46.0	0.16	1.4
	107. WB US380B Front1_6_Q	*	3788.7	1255.0	3719.3	1224.9	*	76.	247. FL	2.100.0	-9.0	43.0	0.42	
3.8	108. WB US380 B West_15_Q	*	1357.3	932.6	-6204.6	839.8	*	7563.	269. AG	3.100.0	1.0	58.0	1.87	
384.2	109. EB US380B Front3_13Q	*	4864.8	1731.4	4904.6	1773.6	*	58.	43. AG	3.100.0	-21.0	54.0	0.32	
2.9	110. SB University N_1_Q	*	4815.0	2047.9	4842.6	2019.0	*	40.	136. AG	2.100.0	-19.0	46.0	0.23	
2.0	111. NB University M_8_Q	*	5091.9	1813.8	5037.9	1869.2	*	77.	316. AG	2.100.0	-9.0	46.0	0.44	

3.9

112. NB University N_9_Q * 5015.3 1892.3 4935.3 1972.7 * 113. 315. AG 2. 100.0 -18.0 34.0 0.65

5.8

113. NB University S_3_Q * 5918.8 848.3 5825.5 901.5 * 107. 300. AG 2. 100.0 10.0 46.0 0.61 5.5

114. SB University M_6_Q * 5509.1 1081.6 5601.6 998.0 * 125. 132. AG 2. 100.0 10.0 46.0 0.71

6.3

115. SB Indep M_3_Q * 3774.7 861.8 3779.0 844.0 * 18. 167. AG 3. 100.0 -16.0 46.0 0.10 0.9

116. WB Connector_4_Q * 5258.2 734.4 5217.8 733.9 * 40. 269. AG 1. 100.0 10.0 34.0 0.23 2.1

117. EB Connector_4_Q * 5551.0 847.1 5566.8 865.3 * 24. 41. AG 1. 100.0 10.0 34.0 0.13 1.2

118. NB Indep S_1_Q * 3859.8 489.2 3857.2 520.8 * 32. 355. AG 2. 100.0 -16.0 46.0 0.18 1.6

PAGE 4

JOB: US380 McKinney

RUN: Segment B - 2050

DATE : 9/15/22

TIME : 14:55:34

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

Table with 10 columns: LINK DESCRIPTION, CYCLE, RED, CLEARANCE, APPROACH, SATURATION, IDLE, SIGNAL, ARRIVAL. Rows 100-118.

RECEPTOR LOCATIONS

Table with 6 columns: RECEPTOR, COORDINATES (FT) X, Y, Z. Rows 1-3.

PAGE 5

JOB: US380 McKinney

RUN: Segment B - 2050

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3

-----*

0.	*	0.0	0.0	0.0
10.	*	0.0	0.0	0.0
20.	*	0.0	0.0	0.0
30.	*	0.0	0.0	0.0
40.	*	0.0	0.0	0.0
50.	*	0.0	0.0	0.0
60.	*	0.0	0.0	0.0
70.	*	0.0	0.0	0.0
80.	*	0.0	0.0	0.0
90.	*	0.0	0.0	0.0
100.	*	0.0	0.0	0.0
110.	*	0.0	0.0	0.0
120.	*	0.0	0.0	0.0
130.	*	0.0	0.0	0.0
140.	*	0.0	0.0	0.0
150.	*	0.0	0.0	0.0
160.	*	0.0	0.0	0.0
170.	*	0.0	0.0	0.0
180.	*	0.0	0.0	0.0
190.	*	0.0	0.0	0.0
200.	*	0.0	0.0	0.0
210.	*	0.0	0.0	0.0
220.	*	0.0	0.0	0.0
230.	*	0.0	0.0	0.0
240.	*	0.0	0.0	0.0
250.	*	0.0	0.0	0.0
260.	*	0.0	0.0	0.0
270.	*	0.0	0.0	0.0
280.	*	0.0	0.0	0.0
290.	*	0.0	0.1	0.0
300.	*	0.0	0.0	0.0
310.	*	0.0	0.0	0.0
320.	*	0.0	0.0	0.0
330.	*	0.0	0.0	0.0
340.	*	0.0	0.0	0.0
350.	*	0.0	0.0	0.0
360.	*	0.0	0.0	0.0

-----*

MAX	*	0.0	0.1	0.0
DEGR.	*	0	290	0

THE HIGHEST CONCENTRATION OF 0.10 PPM OCCURRED AT RECEPTOR REC2 .

PAGE 6

JOB: US380 McKinney

RUN: Segment B - 2050

DATE : 9/15/22

TIME : 14:55:34

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

```
* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3
LINK # * 0 290 0
-----*-----
1 * 0.0 0.0 0.0
2 * 0.0 0.0 0.0
3 * 0.0 0.0 0.0
4 * 0.0 0.0 0.0
5 * 0.0 0.0 0.0
6 * 0.0 0.0 0.0
7 * 0.0 0.0 0.0
8 * 0.0 0.0 0.0
9 * 0.0 0.0 0.0
10 * 0.0 0.0 0.0
11 * 0.0 0.0 0.0
12 * 0.0 0.0 0.0
13 * 0.0 0.0 0.0
14 * 0.0 0.0 0.0
15 * 0.0 0.0 0.0
16 * 0.0 0.0 0.0
17 * 0.0 0.0 0.0
18 * 0.0 0.0 0.0
19 * 0.0 0.0 0.0
20 * 0.0 0.0 0.0
21 * 0.0 0.0 0.0
22 * 0.0 0.1 0.0
23 * 0.0 0.0 0.0
24 * 0.0 0.0 0.0
25 * 0.0 0.0 0.0
26 * 0.0 0.0 0.0
27 * 0.0 0.0 0.0
28 * 0.0 0.0 0.0
29 * 0.0 0.0 0.0
30 * 0.0 0.0 0.0
31 * 0.0 0.0 0.0
32 * 0.0 0.0 0.0
33 * 0.0 0.0 0.0
34 * 0.0 0.0 0.0
35 * 0.0 0.0 0.0
36 * 0.0 0.0 0.0
37 * 0.0 0.0 0.0
```

38 * 0.0 0.0 0.0
39 * 0.0 0.0 0.0
40 * 0.0 0.0 0.0
41 * 0.0 0.0 0.0
42 * 0.0 0.0 0.0
43 * 0.0 0.0 0.0
44 * 0.0 0.0 0.0
45 * 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment B - 2050

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3

LINK # * 0 290 0

46 * 0.0 0.0 0.0
47 * 0.0 0.0 0.0
48 * 0.0 0.0 0.0
49 * 0.0 0.0 0.0
50 * 0.0 0.0 0.0
51 * 0.0 0.0 0.0
52 * 0.0 0.0 0.0
53 * 0.0 0.0 0.0
54 * 0.0 0.0 0.0
55 * 0.0 0.0 0.0
56 * 0.0 0.0 0.0
57 * 0.0 0.0 0.0
58 * 0.0 0.0 0.0
59 * 0.0 0.0 0.0
60 * 0.0 0.0 0.0
61 * 0.0 0.0 0.0
62 * 0.0 0.0 0.0
63 * 0.0 0.0 0.0
64 * 0.0 0.0 0.0
65 * 0.0 0.0 0.0
66 * 0.0 0.0 0.0
67 * 0.0 0.0 0.0
68 * 0.0 0.0 0.0
69 * 0.0 0.0 0.0
70 * 0.0 0.0 0.0
71 * 0.0 0.0 0.0
72 * 0.0 0.0 0.0
73 * 0.0 0.0 0.0
74 * 0.0 0.0 0.0
75 * 0.0 0.0 0.0
76 * 0.0 0.0 0.0
77 * 0.0 0.0 0.0
78 * 0.0 0.0 0.0
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94 * 0.0 0.0 0.0
95 * 0.0 0.0 0.0
96 * 0.0 0.0 0.0
97 * 0.0 0.0 0.0
98 * 0.0 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment B - 2050

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3

LINK # * 0 290 0

*-----
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'US380 McKinney' 60 0.75 0 0 6 0.3048 1 1
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'C2' 2795.36 3031.2 -28
'C3' 5843.37 1511 20
'C4' 5673.6 1297.79 11
'C5' 5743.68 1502.11 20
'C6' 5932.21 1133.93 1
'Segment C - 2030' 118 1 1 'C'
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2
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90 40 2 1600 1.435 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment C - 2030

DATE : 9/15/22

TIME : 14:55:34

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
	1. EB Front 1_1	*	759.9	5461.8	887.1	5108.7	*	375.	160.	AG	1300.	1.0	14.0	43.0
	2. EB Front 1_2	*	887.1	5108.7	995.4	4851.4	*	279.	157.	AG	1300.	1.0	4.0	43.0
	3. EB Front 1_3	*	995.4	4851.4	1152.2	4523.4	*	364.	154.	AG	1300.	1.0	-10.0	43.0
	4. EB Front 1_4	*	1152.2	4523.4	1298.7	4247.2	*	313.	152.	AG	1300.	1.0	-20.0	43.0
	5. EB Front 2_5	*	1297.7	4249.3	1426.0	3981.4	*	297.	154.	AG	1230.	1.0	-18.0	43.0
	6. EB Front 2_6	*	1426.0	3981.4	1635.3	3683.0	*	364.	145.	AG	1230.	1.0	-16.0	43.0
	7. EB Front 2_7	*	1635.3	3683.0	1954.6	3337.0	*	471.	137.	AG	1230.	1.0	-12.0	65.0
	8. EB Front 3_8	*	1954.6	3337.0	2182.4	3093.4	*	334.	137.	AG	1200.	1.9	-14.0	65.0
	9. EB Front 3_9	*	2182.4	3093.4	2393.5	2888.2	*	294.	134.	AG	1200.	1.9	-20.0	43.0
	10. EB Front 4_10	*	2393.5	2888.2	2490.8	2802.0	*	130.	132.	AG	1350.	1.1	-23.0	32.0
	11. EB Front 5_11	*	2490.8	2802.0	2591.3	2713.8	*	134.	131.	AG	1360.	1.1	-22.0	43.0
	12. EB Front 5_12	*	2591.3	2713.8	3011.8	2384.9	*	534.	128.	AG	1360.	1.1	-7.0	43.0
	13. EB Front 5_13	*	3011.8	2384.9	3421.7	2117.5	*	489.	123.	AG	1360.	1.1	9.0	32.0
	14. EB Front 5_14	*	3421.7	2117.5	3946.9	1836.1	*	596.	118.	AG	1360.	1.1	14.0	32.0
	15. EB Front 5_15	*	3946.9	1836.1	4656.4	1556.7	*	762.	111.	AG	1360.	1.1	25.0	32.0
	16. EB Front 5_16	*	4656.4	1556.7	5213.2	1426.0	*	572.	103.	AG	1360.	1.1	29.0	32.0
	17. EB Front 5_17	*	5213.2	1426.0	5572.5	1384.3	*	362.	97.	AG	1360.	1.1	23.0	32.0
	18. EB Front 5_18	*	5572.5	1384.3	5708.5	1371.9	*	137.	95.	AG	1360.	1.1	16.0	32.0
	19. EB US380C West_1	*	851.1	5550.2	980.5	5188.4	*	384.	160.	AG	2140.	1.4	5.0	46.0
	20. EB US380C West_2	*	980.5	5188.4	1111.7	4873.8	*	341.	157.	AG	2140.	1.4	0.0	46.0
	21. EB US380C West_3	*	1111.7	4873.8	1243.6	4604.2	*	300.	154.	AG	2140.	1.4	-7.0	46.0
	22. EB US380C West_4	*	1243.6	4604.2	1385.8	4339.8	*	300.	152.	AG	2140.	1.4	-14.0	46.0
	23. EB US380C West_5	*	1385.8	4339.8	1542.7	4083.8	*	300.	149.	AG	2140.	1.4	-19.0	46.0
	24. EB US380C West_6	*	1542.7	4083.8	1713.5	3836.9	*	300.	145.	AG	2140.	1.4	-17.0	46.0
	25. EB US380C West_7	*	1713.5	3836.9	1862.4	3638.9	*	248.	143.	AG	2140.	1.4	-11.0	46.0
	26. EB US380C East_8	*	1862.4	3638.9	2309.2	3150.1	*	662.	138.	AG	2210.	1.3	-2.0	58.0
	27. EB US380C East_9	*	2309.2	3150.1	2587.8	2887.4	*	383.	133.	BR	2210.	1.3	18.0	58.0
	28. EB US380C East_10	*	2587.8	2887.4	3060.1	2508.6	*	605.	129.	BR	2210.	1.3	28.0	46.0
	29. EB US380C East_11	*	3060.1	2508.6	3562.8	2182.6	*	599.	123.	BR	2210.	1.3	32.0	46.0
	30. EB US380C East_12	*	3562.8	2182.6	4167.9	1877.1	*	678.	117.	AG	2210.	1.3	30.0	46.0
	31. EB US380C East_13	*	4167.9	1877.1	4581.4	1714.4	*	444.	111.	AG	2210.	1.3	26.0	46.0
	32. EB US380C East_14	*	4581.4	1714.4	5043.4	1575.8	*	482.	107.	AG	2210.	1.3	28.0	34.0

33.	EB US380C East_15	*	5043.4	1575.8	5365.8	1483.6	*	335.	106.	AG	2210.	1.3	24.0	34.0
34.	EB US380C East_16	*	5365.8	1483.6	5708.5	1371.9	*	360.	108.	AG	2210.	1.3	19.0	34.0
35.	EB Exist US380_17	*	5708.5	1371.9	5986.3	1283.7	*	292.	108.	AG	3570.	1.1	20.0	58.0
36.	EB Exist US380_18	*	5986.3	1283.7	6245.6	1198.5	*	273.	108.	AG	3570.	1.1	5.0	46.0
37.	EB Exist US380_19	*	6245.6	1198.5	6536.2	1102.2	*	306.	108.	AG	3570.	1.1	-7.0	46.0
38.	EB Exist US380_20	*	6536.2	1102.2	7193.0	889.1	*	691.	108.	AG	3570.	1.1	-28.0	46.0
39.	EB US380C ONR_1	*	1297.7	4249.3	1424.6	4124.6	*	178.	135.	AG	80.	1.0	-22.0	24.0
40.	EB US380C ONR_2	*	1424.6	4124.6	1596.0	3940.3	*	252.	137.	AG	80.	1.0	-17.0	24.0
41.	EB US380C ONR_3	*	1596.0	3940.3	1748.0	3754.5	*	240.	141.	AG	80.	1.0	-14.0	24.0
42.	EB US380C ONR_4	*	1748.0	3754.5	1862.4	3638.9	*	163.	135.	AG	80.	1.0	-12.0	24.0
43.	West U_1	*	1954.6	3337.0	2065.6	3253.1	*	139.	127.	AG	30.	1.5	-14.0	24.0
44.	West U_2	*	2065.6	3253.1	2213.2	3112.7	*	204.	134.	AG	30.	1.5	-15.0	24.0

PAGE 2

JOB: US380 McKinney

RUN: Segment C - 2030

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
			*		*		*							
45.	West U_3	*	2213.2	3112.7	2311.6	3014.9	*	139.	135.	AG	30.	1.5	-16.0	24.0
46.	West U_4	*	2311.6	3014.9	2388.0	3031.4	*	78.	78.	AG	30.	1.5	-17.0	24.0
47.	West U_5	*	2388.0	3031.4	2496.0	3175.3	*	180.	37.	AG	30.	1.5	-17.0	24.0
48.	West U_6	*	2496.0	3175.3	2491.2	3236.9	*	62.	356.	AG	30.	1.5	-11.0	24.0
49.	East U_1	*	3027.9	2725.8	2897.5	2798.5	*	149.	299.	AG	10.	1.6	-17.0	24.0
50.	East U_2	*	2897.5	2798.5	2800.2	2881.3	*	128.	310.	AG	10.	1.6	-17.0	24.0
51.	East U_3	*	2800.2	2881.3	2747.9	2929.8	*	71.	313.	AG	10.	1.6	-17.0	24.0
52.	East U_4	*	2747.9	2929.8	2669.7	3003.4	*	107.	313.	AG	10.	1.6	-17.0	24.0
53.	East U_5	*	2669.7	3003.4	2617.1	3013.8	*	54.	281.	AG	10.	1.6	-17.0	24.0
54.	East U_6	*	2617.1	3013.8	2582.7	2990.9	*	41.	236.	AG	10.	1.6	-17.0	24.0
55.	East U_7	*	2582.7	2990.9	2488.7	2849.3	*	170.	214.	AG	10.	1.6	-17.0	24.0
56.	East U_8	*	2488.7	2849.3	2490.8	2802.0	*	47.	177.	AG	10.	1.6	-17.0	24.0
57.	WB US380C ONR_1	*	1671.7	4249.0	1563.7	4374.3	*	165.	319.	AG	840.	1.0	4.0	24.0
58.	WB US380C ONR_2	*	1563.7	4374.3	1444.0	4534.6	*	200.	323.	AG	840.	1.0	1.0	24.0
59.	WB US380C ONR_3	*	1444.0	4534.6	1333.3	4701.7	*	200.	326.	AG	840.	1.0	-15.0	24.0
60.	WB US380C ONR_4	*	1333.3	4701.7	1233.8	4875.5	*	200.	330.	AG	840.	1.0	-19.0	24.0
61.	WB US380C ONR_5	*	1233.8	4875.5	1145.1	4998.0	*	151.	324.	AG	840.	1.0	-4.0	24.0
62.	WB Exist US80_1	*	7212.8	943.4	6148.5	1287.0	*	1118.	288.	AG	3510.	1.1	-18.0	58.0
63.	WB Exist US80_2	*	6148.5	1287.0	5049.8	1643.0	*	1155.	288.	AG	3510.	1.1	26.0	58.0
64.	WB US380C West_3	*	5049.8	1642.9	4624.9	1781.5	*	447.	288.	AG	2100.	1.3	26.0	46.0
65.	WB US380C West_4	*	4624.9	1781.5	4343.3	1878.6	*	298.	289.	AG	2100.	1.3	24.0	46.0
66.	WB US380C West_5	*	4343.3	1878.6	3798.4	2131.1	*	600.	295.	AG	2100.	1.3	27.0	46.0
67.	WB US380C West_6	*	3798.4	2131.1	3220.9	2479.3	*	674.	301.	BR	2100.	1.3	32.0	46.0
68.	WB US380C West_7	*	3220.9	2479.3	2666.8	2909.6	*	702.	308.	BR	2100.	1.3	28.0	46.0
69.	WB US380C West_8	*	2666.8	2909.6	2511.6	3050.3	*	209.	312.	BR	2100.	1.3	21.0	46.0
70.	WB US380C West_9	*	2511.6	3050.3	2387.7	3167.1	*	170.	313.	BR	2100.	1.3	17.0	46.0
71.	WB US380C West_10	*	2387.7	3167.1	1870.9	3758.8	*	786.	319.	AG	2100.	1.3	4.0	46.0
72.	WB US380C West_11	*	1870.9	3758.8	1577.3	4180.3	*	514.	325.	AG	2100.	1.3	-12.0	46.0
73.	WB US380C West_12	*	1577.3	4180.3	1275.5	4718.1	*	617.	331.	AG	2100.	1.3	-17.0	46.0
74.	WB US380C West_13	*	1275.5	4718.1	1145.1	4998.0	*	309.	335.	AG	2100.	1.3	-8.0	46.0

75. WB US380C East_14 * 1145.0 4998.2 1022.2 5304.7 * 330. 338. AG 2940. 1.3 -2.0 58.0
76. WB US380C East_15 * 1022.2 5304.7 922.0 5602.2 * 314. 341. AG 2940. 1.3 4.0 58.0
77. WB Front 1_1 * 5049.8 1643.0 4703.5 1894.0 * 428. 306. AG 1410. 1.0 27.0 34.0
78. WB Front 1_2 * 4703.5 1894.0 4082.9 2178.9 * 683. 295. AG 1410. 1.0 30.0 46.0
79. WB Front 1_3 * 4082.9 2178.9 3609.4 2393.8 * 520. 294. AG 1410. 1.0 29.0 46.0
80. WB Front 1_4 * 3609.4 2393.8 3250.7 2576.3 * 402. 297. AG 1410. 1.0 20.0 58.0
81. WB Front 1_5 * 3250.7 2576.3 3027.4 2726.2 * 269. 304. AG 1410. 1.0 8.0 58.0
82. WB Front 2_6 * 3027.9 2725.8 2905.0 2821.4 * 156. 308. AG 1400. 2.0 -4.0 82.0
83. WB Front 2_7 * 2905.0 2821.4 2787.4 2924.9 * 157. 311. AG 1400. 2.0 -9.0 82.0
84. WB Front 2_8 * 2787.4 2924.9 2638.6 3072.2 * 209. 315. AG 1400. 2.0 -11.0 82.0
85. WB Front 2_9 * 2638.6 3072.2 2578.8 3136.2 * 88. 317. AG 1400. 2.0 -12.0 58.0
86. WB Front 3_10 * 2578.8 3136.2 2491.2 3236.9 * 134. 319. AG 1250. 1.0 -12.0 46.0
87. WB Front 4_11 * 2491.2 3236.9 2371.7 3375.6 * 183. 319. AG 1270. 1.0 -7.0 46.0
88. WB Front 4_12 * 2371.7 3375.6 2162.1 3617.8 * 320. 319. AG 1270. 1.0 1.0 46.0
89. WB Front 4_13 * 2162.1 3617.8 1929.4 3891.1 * 359. 320. AG 1270. 1.0 -2.0 46.0
90. WB Front 4_14 * 1929.4 3891.1 1671.7 4249.0 * 441. 324. AG 1270. 1.0 -7.0 46.0
91. WB Front 5_15 * 1671.7 4249.0 1470.6 4618.7 * 421. 331. AG 510. 1.0 -13.0 46.0
92. WB Front 5_16 * 1470.6 4618.7 1294.4 4978.2 * 400. 334. AG 510. 1.0 -18.0 46.0
93. WB Front 5_17 * 1294.4 4978.2 1067.0 5573.9 * 638. 339. AG 510. 1.0 -8.0 46.0
94. WB Front 5_18 * 1067.0 5573.9 962.4 5938.3 * 379. 344. AG 510. 1.0 4.0 46.0
95. NB University_1 * 1279.9 2768.0 1827.7 2606.4 * 571. 106. AG 1280. 1.2 -32.0 46.0

PAGE 3

JOB: US380 McKinney

RUN: Segment C - 2030

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	96. NB University_2	* 1827.7	2606.4	2103.7	2629.5	* 277.	85. AG	1280.	1.2	-32.0	46.0	
	97. NB University_3	* 2103.7	2629.5	2328.1	2776.5	* 268.	57. AG	1280.	1.2	-30.0	46.0	
	98. NB University_4	* 2328.1	2776.5	2406.7	2876.4	* 127.	38. AG	1280.	1.2	-25.0	46.0	
	99. NB FM1827 S_1	* 2406.7	2876.4	2588.5	3125.8	* 309.	36. AG	910.	1.7	-19.0	46.0	
	100. NB FM1827 N_1	* 2588.5	3125.8	2842.9	3475.7	* 433.	36. AG	650.	1.1	-8.0	34.0	
	101. NB FM1827 N_2	* 2842.9	3475.7	2895.0	3573.9	* 111.	28. AG	650.	1.1	3.0	34.0	
	102. NB FM1827 N_3	* 2895.0	3573.9	2939.8	3758.5	* 190.	14. AG	650.	1.1	11.0	34.0	
	103. NB FM1827 N_4	* 2939.8	3758.5	2994.1	4598.5	* 842.	4. AG	650.	1.1	20.0	34.0	
	104. SB FM1827 N_1	* 2983.4	4598.5	2921.3	3732.4	* 868.	184. AG	570.	2.1	20.0	46.0	
	105. SB FM1827 N_2	* 2921.3	3732.4	2857.7	3545.6	* 197.	199. AG	570.	2.1	10.0	34.0	
	106. SB FM1827 N_3	* 2857.7	3545.6	2629.5	3218.5	* 399.	215. AG	570.	2.1	-4.0	34.0	
	107. SB FM1827 N_4	* 2629.5	3218.5	2572.9	3143.0	* 94.	217. AG	570.	2.1	-13.0	46.0	
	108. SB FM1827 S_1	* 2572.9	3143.0	2390.4	2891.3	* 311.	216. AG	900.	1.4	-11.0	46.0	
	109. SB University_1	* 2390.4	2891.3	2339.7	2834.0	* 76.	221. AG	1140.	1.0	-23.0	46.0	
	110. SB University_2	* 2339.7	2834.0	2102.7	2672.6	* 287.	236. AG	1140.	1.0	-28.0	46.0	
	111. SB University_3	* 2102.7	2672.6	1830.5	2650.8	* 273.	265. AG	1140.	1.0	-32.0	46.0	
	112. SB University_4	* 1830.5	2650.8	1292.4	2809.5	* 561.	286. AG	1140.	1.0	-32.0	46.0	
8.2	113. SB FM1827 N_4_Q	* 2629.5	3218.5	2533.1	3089.9	* 161.	217. AG	6.	100.0	-13.0	46.0	0.83
8.2	114. SB FM1827 S_1_Q	* 2572.9	3143.0	2478.5	3012.8	* 161.	216. AG	6.	100.0	-11.0	46.0	0.83

115. NB FM1827 S_1_Q * 2406.7 2876.4 2501.4 3006.3 * 161. 36. AG 6. 100.0 -19.0 46.0 0.83
 8.2
 116. NB University_4_Q * 2328.1 2776.5 2427.5 2902.8 * 161. 38. AG 6. 100.0 -25.0 46.0 0.83 8.2
 117. WB Front 2_9_Q * 2638.6 3072.2 2578.9 3136.1 * 87. 317. AG 7. 100.0 -12.0 58.0 0.49 4.4
 118. EB Front 3_9_Q * 2182.4 3093.4 2266.0 3012.2 * 117. 134. AG 5. 100.0 -20.0 43.0 0.65 5.9

PAGE 4

JOB: US380 McKinney

RUN: Segment C - 2030

DATE : 9/15/22

TIME : 14:55:34

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
ARRIVAL	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE
	* (SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		RATE
113. SB FM1827 N_4_Q	* 90	50	2.0	1600	1600	1.43	1 3
114. SB FM1827 S_1_Q	* 90	50	2.0	1600	1600	1.43	1 3
115. NB FM1827 S_1_Q	* 90	50	2.0	1600	1600	1.43	1 3
116. NB University_4_Q	* 90	50	2.0	1600	1600	1.43	1 3
117. WB Front 2_9_Q	* 90	40	2.0	1600	1600	1.43	1 3
118. EB Front 3_9_Q	* 90	40	2.0	1600	1600	1.43	1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. C1	* 2494.1	2711.1	-32.0	*	
2. C2	* 2795.4	3031.2	-28.0	*	
3. C3	* 5843.4	1511.0	20.0	*	
4. C4	* 5673.6	1297.8	11.0	*	
5. C5	* 5743.7	1502.1	20.0	*	
6. C6	* 5932.2	1133.9	1.0	*	

PAGE 5

JOB: US380 McKinney

RUN: Segment C - 2030

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6

0. * 0.0 0.0 0.0 0.0 0.0 0.0

10.	*	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.1	0.0	0.0
60.	*	0.0	0.0	0.0	0.1	0.0	0.0
70.	*	0.0	0.0	0.0	0.1	0.0	0.1
80.	*	0.0	0.0	0.0	0.2	0.0	0.0
90.	*	0.0	0.0	0.0	0.1	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.1	0.0
120.	*	0.0	0.0	0.1	0.0	0.1	0.0
130.	*	0.0	0.0	0.0	0.0	0.1	0.0
140.	*	0.0	0.0	0.1	0.0	0.1	0.0
150.	*	0.0	0.0	0.0	0.0	0.1	0.0
160.	*	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.0	0.0	0.0	0.0	0.1	0.0
260.	*	0.0	0.0	0.1	0.0	0.1	0.0
270.	*	0.0	0.0	0.1	0.0	0.1	0.0
280.	*	0.0	0.0	0.0	0.0	0.1	0.0
290.	*	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.2	0.0	0.1
320.	*	0.0	0.0	0.0	0.1	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0	0.0	0.0

-----*-----
MAX * 0.0 0.0 0.1 0.2 0.1 0.1
DEGR.* 0 0 120 80 110 70

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC4 .

PAGE 6

JOB: US380 McKinney

RUN: Segment C - 2030

DATE : 9/15/22

TIME : 14:55:34

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4 REC5 REC6

LINK #* 0 0 120 80 110 70

*-----
1 * 0.0 0.0 0.0 0.0 0.0 0.0
2 * 0.0 0.0 0.0 0.0 0.0 0.0
3 * 0.0 0.0 0.0 0.0 0.0 0.0
4 * 0.0 0.0 0.0 0.0 0.0 0.0
5 * 0.0 0.0 0.0 0.0 0.0 0.0
6 * 0.0 0.0 0.0 0.0 0.0 0.0
7 * 0.0 0.0 0.0 0.0 0.0 0.0
8 * 0.0 0.0 0.0 0.0 0.0 0.0
9 * 0.0 0.0 0.0 0.0 0.0 0.0
10 * 0.0 0.0 0.0 0.0 0.0 0.0
11 * 0.0 0.0 0.0 0.0 0.0 0.0
12 * 0.0 0.0 0.0 0.0 0.0 0.0
13 * 0.0 0.0 0.0 0.0 0.0 0.0
14 * 0.0 0.0 0.0 0.0 0.0 0.0
15 * 0.0 0.0 0.0 0.0 0.0 0.0
16 * 0.0 0.0 0.0 0.0 0.0 0.0
17 * 0.0 0.0 0.0 0.0 0.0 0.0
18 * 0.0 0.0 0.0 0.0 0.0 0.0
19 * 0.0 0.0 0.0 0.0 0.0 0.0
20 * 0.0 0.0 0.0 0.0 0.0 0.0
21 * 0.0 0.0 0.0 0.0 0.0 0.0
22 * 0.0 0.0 0.0 0.0 0.0 0.0
23 * 0.0 0.0 0.0 0.0 0.0 0.0
24 * 0.0 0.0 0.0 0.0 0.0 0.0
25 * 0.0 0.0 0.0 0.0 0.0 0.0
26 * 0.0 0.0 0.0 0.0 0.0 0.0
27 * 0.0 0.0 0.0 0.0 0.0 0.0
28 * 0.0 0.0 0.0 0.0 0.0 0.0
29 * 0.0 0.0 0.0 0.0 0.0 0.0
30 * 0.0 0.0 0.0 0.0 0.0 0.0
31 * 0.0 0.0 0.0 0.0 0.0 0.0
32 * 0.0 0.0 0.0 0.0 0.0 0.0
33 * 0.0 0.0 0.0 0.0 0.0 0.0
34 * 0.0 0.0 0.0 0.0 0.0 0.0
35 * 0.0 0.0 0.0 0.1 0.0 0.0
36 * 0.0 0.0 0.0 0.0 0.0 0.1
37 * 0.0 0.0 0.0 0.0 0.0 0.0
38 * 0.0 0.0 0.0 0.0 0.0 0.0
39 * 0.0 0.0 0.0 0.0 0.0 0.0
40 * 0.0 0.0 0.0 0.0 0.0 0.0
41 * 0.0 0.0 0.0 0.0 0.0 0.0
42 * 0.0 0.0 0.0 0.0 0.0 0.0
43 * 0.0 0.0 0.0 0.0 0.0 0.0
44 * 0.0 0.0 0.0 0.0 0.0 0.0
45 * 0.0 0.0 0.0 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment C - 2030

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4 REC5 REC6

LINK #* 0 0 120 80 110 70

*

46	*	0.0	0.0	0.0	0.0	0.0	0.0
47	*	0.0	0.0	0.0	0.0	0.0	0.0
48	*	0.0	0.0	0.0	0.0	0.0	0.0
49	*	0.0	0.0	0.0	0.0	0.0	0.0
50	*	0.0	0.0	0.0	0.0	0.0	0.0
51	*	0.0	0.0	0.0	0.0	0.0	0.0
52	*	0.0	0.0	0.0	0.0	0.0	0.0
53	*	0.0	0.0	0.0	0.0	0.0	0.0
54	*	0.0	0.0	0.0	0.0	0.0	0.0
55	*	0.0	0.0	0.0	0.0	0.0	0.0
56	*	0.0	0.0	0.0	0.0	0.0	0.0
57	*	0.0	0.0	0.0	0.0	0.0	0.0
58	*	0.0	0.0	0.0	0.0	0.0	0.0
59	*	0.0	0.0	0.0	0.0	0.0	0.0
60	*	0.0	0.0	0.0	0.0	0.0	0.0
61	*	0.0	0.0	0.0	0.0	0.0	0.0
62	*	0.0	0.0	0.1	0.0	0.1	0.0
63	*	0.0	0.0	0.0	0.1	0.0	0.0
64	*	0.0	0.0	0.0	0.0	0.0	0.0
65	*	0.0	0.0	0.0	0.0	0.0	0.0
66	*	0.0	0.0	0.0	0.0	0.0	0.0
67	*	0.0	0.0	0.0	0.0	0.0	0.0
68	*	0.0	0.0	0.0	0.0	0.0	0.0
69	*	0.0	0.0	0.0	0.0	0.0	0.0
70	*	0.0	0.0	0.0	0.0	0.0	0.0
71	*	0.0	0.0	0.0	0.0	0.0	0.0
72	*	0.0	0.0	0.0	0.0	0.0	0.0
73	*	0.0	0.0	0.0	0.0	0.0	0.0
74	*	0.0	0.0	0.0	0.0	0.0	0.0
75	*	0.0	0.0	0.0	0.0	0.0	0.0
76	*	0.0	0.0	0.0	0.0	0.0	0.0
77	*	0.0	0.0	0.0	0.0	0.0	0.0
78	*	0.0	0.0	0.0	0.0	0.0	0.0
79	*	0.0	0.0	0.0	0.0	0.0	0.0
80	*	0.0	0.0	0.0	0.0	0.0	0.0
81	*	0.0	0.0	0.0	0.0	0.0	0.0
82	*	0.0	0.0	0.0	0.0	0.0	0.0
83	*	0.0	0.0	0.0	0.0	0.0	0.0
84	*	0.0	0.0	0.0	0.0	0.0	0.0
85	*	0.0	0.0	0.0	0.0	0.0	0.0
86	*	0.0	0.0	0.0	0.0	0.0	0.0
87	*	0.0	0.0	0.0	0.0	0.0	0.0
88	*	0.0	0.0	0.0	0.0	0.0	0.0
89	*	0.0	0.0	0.0	0.0	0.0	0.0
90	*	0.0	0.0	0.0	0.0	0.0	0.0
91	*	0.0	0.0	0.0	0.0	0.0	0.0
92	*	0.0	0.0	0.0	0.0	0.0	0.0
93	*	0.0	0.0	0.0	0.0	0.0	0.0
94	*	0.0	0.0	0.0	0.0	0.0	0.0
95	*	0.0	0.0	0.0	0.0	0.0	0.0
96	*	0.0	0.0	0.0	0.0	0.0	0.0
97	*	0.0	0.0	0.0	0.0	0.0	0.0
98	*	0.0	0.0	0.0	0.0	0.0	0.0

	*	CO/LINK (PPM)					
	*	ANGLE (DEGREES)					
	*	REC1	REC2	REC3	REC4	REC5	REC6
LINK #	*	0	0	120	80	110	70
	*	-----*					
99	*	0.0	0.0	0.0	0.0	0.0	0.0
100	*	0.0	0.0	0.0	0.0	0.0	0.0
101	*	0.0	0.0	0.0	0.0	0.0	0.0
102	*	0.0	0.0	0.0	0.0	0.0	0.0
103	*	0.0	0.0	0.0	0.0	0.0	0.0
104	*	0.0	0.0	0.0	0.0	0.0	0.0
105	*	0.0	0.0	0.0	0.0	0.0	0.0
106	*	0.0	0.0	0.0	0.0	0.0	0.0
107	*	0.0	0.0	0.0	0.0	0.0	0.0
108	*	0.0	0.0	0.0	0.0	0.0	0.0
109	*	0.0	0.0	0.0	0.0	0.0	0.0
110	*	0.0	0.0	0.0	0.0	0.0	0.0
111	*	0.0	0.0	0.0	0.0	0.0	0.0
112	*	0.0	0.0	0.0	0.0	0.0	0.0
113	*	0.0	0.0	0.0	0.0	0.0	0.0
114	*	0.0	0.0	0.0	0.0	0.0	0.0
115	*	0.0	0.0	0.0	0.0	0.0	0.0
116	*	0.0	0.0	0.0	0.0	0.0	0.0
117	*	0.0	0.0	0.0	0.0	0.0	0.0
118	*	0.0	0.0	0.0	0.0	0.0	0.0

'US380 McKinney' 60 0.75 0 0 6 0.3048 1 1
'C1' 2494.13 2711.13 -32
'C2' 2795.36 3031.2 -28
'C3' 5843.37 1511 20
'C4' 5673.6 1297.79 11
'C5' 5743.68 1502.11 20
'C6' 5932.21 1133.93 1
'Segment C - 2050' 118 1 1 'C'
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'EB Front 1_1' 'AG' 759.9 5461.75 887.07 5108.71 1300 1.007 14 43
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'EB Front 1_2' 'AG' 887.07 5108.71 995.4 4851.42 1300 1.007 4 43
1
'EB Front 1_3' 'AG' 995.4 4851.42 1152.17 4523.38 1300 1.007 -10 43
1
'EB Front 1_4' 'AG' 1152.17 4523.38 1298.7 4247.17 1300 1.007 -20 43
1
'EB Front 2_5' 'AG' 1297.68 4249.33 1426.03 3981.35 1230 1.017 -18 43
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'EB Front 2_6' 'AG' 1426.03 3981.35 1635.31 3682.96 1230 1.017 -16 43
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'EB Front 2_7' 'AG' 1635.31 3682.96 1954.57 3337 1230 1.017 -12 65
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'EB Front 3_8' 'AG' 1954.57 3337 2182.38 3093.4 1200 1.851 -14 65
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'EB Front 3_9' 'AG' 2182.38 3093.4 2393.53 2888.23 1200 1.851 -20 43
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'EB Front 4_10' 'AG' 2393.53 2888.23 2490.83 2802.04 1350 1.061 -23 32
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'EB Front 5_11' 'AG' 2490.83 2802.04 2591.34 2713.83 1360 1.061 -22 43
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'EB Front 5_12' 'AG' 2591.34 2713.83 3011.81 2384.88 1360 1.061 -7 43
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'EB Front 5_15' 'AG' 3946.94 1836.11 4656.38 1556.69 1360 1.061 25 32
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'EB Front 5_16' 'AG' 4656.38 1556.69 5213.15 1425.96 1360 1.061 29 32
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'EB Front 5_17' 'AG' 5213.15 1425.96 5572.52 1384.29 1360 1.061 23 32
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'EB Front 5_18' 'AG' 5572.52 1384.29 5708.48 1371.91 1360 1.061 16 32
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'EB US380C West_1' 'AG' 851.12 5550.19 980.46 5188.42 2140 1.434 5 46
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'EB US380C West_7' 'AG' 1713.5 3836.86 1862.41 3638.94 2140 1.434 -11 46
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'EB US380C East_10' 'BR' 2587.8 2887.4 3060.12 2508.56 2210 1.282 28 46
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'EB Exist US380_18' 'AG' 5986.31 1283.65 6245.62 1198.54 3570 1.104 5 46
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'EB Exist US380_19' 'AG' 6245.62 1198.54 6536.16 1102.21 3570 1.104 -7 46
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'EB Exist US380_20' 'AG' 6536.16 1102.21 7193.04 889.13 3570 1.104 -28 46
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'EB US380C ONR_1' 'AG' 1297.68 4249.33 1424.62 4124.56 80 0.974 -22 24
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'EB US380C ONR_2' 'AG' 1424.62 4124.56 1595.97 3940.28 80 0.974 -17 24
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'EB US380C ONR_4' 'AG' 1748 3754.46 1862.41 3638.94 80 0.974 -12 24
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'West U_1' 'AG' 1954.57 3337 2065.63 3253.07 30 1.454 -14 24
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'West U_2' 'AG' 2065.63 3253.07 2213.17 3112.7 30 1.454 -15 24
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'West U_3' 'AG' 2213.17 3112.7 2311.58 3014.91 30 1.454 -16 24
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'West U_4' 'AG' 2311.58 3014.91 2388.03 3031.44 30 1.454 -17 24
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'West U_5' 'AG' 2388.03 3031.44 2495.96 3175.33 30 1.454 -17 24
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'West U_6' 'AG' 2495.96 3175.33 2491.17 3236.93 30 1.454 -11 24
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'East U_1' 'AG' 3027.89 2725.83 2897.52 2798.52 10 1.626 -17 24
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'East U_2' 'AG' 2897.52 2798.52 2800.16 2881.3 10 1.626 -17 24
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'East U_3' 'AG' 2800.16 2881.3 2747.94 2929.79 10 1.626 -17 24
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'WB US380C ONR_2' 'AG' 1563.69 4374.28 1443.97 4534.65 840 0.979 1 24
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'WB US380C ONR_3' 'AG' 1443.97 4534.65 1333.3 4701.66 840 0.979 -15 24
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'WB US380C ONR_4' 'AG' 1333.3 4701.66 1233.77 4875.54 840 0.979 -19 24
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'WB Exist US80_1' 'AG' 7212.84 943.36 6148.52 1287.04 3510 1.123 -18 58
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'WB Exist US80_2' 'AG' 6148.52 1287.04 5049.78 1642.96 3510 1.123 26 58
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'WB US380C West_3' 'AG' 5049.84 1642.94 4624.85 1781.48 2100 1.282 26 46
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'WB US380C West_4' 'AG' 4624.85 1781.48 4343.26 1878.6 2100 1.282 24 46
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'WB US380C West_5' 'AG' 4343.26 1878.6 3798.44 2131.13 2100 1.282 27 46
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'WB US380C West_6' 'BR' 3798.44 2131.13 3220.91 2479.25 2100 1.282 32 46
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'WB US380C West_7' 'BR' 3220.91 2479.25 2666.81 2909.61 2100 1.282 28 46
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'WB US380C West_8' 'BR' 2666.81 2909.61 2511.61 3050.26 2100 1.282 21 46
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'WB US380C West_12' 'AG' 1577.33 4180.25 1275.48 4718.06 2100 1.282 -17 46
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'WB US380C West_13' 'AG' 1275.48 4718.06 1145.06 4998.03 2100 1.282 -8 46
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'WB US380C East_14' 'AG' 1145 4998.17 1022.16 5304.67 2940 1.282 -2 58
1
'WB US380C East_15' 'AG' 1022.16 5304.67 922 5602.18 2940 1.282 4 58
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'WB Front 1_1' 'AG' 5049.78 1642.96 4703.48 1894.01 1410 1.017 27 34
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'WB Front 1_2' 'AG' 4703.48 1894.01 4082.9 2178.85 1410 1.017 30 46
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'WB Front 1_3' 'AG' 4082.9 2178.85 3609.35 2393.76 1410 1.017 29 46
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'WB Front 1_4' 'AG' 3609.35 2393.76 3250.72 2576.3 1410 1.017 20 58
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'WB Front 1_5' 'AG' 3250.72 2576.3 3027.4 2726.18 1410 1.017 8 58
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'WB Front 2_6' 'AG' 3027.89 2725.83 2904.97 2821.42 1400 1.988 -4 82
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'WB Front 2_7' 'AG' 2904.97 2821.42 2787.41 2924.89 1400 1.988 -9 82
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'WB Front 2_8' 'AG' 2787.41 2924.89 2638.64 3072.18 1400 1.988 -11 82
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'WB Front 2_9' 'AG' 2638.64 3072.18 2578.78 3136.19 1400 1.988 -12 58
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'WB Front 3_10' 'AG' 2578.78 3136.19 2491.17 3236.93 1250 1.049 -12 46
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'WB Front 5_16' 'AG' 1470.55 4618.71 1294.41 4978.17 510 1.017 -18 46
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'NB University_1' 'AG' 1279.87 2767.98 1827.69 2606.43 1280 1.237 -32 46
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'NB University_2' 'AG' 1827.69 2606.43 2103.7 2629.53 1280 1.237 -32 46
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'NB University_3' 'AG' 2103.7 2629.53 2328.1 2776.47 1280 1.237 -30 46
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'NB University_4' 'AG' 2328.1 2776.47 2406.68 2876.37 1280 1.237 -25 46
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'NB FM1827 S_1' 'AG' 2406.68 2876.37 2588.48 3125.81 910 1.741 -19 46
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'NB FM1827 N_1' 'AG' 2588.48 3125.81 2842.85 3475.73 650 1.135 -8 34
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'NB FM1827 N_2' 'AG' 2842.85 3475.73 2895.04 3573.86 650 1.135 3 34
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'NB FM1827 N_3' 'AG' 2895.04 3573.86 2939.79 3758.49 650 1.135 11 34
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'NB FM1827 N_4' 'AG' 2939.79 3758.49 2994.14 4598.5 650 1.135 20 34
1

'SB FM1827 N_1' 'AG' 2983.39 4598.5 2921.28 3732.36 570 2.14 20 46
1
'SB FM1827 N_2' 'AG' 2921.28 3732.36 2857.67 3545.62 570 2.14 10 34
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'SB FM1827 N_3' 'AG' 2857.67 3545.62 2629.53 3218.53 570 2.14 -4 34
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'SB FM1827 N_4' 'AG' 2629.53 3218.53 2572.86 3142.97 570 2.14 -13 46
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'SB University_1' 'AG' 2390.36 2891.31 2339.73 2834.03 1140 1.017 -23 46
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'SB University_2' 'AG' 2339.73 2834.03 2102.69 2672.64 1140 1.017 -28 46
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'SB University_3' 'AG' 2102.69 2672.64 1830.46 2650.76 1140 1.017 -32 46
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'SB University_4' 'AG' 1830.46 2650.76 1292.36 2809.52 1140 1.017 -32 46
2
'SB FM1827 N_4_Q' 'AG' 2629.53 3218.53 2572.86 3142.97 -13 46 3
90 50 2 850 0.532 1600 1 3
2
'SB FM1827 S_1_Q' 'AG' 2572.86 3142.97 2390.36 2891.31 -11 46 3
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2
'NB FM1827 S_1_Q' 'AG' 2406.68 2876.37 2588.48 3125.81 -19 46 3
90 50 2 1290 0.532 1600 1 3
2
'NB University_4_Q' 'AG' 2328.1 2776.47 2406.68 2876.37 -25 46 3
90 50 2 1920 0.532 1600 1 3
2
'WB Front 2_9_Q' 'AG' 2638.64 3072.18 2578.78 3136.19 -12 58 4
90 40 2 2100 0.532 1600 1 3
2
'EB Front 3_9_Q' 'AG' 2182.38 3093.4 2393.53 2888.23 -20 43 3
90 40 2 1770 0.532 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment C - 2050

DATE : 9/15/22

TIME : 14:55:34

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
	1. EB Front 1_1	*	759.9	5461.8	887.1	5108.7	*	375.	160.	AG	1300.	1.0	14.0	43.0
	2. EB Front 1_2	*	887.1	5108.7	995.4	4851.4	*	279.	157.	AG	1300.	1.0	4.0	43.0
	3. EB Front 1_3	*	995.4	4851.4	1152.2	4523.4	*	364.	154.	AG	1300.	1.0	-10.0	43.0
	4. EB Front 1_4	*	1152.2	4523.4	1298.7	4247.2	*	313.	152.	AG	1300.	1.0	-20.0	43.0
	5. EB Front 2_5	*	1297.7	4249.3	1426.0	3981.4	*	297.	154.	AG	1230.	1.0	-18.0	43.0
	6. EB Front 2_6	*	1426.0	3981.4	1635.3	3683.0	*	364.	145.	AG	1230.	1.0	-16.0	43.0
	7. EB Front 2_7	*	1635.3	3683.0	1954.6	3337.0	*	471.	137.	AG	1230.	1.0	-12.0	65.0
	8. EB Front 3_8	*	1954.6	3337.0	2182.4	3093.4	*	334.	137.	AG	1200.	1.9	-14.0	65.0
	9. EB Front 3_9	*	2182.4	3093.4	2393.5	2888.2	*	294.	134.	AG	1200.	1.9	-20.0	43.0
	10. EB Front 4_10	*	2393.5	2888.2	2490.8	2802.0	*	130.	132.	AG	1350.	1.1	-23.0	32.0
	11. EB Front 5_11	*	2490.8	2802.0	2591.3	2713.8	*	134.	131.	AG	1360.	1.1	-22.0	43.0
	12. EB Front 5_12	*	2591.3	2713.8	3011.8	2384.9	*	534.	128.	AG	1360.	1.1	-7.0	43.0
	13. EB Front 5_13	*	3011.8	2384.9	3421.7	2117.5	*	489.	123.	AG	1360.	1.1	9.0	32.0
	14. EB Front 5_14	*	3421.7	2117.5	3946.9	1836.1	*	596.	118.	AG	1360.	1.1	14.0	32.0
	15. EB Front 5_15	*	3946.9	1836.1	4656.4	1556.7	*	762.	111.	AG	1360.	1.1	25.0	32.0
	16. EB Front 5_16	*	4656.4	1556.7	5213.2	1426.0	*	572.	103.	AG	1360.	1.1	29.0	32.0
	17. EB Front 5_17	*	5213.2	1426.0	5572.5	1384.3	*	362.	97.	AG	1360.	1.1	23.0	32.0
	18. EB Front 5_18	*	5572.5	1384.3	5708.5	1371.9	*	137.	95.	AG	1360.	1.1	16.0	32.0
	19. EB US380C West_1	*	851.1	5550.2	980.5	5188.4	*	384.	160.	AG	2140.	1.4	5.0	46.0
	20. EB US380C West_2	*	980.5	5188.4	1111.7	4873.8	*	341.	157.	AG	2140.	1.4	0.0	46.0
	21. EB US380C West_3	*	1111.7	4873.8	1243.6	4604.2	*	300.	154.	AG	2140.	1.4	-7.0	46.0
	22. EB US380C West_4	*	1243.6	4604.2	1385.8	4339.8	*	300.	152.	AG	2140.	1.4	-14.0	46.0
	23. EB US380C West_5	*	1385.8	4339.8	1542.7	4083.8	*	300.	149.	AG	2140.	1.4	-19.0	46.0
	24. EB US380C West_6	*	1542.7	4083.8	1713.5	3836.9	*	300.	145.	AG	2140.	1.4	-17.0	46.0
	25. EB US380C West_7	*	1713.5	3836.9	1862.4	3638.9	*	248.	143.	AG	2140.	1.4	-11.0	46.0
	26. EB US380C East_8	*	1862.4	3638.9	2309.2	3150.1	*	662.	138.	AG	2210.	1.3	-2.0	58.0
	27. EB US380C East_9	*	2309.2	3150.1	2587.8	2887.4	*	383.	133.	BR	2210.	1.3	18.0	58.0
	28. EB US380C East_10	*	2587.8	2887.4	3060.1	2508.6	*	605.	129.	BR	2210.	1.3	28.0	46.0
	29. EB US380C East_11	*	3060.1	2508.6	3562.8	2182.6	*	599.	123.	BR	2210.	1.3	32.0	46.0
	30. EB US380C East_12	*	3562.8	2182.6	4167.9	1877.1	*	678.	117.	AG	2210.	1.3	30.0	46.0
	31. EB US380C East_13	*	4167.9	1877.1	4581.4	1714.4	*	444.	111.	AG	2210.	1.3	26.0	46.0
	32. EB US380C East_14	*	4581.4	1714.4	5043.4	1575.8	*	482.	107.	AG	2210.	1.3	28.0	34.0

33.	EB US380C East_15	*	5043.4	1575.8	5365.8	1483.6	*	335.	106.	AG	2210.	1.3	24.0	34.0
34.	EB US380C East_16	*	5365.8	1483.6	5708.5	1371.9	*	360.	108.	AG	2210.	1.3	19.0	34.0
35.	EB Exist US380_17	*	5708.5	1371.9	5986.3	1283.7	*	292.	108.	AG	3570.	1.1	20.0	58.0
36.	EB Exist US380_18	*	5986.3	1283.7	6245.6	1198.5	*	273.	108.	AG	3570.	1.1	5.0	46.0
37.	EB Exist US380_19	*	6245.6	1198.5	6536.2	1102.2	*	306.	108.	AG	3570.	1.1	-7.0	46.0
38.	EB Exist US380_20	*	6536.2	1102.2	7193.0	889.1	*	691.	108.	AG	3570.	1.1	-28.0	46.0
39.	EB US380C ONR_1	*	1297.7	4249.3	1424.6	4124.6	*	178.	135.	AG	80.	1.0	-22.0	24.0
40.	EB US380C ONR_2	*	1424.6	4124.6	1596.0	3940.3	*	252.	137.	AG	80.	1.0	-17.0	24.0
41.	EB US380C ONR_3	*	1596.0	3940.3	1748.0	3754.5	*	240.	141.	AG	80.	1.0	-14.0	24.0
42.	EB US380C ONR_4	*	1748.0	3754.5	1862.4	3638.9	*	163.	135.	AG	80.	1.0	-12.0	24.0
43.	West U_1	*	1954.6	3337.0	2065.6	3253.1	*	139.	127.	AG	30.	1.5	-14.0	24.0
44.	West U_2	*	2065.6	3253.1	2213.2	3112.7	*	204.	134.	AG	30.	1.5	-15.0	24.0

PAGE 2

JOB: US380 McKinney

RUN: Segment C - 2050

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)		
45.	West U_3	*	2213.2	3112.7	2311.6	3014.9	*	139.	135.	AG	30.	1.5	-16.0	24.0
46.	West U_4	*	2311.6	3014.9	2388.0	3031.4	*	78.	78.	AG	30.	1.5	-17.0	24.0
47.	West U_5	*	2388.0	3031.4	2496.0	3175.3	*	180.	37.	AG	30.	1.5	-17.0	24.0
48.	West U_6	*	2496.0	3175.3	2491.2	3236.9	*	62.	356.	AG	30.	1.5	-11.0	24.0
49.	East U_1	*	3027.9	2725.8	2897.5	2798.5	*	149.	299.	AG	10.	1.6	-17.0	24.0
50.	East U_2	*	2897.5	2798.5	2800.2	2881.3	*	128.	310.	AG	10.	1.6	-17.0	24.0
51.	East U_3	*	2800.2	2881.3	2747.9	2929.8	*	71.	313.	AG	10.	1.6	-17.0	24.0
52.	East U_4	*	2747.9	2929.8	2669.7	3003.4	*	107.	313.	AG	10.	1.6	-17.0	24.0
53.	East U_5	*	2669.7	3003.4	2617.1	3013.8	*	54.	281.	AG	10.	1.6	-17.0	24.0
54.	East U_6	*	2617.1	3013.8	2582.7	2990.9	*	41.	236.	AG	10.	1.6	-17.0	24.0
55.	East U_7	*	2582.7	2990.9	2488.7	2849.3	*	170.	214.	AG	10.	1.6	-17.0	24.0
56.	East U_8	*	2488.7	2849.3	2490.8	2802.0	*	47.	177.	AG	10.	1.6	-17.0	24.0
57.	WB US380C ONR_1	*	1671.7	4249.0	1563.7	4374.3	*	165.	319.	AG	840.	1.0	4.0	24.0
58.	WB US380C ONR_2	*	1563.7	4374.3	1444.0	4534.6	*	200.	323.	AG	840.	1.0	1.0	24.0
59.	WB US380C ONR_3	*	1444.0	4534.6	1333.3	4701.7	*	200.	326.	AG	840.	1.0	-15.0	24.0
60.	WB US380C ONR_4	*	1333.3	4701.7	1233.8	4875.5	*	200.	330.	AG	840.	1.0	-19.0	24.0
61.	WB US380C ONR_5	*	1233.8	4875.5	1145.1	4998.0	*	151.	324.	AG	840.	1.0	-4.0	24.0
62.	WB Exist US80_1	*	7212.8	943.4	6148.5	1287.0	*	1118.	288.	AG	3510.	1.1	-18.0	58.0
63.	WB Exist US80_2	*	6148.5	1287.0	5049.8	1643.0	*	1155.	288.	AG	3510.	1.1	26.0	58.0
64.	WB US380C West_3	*	5049.8	1642.9	4624.9	1781.5	*	447.	288.	AG	2100.	1.3	26.0	46.0
65.	WB US380C West_4	*	4624.9	1781.5	4343.3	1878.6	*	298.	289.	AG	2100.	1.3	24.0	46.0
66.	WB US380C West_5	*	4343.3	1878.6	3798.4	2131.1	*	600.	295.	AG	2100.	1.3	27.0	46.0
67.	WB US380C West_6	*	3798.4	2131.1	3220.9	2479.3	*	674.	301.	BR	2100.	1.3	32.0	46.0
68.	WB US380C West_7	*	3220.9	2479.3	2666.8	2909.6	*	702.	308.	BR	2100.	1.3	28.0	46.0
69.	WB US380C West_8	*	2666.8	2909.6	2511.6	3050.3	*	209.	312.	BR	2100.	1.3	21.0	46.0
70.	WB US380C West_9	*	2511.6	3050.3	2387.7	3167.1	*	170.	313.	BR	2100.	1.3	17.0	46.0
71.	WB US380C West_10	*	2387.7	3167.1	1870.9	3758.8	*	786.	319.	AG	2100.	1.3	4.0	46.0
72.	WB US380C West_11	*	1870.9	3758.8	1577.3	4180.3	*	514.	325.	AG	2100.	1.3	-12.0	46.0
73.	WB US380C West_12	*	1577.3	4180.3	1275.5	4718.1	*	617.	331.	AG	2100.	1.3	-17.0	46.0
74.	WB US380C West_13	*	1275.5	4718.1	1145.1	4998.0	*	309.	335.	AG	2100.	1.3	-8.0	46.0

75. WB US380C East_14 * 1145.0 4998.2 1022.2 5304.7 * 330. 338. AG 2940. 1.3 -2.0 58.0
76. WB US380C East_15 * 1022.2 5304.7 922.0 5602.2 * 314. 341. AG 2940. 1.3 4.0 58.0
77. WB Front 1_1 * 5049.8 1643.0 4703.5 1894.0 * 428. 306. AG 1410. 1.0 27.0 34.0
78. WB Front 1_2 * 4703.5 1894.0 4082.9 2178.9 * 683. 295. AG 1410. 1.0 30.0 46.0
79. WB Front 1_3 * 4082.9 2178.9 3609.4 2393.8 * 520. 294. AG 1410. 1.0 29.0 46.0
80. WB Front 1_4 * 3609.4 2393.8 3250.7 2576.3 * 402. 297. AG 1410. 1.0 20.0 58.0
81. WB Front 1_5 * 3250.7 2576.3 3027.4 2726.2 * 269. 304. AG 1410. 1.0 8.0 58.0
82. WB Front 2_6 * 3027.9 2725.8 2905.0 2821.4 * 156. 308. AG 1400. 2.0 -4.0 82.0
83. WB Front 2_7 * 2905.0 2821.4 2787.4 2924.9 * 157. 311. AG 1400. 2.0 -9.0 82.0
84. WB Front 2_8 * 2787.4 2924.9 2638.6 3072.2 * 209. 315. AG 1400. 2.0 -11.0 82.0
85. WB Front 2_9 * 2638.6 3072.2 2578.8 3136.2 * 88. 317. AG 1400. 2.0 -12.0 58.0
86. WB Front 3_10 * 2578.8 3136.2 2491.2 3236.9 * 134. 319. AG 1250. 1.0 -12.0 46.0
87. WB Front 4_11 * 2491.2 3236.9 2371.7 3375.6 * 183. 319. AG 1270. 1.0 -7.0 46.0
88. WB Front 4_12 * 2371.7 3375.6 2162.1 3617.8 * 320. 319. AG 1270. 1.0 1.0 46.0
89. WB Front 4_13 * 2162.1 3617.8 1929.4 3891.1 * 359. 320. AG 1270. 1.0 -2.0 46.0
90. WB Front 4_14 * 1929.4 3891.1 1671.7 4249.0 * 441. 324. AG 1270. 1.0 -7.0 46.0
91. WB Front 5_15 * 1671.7 4249.0 1470.6 4618.7 * 421. 331. AG 510. 1.0 -13.0 46.0
92. WB Front 5_16 * 1470.6 4618.7 1294.4 4978.2 * 400. 334. AG 510. 1.0 -18.0 46.0
93. WB Front 5_17 * 1294.4 4978.2 1067.0 5573.9 * 638. 339. AG 510. 1.0 -8.0 46.0
94. WB Front 5_18 * 1067.0 5573.9 962.4 5938.3 * 379. 344. AG 510. 1.0 4.0 46.0
95. NB University_1 * 1279.9 2768.0 1827.7 2606.4 * 571. 106. AG 1280. 1.2 -32.0 46.0

PAGE 3

JOB: US380 McKinney

RUN: Segment C - 2050

DATE : 9/15/22

TIME : 14:55:34

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	96. NB University_2	* 1827.7	2606.4	2103.7	2629.5	* 277.	85. AG	1280.	1.2	-32.0	46.0	
	97. NB University_3	* 2103.7	2629.5	2328.1	2776.5	* 268.	57. AG	1280.	1.2	-30.0	46.0	
	98. NB University_4	* 2328.1	2776.5	2406.7	2876.4	* 127.	38. AG	1280.	1.2	-25.0	46.0	
	99. NB FM1827 S_1	* 2406.7	2876.4	2588.5	3125.8	* 309.	36. AG	910.	1.7	-19.0	46.0	
	100. NB FM1827 N_1	* 2588.5	3125.8	2842.9	3475.7	* 433.	36. AG	650.	1.1	-8.0	34.0	
	101. NB FM1827 N_2	* 2842.9	3475.7	2895.0	3573.9	* 111.	28. AG	650.	1.1	3.0	34.0	
	102. NB FM1827 N_3	* 2895.0	3573.9	2939.8	3758.5	* 190.	14. AG	650.	1.1	11.0	34.0	
	103. NB FM1827 N_4	* 2939.8	3758.5	2994.1	4598.5	* 842.	4. AG	650.	1.1	20.0	34.0	
	104. SB FM1827 N_1	* 2983.4	4598.5	2921.3	3732.4	* 868.	184. AG	570.	2.1	20.0	46.0	
	105. SB FM1827 N_2	* 2921.3	3732.4	2857.7	3545.6	* 197.	199. AG	570.	2.1	10.0	34.0	
	106. SB FM1827 N_3	* 2857.7	3545.6	2629.5	3218.5	* 399.	215. AG	570.	2.1	-4.0	34.0	
	107. SB FM1827 N_4	* 2629.5	3218.5	2572.9	3143.0	* 94.	217. AG	570.	2.1	-13.0	46.0	
	108. SB FM1827 S_1	* 2572.9	3143.0	2390.4	2891.3	* 311.	216. AG	900.	1.4	-11.0	46.0	
	109. SB University_1	* 2390.4	2891.3	2339.7	2834.0	* 76.	221. AG	1140.	1.0	-23.0	46.0	
	110. SB University_2	* 2339.7	2834.0	2102.7	2672.6	* 287.	236. AG	1140.	1.0	-28.0	46.0	
	111. SB University_3	* 2102.7	2672.6	1830.5	2650.8	* 273.	265. AG	1140.	1.0	-32.0	46.0	
	112. SB University_4	* 1830.5	2650.8	1292.4	2809.5	* 561.	286. AG	1140.	1.0	-32.0	46.0	
3.9	113. SB FM1827 N_4_Q	* 2629.5	3218.5	2583.1	3156.6	* 77.	217. AG	2.	100.0	-13.0	46.0	0.44
6.2	114. SB FM1827 S_1_Q	* 2572.9	3143.0	2501.3	3044.3	* 122.	216. AG	2.	100.0	-11.0	46.0	0.70

115. NB FM1827 S_1_Q * 2406.7 2876.4 2475.9 2971.4 * 118. 36. AG 2. 100.0 -19.0 46.0 0.67
 6.0
 116. NB University_4_Q * 2328.1 2776.5 2512.6 3011.0 * 298. 38. AG 2. 100.0 -25.0 46.0 1.00
 15.2
 117. WB Front 2_9_Q * 2638.6 3072.2 2560.2 3156.1 * 115. 317. AG 3. 100.0 -12.0 58.0 0.64 5.8
 118. EB Front 3_9_Q * 2182.4 3093.4 2274.9 3003.5 * 129. 134. AG 2. 100.0 -20.0 43.0 0.72 6.6

PAGE 4

JOB: US380 McKinney

RUN: Segment C - 2050

DATE : 9/15/22

TIME : 14:55:34

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
 ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

LINK DESCRIPTION	CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
113. SB FM1827 N_4_Q	90	50	2.0	850	1600	0.53	1 3
114. SB FM1827 S_1_Q	90	50	2.0	1340	1600	0.53	1 3
115. NB FM1827 S_1_Q	90	50	2.0	1290	1600	0.53	1 3
116. NB University_4_Q	90	50	2.0	1920	1600	0.53	1 3
117. WB Front 2_9_Q	90	40	2.0	2100	1600	0.53	1 3
118. EB Front 3_9_Q	90	40	2.0	1770	1600	0.53	1 3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. C1	2494.1	2711.1	-32.0
2. C2	2795.4	3031.2	-28.0
3. C3	5843.4	1511.0	20.0
4. C4	5673.6	1297.8	11.0
5. C5	5743.7	1502.1	20.0
6. C6	5932.2	1133.9	1.0

PAGE 5

JOB: US380 McKinney

RUN: Segment C - 2050

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6

-----*

0.	*	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.1	0.0	0.0
60.	*	0.0	0.0	0.0	0.1	0.0	0.0
70.	*	0.0	0.0	0.0	0.1	0.0	0.1
80.	*	0.0	0.0	0.0	0.2	0.0	0.0
90.	*	0.0	0.0	0.0	0.1	0.0	0.0
100.	*	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.0	0.0	0.0	0.0	0.1	0.0
120.	*	0.0	0.0	0.1	0.0	0.1	0.0
130.	*	0.0	0.0	0.0	0.0	0.1	0.0
140.	*	0.0	0.0	0.1	0.0	0.1	0.0
150.	*	0.0	0.0	0.0	0.0	0.1	0.0
160.	*	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	0.0	0.0	0.0	0.0	0.1	0.0
260.	*	0.0	0.0	0.1	0.0	0.1	0.0
270.	*	0.0	0.0	0.1	0.0	0.1	0.0
280.	*	0.0	0.0	0.0	0.0	0.1	0.0
290.	*	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.2	0.0	0.1
320.	*	0.0	0.0	0.0	0.1	0.0	0.0
330.	*	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0	0.0	0.0

-----*-----
MAX * 0.0 0.0 0.1 0.2 0.1 0.1
DEGR. * 0 0 120 80 110 70

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC4 .

PAGE 6

JOB: US380 McKinney

RUN: Segment C - 2050

DATE : 9/15/22

TIME : 14:55:34

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

- * CO/LINK (PPM)
- * ANGLE (DEGREES)

* REC1 REC2 REC3 REC4 REC5 REC6
LINK #* 0 0 120 80 110 70

1 * 0.0 0.0 0.0 0.0 0.0 0.0
2 * 0.0 0.0 0.0 0.0 0.0 0.0
3 * 0.0 0.0 0.0 0.0 0.0 0.0
4 * 0.0 0.0 0.0 0.0 0.0 0.0
5 * 0.0 0.0 0.0 0.0 0.0 0.0
6 * 0.0 0.0 0.0 0.0 0.0 0.0
7 * 0.0 0.0 0.0 0.0 0.0 0.0
8 * 0.0 0.0 0.0 0.0 0.0 0.0
9 * 0.0 0.0 0.0 0.0 0.0 0.0
10 * 0.0 0.0 0.0 0.0 0.0 0.0
11 * 0.0 0.0 0.0 0.0 0.0 0.0
12 * 0.0 0.0 0.0 0.0 0.0 0.0
13 * 0.0 0.0 0.0 0.0 0.0 0.0
14 * 0.0 0.0 0.0 0.0 0.0 0.0
15 * 0.0 0.0 0.0 0.0 0.0 0.0
16 * 0.0 0.0 0.0 0.0 0.0 0.0
17 * 0.0 0.0 0.0 0.0 0.0 0.0
18 * 0.0 0.0 0.0 0.0 0.0 0.0
19 * 0.0 0.0 0.0 0.0 0.0 0.0
20 * 0.0 0.0 0.0 0.0 0.0 0.0
21 * 0.0 0.0 0.0 0.0 0.0 0.0
22 * 0.0 0.0 0.0 0.0 0.0 0.0
23 * 0.0 0.0 0.0 0.0 0.0 0.0
24 * 0.0 0.0 0.0 0.0 0.0 0.0
25 * 0.0 0.0 0.0 0.0 0.0 0.0
26 * 0.0 0.0 0.0 0.0 0.0 0.0
27 * 0.0 0.0 0.0 0.0 0.0 0.0
28 * 0.0 0.0 0.0 0.0 0.0 0.0
29 * 0.0 0.0 0.0 0.0 0.0 0.0
30 * 0.0 0.0 0.0 0.0 0.0 0.0
31 * 0.0 0.0 0.0 0.0 0.0 0.0
32 * 0.0 0.0 0.0 0.0 0.0 0.0
33 * 0.0 0.0 0.0 0.0 0.0 0.0
34 * 0.0 0.0 0.0 0.0 0.0 0.0
35 * 0.0 0.0 0.0 0.1 0.0 0.0
36 * 0.0 0.0 0.0 0.0 0.0 0.1
37 * 0.0 0.0 0.0 0.0 0.0 0.0
38 * 0.0 0.0 0.0 0.0 0.0 0.0
39 * 0.0 0.0 0.0 0.0 0.0 0.0
40 * 0.0 0.0 0.0 0.0 0.0 0.0
41 * 0.0 0.0 0.0 0.0 0.0 0.0
42 * 0.0 0.0 0.0 0.0 0.0 0.0
43 * 0.0 0.0 0.0 0.0 0.0 0.0
44 * 0.0 0.0 0.0 0.0 0.0 0.0
45 * 0.0 0.0 0.0 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment C - 2050

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4 REC5 REC6

LINK#* 0 0 120 80 110 70

*-----
46 * 0.0 0.0 0.0 0.0 0.0 0.0
47 * 0.0 0.0 0.0 0.0 0.0 0.0
48 * 0.0 0.0 0.0 0.0 0.0 0.0
49 * 0.0 0.0 0.0 0.0 0.0 0.0
50 * 0.0 0.0 0.0 0.0 0.0 0.0
51 * 0.0 0.0 0.0 0.0 0.0 0.0
52 * 0.0 0.0 0.0 0.0 0.0 0.0
53 * 0.0 0.0 0.0 0.0 0.0 0.0
54 * 0.0 0.0 0.0 0.0 0.0 0.0
55 * 0.0 0.0 0.0 0.0 0.0 0.0
56 * 0.0 0.0 0.0 0.0 0.0 0.0
57 * 0.0 0.0 0.0 0.0 0.0 0.0
58 * 0.0 0.0 0.0 0.0 0.0 0.0
59 * 0.0 0.0 0.0 0.0 0.0 0.0
60 * 0.0 0.0 0.0 0.0 0.0 0.0
61 * 0.0 0.0 0.0 0.0 0.0 0.0
62 * 0.0 0.0 0.1 0.0 0.1 0.0
63 * 0.0 0.0 0.0 0.1 0.0 0.0
64 * 0.0 0.0 0.0 0.0 0.0 0.0
65 * 0.0 0.0 0.0 0.0 0.0 0.0
66 * 0.0 0.0 0.0 0.0 0.0 0.0
67 * 0.0 0.0 0.0 0.0 0.0 0.0
68 * 0.0 0.0 0.0 0.0 0.0 0.0
69 * 0.0 0.0 0.0 0.0 0.0 0.0
70 * 0.0 0.0 0.0 0.0 0.0 0.0
71 * 0.0 0.0 0.0 0.0 0.0 0.0
72 * 0.0 0.0 0.0 0.0 0.0 0.0
73 * 0.0 0.0 0.0 0.0 0.0 0.0
74 * 0.0 0.0 0.0 0.0 0.0 0.0
75 * 0.0 0.0 0.0 0.0 0.0 0.0
76 * 0.0 0.0 0.0 0.0 0.0 0.0
77 * 0.0 0.0 0.0 0.0 0.0 0.0
78 * 0.0 0.0 0.0 0.0 0.0 0.0
79 * 0.0 0.0 0.0 0.0 0.0 0.0
80 * 0.0 0.0 0.0 0.0 0.0 0.0
81 * 0.0 0.0 0.0 0.0 0.0 0.0
82 * 0.0 0.0 0.0 0.0 0.0 0.0
83 * 0.0 0.0 0.0 0.0 0.0 0.0
84 * 0.0 0.0 0.0 0.0 0.0 0.0
85 * 0.0 0.0 0.0 0.0 0.0 0.0
86 * 0.0 0.0 0.0 0.0 0.0 0.0
87 * 0.0 0.0 0.0 0.0 0.0 0.0
88 * 0.0 0.0 0.0 0.0 0.0 0.0
89 * 0.0 0.0 0.0 0.0 0.0 0.0
90 * 0.0 0.0 0.0 0.0 0.0 0.0
91 * 0.0 0.0 0.0 0.0 0.0 0.0
92 * 0.0 0.0 0.0 0.0 0.0 0.0
93 * 0.0 0.0 0.0 0.0 0.0 0.0
94 * 0.0 0.0 0.0 0.0 0.0 0.0
95 * 0.0 0.0 0.0 0.0 0.0 0.0
96 * 0.0 0.0 0.0 0.0 0.0 0.0
97 * 0.0 0.0 0.0 0.0 0.0 0.0

98 * 0.0 0.0 0.0 0.0 0.0 0.0

JOB: US380 McKinney

RUN: Segment C - 2050

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4 REC5 REC6

LINK # * 0 0 120 80 110 70

99	*	0.0	0.0	0.0	0.0	0.0	0.0
100	*	0.0	0.0	0.0	0.0	0.0	0.0
101	*	0.0	0.0	0.0	0.0	0.0	0.0
102	*	0.0	0.0	0.0	0.0	0.0	0.0
103	*	0.0	0.0	0.0	0.0	0.0	0.0
104	*	0.0	0.0	0.0	0.0	0.0	0.0
105	*	0.0	0.0	0.0	0.0	0.0	0.0
106	*	0.0	0.0	0.0	0.0	0.0	0.0
107	*	0.0	0.0	0.0	0.0	0.0	0.0
108	*	0.0	0.0	0.0	0.0	0.0	0.0
109	*	0.0	0.0	0.0	0.0	0.0	0.0
110	*	0.0	0.0	0.0	0.0	0.0	0.0
111	*	0.0	0.0	0.0	0.0	0.0	0.0
112	*	0.0	0.0	0.0	0.0	0.0	0.0
113	*	0.0	0.0	0.0	0.0	0.0	0.0
114	*	0.0	0.0	0.0	0.0	0.0	0.0
115	*	0.0	0.0	0.0	0.0	0.0	0.0
116	*	0.0	0.0	0.0	0.0	0.0	0.0
117	*	0.0	0.0	0.0	0.0	0.0	0.0
118	*	0.0	0.0	0.0	0.0	0.0	0.0

'US380 McKinney' 60 0.75 0 0 4 0.3048 1 1
'D1' 7374.8 2342.54 -29
'D2' 6826.42 2496.77 -32
'D3' 6904.47 3271.95 -19
'D4' 6997.79 2946.62 -23
'Segment D - 2030' 113 1 1 'C'
1
'EB US380D Front1_1' 'FL' 727.47 5935.16 907.16 5240.74 80 1.007 -22 32
1
'EB US380D Front1_2' 'BR' 907.16 5240.74 1110.41 4899.73 80 1.007 -4 32
1
'EB US380D Front1_3' 'BR' 1110.41 4899.73 1532.95 4417.87 80 1.007 3 32
1
'EB US380D Front1_4' 'BR' 1532.95 4417.87 2052.87 4101.82 80 1.007 -7 32
1
'EB US380D Front1_5' 'AG' 2052.87 4101.82 2817.58 3857.79 80 1.007 -22 32
1
'EB US380D Front1_6' 'AG' 2817.58 3857.79 2993.28 3779.44 80 1.007 -26 32
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'EB US380D Front2_7' 'AG' 2993.28 3779.44 3856.56 3521.63 1260 1.056 -30 54
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'EB US380D Front2_8' 'AG' 3856.56 3521.63 5061 3157.05 1260 1.056 -30 43
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'EB US380D Front2_9' 'BR' 5061 3157.05 5262.79 3097.16 1260 1.056 -27 43
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'EB US380D Front3_10' 'BR' 5262.81 3097.15 5850.07 2921.36 1640 1.056 -28 54
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'EB US380D Front6_15' 'AG' 7432.32 2435.99 7793.23 2320.03 1140 1.027 -16 32
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'EB US380D Front6_16' 'AG' 7793.23 2320.03 8648.7 2042.69 1140 1.027 3 32
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'EB US380D Front6_17' 'AG' 8648.7 2042.69 9603.12 1731.49 1140 1.027 18 32
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'EB US380D Front6_20' 'AG' 9979.43 1607.79 10064.06 1571.33 1140 1.027 23 21
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'EB US380D West_1' 'BR' 2679.41 4001.9 3185.13 3819.09 2810 1.282 -6 46
1
'EB US380D West_2' 'BR' 3185.13 3819.09 3854.95 3619.05 2810 1.282 -21 46
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'EB US380D East_3' 'BR' 3854.95 3619.05 4726.89 3353.78 2430 1.177 -24 46
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'EB US380D East_4' 'BR' 4726.89 3353.78 5739.92 3049.96 2430 1.177 -22 46
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'EB US380D East_5' 'BR' 5739.92 3049.96 6637.48 2779.13 2430 1.177 -20 46
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'EB US380D East_6' 'BR' 6637.48 2779.13 7331.34 2568.97 2430 1.177 -6 46
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'EB US380D East_10' 'AG' 8684.06 2142.07 9240.11 1958.63 2430 1.177 28 46
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'EB US380D East_11' 'AG' 9240.11 1958.63 9753.48 1729.27 2430 1.177 28 46
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'EB US380D East_13' 'AG' 10008.8 1607.53 10145.88 1540.34 2430 1.177 28 34
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'EB US380 Exist_14' 'AG' 10145.88 1540.34 11122.52 1226.1 3570 1.141 16 34
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'EB US380 Exist_15' 'AG' 11122.52 1226.1 12189.59 879.7 3570 1.141 -19 34
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'WB US380 Exist_1' 'AG' 12216.78 954.16 11154.4 1301.23 3510 1.038 -18 34
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'WB US380 Exist_2' 'AG' 11154.4 1301.23 10171.11 1620.13 3510 1.038 17 34
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'WB US380D East_5' 'AG' 9673.9 1858.79 9152.83 2084.78 2090 0.96 26 34
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'WB US380D East_7' 'AG' 8542.22 2282.76 7951.16 2474.46 2090 0.96 16 46
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'WB US380D East_8' 'FL' 7951.16 2474.46 7545.01 2597.21 2090 0.96 13 46
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'WB US380D East_9' 'BR' 7545.01 2597.21 7357.94 2656.94 2090 0.96 8 46
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'WB US380D East_14' 'BR' 5123.91 3331.45 4694.02 3459.24 2090 0.96 -21 46
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'WB US380D West_15' 'BR' 4694.08 3459.22 3906.57 3697.42 2610 0.964 -24 46
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'WB US380D Front1_1' 'AG' 10171.11 1620.13 10059.37 1665.84 1420 1.027 24 21
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'WB US380D Front1_2' 'AG' 10059.37 1665.84 9750.36 1877.58 1420 1.027 26 32
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'WB US380D Front1_3' 'AG' 9750.36 1877.58 9551.78 2017.9 1420 1.027 28 32
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'WB US380D Front1_6' 'AG' 8444.33 2423.62 7880.8 2604.89 1420 1.027 2 32
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'WB US380D Front2_7' 'AG' 7880.8 2604.89 7793.4 2633.01 1410 1.698 -7 32
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'WB US380D Front2_8' 'AG' 7793.4 2633.01 7387.39 2754.82 1410 1.698 -17 65
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'WB US380D Front3_9' 'AG' 7387.36 2754.82 7250.12 2796.33 1910 1.006 -26 43
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'WB US380D Front4_10' 'AG' 7250.12 2796.33 6139.84 3132.11 1920 1.006 -31 43
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'WB US380D Front5_11' 'AG' 6139.84 3132.11 5783.07 3243.42 1400 1.056 -27 43
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'WB US380D Front5_12' 'BR' 5783.07 3243.42 4867.27 3519.03 1400 1.056 -23 43
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'WB US380D Front5_13' 'BR' 4867.27 3519.03 3935.95 3798.05 1400 1.056 -22 43
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'WB US380D Front6_20' 'AG' 1614.29 5062.11 1353.62 5429.12 270 1.065 -29 32
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'WB US380D Front6_' 'AG' 1171.11 5820.06 1075.24 6249.14 270 1.065 -26 32
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'EB US380D OFR_1' 'BR' 3854.95 3619.05 4117.45 3503.62 380 1.047 -25 21
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'EB US380D OFR_2' 'BR' 4117.45 3503.62 4506.77 3374.72 380 1.047 -25 21
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'EB US380D OFR_3' 'BR' 4506.77 3374.72 4791.93 3283.57 380 1.047 -24 21
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'EB US380D OFR_4' 'BR' 4791.93 3283.57 5011.98 3204.14 380 1.047 -26 21
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'EB US380D OFR_5' 'BR' 5011.98 3204.14 5262.79 3097.16 380 1.047 -27 21
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'West U_6' 'AG' 6810.01 2630.82 7176.04 2543.99 10 1.522 -27 21
1
'West U_7' 'BR' 7176.04 2543.99 7245.05 2577.84 10 1.522 -24 21
1
'West U_8' 'BR' 7245.05 2577.84 7282.81 2718.47 10 1.522 -26 21
1
'West U_9' 'BR' 7282.81 2718.47 7250.12 2796.33 10 1.522 -28 21
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'East U_10' 'BR' 7880.8 2604.89 7509.37 2696.33 10 1.626 -19 21
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'East U_11' 'AG' 7509.37 2696.33 7453.38 2666.38 10 1.626 -22 21
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'East U_12' 'AG' 7453.38 2666.38 7429.95 2589.56 10 1.626 -24 21
1
'East U_13' 'AG' 7429.95 2589.56 7402.6 2498.42 10 1.626 -24 21
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'East U_14' 'AG' 7402.6 2498.42 7432.32 2435.99 10 1.626 -21 21
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'WB US380D ONR_15' 'AG' 6139.84 3132.11 5829.49 3178.29 520 0.963 -28 21
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'WB US380D ONR_16' 'AG' 5829.49 3178.29 5250.32 3338.71 520 0.963 -13 21
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'WB US380D ONR_17' 'BR' 5250.32 3338.71 4958.66 3410.24 520 0.963 -12 21
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'WB US380D ONR_18' 'BR' 4958.66 3410.24 4694.08 3459.22 520 0.963 -21 21
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'SB FM1827 S_1' 'AG' 7365.5 2761.44 7287.22 2485.34 110 2.901 -24 32
1
'SB FM1827 N_2' 'AG' 7546.18 3129.94 7500.51 3059.49 650 1.237 -14 32
1
'SB FM1827 N_3' 'AG' 7500.51 3059.49 7417.64 2902.94 650 1.237 -18 32
1
'SB FM1827 N_4' 'AG' 7417.64 2902.94 7365.5 2761.44 650 1.237 -25 32
1
'SB FM1827 N_5' 'AG' 7546.25 3130.44 7725.02 3368.73 650 1.237 -9 32
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'SB FM1827 N_6' 'AG' 7725.02 3368.73 7896.33 3634.79 650 1.237 3 32
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'SB FM1827 N_7' 'AG' 7896.33 3634.79 7922.34 3733.34 650 1.237 14 32
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'SB FM1827 N_8' 'AG' 7922.34 3733.34 7983.27 4606.83 650 1.237 20 32
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'NB FM1827 S_9' 'AG' 7578.28 3106.67 7903.07 3595.26 640 1.049 13 32
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'NB FM1827 S_10' 'AG' 7903.07 3595.26 7940.53 3769.37 640 1.049 21 32
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'NB FM1827 S_11' 'AG' 7940.53 3769.37 7994.16 4600.63 640 1.049 -27 32
1

'NB FM1827 S_12' 'AG' 7407.06 2748.91 7441.67 2853.88 640 1.049 -22 32
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'NB FM1827 S_13' 'AG' 7441.67 2853.88 7504.17 2988 640 1.049 -17 32
1
'NB FM1827 S_14' 'AG' 7504.17 2988 7578.38 3106.49 640 1.049 -15 32
1
'NB FM1827 N_15' 'AG' 7321.06 2474.27 7407.06 2748.91 570 1.934 -24 32
2
'SB FM1827 S_1_Q' 'AG' 7365.5 2761.44 7287.22 2485.34 -24 32 2
90 50 2 1600 1.435 1600 1 3
2
'NB FM1827 N_15_Q' 'AG' 7321.06 2474.27 7407.06 2748.91 -24 32 2
90 50 2 1600 1.435 1600 1 3
2
'EB US380D Front4_13Q' 'AG' 7166.54 2522.91 7304.61 2479.92 -27 54 4
90 40 2 1600 1.435 1600 1 3
2
'WB US380D Front2_8Q' 'AG' 7793.4 2633.01 7387.39 2754.82 -17 65 5
90 40 2 1600 1.435 1600 1 3
2
'SB FM1827 N_4_Q' 'AG' 7417.64 2902.94 7365.5 2761.44 -25 32 2
90 50 2 1600 1.435 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment D - 2030

DATE : 9/15/22

TIME : 14:55:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

 LINK DESCRIPTION * LINK COORDINATES (FT) * LENGTH BRG TYPE VPH EF H
 W V/C QUEUE * X1 Y1 X2 Y2 * (FT) (DEG) (G/MI) (FT) (FT) (VEH)
 -----*-----
 1. EB US380D Front1_1 * 727.5 5935.2 907.2 5240.7 * 717. 165. FL 80. 1.0 -22.0 32.0
 2. EB US380D Front1_2 * 907.2 5240.7 1110.4 4899.7 * 397. 149. BR 80. 1.0 -4.0 32.0
 3. EB US380D Front1_3 * 1110.4 4899.7 1533.0 4417.9 * 641. 139. BR 80. 1.0 3.0 32.0
 4. EB US380D Front1_4 * 1533.0 4417.9 2052.9 4101.8 * 608. 121. BR 80. 1.0 -7.0 32.0
 5. EB US380D Front1_5 * 2052.9 4101.8 2817.6 3857.8 * 803. 108. AG 80. 1.0 -22.0 32.0
 6. EB US380D Front1_6 * 2817.6 3857.8 2993.3 3779.4 * 192. 114. AG 80. 1.0 -26.0 32.0
 7. EB US380D Front2_7 * 2993.3 3779.4 3856.6 3521.6 * 901. 107. AG 1260. 1.1 -30.0 54.0
 8. EB US380D Front2_8 * 3856.6 3521.6 5061.0 3157.1 * 1258. 107. AG 1260. 1.1 -30.0 43.0
 9. EB US380D Front2_9 * 5061.0 3157.1 5262.8 3097.2 * 210. 107. BR 1260. 1.1 -27.0 43.0
 10. EB US380D Front3_10 * 5262.8 3097.1 5850.1 2921.4 * 613. 107. BR 1640. 1.1 -28.0 54.0
 11. EB US380D Front3_11 * 5850.1 2921.4 6810.0 2630.8 * 1003. 107. AG 1640. 1.1 -30.0 54.0
 12. EB US380D Front4_12 * 6810.0 2630.8 7166.5 2522.9 * 373. 107. AG 1630. 1.2 -32.0 65.0
 13. EB US380D Front4_13 * 7166.5 2522.9 7304.6 2479.9 * 145. 107. AG 1630. 1.2 -27.0 54.0
 14. EB US380D Front5_14 * 7304.6 2479.9 7432.3 2436.0 * 135. 109. AG 1130. 1.0 -24.0 32.0
 15. EB US380D Front6_15 * 7432.3 2436.0 7793.2 2320.0 * 379. 108. AG 1140. 1.0 -16.0 32.0
 16. EB US380D Front6_16 * 7793.2 2320.0 8648.7 2042.7 * 899. 108. AG 1140. 1.0 3.0 32.0
 17. EB US380D Front6_17 * 8648.7 2042.7 9603.1 1731.5 * 1004. 108. AG 1140. 1.0 18.0 32.0
 18. EB US380D Front6_18 * 9603.1 1731.5 9920.8 1627.3 * 334. 108. AG 1140. 1.0 28.0 32.0
 19. EB US380D Front6_19 * 9920.8 1627.3 9979.4 1607.8 * 62. 108. AG 1140. 1.0 25.0 32.0
 20. EB US380D Front6_20 * 9979.4 1607.8 10064.1 1571.3 * 92. 113. AG 1140. 1.0 23.0 21.0
 21. EB US380D Front6_21 * 10064.1 1571.3 10145.9 1540.3 * 87. 111. AG 1140. 1.0 15.0 21.0
 22. EB US380D West_1 * 2679.4 4001.9 3185.1 3819.1 * 538. 110. BR 2810. 1.3 -6.0 46.0
 23. EB US380D West_2 * 3185.1 3819.1 3855.0 3619.0 * 699. 107. BR 2810. 1.3 -21.0 46.0
 24. EB US380D East_3 * 3855.0 3619.0 4726.9 3353.8 * 911. 107. BR 2430. 1.2 -24.0 46.0
 25. EB US380D East_4 * 4726.9 3353.8 5739.9 3050.0 * 1058. 107. BR 2430. 1.2 -22.0 46.0
 26. EB US380D East_5 * 5739.9 3050.0 6637.5 2779.1 * 938. 107. BR 2430. 1.2 -20.0 46.0
 27. EB US380D East_6 * 6637.5 2779.1 7331.3 2569.0 * 725. 107. BR 2430. 1.2 -6.0 46.0
 28. EB US380D East_7 * 7331.3 2569.0 7516.7 2506.4 * 196. 109. BR 2430. 1.2 6.0 46.0
 29. EB US380D East_8 * 7516.7 2506.4 7805.8 2425.9 * 300. 106. FL 2430. 1.2 12.0 46.0
 30. EB US380D East_9 * 7805.8 2425.9 8684.1 2142.1 * 923. 108. AG 2430. 1.2 18.0 46.0
 31. EB US380D East_10 * 8684.1 2142.1 9240.1 1958.6 * 586. 108. AG 2430. 1.2 28.0 46.0
 32. EB US380D East_11 * 9240.1 1958.6 9753.5 1729.3 * 562. 114. AG 2430. 1.2 28.0 46.0

33.	EB	US380D	East_12	*	9753.5	1729.3	10008.8	1607.5	*	283.	115.	AG	2430.	1.2	28.0	46.0
34.	EB	US380D	East_13	*	10008.8	1607.5	10145.9	1540.3	*	153.	116.	AG	2430.	1.2	28.0	34.0
35.	EB	US380	Exist_14	*	10145.9	1540.3	11122.5	1226.1	*	1026.	108.	AG	3570.	1.1	16.0	34.0
36.	EB	US380	Exist_15	*	11122.5	1226.1	12189.6	879.7	*	1122.	108.	AG	3570.	1.1	-19.0	34.0
37.	WB	US380	Exist_1	*	12216.8	954.2	11154.4	1301.2	*	1118.	288.	AG	3510.	1.0	-18.0	34.0
38.	WB	US380	Exist_2	*	11154.4	1301.2	10171.1	1620.1	*	1034.	288.	AG	3510.	1.0	17.0	34.0
39.	WB	US380D	East_3	*	10171.1	1620.1	9966.3	1686.6	*	215.	288.	AG	2090.	1.0	28.0	34.0
40.	WB	US380D	East_4	*	9966.3	1686.6	9673.9	1858.8	*	339.	300.	AG	2090.	1.0	29.0	34.0
41.	WB	US380D	East_5	*	9673.9	1858.8	9152.8	2084.8	*	568.	293.	AG	2090.	1.0	26.0	34.0
42.	WB	US380D	East_6	*	9152.8	2084.8	8542.2	2282.8	*	642.	288.	AG	2090.	1.0	18.0	46.0
43.	WB	US380D	East_7	*	8542.2	2282.8	7951.2	2474.5	*	621.	288.	AG	2090.	1.0	16.0	46.0
44.	WB	US380D	East_8	*	7951.2	2474.5	7545.0	2597.2	*	424.	287.	FL	2090.	1.0	13.0	46.0

PAGE 2

JOB: US380 McKinney

RUN: Segment D - 2030

DATE : 9/15/22

TIME : 14:55:35

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H			
			V/C	QUEUE	X1	Y1								X2	Y2	(FT)
45.	WB	US380D	East_9	*	7545.0	2597.2	7357.9	2656.9	*	196.	288.	BR	2090.	1.0	8.0	46.0
46.	WB	US380D	East_10	*	7357.9	2656.9	7156.2	2716.8	*	210.	287.	BR	2090.	1.0	2.0	46.0
47.	WB	US380D	East_11	*	7156.2	2716.8	6691.3	2857.8	*	486.	287.	BR	2090.	1.0	-6.0	46.0
48.	WB	US380D	East_12	*	6691.3	2857.8	5936.4	3086.3	*	789.	287.	BR	2090.	1.0	-18.0	46.0
49.	WB	US380D	East_13	*	5936.4	3086.3	5123.9	3331.5	*	849.	287.	BR	2090.	1.0	-25.0	46.0
50.	WB	US380D	East_14	*	5123.9	3331.5	4694.0	3459.2	*	448.	287.	BR	2090.	1.0	-21.0	46.0
51.	WB	US380D	West_15	*	4694.1	3459.2	3906.6	3697.4	*	823.	287.	BR	2610.	1.0	-24.0	46.0
52.	WB	US380D	West_16	*	3906.6	3697.4	3105.9	3938.4	*	836.	287.	BR	2610.	1.0	-18.0	46.0
53.	WB	US380D	West_17	*	3105.9	3938.4	2516.4	4183.3	*	638.	293.	BR	2610.	1.0	-6.0	46.0
54.	WB	US380D	Front1_1	*	10171.1	1620.1	10059.4	1665.8	*	121.	292.	AG	1420.	1.0	24.0	21.0
55.	WB	US380D	Front1_2	*	10059.4	1665.8	9750.4	1877.6	*	375.	304.	AG	1420.	1.0	26.0	32.0
56.	WB	US380D	Front1_3	*	9750.4	1877.6	9551.8	2017.9	*	243.	305.	AG	1420.	1.0	28.0	32.0
57.	WB	US380D	Front1_4	*	9551.8	2017.9	9229.6	2172.0	*	357.	296.	AG	1420.	1.0	32.0	32.0
58.	WB	US380D	Front1_5	*	9229.6	2172.0	8444.3	2423.6	*	825.	288.	AG	1420.	1.0	21.0	32.0
59.	WB	US380D	Front1_6	*	8444.3	2423.6	7880.8	2604.9	*	592.	288.	AG	1420.	1.0	2.0	32.0
60.	WB	US380D	Front2_7	*	7880.8	2604.9	7793.4	2633.0	*	92.	288.	AG	1410.	1.7	-7.0	32.0
61.	WB	US380D	Front2_8	*	7793.4	2633.0	7387.4	2754.8	*	424.	287.	AG	1410.	1.7	-17.0	65.0
62.	WB	US380D	Front3_9	*	7387.4	2754.8	7250.1	2796.3	*	143.	287.	AG	1910.	1.0	-26.0	43.0
63.	WB	US380D	Front4_10	*	7250.1	2796.3	6139.8	3132.1	*	1160.	287.	AG	1920.	1.0	-31.0	43.0
64.	WB	US380D	Front5_11	*	6139.8	3132.1	5783.1	3243.4	*	374.	287.	AG	1400.	1.1	-27.0	43.0
65.	WB	US380D	Front5_12	*	5783.1	3243.4	4867.3	3519.0	*	956.	287.	BR	1400.	1.1	-23.0	43.0
66.	WB	US380D	Front5_13	*	4867.3	3519.0	3936.0	3798.0	*	972.	287.	BR	1400.	1.1	-22.0	43.0
67.	WB	US380D	Front5_14	*	3936.0	3798.0	3147.4	4037.7	*	824.	287.	BR	1400.	1.1	-27.0	54.0
68.	WB	US380D	Front5_15	*	3147.4	4037.7	2945.6	4102.8	*	212.	288.	BR	1400.	1.1	-26.0	54.0
69.	WB	US380D	Front5_16	*	2945.6	4102.8	2601.6	4247.1	*	373.	293.	BR	1400.	1.1	-26.0	54.0
70.	WB	US380D	Front6_17	*	2601.6	4247.1	2273.3	4466.7	*	395.	304.	BR	270.	1.1	-23.0	32.0
71.	WB	US380D	Front6_18	*	2273.3	4466.7	1930.8	4733.9	*	434.	308.	BR	270.	1.1	-23.0	32.0
72.	WB	US380D	Front6_19	*	1930.8	4733.9	1614.3	5062.1	*	456.	316.	AG	270.	1.1	-25.0	32.0
73.	WB	US380D	Front6_20	*	1614.3	5062.1	1353.6	5429.1	*	450.	325.	AG	270.	1.1	-29.0	32.0
74.	WB	US380D	Front6_21	*	1353.6	5429.1	1171.1	5820.1	*	431.	335.	AG	270.	1.1	-29.0	32.0

75. WB US380D Front6 * 1171.1 5820.1 1075.2 6249.1 * 440. 347. AG 270. 1.1 -26.0 32.0
76. EB US380D OFR_1 * 3855.0 3619.0 4117.5 3503.6 * 287. 114. BR 380. 1.0 -25.0 21.0
77. EB US380D OFR_2 * 4117.5 3503.6 4506.8 3374.7 * 410. 108. BR 380. 1.0 -25.0 21.0
78. EB US380D OFR_3 * 4506.8 3374.7 4791.9 3283.6 * 299. 108. BR 380. 1.0 -24.0 21.0
79. EB US380D OFR_4 * 4791.9 3283.6 5012.0 3204.1 * 234. 110. BR 380. 1.0 -26.0 21.0
80. EB US380D OFR_5 * 5012.0 3204.1 5262.8 3097.2 * 273. 113. BR 380. 1.0 -27.0 21.0
81. West U_6 * 6810.0 2630.8 7176.0 2544.0 * 376. 103. AG 10. 1.5 -27.0 21.0
82. West U_7 * 7176.0 2544.0 7245.1 2577.8 * 77. 64. BR 10. 1.5 -24.0 21.0
83. West U_8 * 7245.1 2577.8 7282.8 2718.5 * 146. 15. BR 10. 1.5 -26.0 21.0
84. West U_9 * 7282.8 2718.5 7250.1 2796.3 * 84. 337. BR 10. 1.5 -28.0 21.0
85. East U_10 * 7880.8 2604.9 7509.4 2696.3 * 383. 284. BR 10. 1.6 -19.0 21.0
86. East U_11 * 7509.4 2696.3 7453.4 2666.4 * 63. 242. AG 10. 1.6 -22.0 21.0
87. East U_12 * 7453.4 2666.4 7430.0 2589.6 * 80. 197. AG 10. 1.6 -24.0 21.0
88. East U_13 * 7430.0 2589.6 7402.6 2498.4 * 95. 197. AG 10. 1.6 -24.0 21.0
89. East U_14 * 7402.6 2498.4 7432.3 2436.0 * 69. 155. AG 10. 1.6 -21.0 21.0
90. WB US380D ONR_15 * 6139.8 3132.1 5829.5 3178.3 * 314. 278. AG 520. 1.0 -28.0 21.0
91. WB US380D ONR_16 * 5829.5 3178.3 5250.3 3338.7 * 601. 285. AG 520. 1.0 -13.0 21.0
92. WB US380D ONR_17 * 5250.3 3338.7 4958.7 3410.2 * 300. 284. BR 520. 1.0 -12.0 21.0
93. WB US380D ONR_18 * 4958.7 3410.2 4694.1 3459.2 * 269. 280. BR 520. 1.0 -21.0 21.0
94. SB FM1827 S_1 * 7365.5 2761.4 7287.2 2485.3 * 287. 196. AG 110. 2.9 -24.0 32.0
95. SB FM1827 N_2 * 7546.2 3129.9 7500.5 3059.5 * 84. 213. AG 650. 1.2 -14.0 32.0

PAGE 3

JOB: US380 McKinney

RUN: Segment D - 2030

DATE : 9/15/22

TIME : 14:55:35

LINK VARIABLES

LINK DESCRIPTION * LINK COORDINATES (FT) * LENGTH BRG TYPE VPH EF H
W V/C QUEUE * X1 Y1 X2 Y2 * (FT) (DEG) (G/MI) (FT) (FT) (VEH)
-----*-----
96. SB FM1827 N_3 * 7500.5 3059.5 7417.6 2902.9 * 177. 208. AG 650. 1.2 -18.0 32.0
97. SB FM1827 N_4 * 7417.6 2902.9 7365.5 2761.4 * 151. 200. AG 650. 1.2 -25.0 32.0
98. SB FM1827 N_5 * 7546.2 3130.4 7725.0 3368.7 * 298. 37. AG 650. 1.2 -9.0 32.0
99. SB FM1827 N_6 * 7725.0 3368.7 7896.3 3634.8 * 316. 33. AG 650. 1.2 3.0 32.0
100. SB FM1827 N_7 * 7896.3 3634.8 7922.3 3733.3 * 102. 15. AG 650. 1.2 14.0 32.0
101. SB FM1827 N_8 * 7922.3 3733.3 7983.3 4606.8 * 876. 4. AG 650. 1.2 20.0 32.0
102. NB FM1827 S_9 * 7578.3 3106.7 7903.1 3595.3 * 587. 34. AG 640. 1.0 13.0 32.0
103. NB FM1827 S_10 * 7903.1 3595.3 7940.5 3769.4 * 178. 12. AG 640. 1.0 21.0 32.0
104. NB FM1827 S_11 * 7940.5 3769.4 7994.2 4600.6 * 833. 4. AG 640. 1.0 -27.0 32.0
105. NB FM1827 S_12 * 7407.1 2748.9 7441.7 2853.9 * 111. 18. AG 640. 1.0 -22.0 32.0
106. NB FM1827 S_13 * 7441.7 2853.9 7504.2 2988.0 * 148. 25. AG 640. 1.0 -17.0 32.0
107. NB FM1827 S_14 * 7504.2 2988.0 7578.4 3106.5 * 140. 32. AG 640. 1.0 -15.0 32.0
108. NB FM1827 N_15 * 7321.1 2474.3 7407.1 2748.9 * 288. 17. AG 570. 1.9 -24.0 32.0
109. SB FM1827 S_1_Q * 7365.5 2761.4 6834.2 887.5 * 1948. 196. AG 4. 100.0 -24.0 32.0 1.25
98.9
110. NB FM1827 N_15_Q * 7321.1 2474.3 7903.1 4333.0 * 1948. 17. AG 4. 100.0 -24.0 32.0 1.25
98.9
111. EB US380D Front4_13Q * 7166.5 2522.9 7250.1 2496.9 * 87. 107. AG 7. 100.0 -27.0 54.0 0.49
4.4
112. WB US380D Front2_8Q * 7793.4 2633.0 7726.4 2653.1 * 70. 287. AG 9. 100.0 -17.0 65.0 0.39
3.6

113. SB FM1827 N_4_Q * 7417.6 2902.9 6744.2 1075.3 * 1948. 200. AG 4. 100.0 -25.0 32.0 1.25
98.9

PAGE 4

JOB: US380 McKinney

RUN: Segment D - 2030

DATE : 9/15/22

TIME : 14:55:35

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL	
ARRIVAL	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	* (SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
109. SB FM1827 S_1_Q	* 90	50	2.0	1600	1600	1.43	1	3
110. NB FM1827 N_15_Q	* 90	50	2.0	1600	1600	1.43	1	3
111. EB US380D Front4_13Q*	90	40	2.0	1600	1600	1.43	1	3
112. WB US380D Front2_8Q*	* 90	40	2.0	1600	1600	1.43	1	3
113. SB FM1827 N_4_Q	* 90	50	2.0	1600	1600	1.43	1	3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. D1	* 7374.8	2342.5	-29.0	*	
2. D2	* 6826.4	2496.8	-32.0	*	
3. D3	* 6904.5	3271.9	-19.0	*	
4. D4	* 6997.8	2946.6	-23.0	*	

PAGE 5

JOB: US380 McKinney

RUN: Segment D - 2030

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4

0. *	0.0	0.0	0.0	0.0
10. *	0.0	0.0	0.0	0.0
20. *	0.0	0.0	0.0	0.0
30. *	0.0	0.0	0.0	0.0
40. *	0.0	0.0	0.0	0.0
50. *	0.0	0.0	0.0	0.0
60. *	0.0	0.0	0.0	0.0

```

70. * 0.0 0.0 0.0 0.0
80. * 0.0 0.0 0.0 0.0
90. * 0.0 0.0 0.0 0.0
100. * 0.0 0.0 0.0 0.0
110. * 0.0 0.0 0.0 0.0
120. * 0.0 0.0 0.0 0.0
130. * 0.0 0.0 0.0 0.1
140. * 0.0 0.0 0.0 0.1
150. * 0.0 0.0 0.0 0.0
160. * 0.0 0.0 0.0 0.0
170. * 0.0 0.0 0.0 0.0
180. * 0.0 0.0 0.0 0.0
190. * 0.0 0.0 0.0 0.0
200. * 0.0 0.0 0.0 0.0
210. * 0.0 0.0 0.0 0.0
220. * 0.0 0.0 0.0 0.0
230. * 0.0 0.0 0.0 0.0
240. * 0.0 0.0 0.0 0.0
250. * 0.0 0.0 0.0 0.1
260. * 0.0 0.0 0.0 0.1
270. * 0.0 0.0 0.0 0.1
280. * 0.0 0.0 0.0 0.1
290. * 0.0 0.0 0.0 0.0
300. * 0.0 0.0 0.0 0.0
310. * 0.0 0.0 0.0 0.0
320. * 0.0 0.0 0.0 0.0
330. * 0.0 0.0 0.0 0.0
340. * 0.0 0.0 0.0 0.0
350. * 0.0 0.0 0.0 0.0
360. * 0.0 0.0 0.0 0.0
-----*-----

```

```

MAX * 0.0 0.0 0.0 0.1
DEGR. * 0 0 0 130

```

THE HIGHEST CONCENTRATION OF 0.10 PPM OCCURRED AT RECEPTOR REC4 .

PAGE 6

JOB: US380 McKinney

RUN: Segment D - 2030

DATE : 9/15/22

TIME : 14:55:35

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

```

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4
LINK # * 0 0 0 130
-----*-----

```

```

1 * 0.0 0.0 0.0 0.0
2 * 0.0 0.0 0.0 0.0
3 * 0.0 0.0 0.0 0.0
4 * 0.0 0.0 0.0 0.0

```

5 * 0.0 0.0 0.0 0.0
6 * 0.0 0.0 0.0 0.0
7 * 0.0 0.0 0.0 0.0
8 * 0.0 0.0 0.0 0.0
9 * 0.0 0.0 0.0 0.0
10 * 0.0 0.0 0.0 0.0
11 * 0.0 0.0 0.0 0.0
12 * 0.0 0.0 0.0 0.0
13 * 0.0 0.0 0.0 0.0
14 * 0.0 0.0 0.0 0.0
15 * 0.0 0.0 0.0 0.0
16 * 0.0 0.0 0.0 0.0
17 * 0.0 0.0 0.0 0.0
18 * 0.0 0.0 0.0 0.0
19 * 0.0 0.0 0.0 0.0
20 * 0.0 0.0 0.0 0.0
21 * 0.0 0.0 0.0 0.0
22 * 0.0 0.0 0.0 0.0
23 * 0.0 0.0 0.0 0.0
24 * 0.0 0.0 0.0 0.0
25 * 0.0 0.0 0.0 0.0
26 * 0.0 0.0 0.0 0.0
27 * 0.0 0.0 0.0 0.0
28 * 0.0 0.0 0.0 0.0
29 * 0.0 0.0 0.0 0.0
30 * 0.0 0.0 0.0 0.0
31 * 0.0 0.0 0.0 0.0
32 * 0.0 0.0 0.0 0.0
33 * 0.0 0.0 0.0 0.0
34 * 0.0 0.0 0.0 0.0
35 * 0.0 0.0 0.0 0.0
36 * 0.0 0.0 0.0 0.0
37 * 0.0 0.0 0.0 0.0
38 * 0.0 0.0 0.0 0.0
39 * 0.0 0.0 0.0 0.0
40 * 0.0 0.0 0.0 0.0
41 * 0.0 0.0 0.0 0.0
42 * 0.0 0.0 0.0 0.0
43 * 0.0 0.0 0.0 0.0
44 * 0.0 0.0 0.0 0.0
45 * 0.0 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment D - 2030

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 0 0 0 130

-----*

46 * 0.0 0.0 0.0 0.0
47 * 0.0 0.0 0.0 0.0
48 * 0.0 0.0 0.0 0.0
49 * 0.0 0.0 0.0 0.0
50 * 0.0 0.0 0.0 0.0

51	*	0.0	0.0	0.0	0.0
52	*	0.0	0.0	0.0	0.0
53	*	0.0	0.0	0.0	0.0
54	*	0.0	0.0	0.0	0.0
55	*	0.0	0.0	0.0	0.0
56	*	0.0	0.0	0.0	0.0
57	*	0.0	0.0	0.0	0.0
58	*	0.0	0.0	0.0	0.0
59	*	0.0	0.0	0.0	0.0
60	*	0.0	0.0	0.0	0.0
61	*	0.0	0.0	0.0	0.0
62	*	0.0	0.0	0.0	0.0
63	*	0.0	0.0	0.0	0.1
64	*	0.0	0.0	0.0	0.0
65	*	0.0	0.0	0.0	0.0
66	*	0.0	0.0	0.0	0.0
67	*	0.0	0.0	0.0	0.0
68	*	0.0	0.0	0.0	0.0
69	*	0.0	0.0	0.0	0.0
70	*	0.0	0.0	0.0	0.0
71	*	0.0	0.0	0.0	0.0
72	*	0.0	0.0	0.0	0.0
73	*	0.0	0.0	0.0	0.0
74	*	0.0	0.0	0.0	0.0
75	*	0.0	0.0	0.0	0.0
76	*	0.0	0.0	0.0	0.0
77	*	0.0	0.0	0.0	0.0
78	*	0.0	0.0	0.0	0.0
79	*	0.0	0.0	0.0	0.0
80	*	0.0	0.0	0.0	0.0
81	*	0.0	0.0	0.0	0.0
82	*	0.0	0.0	0.0	0.0
83	*	0.0	0.0	0.0	0.0
84	*	0.0	0.0	0.0	0.0
85	*	0.0	0.0	0.0	0.0
86	*	0.0	0.0	0.0	0.0
87	*	0.0	0.0	0.0	0.0
88	*	0.0	0.0	0.0	0.0
89	*	0.0	0.0	0.0	0.0
90	*	0.0	0.0	0.0	0.0
91	*	0.0	0.0	0.0	0.0
92	*	0.0	0.0	0.0	0.0
93	*	0.0	0.0	0.0	0.0
94	*	0.0	0.0	0.0	0.0
95	*	0.0	0.0	0.0	0.0
96	*	0.0	0.0	0.0	0.0
97	*	0.0	0.0	0.0	0.0
98	*	0.0	0.0	0.0	0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment D - 2030

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4

LINK # * 0 0 0 130

-----*-----
99 * 0.0 0.0 0.0 0.0
100 * 0.0 0.0 0.0 0.0
101 * 0.0 0.0 0.0 0.0
102 * 0.0 0.0 0.0 0.0
103 * 0.0 0.0 0.0 0.0
104 * 0.0 0.0 0.0 0.0
105 * 0.0 0.0 0.0 0.0
106 * 0.0 0.0 0.0 0.0
107 * 0.0 0.0 0.0 0.0
108 * 0.0 0.0 0.0 0.0
109 * 0.0 0.0 0.0 0.0
110 * 0.0 0.0 0.0 0.0
111 * 0.0 0.0 0.0 0.0
112 * 0.0 0.0 0.0 0.0
113 * 0.0 0.0 0.0 0.0

'US380 McKinney' 60 0.75 0 0 4 0.3048 1 1
'D1' 7374.8 2342.54 -29
'D2' 6826.42 2496.77 -32
'D3' 6904.47 3271.95 -19
'D4' 6997.79 2946.62 -23
'Segment D - 2050' 113 1 1 'C'
1
'EB US380D Front1_1' 'FL' 727.47 5935.16 907.16 5240.74 120 0.589 -22 32
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'EB US380D Front1_2' 'BR' 907.16 5240.74 1110.41 4899.73 120 0.589 -4 32
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'EB US380D Front1_3' 'BR' 1110.41 4899.73 1532.95 4417.87 120 0.589 3 32
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'EB US380D Front1_4' 'BR' 1532.95 4417.87 2052.87 4101.82 120 0.589 -7 32
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'EB US380D Front1_5' 'AG' 2052.87 4101.82 2817.58 3857.79 120 0.589 -22 32
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'EB US380D Front1_6' 'AG' 2817.58 3857.79 2993.28 3779.44 120 0.589 -26 32
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'EB US380D Front2_8' 'AG' 3856.56 3521.63 5061 3157.05 1810 0.647 -30 43
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'EB US380D Front3_10' 'BR' 5262.81 3097.15 5850.07 2921.36 2350 0.647 -28 54
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'EB US380D West_2' 'BR' 3185.13 3819.09 3854.95 3619.05 4410 0.807 -21 46
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'EB US380D East_4' 'BR' 4726.89 3353.78 5739.92 3049.96 3870 0.734 -22 46
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'EB US380D East_7' 'BR' 7331.35 2568.97 7516.7 2506.35 3870 0.734 6 46
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'WB US380D Front3_9' 'AG' 7387.36 2754.82 7250.12 2796.33 2830 0.603 -26 43
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'WB US380D Front4_10' 'AG' 7250.12 2796.33 6139.84 3132.11 2850 0.603 -31 43
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'WB US380D Front6_18' 'BR' 2273.31 4466.67 1930.77 4733.94 400 0.654 -23 32
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'WB US380D Front6_19' 'AG' 1930.77 4733.94 1614.29 5062.11 400 0.654 -25 32
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'WB US380D Front6_20' 'AG' 1614.29 5062.11 1353.62 5429.12 400 0.654 -29 32
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'EB US380D OFR_2' 'BR' 4117.45 3503.62 4506.77 3374.72 540 0.642 -25 21
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'EB US380D OFR_3' 'BR' 4506.77 3374.72 4791.93 3283.57 540 0.642 -24 21
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'EB US380D OFR_5' 'BR' 5011.98 3204.14 5262.79 3097.16 540 0.642 -27 21
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'West U_7' 'BR' 7176.04 2543.99 7245.05 2577.84 20 0.858 -24 21
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'West U_8' 'BR' 7245.05 2577.84 7282.81 2718.47 20 0.858 -26 21
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'West U_9' 'BR' 7282.81 2718.47 7250.12 2796.33 20 0.858 -28 21
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'East U_11' 'AG' 7509.37 2696.33 7453.38 2666.38 20 0.922 -22 21
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'East U_12' 'AG' 7453.38 2666.38 7429.95 2589.56 20 0.922 -24 21
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'SB FM1827 S_1' 'AG' 7365.5 2761.44 7287.22 2485.34 150 1.542 -24 32
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'SB FM1827 N_2' 'AG' 7546.18 3129.94 7500.51 3059.49 920 0.703 -14 32
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'SB FM1827 N_3' 'AG' 7500.51 3059.49 7417.64 2902.94 920 0.703 -18 32
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'SB FM1827 N_4' 'AG' 7417.64 2902.94 7365.5 2761.44 920 0.703 -25 32
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'SB FM1827 N_6' 'AG' 7725.02 3368.73 7896.33 3634.79 920 0.703 3 32
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'NB FM1827 S_10' 'AG' 7903.07 3595.26 7940.53 3769.37 930 0.608 21 32
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'NB FM1827 S_11' 'AG' 7940.53 3769.37 7994.16 4600.63 930 0.608 -27 32
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'NB FM1827 S_13' 'AG' 7441.67 2853.88 7504.17 2988 930 0.608 -17 32
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'NB FM1827 S_14' 'AG' 7504.17 2988 7578.38 3106.49 930 0.608 -15 32
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'NB FM1827 N_15' 'AG' 7321.06 2474.27 7407.06 2748.91 810 1.082 -24 32
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'SB FM1827 S_1_Q' 'AG' 7365.5 2761.44 7287.22 2485.34 -24 32 2
90 50 2 150 0.532 1600 1 3
2
'NB FM1827 N_15_Q' 'AG' 7321.06 2474.27 7407.06 2748.91 -24 32 2
90 50 2 810 0.532 1600 1 3
2
'EB US380D Front4_13Q' 'AG' 7166.54 2522.91 7304.61 2479.92 -27 54 4
90 40 2 2330 0.532 1600 1 3
2
'WB US380D Front2_8Q' 'AG' 7793.4 2633.01 7387.39 2754.82 -17 65 5
90 40 2 2100 0.532 1600 1 3
2
'SB FM1827 N_4_Q' 'AG' 7417.64 2902.94 7365.5 2761.44 -25 32 2
90 50 2 920 0.532 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment D - 2050

DATE : 9/15/22

TIME : 14:55:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION V/C QUEUE	* LINK COORDINATES (FT)				* LENGTH BRG TYPE VPH EF H				
		* X1	Y1	X2	Y2	* (FT) (DEG)	(G/MI) (FT) (FT)	(VEH)		
	1. EB US380D Front1_1	* 727.5	5935.2	907.2	5240.7	* 717.	165. FL	120.	0.6 -22.0	32.0
	2. EB US380D Front1_2	* 907.2	5240.7	1110.4	4899.7	* 397.	149. BR	120.	0.6 -4.0	32.0
	3. EB US380D Front1_3	* 1110.4	4899.7	1533.0	4417.9	* 641.	139. BR	120.	0.6 3.0	32.0
	4. EB US380D Front1_4	* 1533.0	4417.9	2052.9	4101.8	* 608.	121. BR	120.	0.6 -7.0	32.0
	5. EB US380D Front1_5	* 2052.9	4101.8	2817.6	3857.8	* 803.	108. AG	120.	0.6 -22.0	32.0
	6. EB US380D Front1_6	* 2817.6	3857.8	2993.3	3779.4	* 192.	114. AG	120.	0.6 -26.0	32.0
	7. EB US380D Front2_7	* 2993.3	3779.4	3856.6	3521.6	* 901.	107. AG	1810.	0.6 -30.0	54.0
	8. EB US380D Front2_8	* 3856.6	3521.6	5061.0	3157.1	* 1258.	107. AG	1810.	0.6 -30.0	43.0
	9. EB US380D Front2_9	* 5061.0	3157.1	5262.8	3097.2	* 210.	107. BR	1810.	0.6 -27.0	43.0
	10. EB US380D Front3_10	* 5262.8	3097.1	5850.1	2921.4	* 613.	107. BR	2350.	0.6 -28.0	54.0
	11. EB US380D Front3_11	* 5850.1	2921.4	6810.0	2630.8	* 1003.	107. AG	2350.	0.6 -30.0	54.0
	12. EB US380D Front4_12	* 6810.0	2630.8	7166.5	2522.9	* 373.	107. AG	2330.	0.7 -32.0	65.0
	13. EB US380D Front4_13	* 7166.5	2522.9	7304.6	2479.9	* 145.	107. AG	2330.	0.7 -27.0	54.0
	14. EB US380D Front5_14	* 7304.6	2479.9	7432.3	2436.0	* 135.	109. AG	1630.	0.6 -24.0	32.0
	15. EB US380D Front6_15	* 7432.3	2436.0	7793.2	2320.0	* 379.	108. AG	1650.	0.6 -16.0	32.0
	16. EB US380D Front6_16	* 7793.2	2320.0	8648.7	2042.7	* 899.	108. AG	1650.	0.6 3.0	32.0
	17. EB US380D Front6_17	* 8648.7	2042.7	9603.1	1731.5	* 1004.	108. AG	1650.	0.6 18.0	32.0
	18. EB US380D Front6_18	* 9603.1	1731.5	9920.8	1627.3	* 334.	108. AG	1650.	0.6 28.0	32.0
	19. EB US380D Front6_19	* 9920.8	1627.3	9979.4	1607.8	* 62.	108. AG	1650.	0.6 25.0	32.0
	20. EB US380D Front6_20	* 9979.4	1607.8	10064.1	1571.3	* 92.	113. AG	1650.	0.6 23.0	21.0
	21. EB US380D Front6_21	* 10064.1	1571.3	10145.9	1540.3	* 87.	111. AG	1650.	0.6 15.0	21.0
	22. EB US380D West_1	* 2679.4	4001.9	3185.1	3819.1	* 538.	110. BR	4410.	0.8 -6.0	46.0
	23. EB US380D West_2	* 3185.1	3819.1	3855.0	3619.0	* 699.	107. BR	4410.	0.8 -21.0	46.0
	24. EB US380D East_3	* 3855.0	3619.0	4726.9	3353.8	* 911.	107. BR	3870.	0.7 -24.0	46.0
	25. EB US380D East_4	* 4726.9	3353.8	5739.9	3050.0	* 1058.	107. BR	3870.	0.7 -22.0	46.0
	26. EB US380D East_5	* 5739.9	3050.0	6637.5	2779.1	* 938.	107. BR	3870.	0.7 -20.0	46.0
	27. EB US380D East_6	* 6637.5	2779.1	7331.3	2569.0	* 725.	107. BR	3870.	0.7 -6.0	46.0
	28. EB US380D East_7	* 7331.3	2569.0	7516.7	2506.4	* 196.	109. BR	3870.	0.7 6.0	46.0
	29. EB US380D East_8	* 7516.7	2506.4	7805.8	2425.9	* 300.	106. FL	3870.	0.7 12.0	46.0
	30. EB US380D East_9	* 7805.8	2425.9	8684.1	2142.1	* 923.	108. AG	3870.	0.7 18.0	46.0
	31. EB US380D East_10	* 8684.1	2142.1	9240.1	1958.6	* 586.	108. AG	3870.	0.7 28.0	46.0
	32. EB US380D East_11	* 9240.1	1958.6	9753.5	1729.3	* 562.	114. AG	3870.	0.7 28.0	46.0

33.	EB	US380D	East_12	*	9753.5	1729.3	10008.8	1607.5	*	283.	115.	AG	3870.	0.7	28.0	46.0
34.	EB	US380D	East_13	*	10008.8	1607.5	10145.9	1540.3	*	153.	116.	AG	3870.	0.7	28.0	34.0
35.	EB	US380	Exist_14	*	10145.9	1540.3	11122.5	1226.1	*	1026.	108.	AG	5520.	0.7	16.0	34.0
36.	EB	US380	Exist_15	*	11122.5	1226.1	12189.6	879.7	*	1122.	108.	AG	5520.	0.7	-19.0	34.0
37.	WB	US380	Exist_1	*	12216.8	954.2	11154.4	1301.2	*	1118.	288.	AG	5270.	0.6	-18.0	34.0
38.	WB	US380	Exist_2	*	11154.4	1301.2	10171.1	1620.1	*	1034.	288.	AG	5270.	0.6	17.0	34.0
39.	WB	US380D	East_3	*	10171.1	1620.1	9966.3	1686.6	*	215.	288.	AG	3150.	0.6	28.0	34.0
40.	WB	US380D	East_4	*	9966.3	1686.6	9673.9	1858.8	*	339.	300.	AG	3150.	0.6	29.0	34.0
41.	WB	US380D	East_5	*	9673.9	1858.8	9152.8	2084.8	*	568.	293.	AG	3150.	0.6	26.0	34.0
42.	WB	US380D	East_6	*	9152.8	2084.8	8542.2	2282.8	*	642.	288.	AG	3150.	0.6	18.0	46.0
43.	WB	US380D	East_7	*	8542.2	2282.8	7951.2	2474.5	*	621.	288.	AG	3150.	0.6	16.0	46.0
44.	WB	US380D	East_8	*	7951.2	2474.5	7545.0	2597.2	*	424.	287.	FL	3150.	0.6	13.0	46.0

PAGE 2

JOB: US380 McKinney

RUN: Segment D - 2050

DATE : 9/15/22

TIME : 14:55:35

LINK VARIABLES

W	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H
	V/C QUEUE		X1	Y1	X2	Y2	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)	
		*	*			*	*						
45.	WB US380D East_9	*	7545.0	2597.2	7357.9	2656.9	*	196.	288.	BR	3150.	0.6 8.0 46.0	
46.	WB US380D East_10	*	7357.9	2656.9	7156.2	2716.8	*	210.	287.	BR	3150.	0.6 2.0 46.0	
47.	WB US380D East_11	*	7156.2	2716.8	6691.3	2857.8	*	486.	287.	BR	3150.	0.6 -6.0 46.0	
48.	WB US380D East_12	*	6691.3	2857.8	5936.4	3086.3	*	789.	287.	BR	3150.	0.6 -18.0 46.0	
49.	WB US380D East_13	*	5936.4	3086.3	5123.9	3331.5	*	849.	287.	BR	3150.	0.6 -25.0 46.0	
50.	WB US380D East_14	*	5123.9	3331.5	4694.0	3459.2	*	448.	287.	BR	3150.	0.6 -21.0 46.0	
51.	WB US380D West_15	*	4694.1	3459.2	3906.6	3697.4	*	823.	287.	BR	3900.	0.6 -24.0 46.0	
52.	WB US380D West_16	*	3906.6	3697.4	3105.9	3938.4	*	836.	287.	BR	3900.	0.6 -18.0 46.0	
53.	WB US380D West_17	*	3105.9	3938.4	2516.4	4183.3	*	638.	293.	BR	3900.	0.6 -6.0 46.0	
54.	WB US380D Front1_1	*	10171.1	1620.1	10059.4	1665.8	*	121.	292.	AG	2120.	0.6 24.0 21.0	
55.	WB US380D Front1_2	*	10059.4	1665.8	9750.4	1877.6	*	375.	304.	AG	2120.	0.6 26.0 32.0	
56.	WB US380D Front1_3	*	9750.4	1877.6	9551.8	2017.9	*	243.	305.	AG	2120.	0.6 28.0 32.0	
57.	WB US380D Front1_4	*	9551.8	2017.9	9229.6	2172.0	*	357.	296.	AG	2120.	0.6 32.0 32.0	
58.	WB US380D Front1_5	*	9229.6	2172.0	8444.3	2423.6	*	825.	288.	AG	2120.	0.6 21.0 32.0	
59.	WB US380D Front1_6	*	8444.3	2423.6	7880.8	2604.9	*	592.	288.	AG	2120.	0.6 2.0 32.0	
60.	WB US380D Front2_7	*	7880.8	2604.9	7793.4	2633.0	*	92.	288.	AG	2100.	1.0 -7.0 32.0	
61.	WB US380D Front2_8	*	7793.4	2633.0	7387.4	2754.8	*	424.	287.	AG	2100.	1.0 -17.0 65.0	
62.	WB US380D Front3_9	*	7387.4	2754.8	7250.1	2796.3	*	143.	287.	AG	2830.	0.6 -26.0 43.0	
63.	WB US380D Front4_10	*	7250.1	2796.3	6139.8	3132.1	*	1160.	287.	AG	2850.	0.6 -31.0 43.0	
64.	WB US380D Front5_11	*	6139.8	3132.1	5783.1	3243.4	*	374.	287.	AG	2100.	0.6 -27.0 43.0	
65.	WB US380D Front5_12	*	5783.1	3243.4	4867.3	3519.0	*	956.	287.	BR	2100.	0.6 -23.0 43.0	
66.	WB US380D Front5_13	*	4867.3	3519.0	3936.0	3798.0	*	972.	287.	BR	2100.	0.6 -22.0 43.0	
67.	WB US380D Front5_14	*	3936.0	3798.0	3147.4	4037.7	*	824.	287.	BR	2100.	0.6 -27.0 54.0	
68.	WB US380D Front5_15	*	3147.4	4037.7	2945.6	4102.8	*	212.	288.	BR	2100.	0.6 -26.0 54.0	
69.	WB US380D Front5_16	*	2945.6	4102.8	2601.6	4247.1	*	373.	293.	BR	2100.	0.6 -26.0 54.0	
70.	WB US380D Front6_17	*	2601.6	4247.1	2273.3	4466.7	*	395.	304.	BR	400.	0.7 -23.0 32.0	
71.	WB US380D Front6_18	*	2273.3	4466.7	1930.8	4733.9	*	434.	308.	BR	400.	0.7 -23.0 32.0	
72.	WB US380D Front6_19	*	1930.8	4733.9	1614.3	5062.1	*	456.	316.	AG	400.	0.7 -25.0 32.0	
73.	WB US380D Front6_20	*	1614.3	5062.1	1353.6	5429.1	*	450.	325.	AG	400.	0.7 -29.0 32.0	
74.	WB US380D Front6_21	*	1353.6	5429.1	1171.1	5820.1	*	431.	335.	AG	400.	0.7 -29.0 32.0	

113. SB FM1827 N_4_Q * 7417.6 2902.9 7374.2 2784.9 * 126. 200. AG 2. 100.0 -25.0 32.0 0.72
6.4

PAGE 4

JOB: US380 McKinney

RUN: Segment D - 2050

DATE : 9/15/22

TIME : 14:55:35

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
ARRIVAL
* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
* (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

109. SB FM1827 S_1_Q * 90 50 2.0 150 1600 0.53 1 3
110. NB FM1827 N_15_Q * 90 50 2.0 810 1600 0.53 1 3
111. EB US380D Front4_13Q* 90 40 2.0 2330 1600 0.53 1 3
112. WB US380D Front2_8Q * 90 40 2.0 2100 1600 0.53 1 3
113. SB FM1827 N_4_Q * 90 50 2.0 920 1600 0.53 1 3

RECEPTOR LOCATIONS

* COORDINATES (FT) *
RECEPTOR * X Y Z *
-----*
1. D1 * 7374.8 2342.5 -29.0 *
2. D2 * 6826.4 2496.8 -32.0 *
3. D3 * 6904.5 3271.9 -19.0 *
4. D4 * 6997.8 2946.6 -23.0 *

PAGE 5

JOB: US380 McKinney

RUN: Segment D - 2050

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4

-----*
0. * 0.0 0.0 0.0 0.0
10. * 0.0 0.0 0.0 0.0
20. * 0.0 0.0 0.0 0.0
30. * 0.0 0.0 0.0 0.0
40. * 0.0 0.0 0.0 0.0
50. * 0.0 0.0 0.0 0.0
60. * 0.0 0.0 0.0 0.0

```

70. * 0.0 0.0 0.0 0.0
80. * 0.0 0.0 0.0 0.0
90. * 0.0 0.0 0.0 0.0
100. * 0.0 0.0 0.0 0.0
110. * 0.0 0.0 0.0 0.0
120. * 0.0 0.0 0.0 0.0
130. * 0.0 0.0 0.0 0.1
140. * 0.0 0.0 0.0 0.1
150. * 0.0 0.0 0.0 0.0
160. * 0.0 0.0 0.0 0.0
170. * 0.0 0.0 0.0 0.0
180. * 0.0 0.0 0.0 0.0
190. * 0.0 0.0 0.0 0.0
200. * 0.0 0.0 0.0 0.0
210. * 0.0 0.0 0.0 0.0
220. * 0.0 0.0 0.0 0.0
230. * 0.0 0.0 0.0 0.0
240. * 0.0 0.0 0.0 0.0
250. * 0.0 0.0 0.0 0.0
260. * 0.0 0.0 0.0 0.1
270. * 0.0 0.0 0.0 0.1
280. * 0.0 0.0 0.0 0.1
290. * 0.0 0.0 0.0 0.0
300. * 0.0 0.0 0.0 0.0
310. * 0.0 0.0 0.0 0.0
320. * 0.0 0.0 0.0 0.0
330. * 0.0 0.0 0.0 0.0
340. * 0.0 0.0 0.0 0.0
350. * 0.0 0.0 0.0 0.0
360. * 0.0 0.0 0.0 0.0
-----*-----

```

```

MAX * 0.0 0.0 0.0 0.1
DEGR. * 0 0 0 130

```

THE HIGHEST CONCENTRATION OF 0.10 PPM OCCURRED AT RECEPTOR REC4 .

PAGE 6

JOB: US380 McKinney

RUN: Segment D - 2050

DATE : 9/15/22

TIME : 14:55:35

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

```

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4
LINK # * 0 0 0 130
-----*-----

```

```

1 * 0.0 0.0 0.0 0.0
2 * 0.0 0.0 0.0 0.0
3 * 0.0 0.0 0.0 0.0
4 * 0.0 0.0 0.0 0.0

```

5 * 0.0 0.0 0.0 0.0
6 * 0.0 0.0 0.0 0.0
7 * 0.0 0.0 0.0 0.0
8 * 0.0 0.0 0.0 0.0
9 * 0.0 0.0 0.0 0.0
10 * 0.0 0.0 0.0 0.0
11 * 0.0 0.0 0.0 0.0
12 * 0.0 0.0 0.0 0.0
13 * 0.0 0.0 0.0 0.0
14 * 0.0 0.0 0.0 0.0
15 * 0.0 0.0 0.0 0.0
16 * 0.0 0.0 0.0 0.0
17 * 0.0 0.0 0.0 0.0
18 * 0.0 0.0 0.0 0.0
19 * 0.0 0.0 0.0 0.0
20 * 0.0 0.0 0.0 0.0
21 * 0.0 0.0 0.0 0.0
22 * 0.0 0.0 0.0 0.0
23 * 0.0 0.0 0.0 0.0
24 * 0.0 0.0 0.0 0.0
25 * 0.0 0.0 0.0 0.0
26 * 0.0 0.0 0.0 0.0
27 * 0.0 0.0 0.0 0.0
28 * 0.0 0.0 0.0 0.0
29 * 0.0 0.0 0.0 0.0
30 * 0.0 0.0 0.0 0.0
31 * 0.0 0.0 0.0 0.0
32 * 0.0 0.0 0.0 0.0
33 * 0.0 0.0 0.0 0.0
34 * 0.0 0.0 0.0 0.0
35 * 0.0 0.0 0.0 0.0
36 * 0.0 0.0 0.0 0.0
37 * 0.0 0.0 0.0 0.0
38 * 0.0 0.0 0.0 0.0
39 * 0.0 0.0 0.0 0.0
40 * 0.0 0.0 0.0 0.0
41 * 0.0 0.0 0.0 0.0
42 * 0.0 0.0 0.0 0.0
43 * 0.0 0.0 0.0 0.0
44 * 0.0 0.0 0.0 0.0
45 * 0.0 0.0 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment D - 2050

* CO/LINK (PPM)

* ANGLE (DEGREES)

* REC1 REC2 REC3 REC4

LINK # * 0 0 0 130

-----*

46 * 0.0 0.0 0.0 0.0
47 * 0.0 0.0 0.0 0.0
48 * 0.0 0.0 0.0 0.0
49 * 0.0 0.0 0.0 0.0
50 * 0.0 0.0 0.0 0.0

51 * 0.0 0.0 0.0 0.0
52 * 0.0 0.0 0.0 0.0
53 * 0.0 0.0 0.0 0.0
54 * 0.0 0.0 0.0 0.0
55 * 0.0 0.0 0.0 0.0
56 * 0.0 0.0 0.0 0.0
57 * 0.0 0.0 0.0 0.0
58 * 0.0 0.0 0.0 0.0
59 * 0.0 0.0 0.0 0.0
60 * 0.0 0.0 0.0 0.0
61 * 0.0 0.0 0.0 0.0
62 * 0.0 0.0 0.0 0.0
63 * 0.0 0.0 0.0 0.1
64 * 0.0 0.0 0.0 0.0
65 * 0.0 0.0 0.0 0.0
66 * 0.0 0.0 0.0 0.0
67 * 0.0 0.0 0.0 0.0
68 * 0.0 0.0 0.0 0.0
69 * 0.0 0.0 0.0 0.0
70 * 0.0 0.0 0.0 0.0
71 * 0.0 0.0 0.0 0.0
72 * 0.0 0.0 0.0 0.0
73 * 0.0 0.0 0.0 0.0
74 * 0.0 0.0 0.0 0.0
75 * 0.0 0.0 0.0 0.0
76 * 0.0 0.0 0.0 0.0
77 * 0.0 0.0 0.0 0.0
78 * 0.0 0.0 0.0 0.0
79 * 0.0 0.0 0.0 0.0
80 * 0.0 0.0 0.0 0.0
81 * 0.0 0.0 0.0 0.0
82 * 0.0 0.0 0.0 0.0
83 * 0.0 0.0 0.0 0.0
84 * 0.0 0.0 0.0 0.0
85 * 0.0 0.0 0.0 0.0
86 * 0.0 0.0 0.0 0.0
87 * 0.0 0.0 0.0 0.0
88 * 0.0 0.0 0.0 0.0
89 * 0.0 0.0 0.0 0.0
90 * 0.0 0.0 0.0 0.0
91 * 0.0 0.0 0.0 0.0
92 * 0.0 0.0 0.0 0.0
93 * 0.0 0.0 0.0 0.0
94 * 0.0 0.0 0.0 0.0
95 * 0.0 0.0 0.0 0.0
96 * 0.0 0.0 0.0 0.0
97 * 0.0 0.0 0.0 0.0
98 * 0.0 0.0 0.0 0.0

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2 REC3 REC4

LINK # * 0 0 0 130

-----*-----
99 * 0.0 0.0 0.0 0.0
100 * 0.0 0.0 0.0 0.0
101 * 0.0 0.0 0.0 0.0
102 * 0.0 0.0 0.0 0.0
103 * 0.0 0.0 0.0 0.0
104 * 0.0 0.0 0.0 0.0
105 * 0.0 0.0 0.0 0.0
106 * 0.0 0.0 0.0 0.0
107 * 0.0 0.0 0.0 0.0
108 * 0.0 0.0 0.0 0.0
109 * 0.0 0.0 0.0 0.0
110 * 0.0 0.0 0.0 0.0
111 * 0.0 0.0 0.0 0.0
112 * 0.0 0.0 0.0 0.0
113 * 0.0 0.0 0.0 0.0

'US380 McKinney' 60 0.75 0 0 2 0.3048 1 1
'E1' 5065.18 1334.96 -15
'E2' 5084.49 1817.96 -3
'Segment E - 2030' 100 1 1 'C'
1
'WB US380E Frnt1_1' 'AG' 2804.99 1728.8 2473.32 1726.22 1570 1.017 17 34
1
'WB US380E Frnt1_2' 'AG' 2473.32 1726.22 2111.52 1738.02 1570 1.017 24 34
1
'WB US380E Frnt1_3' 'AG' 2111.52 1738.02 1576.1 1783.85 1570 1.017 26 34
1
'WB US380E Frnt2_4' 'AG' 4637.67 1733.89 4061.83 1744.77 600 1.027 -1 34
1
'WB US380E Frnt2_5' 'AG' 4061.83 1744.77 2804.99 1728.8 600 1.027 21 34
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1
'WB US380E Frnt4_7' 'AG' 4917.1 1723.52 4762.69 1729.03 970 1.988 -15 34
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'WB US 380 E 2_2' 'AG' 8780.93 1487.45 5721.04 1608.24 3570 1.23 10 58
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'WB US 380 E 3_3' 'FL' 5721.04 1608.24 4883.11 1640.75 3780 1.23 5 58
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'WB US 380 E 3_4' 'BR' 4883.11 1640.75 4599.09 1650.66 3780 1.23 15 58
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'WB US 380 E 3_5' 'FL' 4599.09 1650.66 4182.91 1659.65 3780 1.23 24 58
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'WB US 380 E 4_6' 'AG' 4182.97 1659.65 2354.05 1641.94 2810 1.332 17 58
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'WB US 380 E 4_7' 'AG' 2354.05 1641.94 2034.45 1658.58 2810 1.332 12 58
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'WB US 380 E 4_8' 'AG' 2034.45 1658.58 1223.73 1724.74 2810 1.332 20 58
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'WB US 380 E 4_11' 'AG' 902.87 1725.79 611.19 1701.22 2810 1.332 15 58
1
'WB US 380 E 4_12' 'AG' 611.19 1701.22 243.3 1635.45 2810 1.332 5 58
1

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'WB US380E OFR1_2' 'AG' 8623.82 1527.13 8325.48 1557.68 720 0.959 8 22
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'WB US380E OFR1_5' 'AG' 7673.82 1606.01 7628.55 1618.72 720 0.959 22 22
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1
'WB US380E ONR_7' 'AG' 6580.48 1628.79 6116.04 1637.13 210 0.974 10 22
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'WB US380E ONR_8' 'AG' 6116.04 1637.13 5781.04 1633.24 210 0.974 6 22
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'WB US380E OFR2_10' 'FL' 4182.91 1659.65 3892.35 1699.13 970 0.962 19 22
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'EB US380E Frnt2_4' 'AG' 3070.78 1474.56 4109.84 1483.24 700 1.007 19 46
1
'EB US380E Frnt2_5' 'AG' 4109.84 1483.24 4598.41 1473.69 700 1.007 -2 46
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'EB US380E Frnt3_6' 'AG' 4598.41 1473.69 4742.33 1469.36 690 1.889 -11 70
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'EB US380E Frnt4_7' 'AG' 4742.39 1469.36 4857.19 1465.29 1160 1.049 -13 34
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'EB US380E Frnt7_10' 'AG' 7738.4 1351.19 9804.19 1270.56 410 1.007 11 46
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'EB US380 E 1_1' 'AG' 258.87 1545.19 665.03 1615.84 2800 1.434 5 58
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'EB US380 E 1_2' 'AG' 665.03 1615.84 821.56 1629.68 2800 1.434 11 58
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'EB US380 E 1_3' 'AG' 821.56 1629.68 1102.68 1637.47 2800 1.434 16 58
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'EB US380 E 1_4' 'AG' 1102.68 1637.47 1353.75 1623.61 2800 1.434 20 58
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'EB US380 E 1_6' 'AG' 2073.42 1563.71 2392.59 1549.8 2800 1.434 10 58
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'EB US380 E 1_7' 'AG' 2392.59 1549.8 4191.3 1567.13 2800 1.434 16 58
1
'EB US380 E 2_8' 'FL' 4191.18 1567.13 4621.71 1558.07 3400 1.282 24 58
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'EB US380 E 2_9' 'BR' 4621.71 1558.07 4859.1 1550.07 3400 1.282 15 58
1
'EB US380 E 2_10' 'FL' 4859.1 1550.07 5762.43 1514.5 3400 1.282 5 58
1
'EB US380 E 3_11' 'AG' 5762.43 1514.5 8841.35 1393.9 3170 1.282 10 58
1
'EB US380 E 4_12' 'DP' 8841.35 1393.9 10788.85 1317.32 4030 1.23 0 58
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'EB US380E ONR1_1' 'AG' 7738.4 1351.19 8056.98 1372.03 970 0.979 16 22
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'EB US380E ONR1_2' 'AG' 8056.98 1372.03 8662.75 1366.35 970 0.979 10 22
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'EB US380E ONR1_3' 'AG' 8662.75 1366.35 8841.35 1393.9 970 0.979 5 22
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'EB US380E OFR_7' 'AG' 6741.01 1416.65 6964.22 1382.63 230 0.987 2 22
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'EB US380E ONR2_9' 'AG' 3151.51 1494.52 3268.69 1509.28 600 0.976 25 22
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'EB US380E ONR2_11' 'FL' 3769.56 1520.56 4115.23 1540.4 600 0.976 17 22
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'EB US380E ONR2_12' 'FL' 4115.23 1540.4 4159.61 1549.96 600 0.976 3 22
1
'EB US380E ONR2_' 'FL' 4159.61 1549.96 4191.18 1567.13 600 0.976 1 22
1
'SB Lake Forest N_1' 'AG' 4884.73 2711.96 4886.12 2424.81 1610 2.249 3 46
1
'SB Lake Forest N_2' 'AG' 4886.12 2424.81 4871.54 2257.13 1610 2.249 -1 46
1
'SB Lake Forest N_3' 'AG' 4871.54 2257.13 4852.09 2153.65 1610 2.249 -5 46
1
'SB Lake Forest N_4' 'AG' 4852.09 2153.65 4761.12 1866.85 1610 2.249 -14 46
1
'SB Lake Forest N_5' 'AG' 4761.12 1866.85 4728.37 1730.37 1610 2.249 -18 58
1
'SB Lake Forest M_6' 'AG' 4728.37 1730.37 4710.25 1470.33 1480 1.789 -17 58
1

'SB Lake Forest S_7' 'AG' 4710.25 1470.33 4682.62 838.75 880 1.003 -13 34
1
'NB Lake Forest S_1' 'AG' 4746.39 839.76 4787.52 1728.15 790 2.901 -15 70
1
'NB Lake Forest M_2' 'AG' 4769.33 1468.41 4787.52 1728.15 950 1.279 -20 58
1
'NB Lake Forest N_3' 'AG' 4787.52 1728.15 4813.9 1844.63 1550 1.003 -20 34
1
'NB Lake Forest N_4' 'AG' 4813.9 1844.63 4900.01 2122.4 1550 1.003 -13 34
1
'NB Lake Forest N_5' 'AG' 4900.01 2122.4 4935.43 2285.6 1550 1.003 -3 34
1
'NB Lake Forest N_6' 'AG' 4935.43 2285.6 4942.37 2375.88 1550 1.003 1 34
1
'NB Lake Forest N_7' 'AG' 4942.37 2375.88 4940.31 2712.01 1550 1.003 4 34
1
'Lake Forest U E_1' 'AG' 4917.1 1723.52 4866.53 1692.69 10 1.626 -20 22
1
'Lake Forest U E_2' 'AG' 4866.53 1692.69 4842.2 1660.06 10 1.626 -20 22
1
'Lake Forest U E_3' 'AG' 4842.2 1660.06 4833.54 1520.81 10 1.626 -22 22
1
'Lake Forest U E_4' 'AG' 4833.54 1520.81 4857.19 1465.29 10 1.626 -26 22
1
'Lake Forest U W_1' 'AG' 4598.41 1473.69 4644.61 1516.62 10 1.626 -13 22
1
'Lake Forest U W_2' 'AG' 4644.61 1516.62 4659.29 1563.15 10 1.626 -14 22
1
'Lake Forest U W_3' 'AG' 4659.29 1563.15 4663.88 1688.72 10 1.626 -14 22
1
'Lake Forest U W_4' 'AG' 4663.88 1688.72 4637.67 1733.89 10 1.626 -13 22
2
'EB US380E Frnt3_6_Q' 'AG' 4598.41 1473.69 4742.33 1469.36 -11 70 5
90 40 2 1600 1.435 1600 1 3
2
'WB US380E Frnt3_6_Q' 'AG' 4762.69 1729.03 4637.67 1733.89 -13 34 2
90 40 2 1600 1.435 1600 1 3
2
'SB Lake Forest M_6_Q' 'AG' 4728.37 1730.37 4710.25 1470.33 -17 58 4
90 50 2 1600 1.435 1600 1 3
2
'SB Lake Forest S_7_Q' 'AG' 4710.25 1470.33 4682.62 838.75 -13 34 2
90 50 2 1600 1.435 1600 1 3
2
'SB Lake Forest N_3_Q' 'AG' 4871.54 2257.13 4852.09 2153.65 -5 46 3
90 50 2 1600 1.435 1600 1 3
2
'SB Lake Forest N_4_Q' 'AG' 4852.09 2153.65 4761.12 1866.85 -14 46 3
90 50 2 1600 1.435 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment E - 2030

DATE : 9/15/22

TIME : 14:55:36

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION V/C QUEUE	* LINK COORDINATES (FT)				* LENGTH BRG TYPE				VPH	EF	H		
		* X1	Y1	X2	Y2	* (FT)	(DEG)	(G/MI)	(FT)				(FT)	(VEH)
1.	WB US380E Frnt1_1	*	2805.0	1728.8	2473.3	1726.2	*	332.	270.	AG	1570.	1.0	17.0	34.0
2.	WB US380E Frnt1_2	*	2473.3	1726.2	2111.5	1738.0	*	362.	272.	AG	1570.	1.0	24.0	34.0
3.	WB US380E Frnt1_3	*	2111.5	1738.0	1576.1	1783.8	*	537.	275.	AG	1570.	1.0	26.0	34.0
4.	WB US380E Frnt2_4	*	4637.7	1733.9	4061.8	1744.8	*	576.	271.	AG	600.	1.0	-1.0	34.0
5.	WB US380E Frnt2_5	*	4061.8	1744.8	2805.0	1728.8	*	1257.	269.	AG	600.	1.0	21.0	34.0
6.	WB US380E Frnt3_6	*	4762.7	1729.0	4637.7	1733.9	*	125.	272.	AG	590.	1.0	-13.0	34.0
7.	WB US380E Frnt4_7	*	4917.1	1723.5	4762.7	1729.0	*	155.	272.	AG	970.	2.0	-15.0	34.0
8.	WB US380E Frnt5_8	*	6848.4	1648.8	6557.0	1667.8	*	292.	274.	AG	980.	1.0	11.0	46.0
9.	WB US380E Frnt5_9	*	6557.0	1667.8	6153.3	1675.6	*	404.	271.	AG	980.	1.0	10.0	46.0
10.	WB US380E Frnt5_10	*	6153.3	1675.6	4917.1	1723.5	*	1237.	272.	AG	980.	1.0	-8.0	46.0
11.	WB US380E Frnt6_11	*	7628.6	1618.7	6848.4	1648.8	*	781.	272.	AG	1190.	1.0	20.0	46.0
12.	WB US380E Frnt7_12	*	9848.1	1530.6	7628.6	1618.7	*	2221.	272.	AG	480.	1.0	14.0	34.0
13.	WB US 380 E 1_1	*	10394.2	1425.1	8780.9	1487.4	*	1614.	272.	AG	4280.	1.2	0.0	58.0
14.	WB US 380 E 2_2	*	8780.9	1487.4	5721.0	1608.2	*	3062.	272.	AG	3570.	1.2	10.0	58.0
15.	WB US 380 E 3_3	*	5721.0	1608.2	4883.1	1640.8	*	839.	272.	FL	3780.	1.2	5.0	58.0
16.	WB US 380 E 3_4	*	4883.1	1640.8	4599.1	1650.7	*	284.	272.	BR	3780.	1.2	15.0	58.0
17.	WB US 380 E 3_5	*	4599.1	1650.7	4182.9	1659.7	*	416.	271.	FL	3780.	1.2	24.0	58.0
18.	WB US 380 E 4_6	*	4183.0	1659.7	2354.1	1641.9	*	1829.	269.	AG	2810.	1.3	17.0	58.0
19.	WB US 380 E 4_7	*	2354.1	1641.9	2034.4	1658.6	*	320.	273.	AG	2810.	1.3	12.0	58.0
20.	WB US 380 E 4_8	*	2034.4	1658.6	1223.7	1724.7	*	813.	275.	AG	2810.	1.3	20.0	58.0
21.	WB US 380 E 4_9	*	1223.7	1724.7	1062.3	1728.4	*	162.	271.	AG	2810.	1.3	23.0	58.0
22.	WB US 380 E 4_10	*	1062.3	1728.4	902.9	1725.8	*	159.	269.	AG	2810.	1.3	18.0	58.0
23.	WB US 380 E 4_11	*	902.9	1725.8	611.2	1701.2	*	293.	265.	AG	2810.	1.3	15.0	58.0
24.	WB US 380 E 4_12	*	611.2	1701.2	243.3	1635.4	*	374.	260.	AG	2810.	1.3	5.0	58.0
25.	WB US380E OFR1_1	*	8780.9	1487.4	8623.8	1527.1	*	162.	284.	AG	720.	1.0	6.0	22.0
26.	WB US380E OFR1_2	*	8623.8	1527.1	8325.5	1557.7	*	300.	276.	AG	720.	1.0	8.0	22.0
27.	WB US380E OFR1_3	*	8325.5	1557.7	7831.0	1585.5	*	495.	273.	AG	720.	1.0	13.0	22.0
28.	WB US380E OFR1_4	*	7831.0	1585.5	7673.8	1606.0	*	159.	277.	AG	720.	1.0	21.0	22.0
29.	WB US380E OFR1_5	*	7673.8	1606.0	7628.6	1618.7	*	47.	286.	AG	720.	1.0	22.0	22.0
30.	WB US380E ONR_6	*	6848.4	1648.8	6580.5	1628.8	*	269.	266.	FL	210.	1.0	5.0	22.0
31.	WB US380E ONR_7	*	6580.5	1628.8	6116.0	1637.1	*	465.	271.	AG	210.	1.0	10.0	22.0
32.	WB US380E ONR_8	*	6116.0	1637.1	5781.0	1633.2	*	335.	269.	AG	210.	1.0	6.0	22.0

33. WB US380E ONR_9 * 5781.0 1633.2 5721.0 1608.2 * 65. 247. FL 210. 1.0 -2.0 22.0
34. WB US380E OFR2_10 * 4182.9 1659.7 3892.4 1699.1 * 293. 278. FL 970. 1.0 19.0 22.0
35. WB US380E OFR2_11 * 3892.4 1699.1 3204.2 1701.9 * 688. 270. AG 970. 1.0 19.0 22.0
36. WB US380E OFR2_12 * 3204.2 1701.9 3002.8 1709.6 * 202. 272. AG 970. 1.0 22.0 22.0
37. WB US380E OFR2_ * 3002.8 1709.6 2805.0 1728.8 * 199. 276. AG 970. 1.0 20.0 22.0
38. EB US380E Frnt1_1 * 1628.9 1512.8 2183.6 1473.7 * 556. 94. AG 1300. 1.0 22.0 46.0
39. EB US380E Frnt1_2 * 2183.6 1473.7 2881.5 1479.8 * 698. 90. AG 1300. 1.0 20.0 46.0
40. EB US380E Frnt1_3 * 2881.5 1479.8 3070.8 1474.6 * 189. 92. AG 1300. 1.0 23.0 46.0
41. EB US380E Frnt2_4 * 3070.8 1474.6 4109.8 1483.2 * 1039. 90. AG 700. 1.0 19.0 46.0
42. EB US380E Frnt2_5 * 4109.8 1483.2 4598.4 1473.7 * 489. 91. AG 700. 1.0 -2.0 46.0
43. EB US380E Frnt3_6 * 4598.4 1473.7 4742.3 1469.4 * 144. 92. AG 690. 1.9 -11.0 70.0
44. EB US380E Frnt4_7 * 4742.4 1469.4 4857.2 1465.3 * 115. 92. AG 1160. 1.0 -13.0 34.0

PAGE 2

JOB: US380 McKinney

RUN: Segment E - 2030

DATE : 9/15/22

TIME : 14:55:36

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
45. EB US380E Frnt5_8	* 4857.2	1465.3	6964.2	1382.6	* 2109. 92. AG	1170.	1.0	4.0	34.0		
46. EB US380E Frnt6_9	* 6964.2	1382.6	7738.4	1351.2	* 775. 92. AG	1380.	1.0	16.0	46.0		
47. EB US380E Frnt7_10	* 7738.4	1351.2	9804.2	1270.6	* 2067. 92. AG	410.	1.0	11.0	46.0		
48. EB US380 E 1_1	* 258.9	1545.2	665.0	1615.8	* 412. 80. AG	2800.	1.4	5.0	58.0		
49. EB US380 E 1_2	* 665.0	1615.8	821.6	1629.7	* 157. 85. AG	2800.	1.4	11.0	58.0		
50. EB US380 E 1_3	* 821.6	1629.7	1102.7	1637.5	* 281. 88. AG	2800.	1.4	16.0	58.0		
51. EB US380 E 1_4	* 1102.7	1637.5	1353.8	1623.6	* 251. 93. AG	2800.	1.4	20.0	58.0		
52. EB US380 E 1_5	* 1353.8	1623.6	2073.4	1563.7	* 722. 95. AG	2800.	1.4	23.0	58.0		
53. EB US380 E 1_6	* 2073.4	1563.7	2392.6	1549.8	* 319. 92. AG	2800.	1.4	10.0	58.0		
54. EB US380 E 1_7	* 2392.6	1549.8	4191.3	1567.1	* 1799. 89. AG	2800.	1.4	16.0	58.0		
55. EB US380 E 2_8	* 4191.2	1567.1	4621.7	1558.1	* 431. 91. FL	3400.	1.3	24.0	58.0		
56. EB US380 E 2_9	* 4621.7	1558.1	4859.1	1550.1	* 238. 92. BR	3400.	1.3	15.0	58.0		
57. EB US380 E 2_10	* 4859.1	1550.1	5762.4	1514.5	* 904. 92. FL	3400.	1.3	5.0	58.0		
58. EB US380 E 3_11	* 5762.4	1514.5	8841.4	1393.9	* 3081. 92. AG	3170.	1.3	10.0	58.0		
59. EB US380 E 4_12	* 8841.4	1393.9	10788.8	1317.3	* 1949. 92. DP	4030.	1.2	0.0	58.0		
60. EB US380E ONR1_1	* 7738.4	1351.2	8057.0	1372.0	* 319. 86. AG	970.	1.0	16.0	22.0		
61. EB US380E ONR1_2	* 8057.0	1372.0	8662.8	1366.3	* 606. 91. AG	970.	1.0	10.0	22.0		
62. EB US380E ONR1_3	* 8662.8	1366.3	8841.4	1393.9	* 181. 81. AG	970.	1.0	5.0	22.0		
63. EB US380E OFR_4	* 5762.4	1514.5	5853.9	1481.8	* 97. 110. AG	230.	1.0	4.0	22.0		
64. EB US380E OFR_5	* 5853.9	1481.8	6325.2	1436.6	* 474. 95. AG	230.	1.0	7.0	22.0		
65. EB US380E OFR_6	* 6325.2	1436.6	6741.0	1416.7	* 416. 93. AG	230.	1.0	4.0	22.0		
66. EB US380E OFR_7	* 6741.0	1416.7	6964.2	1382.6	* 226. 99. AG	230.	1.0	2.0	22.0		
67. EB US380E ONR2_8	* 3070.8	1474.6	3151.5	1494.5	* 83. 76. AG	600.	1.0	26.0	22.0		
68. EB US380E ONR2_9	* 3151.5	1494.5	3268.7	1509.3	* 118. 83. AG	600.	1.0	25.0	22.0		
69. EB US380E ONR2_10	* 3268.7	1509.3	3769.6	1520.6	* 501. 89. AG	600.	1.0	22.0	22.0		
70. EB US380E ONR2_11	* 3769.6	1520.6	4115.2	1540.4	* 346. 87. FL	600.	1.0	17.0	22.0		
71. EB US380E ONR2_12	* 4115.2	1540.4	4159.6	1550.0	* 45. 78. FL	600.	1.0	3.0	22.0		
72. EB US380E ONR2_	* 4159.6	1550.0	4191.2	1567.1	* 36. 61. FL	600.	1.0	1.0	22.0		
73. SB Lake Forest N_1	* 4884.7	2712.0	4886.1	2424.8	* 287. 180. AG	1610.	2.2	3.0	46.0		
74. SB Lake Forest N_2	* 4886.1	2424.8	4871.5	2257.1	* 168. 185. AG	1610.	2.2	-1.0	46.0		

75. SB Lake Forest N_3 * 4871.5 2257.1 4852.1 2153.6 * 105. 191. AG 1610. 2.2 -5.0 46.0
76. SB Lake Forest N_4 * 4852.1 2153.6 4761.1 1866.8 * 301. 198. AG 1610. 2.2 -14.0 46.0
77. SB Lake Forest N_5 * 4761.1 1866.8 4728.4 1730.4 * 140. 193. AG 1610. 2.2 -18.0 58.0
78. SB Lake Forest M_6 * 4728.4 1730.4 4710.3 1470.3 * 261. 184. AG 1480. 1.8 -17.0 58.0
79. SB Lake Forest S_7 * 4710.3 1470.3 4682.6 838.8 * 632. 183. AG 880. 1.0 -13.0 34.0
80. NB Lake Forest S_1 * 4746.4 839.8 4787.5 1728.1 * 889. 3. AG 790. 2.9 -15.0 70.0
81. NB Lake Forest M_2 * 4769.3 1468.4 4787.5 1728.1 * 260. 4. AG 950. 1.3 -20.0 58.0
82. NB Lake Forest N_3 * 4787.5 1728.1 4813.9 1844.6 * 119. 13. AG 1550. 1.0 -20.0 34.0
83. NB Lake Forest N_4 * 4813.9 1844.6 4900.0 2122.4 * 291. 17. AG 1550. 1.0 -13.0 34.0
84. NB Lake Forest N_5 * 4900.0 2122.4 4935.4 2285.6 * 167. 12. AG 1550. 1.0 -3.0 34.0
85. NB Lake Forest N_6 * 4935.4 2285.6 4942.4 2375.9 * 91. 4. AG 1550. 1.0 1.0 34.0
86. NB Lake Forest N_7 * 4942.4 2375.9 4940.3 2712.0 * 336. 360. AG 1550. 1.0 4.0 34.0
87. Lake Forest U E_1 * 4917.1 1723.5 4866.5 1692.7 * 59. 239. AG 10. 1.6 -20.0 22.0
88. Lake Forest U E_2 * 4866.5 1692.7 4842.2 1660.1 * 41. 217. AG 10. 1.6 -20.0 22.0
89. Lake Forest U E_3 * 4842.2 1660.1 4833.5 1520.8 * 140. 184. AG 10. 1.6 -22.0 22.0
90. Lake Forest U E_4 * 4833.5 1520.8 4857.2 1465.3 * 60. 157. AG 10. 1.6 -26.0 22.0
91. Lake Forest U W_1 * 4598.4 1473.7 4644.6 1516.6 * 63. 47. AG 10. 1.6 -13.0 22.0
92. Lake Forest U W_2 * 4644.6 1516.6 4659.3 1563.2 * 49. 18. AG 10. 1.6 -14.0 22.0
93. Lake Forest U W_3 * 4659.3 1563.2 4663.9 1688.7 * 126. 2. AG 10. 1.6 -14.0 22.0
94. Lake Forest U W_4 * 4663.9 1688.7 4637.7 1733.9 * 52. 330. AG 10. 1.6 -13.0 22.0
95. EB US380E Frnt3_6_Q * 4598.4 1473.7 4668.4 1471.6 * 70. 92. AG 9. 100.0 -11.0 70.0 0.39

3.6

PAGE 3

JOB: US380 McKinney

RUN: Segment E - 2030

DATE : 9/15/22

TIME : 14:55:36

LINK VARIABLES

LINK DESCRIPTION * LINK COORDINATES (FT) * LENGTH BRG TYPE VPH EF H
W V/C QUEUE
* X1 Y1 X2 Y2 * (FT) (DEG) (G/MI) (FT) (FT) (VEH)
-----*

96. WB US380E Frnt3_6_Q * 4762.7 1729.0 4478.7 1740.1 * 284. 272. AG 3. 100.0 -13.0 34.0 0.98
14.4
97. SB Lake Forest M_6_Q* 4728.4 1730.4 4720.8 1621.3 * 109. 184. AG 9. 100.0 -17.0 58.0 0.62
5.6
98. SB Lake Forest S_7_Q* 4710.3 1470.3 4625.1 -475.6 * 1948. 183. AG 4. 100.0 -13.0 34.0 1.25
98.9
99. SB Lake Forest N_3_Q* 4871.5 2257.1 4841.8 2099.1 * 161. 191. AG 6. 100.0 -5.0 46.0 0.83
8.2
100. SB Lake Forest N_4_Q* 4852.1 2153.6 4803.5 2000.4 * 161. 198. AG 6. 100.0 -14.0 46.0 0.83
8.2

PAGE 4

JOB: US380 McKinney

RUN: Segment E - 2030

DATE : 9/15/22

TIME : 14:55:36

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
ARRIVAL

	* LENGTH (SEC)	TIME (SEC)	LOST TIME (VPH)	VOL (VPH)	FLOW RATE (gm/hr)	EM FAC	TYPE	RATE
95.	EB US380E Frnt3_6_Q*	90	40	2.0	1600	1600	1.43	1 3
96.	WB US380E Frnt3_6_Q*	90	40	2.0	1600	1600	1.43	1 3
97.	SB Lake Forest M_6_Q*	90	50	2.0	1600	1600	1.43	1 3
98.	SB Lake Forest S_7_Q*	90	50	2.0	1600	1600	1.43	1 3
99.	SB Lake Forest N_3_Q*	90	50	2.0	1600	1600	1.43	1 3
100.	SB Lake Forest N_4_Q*	90	50	2.0	1600	1600	1.43	1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. E1	* 5065.2	1335.0	-15.0	*	
2. E2	* 5084.5	1818.0	-3.0	*	

JOB: US380 McKinney

RUN: Segment E - 2030

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2

0.	* 0.0	0.0
10.	* 0.0	0.0
20.	* 0.0	0.0
30.	* 0.0	0.0
40.	* 0.0	0.0
50.	* 0.0	0.0
60.	* 0.1	0.0
70.	* 0.1	0.0
80.	* 0.2	0.0
90.	* 0.0	0.0
100.	* 0.0	0.1
110.	* 0.0	0.0
120.	* 0.0	0.1
130.	* 0.0	0.1
140.	* 0.0	0.1
150.	* 0.0	0.1
160.	* 0.0	0.1
170.	* 0.0	0.1
180.	* 0.0	0.1
190.	* 0.0	0.1

200. * 0.0 0.1
210. * 0.0 0.1
220. * 0.0 0.1
230. * 0.0 0.0
240. * 0.0 0.1
250. * 0.0 0.0
260. * 0.0 0.0
270. * 0.0 0.0
280. * 0.0 0.0
290. * 0.0 0.0
300. * 0.0 0.0
310. * 0.0 0.0
320. * 0.0 0.0
330. * 0.0 0.0
340. * 0.0 0.0
350. * 0.0 0.0
360. * 0.0 0.0

-----*-----
MAX * 0.2 0.1
DEGR. * 80 100

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC1 .

PAGE 6

JOB: US380 McKinney

RUN: Segment E - 2030

DATE : 9/15/22

TIME : 14:55:36

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2
LINK # * 80 100

-----*-----
1 * 0.0 0.0
2 * 0.0 0.0
3 * 0.0 0.0
4 * 0.0 0.0
5 * 0.0 0.0
6 * 0.0 0.0
7 * 0.0 0.0
8 * 0.0 0.0
9 * 0.0 0.0
10 * 0.0 0.0
11 * 0.0 0.0
12 * 0.0 0.0
13 * 0.0 0.0
14 * 0.1 0.1
15 * 0.0 0.0
16 * 0.0 0.0
17 * 0.0 0.0

18 * 0.0 0.0
19 * 0.0 0.0
20 * 0.0 0.0
21 * 0.0 0.0
22 * 0.0 0.0
23 * 0.0 0.0
24 * 0.0 0.0
25 * 0.0 0.0
26 * 0.0 0.0
27 * 0.0 0.0
28 * 0.0 0.0
29 * 0.0 0.0
30 * 0.0 0.0
31 * 0.0 0.0
32 * 0.0 0.0
33 * 0.0 0.0
34 * 0.0 0.0
35 * 0.0 0.0
36 * 0.0 0.0
37 * 0.0 0.0
38 * 0.0 0.0
39 * 0.0 0.0
40 * 0.0 0.0
41 * 0.0 0.0
42 * 0.0 0.0
43 * 0.0 0.0
44 * 0.0 0.0
45 * 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment E - 2030

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2

LINK # * 80 100

-----*-----
46 * 0.0 0.0
47 * 0.0 0.0
48 * 0.0 0.0
49 * 0.0 0.0
50 * 0.0 0.0
51 * 0.0 0.0
52 * 0.0 0.0
53 * 0.0 0.0
54 * 0.0 0.0
55 * 0.0 0.0
56 * 0.0 0.0
57 * 0.0 0.0
58 * 0.1 0.0
59 * 0.0 0.0
60 * 0.0 0.0
61 * 0.0 0.0
62 * 0.0 0.0
63 * 0.0 0.0

64 * 0.0 0.0
65 * 0.0 0.0
66 * 0.0 0.0
67 * 0.0 0.0
68 * 0.0 0.0
69 * 0.0 0.0
70 * 0.0 0.0
71 * 0.0 0.0
72 * 0.0 0.0
73 * 0.0 0.0
74 * 0.0 0.0
75 * 0.0 0.0
76 * 0.0 0.0
77 * 0.0 0.0
78 * 0.0 0.0
79 * 0.0 0.0
80 * 0.0 0.0
81 * 0.0 0.0
82 * 0.0 0.0
83 * 0.0 0.0
84 * 0.0 0.0
85 * 0.0 0.0
86 * 0.0 0.0
87 * 0.0 0.0
88 * 0.0 0.0
89 * 0.0 0.0
90 * 0.0 0.0
91 * 0.0 0.0
92 * 0.0 0.0
93 * 0.0 0.0
94 * 0.0 0.0
95 * 0.0 0.0
96 * 0.0 0.0
97 * 0.0 0.0
98 * 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment E - 2030

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2
LINK # * 80 100
-----*-----
99 * 0.0 0.0
100 * 0.0 0.0

'US380 McKinney' 60 0.75 0 0 2 0.3048 1 1
'E1' 5065.18 1334.96 -15
'E2' 5084.49 1817.96 -3
'Segment E - 2050' 100 1 1 'C'
1
'WB US380E Frnt1_1' 'AG' 2804.99 1728.8 2473.32 1726.22 2370 0.593 17 34
1
'WB US380E Frnt1_2' 'AG' 2473.32 1726.22 2111.52 1738.02 2370 0.593 24 34
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'WB US380E Frnt1_3' 'AG' 2111.52 1738.02 1576.1 1783.85 2370 0.593 26 34
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'WB US380E Frnt2_4' 'AG' 4637.67 1733.89 4061.83 1744.77 900 0.598 -1 34
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'WB US380E Frnt2_5' 'AG' 4061.83 1744.77 2804.99 1728.8 900 0.598 21 34
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'WB US380E Frnt3_6' 'AG' 4762.69 1729.03 4637.67 1733.89 880 0.598 -13 34
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'WB US380E Frnt4_7' 'AG' 4917.1 1723.52 4762.69 1729.03 1460 1.107 -15 34
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'WB US380E Frnt5_8' 'AG' 6848.36 1648.84 6556.98 1667.77 1480 0.593 11 46
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'WB US380E Frnt5_10' 'AG' 6153.33 1675.59 4917.1 1723.52 1480 0.593 -8 46
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'WB US 380 E 2_2' 'AG' 8780.93 1487.45 5721.04 1608.24 5360 0.771 10 58
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'WB US 380 E 3_3' 'FL' 5721.04 1608.24 4883.11 1640.75 5680 0.771 5 58
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'WB US 380 E 3_4' 'BR' 4883.11 1640.75 4599.09 1650.66 5680 0.771 15 58
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'WB US 380 E 4_6' 'AG' 4182.97 1659.65 2354.05 1641.94 4210 0.842 17 58
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'WB US 380 E 4_7' 'AG' 2354.05 1641.94 2034.45 1658.58 4210 0.842 12 58
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'WB US 380 E 4_9' 'AG' 1223.73 1724.74 1062.26 1728.4 4210 0.842 23 58
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'WB US380E OFR1_1' 'AG' 8780.93 1487.45 8623.82 1527.13 1080 0.572 6 22
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'WB US380E OFR1_2' 'AG' 8623.82 1527.13 8325.48 1557.68 1080 0.572 8 22
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'WB US380E OFR1_5' 'AG' 7673.82 1606.01 7628.55 1618.72 1080 0.572 22 22
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'EB US380E Frnt1_2' 'AG' 2183.62 1473.69 2881.54 1479.77 1920 0.593 20 46
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'EB US380E Frnt1_3' 'AG' 2881.54 1479.77 3070.78 1474.56 1920 0.593 23 46
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'EB US380E Frnt2_5' 'AG' 4109.84 1483.24 4598.41 1473.69 1050 0.589 -2 46
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'EB US380E Frnt4_7' 'AG' 4742.39 1469.36 4857.19 1465.29 1850 0.608 -13 34
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'EB US380E Frnt5_8' 'AG' 4857.19 1465.29 6964.22 1382.63 1870 0.608 4 34
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'EB US380E Frnt6_9' 'AG' 6964.22 1382.63 7738.4 1351.19 2090 0.603 16 46
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'EB US380E Frnt7_10' 'AG' 7738.4 1351.19 9804.19 1270.56 630 0.589 11 46
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'EB US380 E 1_1' 'AG' 258.87 1545.19 665.03 1615.84 4170 0.911 5 58
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'EB US380 E 1_2' 'AG' 665.03 1615.84 821.56 1629.68 4170 0.911 11 58
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'EB US380 E 1_3' 'AG' 821.56 1629.68 1102.68 1637.47 4170 0.911 16 58
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'EB US380 E 1_4' 'AG' 1102.68 1637.47 1353.75 1623.61 4170 0.911 20 58
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'EB US380 E 1_5' 'AG' 1353.75 1623.61 2073.42 1563.71 4170 0.911 23 58
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'EB US380 E 1_7' 'AG' 2392.59 1549.8 4191.3 1567.13 4170 0.911 16 58
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'EB US380 E 2_9' 'BR' 4621.71 1558.07 4859.1 1550.07 5040 0.807 15 58
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'EB US380 E 2_10' 'FL' 4859.1 1550.07 5762.43 1514.5 5040 0.807 5 58
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'EB US380 E 4_12' 'DP' 8841.35 1393.9 10788.85 1317.32 6010 0.771 0 58
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'EB US380E ONR1_3' 'AG' 8662.75 1366.35 8841.35 1393.9 1460 0.578 5 22
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'EB US380E OFR_4' 'AG' 5762.43 1514.5 5853.85 1481.75 310 0.597 4 22
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'SB Lake Forest N_1' 'AG' 4884.73 2711.96 4886.12 2424.81 2410 1.231 3 46
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'SB Lake Forest N_2' 'AG' 4886.12 2424.81 4871.54 2257.13 2410 1.231 -1 46
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'SB Lake Forest N_3' 'AG' 4871.54 2257.13 4852.09 2153.65 2410 1.231 -5 46
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'SB Lake Forest N_4' 'AG' 4852.09 2153.65 4761.12 1866.85 2410 1.231 -14 46
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'SB Lake Forest N_5' 'AG' 4761.12 1866.85 4728.37 1730.37 2410 1.231 -18 58
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'SB Lake Forest M_6' 'AG' 4728.37 1730.37 4710.25 1470.33 2220 1.014 -17 58
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'SB Lake Forest S_7' 'AG' 4710.25 1470.33 4682.62 838.75 1340 0.591 -13 34
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'NB Lake Forest S_1' 'AG' 4746.39 839.76 4787.52 1728.15 1190 1.542 -15 70
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'NB Lake Forest M_2' 'AG' 4769.33 1468.41 4787.52 1728.15 1300 0.71 -20 58
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'NB Lake Forest N_3' 'AG' 4787.52 1728.15 4813.9 1844.63 2200 0.591 -20 34
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'NB Lake Forest N_4' 'AG' 4813.9 1844.63 4900.01 2122.4 2200 0.591 -13 34
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'NB Lake Forest N_5' 'AG' 4900.01 2122.4 4935.43 2285.6 2200 0.591 -3 34
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'NB Lake Forest N_6' 'AG' 4935.43 2285.6 4942.37 2375.88 2200 0.591 1 34
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'NB Lake Forest N_7' 'AG' 4942.37 2375.88 4940.31 2712.01 2200 0.591 4 34
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'Lake Forest U E_1' 'AG' 4917.1 1723.52 4866.53 1692.69 20 0.922 -20 22
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'Lake Forest U E_2' 'AG' 4866.53 1692.69 4842.2 1660.06 20 0.922 -20 22
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'Lake Forest U E_3' 'AG' 4842.2 1660.06 4833.54 1520.81 20 0.922 -22 22
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'Lake Forest U E_4' 'AG' 4833.54 1520.81 4857.19 1465.29 20 0.922 -26 22
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'Lake Forest U W_1' 'AG' 4598.41 1473.69 4644.61 1516.62 20 0.922 -13 22
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'Lake Forest U W_2' 'AG' 4644.61 1516.62 4659.29 1563.15 20 0.922 -14 22
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'Lake Forest U W_3' 'AG' 4659.29 1563.15 4663.88 1688.72 20 0.922 -14 22
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'Lake Forest U W_4' 'AG' 4663.88 1688.72 4637.67 1733.89 20 0.922 -13 22
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'EB US380E Frnt3_6_Q' 'AG' 4598.41 1473.69 4742.33 1469.36 -11 70 5
90 40 2 1030 0.532 1600 1 3
2
'WB US380E Frnt3_6_Q' 'AG' 4762.69 1729.03 4637.67 1733.89 -13 34 2
90 40 2 880 0.532 1600 1 3
2
'SB Lake Forest M_6_Q' 'AG' 4728.37 1730.37 4710.25 1470.33 -17 58 4
90 50 2 2220 0.532 1600 1 3
2
'SB Lake Forest S_7_Q' 'AG' 4710.25 1470.33 4682.62 838.75 -13 34 2
90 50 2 1340 0.532 1600 1 3
2
'SB Lake Forest N_3_Q' 'AG' 4871.54 2257.13 4852.09 2153.65 -5 46 3
90 50 2 2410 0.532 1600 1 3
2
'SB Lake Forest N_4_Q' 'AG' 4852.09 2153.65 4761.12 1866.85 -14 46 3
90 50 2 2410 0.532 1600 1 3
1 0 4 1000 0 'Y' 10 0 36

1

JOB: US380 McKinney

RUN: Segment E - 2050

DATE : 9/15/22

TIME : 14:55:36

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 1. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

W	LINK DESCRIPTION	* V/C QUEUE	* X1	Y1	X2	Y2	* (FT) (DEG)	* (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
1.	WB US380E Frnt1_1	*	2805.0	1728.8	2473.3	1726.2	*	332.	270.	AG	2370.	0.6	17.0 34.0
2.	WB US380E Frnt1_2	*	2473.3	1726.2	2111.5	1738.0	*	362.	272.	AG	2370.	0.6	24.0 34.0
3.	WB US380E Frnt1_3	*	2111.5	1738.0	1576.1	1783.8	*	537.	275.	AG	2370.	0.6	26.0 34.0
4.	WB US380E Frnt2_4	*	4637.7	1733.9	4061.8	1744.8	*	576.	271.	AG	900.	0.6	-1.0 34.0
5.	WB US380E Frnt2_5	*	4061.8	1744.8	2805.0	1728.8	*	1257.	269.	AG	900.	0.6	21.0 34.0
6.	WB US380E Frnt3_6	*	4762.7	1729.0	4637.7	1733.9	*	125.	272.	AG	880.	0.6	-13.0 34.0
7.	WB US380E Frnt4_7	*	4917.1	1723.5	4762.7	1729.0	*	155.	272.	AG	1460.	1.1	-15.0 34.0
8.	WB US380E Frnt5_8	*	6848.4	1648.8	6557.0	1667.8	*	292.	274.	AG	1480.	0.6	11.0 46.0
9.	WB US380E Frnt5_9	*	6557.0	1667.8	6153.3	1675.6	*	404.	271.	AG	1480.	0.6	10.0 46.0
10.	WB US380E Frnt5_10	*	6153.3	1675.6	4917.1	1723.5	*	1237.	272.	AG	1480.	0.6	-8.0 46.0
11.	WB US380E Frnt6_11	*	7628.6	1618.7	6848.4	1648.8	*	781.	272.	AG	1800.	0.6	20.0 46.0
12.	WB US380E Frnt7_12	*	9848.1	1530.6	7628.6	1618.7	*	2221.	272.	AG	740.	0.6	14.0 34.0
13.	WB US 380 E 1_1	*	10394.2	1425.1	8780.9	1487.4	*	1614.	272.	AG	6420.	0.7	0.0 58.0
14.	WB US 380 E 2_2	*	8780.9	1487.4	5721.0	1608.2	*	3062.	272.	AG	5360.	0.8	10.0 58.0
15.	WB US 380 E 3_3	*	5721.0	1608.2	4883.1	1640.8	*	839.	272.	FL	5680.	0.8	5.0 58.0
16.	WB US 380 E 3_4	*	4883.1	1640.8	4599.1	1650.7	*	284.	272.	BR	5680.	0.8	15.0 58.0
17.	WB US 380 E 3_5	*	4599.1	1650.7	4182.9	1659.7	*	416.	271.	FL	5680.	0.8	24.0 58.0
18.	WB US 380 E 4_6	*	4183.0	1659.7	2354.1	1641.9	*	1829.	269.	AG	4210.	0.8	17.0 58.0
19.	WB US 380 E 4_7	*	2354.1	1641.9	2034.4	1658.6	*	320.	273.	AG	4210.	0.8	12.0 58.0
20.	WB US 380 E 4_8	*	2034.4	1658.6	1223.7	1724.7	*	813.	275.	AG	4210.	0.8	20.0 58.0
21.	WB US 380 E 4_9	*	1223.7	1724.7	1062.3	1728.4	*	162.	271.	AG	4210.	0.8	23.0 58.0
22.	WB US 380 E 4_10	*	1062.3	1728.4	902.9	1725.8	*	159.	269.	AG	4210.	0.8	18.0 58.0
23.	WB US 380 E 4_11	*	902.9	1725.8	611.2	1701.2	*	293.	265.	AG	4210.	0.8	15.0 58.0
24.	WB US 380 E 4_12	*	611.2	1701.2	243.3	1635.4	*	374.	260.	AG	4210.	0.8	5.0 58.0
25.	WB US380E OFR1_1	*	8780.9	1487.4	8623.8	1527.1	*	162.	284.	AG	1080.	0.6	6.0 22.0
26.	WB US380E OFR1_2	*	8623.8	1527.1	8325.5	1557.7	*	300.	276.	AG	1080.	0.6	8.0 22.0
27.	WB US380E OFR1_3	*	8325.5	1557.7	7831.0	1585.5	*	495.	273.	AG	1080.	0.6	13.0 22.0
28.	WB US380E OFR1_4	*	7831.0	1585.5	7673.8	1606.0	*	159.	277.	AG	1080.	0.6	21.0 22.0
29.	WB US380E OFR1_5	*	7673.8	1606.0	7628.6	1618.7	*	47.	286.	AG	1080.	0.6	22.0 22.0
30.	WB US380E ONR_6	*	6848.4	1648.8	6580.5	1628.8	*	269.	266.	FL	320.	0.6	5.0 22.0
31.	WB US380E ONR_7	*	6580.5	1628.8	6116.0	1637.1	*	465.	271.	AG	320.	0.6	10.0 22.0
32.	WB US380E ONR_8	*	6116.0	1637.1	5781.0	1633.2	*	335.	269.	AG	320.	0.6	6.0 22.0

33. WB US380E ONR_9 * 5781.0 1633.2 5721.0 1608.2 * 65. 247. FL 320. 0.6 -2.0 22.0
 34. WB US380E OFR2_10 * 4182.9 1659.7 3892.4 1699.1 * 293. 278. FL 1470. 0.6 19.0 22.0
 35. WB US380E OFR2_11 * 3892.4 1699.1 3204.2 1701.9 * 688. 270. AG 1470. 0.6 19.0 22.0
 36. WB US380E OFR2_12 * 3204.2 1701.9 3002.8 1709.6 * 202. 272. AG 1470. 0.6 22.0 22.0
 37. WB US380E OFR2_ * 3002.8 1709.6 2805.0 1728.8 * 199. 276. AG 1470. 0.6 20.0 22.0
 38. EB US380E Frnt1_1 * 1628.9 1512.8 2183.6 1473.7 * 556. 94. AG 1920. 0.6 22.0 46.0
 39. EB US380E Frnt1_2 * 2183.6 1473.7 2881.5 1479.8 * 698. 90. AG 1920. 0.6 20.0 46.0
 40. EB US380E Frnt1_3 * 2881.5 1479.8 3070.8 1474.6 * 189. 92. AG 1920. 0.6 23.0 46.0
 41. EB US380E Frnt2_4 * 3070.8 1474.6 4109.8 1483.2 * 1039. 90. AG 1050. 0.6 19.0 46.0
 42. EB US380E Frnt2_5 * 4109.8 1483.2 4598.4 1473.7 * 489. 91. AG 1050. 0.6 -2.0 46.0
 43. EB US380E Frnt3_6 * 4598.4 1473.7 4742.3 1469.4 * 144. 92. AG 1030. 1.1 -11.0 70.0
 44. EB US380E Frnt4_7 * 4742.4 1469.4 4857.2 1465.3 * 115. 92. AG 1850. 0.6 -13.0 34.0

PAGE 2

JOB: US380 McKinney

RUN: Segment E - 2050

DATE : 9/15/22

TIME : 14:55:36

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	45. EB US380E Frnt5_8	* 4857.2	1465.3	6964.2	1382.6	* 2109.	92. AG	1870.	0.6	4.0	34.0	
	46. EB US380E Frnt6_9	* 6964.2	1382.6	7738.4	1351.2	* 775.	92. AG	2090.	0.6	16.0	46.0	
	47. EB US380E Frnt7_10	* 7738.4	1351.2	9804.2	1270.6	* 2067.	92. AG	630.	0.6	11.0	46.0	
	48. EB US380 E 1_1	* 258.9	1545.2	665.0	1615.8	* 412.	80. AG	4170.	0.9	5.0	58.0	
	49. EB US380 E 1_2	* 665.0	1615.8	821.6	1629.7	* 157.	85. AG	4170.	0.9	11.0	58.0	
	50. EB US380 E 1_3	* 821.6	1629.7	1102.7	1637.5	* 281.	88. AG	4170.	0.9	16.0	58.0	
	51. EB US380 E 1_4	* 1102.7	1637.5	1353.8	1623.6	* 251.	93. AG	4170.	0.9	20.0	58.0	
	52. EB US380 E 1_5	* 1353.8	1623.6	2073.4	1563.7	* 722.	95. AG	4170.	0.9	23.0	58.0	
	53. EB US380 E 1_6	* 2073.4	1563.7	2392.6	1549.8	* 319.	92. AG	4170.	0.9	10.0	58.0	
	54. EB US380 E 1_7	* 2392.6	1549.8	4191.3	1567.1	* 1799.	89. AG	4170.	0.9	16.0	58.0	
	55. EB US380 E 2_8	* 4191.2	1567.1	4621.7	1558.1	* 431.	91. FL	5040.	0.8	24.0	58.0	
	56. EB US380 E 2_9	* 4621.7	1558.1	4859.1	1550.1	* 238.	92. BR	5040.	0.8	15.0	58.0	
	57. EB US380 E 2_10	* 4859.1	1550.1	5762.4	1514.5	* 904.	92. FL	5040.	0.8	5.0	58.0	
	58. EB US380 E 3_11	* 5762.4	1514.5	8841.4	1393.9	* 3081.	92. AG	4730.	0.8	10.0	58.0	
	59. EB US380 E 4_12	* 8841.4	1393.9	10788.8	1317.3	* 1949.	92. DP	6010.	0.8	0.0	58.0	
	60. EB US380E ONR1_1	* 7738.4	1351.2	8057.0	1372.0	* 319.	86. AG	1460.	0.6	16.0	22.0	
	61. EB US380E ONR1_2	* 8057.0	1372.0	8662.8	1366.3	* 606.	91. AG	1460.	0.6	10.0	22.0	
	62. EB US380E ONR1_3	* 8662.8	1366.3	8841.4	1393.9	* 181.	81. AG	1460.	0.6	5.0	22.0	
	63. EB US380E OFR_4	* 5762.4	1514.5	5853.9	1481.8	* 97.	110. AG	310.	0.6	4.0	22.0	
	64. EB US380E OFR_5	* 5853.9	1481.8	6325.2	1436.6	* 474.	95. AG	310.	0.6	7.0	22.0	
	65. EB US380E OFR_6	* 6325.2	1436.6	6741.0	1416.7	* 416.	93. AG	310.	0.6	4.0	22.0	
	66. EB US380E OFR_7	* 6741.0	1416.7	6964.2	1382.6	* 226.	99. AG	310.	0.6	2.0	22.0	
	67. EB US380E ONR2_8	* 3070.8	1474.6	3151.5	1494.5	* 83.	76. AG	870.	0.6	26.0	22.0	
	68. EB US380E ONR2_9	* 3151.5	1494.5	3268.7	1509.3	* 118.	83. AG	870.	0.6	25.0	22.0	
	69. EB US380E ONR2_10	* 3268.7	1509.3	3769.6	1520.6	* 501.	89. AG	870.	0.6	22.0	22.0	
	70. EB US380E ONR2_11	* 3769.6	1520.6	4115.2	1540.4	* 346.	87. FL	870.	0.6	17.0	22.0	
	71. EB US380E ONR2_12	* 4115.2	1540.4	4159.6	1550.0	* 45.	78. FL	870.	0.6	3.0	22.0	
	72. EB US380E ONR2_	* 4159.6	1550.0	4191.2	1567.1	* 36.	61. FL	870.	0.6	1.0	22.0	
	73. SB Lake Forest N_1	* 4884.7	2712.0	4886.1	2424.8	* 287.	180. AG	2410.	1.2	3.0	46.0	
	74. SB Lake Forest N_2	* 4886.1	2424.8	4871.5	2257.1	* 168.	185. AG	2410.	1.2	-1.0	46.0	

75. SB Lake Forest N_3 * 4871.5 2257.1 4852.1 2153.6 * 105. 191. AG 2410. 1.2 -5.0 46.0
76. SB Lake Forest N_4 * 4852.1 2153.6 4761.1 1866.8 * 301. 198. AG 2410. 1.2 -14.0 46.0
77. SB Lake Forest N_5 * 4761.1 1866.8 4728.4 1730.4 * 140. 193. AG 2410. 1.2 -18.0 58.0
78. SB Lake Forest M_6 * 4728.4 1730.4 4710.3 1470.3 * 261. 184. AG 2220. 1.0 -17.0 58.0
79. SB Lake Forest S_7 * 4710.3 1470.3 4682.6 838.8 * 632. 183. AG 1340. 0.6 -13.0 34.0
80. NB Lake Forest S_1 * 4746.4 839.8 4787.5 1728.1 * 889. 3. AG 1190. 1.5 -15.0 70.0
81. NB Lake Forest M_2 * 4769.3 1468.4 4787.5 1728.1 * 260. 4. AG 1300. 0.7 -20.0 58.0
82. NB Lake Forest N_3 * 4787.5 1728.1 4813.9 1844.6 * 119. 13. AG 2200. 0.6 -20.0 34.0
83. NB Lake Forest N_4 * 4813.9 1844.6 4900.0 2122.4 * 291. 17. AG 2200. 0.6 -13.0 34.0
84. NB Lake Forest N_5 * 4900.0 2122.4 4935.4 2285.6 * 167. 12. AG 2200. 0.6 -3.0 34.0
85. NB Lake Forest N_6 * 4935.4 2285.6 4942.4 2375.9 * 91. 4. AG 2200. 0.6 1.0 34.0
86. NB Lake Forest N_7 * 4942.4 2375.9 4940.3 2712.0 * 336. 360. AG 2200. 0.6 4.0 34.0
87. Lake Forest U E_1 * 4917.1 1723.5 4866.5 1692.7 * 59. 239. AG 20. 0.9 -20.0 22.0
88. Lake Forest U E_2 * 4866.5 1692.7 4842.2 1660.1 * 41. 217. AG 20. 0.9 -20.0 22.0
89. Lake Forest U E_3 * 4842.2 1660.1 4833.5 1520.8 * 140. 184. AG 20. 0.9 -22.0 22.0
90. Lake Forest U E_4 * 4833.5 1520.8 4857.2 1465.3 * 60. 157. AG 20. 0.9 -26.0 22.0
91. Lake Forest U W_1 * 4598.4 1473.7 4644.6 1516.6 * 63. 47. AG 20. 0.9 -13.0 22.0
92. Lake Forest U W_2 * 4644.6 1516.6 4659.3 1563.2 * 49. 18. AG 20. 0.9 -14.0 22.0
93. Lake Forest U W_3 * 4659.3 1563.2 4663.9 1688.7 * 126. 2. AG 20. 0.9 -14.0 22.0
94. Lake Forest U W_4 * 4663.9 1688.7 4637.7 1733.9 * 52. 330. AG 20. 0.9 -13.0 22.0
95. EB US380E Frnt3_6_Q * 4598.4 1473.7 4643.4 1472.3 * 45. 92. AG 3. 100.0 -11.0 70.0 0.25

2.3

JOB: US380 McKinney

RUN: Segment E - 2050

DATE : 9/15/22

TIME : 14:55:36

LINK VARIABLES

W	LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	* LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H
	V/C QUEUE											
4.9	96. WB US380E Frnt3_6_Q	4762.7	1729.0	4666.5	1732.8	*	96.	272.	AG	1.	100.0	-13.0 34.0 0.54
9.0	97. SB Lake Forest M_6_Q	4728.4	1730.4	4716.0	1553.6	*	177.	184.	AG	3.	100.0	-17.0 58.0 0.87
30.9	98. SB Lake Forest S_7_Q	4710.3	1470.3	4683.7	863.3	*	608.	183.	AG	2.	100.0	-13.0 34.0 1.05
100.5	99. SB Lake Forest N_3_Q	4871.5	2257.1	4506.0	312.5	*	1979.	191.	AG	2.	100.0	-5.0 46.0 1.25
100.5	100. SB Lake Forest N_4_Q	4852.1	2153.6	4253.8	267.6	*	1979.	198.	AG	2.	100.0	-14.0 46.0 1.25

JOB: US380 McKinney

RUN: Segment E - 2050

DATE : 9/15/22

TIME : 14:55:36

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
ARRIVAL							

	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)			
95.	EB US380E Frnt3_6_Q*	90	40	2.0	1030	1600	0.53	1 3
96.	WB US380E Frnt3_6_Q*	90	40	2.0	880	1600	0.53	1 3
97.	SB Lake Forest M_6_Q*	90	50	2.0	2220	1600	0.53	1 3
98.	SB Lake Forest S_7_Q*	90	50	2.0	1340	1600	0.53	1 3
99.	SB Lake Forest N_3_Q*	90	50	2.0	2410	1600	0.53	1 3
100.	SB Lake Forest N_4_Q*	90	50	2.0	2410	1600	0.53	1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. E1	* 5065.2	1335.0	-15.0	*	
2. E2	* 5084.5	1818.0	-3.0	*	

JOB: US380 McKinney

RUN: Segment E - 2050

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
 ANGLE * (PPM)
 (DEGR)* REC1 REC2

0.	* 0.0	0.0
10.	* 0.0	0.0
20.	* 0.0	0.0
30.	* 0.0	0.0
40.	* 0.0	0.0
50.	* 0.0	0.0
60.	* 0.0	0.0
70.	* 0.0	0.0
80.	* 0.2	0.0
90.	* 0.0	0.0
100.	* 0.0	0.1
110.	* 0.0	0.0
120.	* 0.0	0.1
130.	* 0.0	0.1
140.	* 0.0	0.1
150.	* 0.0	0.1
160.	* 0.0	0.0
170.	* 0.0	0.0
180.	* 0.0	0.0
190.	* 0.0	0.0

200. * 0.0 0.0
210. * 0.0 0.0
220. * 0.0 0.1
230. * 0.0 0.0
240. * 0.0 0.1
250. * 0.0 0.0
260. * 0.0 0.0
270. * 0.0 0.0
280. * 0.0 0.0
290. * 0.0 0.0
300. * 0.0 0.0
310. * 0.0 0.0
320. * 0.0 0.0
330. * 0.0 0.0
340. * 0.0 0.0
350. * 0.0 0.0
360. * 0.0 0.0

-----*-----
MAX * 0.2 0.1
DEGR. * 80 100

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC1 .

PAGE 6

JOB: US380 McKinney

RUN: Segment E - 2050

DATE : 9/15/22

TIME : 14:55:36

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2
LINK # * 80 100

-----*-----
1 * 0.0 0.0
2 * 0.0 0.0
3 * 0.0 0.0
4 * 0.0 0.0
5 * 0.0 0.0
6 * 0.0 0.0
7 * 0.0 0.0
8 * 0.0 0.0
9 * 0.0 0.0
10 * 0.0 0.0
11 * 0.0 0.0
12 * 0.0 0.0
13 * 0.0 0.0
14 * 0.1 0.1
15 * 0.0 0.0
16 * 0.0 0.0
17 * 0.0 0.0

18 * 0.0 0.0
19 * 0.0 0.0
20 * 0.0 0.0
21 * 0.0 0.0
22 * 0.0 0.0
23 * 0.0 0.0
24 * 0.0 0.0
25 * 0.0 0.0
26 * 0.0 0.0
27 * 0.0 0.0
28 * 0.0 0.0
29 * 0.0 0.0
30 * 0.0 0.0
31 * 0.0 0.0
32 * 0.0 0.0
33 * 0.0 0.0
34 * 0.0 0.0
35 * 0.0 0.0
36 * 0.0 0.0
37 * 0.0 0.0
38 * 0.0 0.0
39 * 0.0 0.0
40 * 0.0 0.0
41 * 0.0 0.0
42 * 0.0 0.0
43 * 0.0 0.0
44 * 0.0 0.0
45 * 0.0 0.0

PAGE 7

JOB: US380 McKinney

RUN: Segment E - 2050

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2

LINK # * 80 100

-----*-----
46 * 0.0 0.0
47 * 0.0 0.0
48 * 0.0 0.0
49 * 0.0 0.0
50 * 0.0 0.0
51 * 0.0 0.0
52 * 0.0 0.0
53 * 0.0 0.0
54 * 0.0 0.0
55 * 0.0 0.0
56 * 0.0 0.0
57 * 0.0 0.0
58 * 0.1 0.0
59 * 0.0 0.0
60 * 0.0 0.0
61 * 0.0 0.0
62 * 0.0 0.0
63 * 0.0 0.0

64 * 0.0 0.0
65 * 0.0 0.0
66 * 0.0 0.0
67 * 0.0 0.0
68 * 0.0 0.0
69 * 0.0 0.0
70 * 0.0 0.0
71 * 0.0 0.0
72 * 0.0 0.0
73 * 0.0 0.0
74 * 0.0 0.0
75 * 0.0 0.0
76 * 0.0 0.0
77 * 0.0 0.0
78 * 0.0 0.0
79 * 0.0 0.0
80 * 0.0 0.0
81 * 0.0 0.0
82 * 0.0 0.0
83 * 0.0 0.0
84 * 0.0 0.0
85 * 0.0 0.0
86 * 0.0 0.0
87 * 0.0 0.0
88 * 0.0 0.0
89 * 0.0 0.0
90 * 0.0 0.0
91 * 0.0 0.0
92 * 0.0 0.0
93 * 0.0 0.0
94 * 0.0 0.0
95 * 0.0 0.0
96 * 0.0 0.0
97 * 0.0 0.0
98 * 0.0 0.0

PAGE 8

JOB: US380 McKinney

RUN: Segment E - 2050

* CO/LINK (PPM)
* ANGLE (DEGREES)
* REC1 REC2
LINK # * 80 100
-----*-----
99 * 0.0 0.0
100 * 0.0 0.0

ATTACHMENT D: TRAFFIC INFORMATION

Table D-1: Provided Traffic Data from HDR, Inc. Used in CO TAQA Quantitative Analysis- Segment A

Road Type	Road Name	Shortened Name	Traffic Direction	2030 ADT (veh/day)	2030 AM Peak Volume (veh/hr)	2030 AM Peak Speed (mph)	2030 PM Peak Volume (veh/hr)	2030 PM Peak Speed (mph)	2050 ADT (veh/day)	2050 AM Peak Volume (veh/hr)	2050 AM Peak Speed (mph)	2050 PM Peak Volume (veh/hr)	2050 PM Peak Speed (mph)	Segment Length (feet)
Mainlanes	WB Exist US 380 OFR to Exist US 380 ONR	WB US380 A West	WB	26,600	2,420	70	1,610	71	40,400	3,610	70	2,380	71	5,180
Mainlanes	WB Exist US 380 ONR to Custer OFR	WB US380 A East	WB	37,600	3,200	69	2,610	69	57,400	4,810	69	3,900	69	3,834
Mainlanes	EB Custer ONR to Exist US 380 OFR	EB US380 A East	EB	37,400	2,860	65	3,420	67	57,400	4,340	65	5,230	67	4,409
Mainlanes	EB Exist US 380 OFR to CR124 OFR	EB US380 A West	EB	30,100	2,120	67	2,940	68	46,200	3,190	67	4,440	68	1,296
Ramps	WB Exist US 380 ONR	WB US380 A ONR	WB	11,000	480	44	1,000	43	17,000	1,200	44	1,520	43	1,131
Ramps	EB Exist US 380 OFR	EB US380 A OFR	EB	7,300	740	58	480	60	11,200	1,150	58	790	60	1,393
Frontage Roads	EB Stonebridge to Stonebridge U	EB US380A Front1	EB	10,500	980	43	810	44	16,200	1,480	43	1,160	44	128
Frontage Roads	EB Stonebridge U to Driveway	EB US380A Front2	EB	10,600	990	43	820	44	16,400	1,500	43	1,180	44	3,959
Frontage Roads	EB Driveway to Exist US 380 U	EB US380A Front3	EB	8,400	780	44	640	44	13,000	1,180	44	970	44	1,024
Frontage Roads	EB Exist US 380 U to Exist US 380	EB US380A Front4	EB	8,300	770	14	620	13	12,800	1,160	14	940	13	220
Frontage Roads	WB Exist US 380 to Exist US 380 U	WB US380A Front1	WB	21,900	1,690	33	2,040	30	33,600	2,580	33	3,100	30	274
Frontage Roads	WB Exist US 380 ONR to Tremont	WB US380A Front2	WB	11,000	920	43	1,060	43	16,800	1,400	43	1,610	43	1,920
Frontage Roads	WB Tremont to Stonebridge U	WB US380A Front3	WB	11,100	950	43	1,040	43	16,900	1,460	43	1,590	43	2,688
Frontage Roads	WB Stonebridge U to Stonebridge	WB US380A Front4	WB	11,000	940	18	1,030	15	16,700	1,440	18	1,570	15	144
Local Road	Tremont SB	SB Tremont	SB	2,500	210	12	200	12	3,800	330	12	310	12	969
Local Road	Tremont NB	NB Tremont	NB	2,400	180	25	220	25	3,700	270	25	330	25	969
Local Road	Driveway SB	SB Driveway	EB	2,200	210	31	180	32	3,400	320	31	210	32	1,562
Local Road	Driveway NB**	NB Driveway	WB	2,200	210	31	180	32	3,400	320	31	210	32	1,523
Local Road	Stonebridge SB-1	SB Stonebridge N	SB	9,200	760	13	690	17	13,900	1,170	13	1,020	17	155
Local Road	Stonebridge SB-2	SB Stonebridge M	SB	10,100	780	19	860	18	15,300	1,200	19	1,280	18	261
Local Road	Stonebridge SB-3	SB Stonebridge S	SB	10,800	800	38	920	38	16,400	1,230	38	1,390	38	577
Local Road	Stonebridge NB-3	NB Stonebridge N	NB	9,900	710	38	900	38	15,000	1,090	38	1,380	38	155
Local Road	Stonebridge NB-2	NB Stonebridge M	NB	9,900	690	21	920	17	15,100	1,080	21	1,410	17	261
Local Road	Stonebridge NB-1	NB Stonebridge S	NB	10,500	800	5	910	6	16,000	1,230	5	1,360	6	574
Local Road	Stonebridge SB U	Stonebridge U	SB	100	10	19	10	19	200	20	19	20	19	308
Local Road	Exist US 380 SB-1	SB University N	WB	3,400	440	6	270	7	5,200	670	6	420	7	345
Local Road	Exist US 380 SB-2	SB University M	WB	3,700	480	42	310	42	5,700	730	42	470	42	553
Local Road	Exist US 380 SB-3	SB University S	EB	11,000	1,220	54	790	54	16,900	1,880	54	1,260	54	1,087
Local Road	Exist US 380 NB U	University U	NB	100	10	22	20	20	200	20	22	30	20	601
Local Road	Exist US 380 NB-2	NB University N	WB	11,400	760	11	1,120	10	17,600	1,160	11	1,710	10	347
Local Road	Exist US 380 NB-1	NB University S	WB	13,200	880	35	1,280	27	20,300	1,340	35	1,960	27	1,621

**Traffic information provided by HDR, Inc indicated zero traffic on this road. The southbound direction of this roadway was used to approximate the traffic on this road segment.

Table D-2: Provided Traffic Data from HDR, Inc. Used in CO TAQA Quantitative Analysis- Segment B

Road Type	Road Name	Model Road Name	Traffic Direction	2030 ADT (veh/day)	Peak Volume	Peak Speed	Peak Volume	Peak Speed	2050 ADT (veh/day)	Peak Volume	Peak Speed	Peak Volume	Peak Speed	Segment Length (feet)
Frontage Roads	WB Mainlane OFR to Prestwick Hollow	WB US380 B West	WB	47,000	3,980	44	3,370	45	72,100	6,100	44	5,070	45	1,061
Mainlanes	WB Custer ONR to WB US 380 Start	WB US 380 B	WB	37,700	3,380	59	2,660	61	57,900	5,180	59	4,010	61	4,391
Frontage Roads	EB Prestick Hollow to Mainlane ONR**	EB US380B West	EB	46,000	3,380	44	4,040	45	70,800	5,170	44	6,180	45	1,163
Mainlanes	EB US 380 Start to Custer OFR	EB US 380 B	EB	38,300	2,660	70	3,500	68	59,000	4,050	70	5,280	68	4,256
Frontage Roads	WB University to WB Independence	WB US380B Front1	WB	8,600	580	41	670	40	13,100	870	41	1,040	40	1,480
Frontage Roads	WB Independence to Independence U	WB US380B Front2	WB	9,200	590	43	690	43	14,000	900	43	1,030	43	97
Frontage Roads	WB Independence U to Mainlane OFR	WB US380B Front3	WB	9,300	600	43	710	43	14,200	920	43	1,060	43	2,225
Frontage Roads	EB Mainlane ONR to Independence U	EB US380B Front1	EB	7,700	720	45	540	45	11,800	1,120	45	900	45	2,215
Frontage Roads	EB Independence U to Independence	EB US380B Front2	EB	7,600	710	45	520	45	11,600	1,100	45	870	45	114
Frontage Roads	EB Independence to EB University	EB US380B Front3	EB	7,200	680	38	480	32	11,000	1,060	38	820	32	1,560
Local Road	University SB-1	SB University N	SB	2,400	280	6	170	8	3,700	440	6	250	8	254
Local Road	University SB-2	SB University M	SB	8,100	870	42	490	42	12,400	1,370	42	810	42	1,121
Local Road	University SB-3	SB University S	SB	9,800	980	53	600	52	14,900	1,540	53	990	52	1,797
Local Road	University NB-1	NB University S	NB	12,000	570	54	780	54	18,500	860	54	1,180	54	1,774
Local Road	University NB-2	NB University M	NB	9,300	370	4	540	6	14,300	560	4	850	6	1,116
Local Road	University NB-3	NB University N	NB	6,700	350	16	520	17	10,300	550	16	830	17	253
Local Road	Prestwick Hollow SB-2**	SB Prestwick N	SB	1,600	150	26	170	26	2,500	210	26	270	26	566
Local Road	Prestwick Hollow SB-1**	SB Prestwick S	SB	1,200	120	10	120	11	1,900	170	10	200	11	254
Local Road	Prestwick Hollow NB-2**	NB Prestwick N	NB	1,800	130	13	150	14	2,800	200	13	210	14	253
Local Road	Prestwick Hollow NB-1**	NB Prestwick S	NB	1,800	130	11	140	11	2,800	200	11	190	11	332
Local Road	Independence SB-1	SB Indep N	SB	1,200	120	10	120	11	1,900	170	10	200	11	238
Local Road	Independence SB-2	SB Indep M	SB	1,600	150	26	170	26	2,500	210	26	270	26	278
Local Road	Independence SB-3	SB Indep S	SB	4,200	340	28	380	28	6,500	490	28	560	28	218
Local Road	Independence NB-1	NB Indep S	NB	3,400	230	25	230	24	5,100	350	25	350	24	218
Local Road	Independence NB-2	NB Indep M	NB	1,800	130	13	150	14	2,800	200	13	210	14	290
Local Road	Independence NB-3	NB Indep N	NB	1,800	130	11	140	11	2,800	200	11	190	11	238
Local Road	EB Connector Independence to University	WB Connector	WB	2,900	220	29	260	29	4,600	340	29	370	29	1,939
Local Road	EB Connector Independence to University	EB Connector	EB	1,900	130	28	130	27	2,900	210	28	220	27	1,957

**Traffic information provided by HDR, Inc indicated zero traffic on this road. Similar roadway segment data was utilized to approximate the traffic data on these roads.

Table D-3: Provided Traffic Data from HDR, Inc. Used in CO TAQA Quantitative Analysis- Segment C

Road Type	Road Name	Model Road Name	Traffic Direction	Mixing Width	2030 AM Peak Volume (veh/hr)	2030 AM Peak Speed (mph)	2030 PM Peak Volume (veh/hr)	2030 PM Peak Speed (mph)	2050 AM Peak Volume (veh/hr)	2050 AM Peak Speed (mph)	2050 PM Peak Volume (veh/hr)	2050 PM Peak Speed (mph)	2030 ADT (veh/day)	2050 ADT (veh/day)	Segment Length (feet)
Frontage Roads	EB FM 1827 OFR to CR 335 ONR	EB Front 1	EB	43	1,050	45	1,300	44	1,590	45	1,910	44	13,400	20,400	1,331
Frontage Roads	EB CR 335 ONR to FM1827 U	EB Front 2	EB	43	970	44	1,230	44	1,480	44	1,820	44	12,800	19,400	1,133
Frontage Roads	EB FM 1827 U to FM1827	EB Front 3	EB	65	950	13	1,200	13	1,440	13	1,770	13	12,500	18,900	628
Frontage Roads	EB FM 1827 to FM 1827 U	EB Front 4	EB	32	1,040	40	1,350	39	1,550	40	2,050	39	14,400	22,100	130
Frontage Roads	EB FM 1827 U to US 380 EB Merge	EB Front 5	EB	43	1,050	40	1,360	39	1,570	40	2,070	39	14,500	22,300	3,588
Mainlanes	EB FM 1827 OFR to EB CR 335 ONR	EB US380C West	EB	46	1,570	71	2,140	70	2,360	71	3,360	70	23,600	36,100	3,818
Mainlanes	EB CR 335 ONR to US 380 EB	EB US380C East	EB	58	1,650	69	2,210	65	2,470	69	3,450	65	24,200	37,100	4,553
Frontage Roads	EB US 380 Merge to Existing US 380	EB Exist US380	EB	58	2,700	62	3,570	54	4,040	62	5,520	54	38,700	59,400	1,561
Ramps	EB CR 335 ONR	EB US380C ONR	EB	24	80	47	70	47	110	47	90	47	600	1,000	832
Local Road	FM 1827 U NB	West U	NB	24	20	22	30	22	40	22	50	22	300	500	808
Local Road	FM 1827 SB U	East U	SB	24	10	19	10	19	20	19	20	19	100	200	772
Ramps	WB FM1827 ONR	WB US380C ONR	WB	24	840	45	710	45	1,250	45	1,180	45	8,600	13,300	918
Frontage Roads	WB Existing US 380 to US 380 Diverge	WB Exist US80	WB	58	3,510	63	2,910	68	5,270	63	4,280	68	37,100	57,900	2,273
Mainlanes	WB US 380 Diverge to WB FM1827 ONR	WB US380C West	WB	46	2,100	69	1,620	70	3,150	69	2,440	70	20,500	32,600	5,328
Mainlanes	WB FM1827 ONR to CR 331 OFR	WB US380C East	WB	58	2,940	69	2,330	70	4,400	69	3,620	70	29,100	45,900	3,499
Frontage Roads	WB US 380 Diverge to FM 1827 U	WB Front 1	WB	34	1,410	44	1,290	45	2,120	44	1,840	45	16,600	25,300	2,304
Frontage Roads	WB FM 1827 U to FM 1827	WB Front 2	WB	82	1,400	12	1,280	10	2,100	12	1,820	10	16,500	25,100	609
Frontage Roads	WB FM 1827 to FM 1827 U	WB Front 3	WB	46	1,250	40	1,190	41	1,870	40	1,820	41	13,400	20,400	133
Frontage Roads	WB FM 1827 U to FM 1827 ONR	WB Front 4	WB	46	1,270	40	1,220	41	1,910	40	1,870	41	13,700	20,900	1,303
Frontage Roads	WB FM 1827 ONR to FM 2933	WB Front 5	WB	46	430	44	510	44	660	44	690	44	5,100	7,600	1,839
Local Road	University Dr NB-1	NB University	NB	46	1,070	31	1,280	36	1,600	31	1,920	36	13,300	20,000	1,248
Local Road	FM 1827 NB-2	NB FM1827 S	NB	46	740	16	910	14	1,110	16	1,290	14	8,900	13,300	309
Local Road	FM 1827 NB-3	NB FM1827 N	NB	34	560	35	650	36	850	35	850	36	6,700	10,000	1,577
Local Road	FM 1827 SB-1	SB FM1827 N	SB	46	570	8	490	8	850	8	800	8	5,700	8,800	1,561
Local Road	FM 1827 SB-2	SB FM1827 S	SB	46	900	23	840	23	1,340	23	1,240	23	11,000	16,800	311
Local Road	University Dr SB-3	SB University	SB	46	1,140	44	1,060	44	1,720	44	1,590	44	13,500	20,300	1,204

Table D-4: Provided Traffic Data from HDR, Inc. Used in CO TAQA Quantitative Analysis- Segment D

Road Type	Road Name	Model Road Name	Traffic Direction	Mixing Width	2030 AM Peak Volume (veh/hr)	2030 AM Peak Speed (mph)	2030 PM Peak Volume (veh/hr)	2030 PM Peak Speed (mph)	2050 AM Peak Volume (veh/hr)	2050 AM Peak Speed (mph)	2050 PM Peak Volume (veh/hr)	2050 PM Peak Speed (mph)	2030 ADT (veh/day)	2050 ADT (veh/day)	Segment Length (feet)
Frontage Roads	EB Airport to US 380 FR	EB US380D Front1	EB	32	80	45	80	45	120	45	110	45	900	1,400	3,365
Frontage Roads	EB US 380 FR to FM 1827 OFR	EB US380D Front2	EB	54	930	59	1,260	59	1,420	59	1,810	59	13,300	20,000	2,370
Frontage Roads	EB FM 1827 OFR to New Hope U	EB US380D Front3	EB	54	1,230	59	1,640	59	1,880	59	2,350	59	17,400	26,200	1,616
Frontage Roads	EB FM 1827 U to FM 1827	EB US380D Front4	EB	65	1,220	35	1,630	33	1,860	35	2,330	33	17,300	26,000	517
Frontage Roads	EB FM 1827 to FM 1827 U	EB US380D Front5	EB	32	930	56	1,130	56	1,390	56	1,630	56	12,500	18,900	135
Frontage Roads	EB FM 1827 U to US 380 Merge	EB US380D Front6	EB	32	940	56	1,140	56	1,410	56	1,650	56	12,600	19,100	2,858
Mainlanes	EB McIntyre ONR to FM 1827 OFR	EB US380D West	EB	46	2,060	69	2,810	67	3,090	69	4,410	67	30,200	46,500	6,113
Mainlanes	EB New Hope OFR to US 380 Merge	EB US380D East	EB	46	1,760	67	2,430	59	2,630	67	3,870	59	26,100	40,300	6,634
Frontage Roads	EB US 380 Merge to Existing US380 EB	EB US380 Exist	EB	34	2,700	64	3,570	59	4,040	64	5,520	59	38,700	59,400	2,148
Frontage Roads	WB Existing US 380 to US 380 Diverge	WB US380 Exist	WB	34	3,510	42	2,910	53	5,270	42	4,280	53	37,100	57,900	2,151
Mainlanes	WB US 380 Diverge to FM 1827 ONR	WB US380D East	WB	34	2,090	53	1,780	56	3,150	53	2,570	56	21,000	33,800	5,790
Mainlanes	WB FM 1827 ONR to Airport ONR	WB US380D West	WB	46	2,610	59	2,110	60	3,900	59	3,170	60	25,700	41,300	10,071
Frontage Roads	WB US 380 Diverge to FM 1827 U	WB US380D Front1	WB	21	1,420	56	1,130	58	2,120	56	1,710	58	16,100	24,100	2,514
Frontage Roads	WB FM 1827 U to FM 1827	WB US380D Front2	WB	32	1,410	17	1,120	11	2,100	17	1,690	11	16,000	23,900	516
Frontage Roads	WB FM 1827 to FM 1827 U	WB US380D Front3	WB	43	1,910	52	1,380	52	2,830	52	2,160	52	20,000	30,400	143
Frontage Roads	WB FM 1827 U to FM 1827 ONR	WB US380D Front4	WB	43	1,920	52	1,390	52	2,850	52	2,180	52	20,100	30,600	1,160
Frontage Roads	WB FM 1827 ONR to Airport	WB US380D Front5	WB	43	1,400	59	1,060	59	2,100	59	1,580	59	15,400	23,100	3,712
Frontage Roads	WB US 380 FR to Airport	WB US380D Front6	WB	32	270	60	190	60	400	60	280	60	2,700	4,100	2,609
Ramps	EB FM 1827 OFR	EB US380D OFR	EB	21	300	65	380	64	460	65	540	64	4,100	6,200	1,503
Local Road	FM 1827 NB U	West U	NB	21	10	21	10	21	20	21	20	21	100	200	690
Local Road	FM 1827 SB U	East U	SB	21	10	19	10	19	20	19	20	19	100	200	697
Ramps	WB FM 1827 ONR	WB US380D ONR	WB	21	520	58	330	58	750	58	600	58	4,700	7,500	1,486
Local Road	FM 1827 SB-2	SB FM1827 S	SB	32	110	3	70	4	150	3	110	4	800	1,300	287
Local Road	FM 1827 SB-1	SB FM1827 N	SB	32	650	23	400	31	920	23	700	31	5,600	9,000	2,006
Local Road	FM 1827 NB-2	NB FM1827 S	NB	32	440	41	640	41	660	41	930	41	6,400	9,600	1,998
Local Road	FM 1827 NB-1	NB FM1827 N	NB	32	400	6	570	11	620	6	810	11	5,600	8,400	288

Table D-5: Provided Traffic Data from HDR, Inc. Used in CO TAQA Quantitative Analysis- Segment E

Road Type	Link ID	Road Name	Model Road Name	Traffic Direction	2030 ADT (veh/day)	2030 AM Peak Volume (veh/hr)	2030 AM Peak Speed (mph)	2030 PM Peak Volume (veh/hr)	2030 PM Peak Speed (mph)	2050 ADT (veh/day)	2050 AM Peak Volume (veh/hr)	2050 AM Peak Speed (mph)	2050 PM Peak Volume (veh/hr)	2050 PM Peak Speed (mph)	Segment Length (feet)
Frontage Roads	111	WB Ridge Rd OFR to Lake Forest Dr ONR	WB US380E Frnt1	WB	16,500	1,570	44	1,330	44	25,300	2,370	44	1,990	44	1,231
Frontage Roads	110	WB Lake Forest Dr U to Ridge Rd OFR	WB US380E Frnt2	WB	4,800	600	43	420	43	7,400	900	43	620	43	1,833
Frontage Roads	109	WB Lake Forest Dr to Lake Forest Dr U	WB US380E Frnt3	WB	4,700	590	43	410	43	7,200	880	43	600	43	125
Frontage Roads	108	WB Lake Forest Dr U to Lake Forest Dr	WB US380E Frnt4	WB	9,500	970	10	940	11	14,600	1,460	10	1,420	11	155
Frontage Roads	107	WB CR 1006 ONR to Lake Forest Dr U	WB US380E Frnt5	WB	9,600	980	44	950	42	14,800	1,480	44	1,440	42	1,933
Frontage Roads	106	WB Lake Forest Dr OFR to CR 1006 ONR	WB US380E Frnt6	WB	13,300	1,190	45	1,100	44	20,300	1,800	45	1,670	44	781
Frontage Roads	105	WB CR 1006 U to Lake Forest Dr OFR	WB US380E Frnt7	WB	5,900	480	43	380	43	9,000	740	43	590	43	2,221
Mainlanes	42	WB Bloomdale Rd E ONR to Lake Forest Dr OFR	WB US 380 E 1	WB	44,900	4,280	67	3,560	68	68,900	6,420	67	5,340	68	1,614
Mainlanes	44	WB Lake Forest Dr OFR to CR 1006 ONR	WB US 380 E 2	WB	37,500	3,570	68	2,840	69	57,600	5,360	68	4,260	69	3,062
Mainlanes	46	WB CR 1006 ONR to Ridge Rd OFR	WB US 380 E 3	WB	41,200	3,780	68	2,990	69	63,100	5,680	68	4,490	69	1,539
Mainlanes	48	WB Ridge Rd OFR to Lake Forest Dr ONR	WB US 380 E 4	WB	29,500	2,810	70	2,080	71	45,200	4,210	70	3,120	71	3,950
Ramps	43	WB Lake Forest Dr OFR	WB US380E OFR1	WB	7,400	710	54	720	54	11,300	1,060	54	1,080	54	1,163
Ramps	45	WB CR 1006 ONR	WB US380E ONR	WB	3,700	210	47	150	47	5,500	320	47	230	47	1,133
Ramps	47	WB Ridge Rd OFR	WB US380E OFR2	WB	11,700	970	52	910	53	17,900	1,470	52	1,370	53	1,382
Frontage Roads	55	EB Lake Forest Dr OFR to Ridge Rd ONR	EB US380E Frnt1	EB	14,200	1,020	44	1,300	44	22,200	1,610	44	1,920	44	1,443
Frontage Roads	56	EB Ridge Rd ONR to Lake Forest Dr U	EB US380E Frnt2	EB	6,100	490	45	700	45	9,600	820	45	1,050	45	1,528
Frontage Roads	57	EB Lake Forest Dr U to Lake Forest Dr	EB US380E Frnt3	EB	6,000	480	12	690	12	9,400	800	12	1,030	12	144
Frontage Roads	58	EB Lake Forest Dr to Lake Forest Dr U	EB US380E Frnt4	EB	10,800	1,160	41	1,020	41	16,200	1,850	41	1,570	41	115
Frontage Roads	59	EB Lake Forest Dr U to CR 1006 OFR	EB US380E Frnt5	EB	10,900	1,170	41	1,030	41	16,400	1,870	41	1,590	41	2,109
Frontage Roads	60	CR 1006 OFR to Lake Forest Dr ONR	EB US380E Frnt6	EB	13,900	1,380	42	1,260	42	21,300	2,090	42	1,900	42	775
Frontage Roads	61	Lake Forest Dr ONR to CR 1006 U	EB US380E Frnt7	EB	5,000	410	45	400	45	7,600	630	45	620	45	2,067
Mainlanes	3	EB Lake Forest Dr OFR to Ridge Rd ONR	EB US380 E 1	EB	30,700	2,190	71	2,800	70	47,300	3,200	71	4,170	70	3,943
Mainlanes	5	EB Ridge Rd ONR to CR 1006 OFR	EB US380 E 2	EB	38,800	2,720	70	3,400	69	59,900	3,990	70	5,040	69	1,572
Mainlanes	7	EB CR 1006 OFR to Lake Forest Dr ONR	EB US380 E 3	EB	35,800	2,510	70	3,170	69	55,000	3,770	70	4,730	69	3,081
Mainlanes	9	EB Lake Forest Dr ONR to Bloomdale Rd E OFR	EB US380 E 4	EB	44,700	3,480	68	4,030	66	68,700	5,230	68	6,010	66	1,949
Ramps	8	EB Lake Forest Dr ONR	EB US380E ONR1	EB	8,900	970	44	860	45	13,700	1,460	44	1,280	45	1,106
Ramps	6	EB CR 1006 OFR	EB US380E OFR	EB	3,000	210	61	230	59	4,900	220	61	310	59	1,213
Ramps	4	EB Ridge Rd ONR	EB US380E ONR2	EB	8,100	530	46	600	46	12,600	790	46	870	46	1,130
Local Road	127	Lake Forest Dr SB-1	SB Lake Forest N	SB	15,900	1,610	7	1,500	7	24,200	2,410	7	2,200	7	1,002
Local Road	128	Lake Forest Dr SB-2	SB Lake Forest M	SB	14,700	1,480	13	1,430	15	22,400	2,220	13	2,120	15	261
Local Road	129	Lake Forest Dr SB-3	SB Lake Forest S	SB	8,500	740	48	880	47	13,200	1,110	48	1,340	47	632
Local Road	124	Lake Forest Dr NB-1	NB Lake Forest S	NB	8,000	790	3	730	4	13,300	1,190	3	1,060	4	629
Local Road	125	Lake Forest Dr NB-2	NB Lake Forest M	NB	9,400	850	25	950	26	15,700	1,250	25	1,300	26	260
Local Road	126	Lake Forest Dr NB-3	NB Lake Forest N	NB	15,400	1,360	47	1,550	47	24,900	2,020	47	2,200	47	1,004
Local Road	131	Lake Forest Dr SB U	Lake Forest U E	SB	100	10	19	10	19	200	20	19	20	19	301
Local Road	130	Lake Forest Dr NB U	Lake Forest U W	NB	100	10	19	10	19	200	20	19	20	19	291

Appendix P-3: Mobile Source Air Toxics Analysis (MSAT)



Mobile Source Air Toxics Technical Report

US 380 McKinney
CSJ 0135-02-065, 0135-03-053, 0135-15-002

From Coit Road to FM 1827
Collin County
Texas Department of Transportation, Dallas District
September 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

Table of Contents

1.0	Project Background	1
1.1	Existing Facility	1
1.2	Proposed Facility	2
1.2.1	Segment A - Coit Road to CR 161/Future Ridge Road	3
1.2.2	Segment B - Coit Road to CR 161/Future Ridge Road	3
1.2.3	Segment E - CR 161/Future Ridge Road to East of SH 5	3
1.2.3	Segment C - East of SH 5 to Existing US 380/FM 1827	4
1.2.3	Segment D - East of SH 5 to Existing US 380/FM 1827	4
2.0	Mobile Source Air Toxics	4
2.1	Qualitative Analysis	5
2.1.1	Background Information	5
2.1.2	Motor Vehicle Emissions Simulator (MOVES)	5
2.1.3	MSAT Research	7
2.1.4	Project Specific MSAT Information	7
2.1.5	Incomplete or Unavailable Information for Project Specific MSAT Health Impacts Analysis	7
2.2	Quantitative Analysis	9
2.2.1	Analysis Results	17
2.2.2	Conclusion	20

Tables

Table 2-1: VMT per Day by Road Type and Design Scenario	10
Table 2-2: Peak and Off-Peak Speeds Used for MSAT Analysis For Proposed Future Build (2050) Segments	11
Table 2-3: Peak and Off-Peak Speeds Used for MSAT Analysis For Existing Segments in Existing (2020), Future No-Build (2050) and Future Build (2050) Analyses	11
Table 2-4: Existing Emission Factors by Road Type for Peak and Off-peak Hours	13
Table 2-4: Future No-Build (2050) Emission Factors by Road Type for Peak and Off-peak Hours	13
Table 2-6: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment A	14
Table 2-7: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment B	14
Table 2-8: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment C	15
Table 2-9: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment D	15

Table 2-10: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment E.....	16
Table 2-11: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment F.....	16
Table 2-12: Mass of MSAT Emissions in Tons per Year and Percent Change in 2050 (Build) Compared to the 2020 Base Scenario.....	18

Graphs

Figure 1-1: Proposed US 380 Build Alternatives	2
Figure 2-1: FHWA Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways Using EPA’s MOVES2014a Model	6
Graph 2-2: Priority MSAT Emissions and VMT	19
Graph 2-3: Total MSAT Emissions and VMT per Scenario	20

Attachments

Attachment A: Exhibits	
Exhibit 1- Project Location Map	
Exhibit 2- Typical Sections	
Exhibit 3- Affected Network Links	
Exhibit 4- Traffic Data	
Attachment B: Coordination Meeting Minutes	

1.0 Project Background

In 2020, the Texas Department of Transportation (TxDOT) completed the *US 380 Collin County Feasibility Study* that recommended the development of a new freeway facility extending across the county from the Denton County to the Hunt County line. One of the projects of independent utility identified in the Feasibility Study was improving east-west traffic along US 380 near downtown McKinney. The US 380 McKinney project location and termini are shown in the Project Location Map provided in **Appendix A**. The purpose of this project is to improve east-west mobility and connectivity for travelers in the Study Area by constructing an 8-lane freeway on new location north of existing US 380 including frontage roads and grade-separated interchanges.

The need for the proposed action is because population growth within the central portion of Collin County, primarily the City of McKinney, has caused increases in current and forecasted traffic volumes that exceed the capacity of US 380 between Coit Road and Farm to Market (FM) 1827, leading to increased congestion, reduced mobility, and higher crash rates compared to other similar roadways in the region.

Roadway projects may be subject to a quantitative Mobile Source Air Toxics (MSAT) analysis if the project will add capacity, is a Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) project, has a design year annual average daily traffic (AADT) greater than 140,000 vehicles per day (vpd), affects a major intermodal facility or port located in proximity to a populated area, or public concern has been raised regarding MSAT emissions. The proposed project would increase capacity and the AADT in the design year is above 140,000 vpd for several segment analyzed; therefore, a quantitative MSAT analysis is required. This assessment is based on the issues discussed and the resolutions agreed upon during a conference call with TxDOT ENV, the North Central Texas Council of Governments (NCTCOG), and Burns & McDonnell on March 11, 2022. A second conference call regarding future traffic projections for existing roadways was held on May 23, 2022. Notes from these coordination calls may be found in **Attachment B**.

1.1 Existing Facility

The existing highway system consists of US 380 (University Drive) from Coit Road through the City of McKinney to FM 1827/New Hope Road W. Existing US 380 and its connections to US 75 and SH 5 near the center of the Study Area serves as the primary connection between the eastern and western portions of Collin County and the rest of the Dallas Metroplex. In 2022, US 380 through the Study Area is a 6-lane divided arterial with a variable curbed median and right- and left-turn lanes at numerous at-grade intersections and driveways and a grade-separated interchange at US 75. The at-grade intersections from Coit Road to FM 1827 are all signalized. Inside shoulders vary from non-existent to four feet in width with 8-foot-wide outside shoulders consistent throughout the section. The pavement width, including intermittent turn lanes both eastbound and westbound, ranges from 85 to 124 feet. The existing right-of-way (ROW) width varies from 121 feet to 241 feet.

A project to widen existing US 380 east of McKinney from Airport Drive to County Road (CR) 458 (CSJs 0135-03-046 and 0135-04-033) was environmentally cleared on January 15, 2020, and is anticipated to be ready to let for construction in February 2024. This project would widen the existing 4-lane 7.2 mile-long section of US 380 to a 6-lane divided urban facility with a raised median and new curb and gutter drainage within the existing highway ROW.

1.2 Proposed Facility

The proposed US 380 McKinney project would construct an 8-lane, access-controlled freeway with 2-lane, one-way frontage roads on each side connecting Coit Road and existing US 380 on the west within the Town of Prosper with FM 1827 and existing US 380 on the east within the City of McKinney. The freeway would be constructed, primarily on new location, within an anticipated ROW width ranging from 350 feet to 1,580 feet depending on location, with an average width of 420 feet. The end-to-end Build Alternatives (illustrated in **Figure 1-1**) range in length from approximately 14.8 miles to approximately 16.3 miles. Frontage roads may be eliminated, and the primary travel lanes may be depressed (lowered) or elevated (on bridge/viaduct) to minimize impacts on sensitive resources. The freeway facility would include ramps, direct connector roadways, frontage roads, and arterial roadways to support connectivity to the existing roadway network. A multi-level interchange is proposed at US 75/ SH 5 with grade-separated interchanges at other primary local roadways within each segment. The western end of the project would transition to an at-grade intersection near Coit Road with a grade-separated interchange connecting the east end of the new location alignment to existing US 380 near FM 1827.

The four Build Alternatives (Purple, Blue, Brown, and Gold) are considered under the US 380 future Build scenarios. Each Build Alternative is comprised of three segments with all Build Alternatives sharing a common central segment – Segment E. The Build Alternatives are comprised of the following lettered segments as illustrated in **Figure 1-1**:

- Purple Alternative – A+E+D
- Blue Alternative – A+E+C
- Brown Alternative – B+E+C
- Gold Alternative – B+E+D

Figure 1-1: Proposed US 380 Build Alternatives



The individual segments are discussed in detail in the sections below. Detailed figures of each Build Alternative are included in **Exhibit 3**. In some areas, auxiliary lanes may be constructed along the mainlanes and extended turn lanes may be provided along the frontage roads.

1.2.1 Segment A – Coit Road to CR 161/Future Ridge Road

Segment A would begin at an at-grade intersection at existing US 380 and Coit Road with three travel lanes in the eastbound direction and three travel lanes with two left-turn lanes in the westbound direction separated by a wide median (intended as an interim design solution with the travel lanes converting to frontage roads and the median reserved to accommodate future freeway mainlanes). Just east of Lakewood Drive, the at-grade freeway section along the existing US 380 alignment would begin with four travel lanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. The freeway would bridge over future Independence Parkway and continue east where it would be elevated over N. Custer Road where a directional diamond (DDI) interchange would be constructed to connect local traffic with the frontage road system. As the alignment continues east, it would be elevated over N. Stonebridge Drive. After crossing N. Stonebridge Drive, the alignment would be lowered (depressed) passing under Fleetwood Street before climbing back above grade as it curves north on new location past the future connection to W. University Drive (existing US 380). The alignment would stay elevated on bridge over Wilson Creek then on earthen embankment with bridged/grade-separated crossings of CR 124/future Wilmeth Drive, future Bloomdale Road, and CR 161/future Ridge Road before tying into Segment E. Frontage roads on both sides of the mainlanes would be carried throughout Segment A from Lakewood Drive to CR 161/Future Ridge Road.

1.2.2 Segment B - Coit Road to CR 161/Future Ridge Road

Like Segment A, Segment B would begin at an at-grade intersection at existing US 380 and Coit Road with three travel lanes in the eastbound direction and three travel lanes with two left-turn lanes in the westbound direction separated by a wide median (intended as an interim design solution with the travel lanes converting to frontage roads and the median reserved to accommodate future freeway mainlanes). East of Lakewood Drive near Red Bud Drive, the alignment would turn northward on new location carrying the four travel lanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. The freeway would bridge over future Independence Parkway, a Soil Conservation Service Reservoir, and a new connection back to future University Drive (existing US 380). The alignment would continue elevated in a northeasterly direction on an earthen embankment then with bridged/grade-separated crossings of Rutherford Branch, FM 2478/N. Custer Road, and Wilson Creek then transitioning back to an elevated roadway on earthen fill with bridged/grade-separated crossing of future N. Stonebridge Drive, Stover Creek, and future Bloomdale Road West before tying into Segment E. Frontage roads on both sides of the mainlanes would be carried throughout Segment B from Lakewood Drive through future Bloomdale Road West.

1.2.3 Segment E – CR 161/Future Ridge Road to East of SH 5

Segment E is common to all of the Build Alternatives and primarily follows the alignment of existing Bloomdale Road along the northern edge of McKinney. The anticipated ROW width along Segment E varies from approximately 350 feet and 1,580 feet to accommodate the new multi-level interchange with US 75. Segment

E begins at CR 161/future Ridge Road continuing the four elevated-mainlanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. Segment E would be elevated on earthen fill embankment with retaining walls and grade-separations provided at FM 1461/Lake Forest Drive, future CR 1006, Bloomdale Road East, CR 164/future Hardin Boulevard, and Community Avenue. At Community Avenue the bridge structure would extend northeast on new location to cross the Honey Creek floodplain, accommodate the new multi-level interchange at US 75, span Spur 195, and cross the East Fork Trinity River floodplain and connect to SH 5. Frontage roads on both sides of the mainlanes would be carried throughout Segment E from CR 161/future Ridge Road through the interchange with SH 5.

1.2.3 Segment C – East of SH 5 to Existing US 380/FM 1827

Segment C joins the east end of Segment E to cross the East Fork Trinity River floodplain and travels roughly south, parallel to, and east of the floodplain until it turns to the east-southeast to connect to existing US 380 near FM 1827. Segment C would be elevated on bridge over the East Fork Trinity River floodplain and the Dallas Area Rapid Transit (DART)/Dallas, Garland, and Northeastern (DGNO) rail line continuing the four elevated-mainlanes in each direction separated by a center concrete barrier and 2-lane one-way frontage roads on both sides of the mainlanes to provide access to the local roadway network. After crossing the floodplain, the new location alignment would remain elevated on earthen embankment with grade-separated crossings of CR 338, tributaries to the East Fork Trinity River, and FM 1827. Existing local roadways including CR 338, CR 331/future Wilmeth Road, CR 335, CR 332, and FM 2933 would be accessible from the frontage roads. Frontage roads on both sides of the mainlanes would be carried throughout Segment C from east of SH 5 through the interchange at FM 1827 tying into existing US 380 west of Private Road 5446.

1.2.3 Segment D - East of SH 5 to Existing US 380/FM 1827

Segment D joins the east end of Segment E to cross through the East Fork Trinity River floodplain and travels roughly south, parallel to, and west of the East Fork Trinity River until it connects to existing US 380 near Airport Drive and then follows US 380 to FM 1827. Segment D would be elevated on bridge over the East Fork Trinity River floodplain and the McIntyre Road/future Wilmeth Road for the full length of the new location alignment until it ties into existing US 380. Frontage roads on both sides of the mainlanes would be carried throughout Segment D from east of SH 5 through the interchange at Airport Drive and then connect at-grade to US 380 near FM 1827. Woodlawn Road would connect to the frontage roads.

2.0 Mobile Source Air Toxics

The purpose of this project is to improve east-west mobility and connectivity for travelers in the Study Area by constructing an 8-lane, access controlled freeway with 2-lane, one-way frontage roads on both sides of the mainlanes between Coit Road and FM 1827. This MSAT Analysis was performed in accordance with TxDOT's "Environmental Guide: Volume 2 Activity Instructions", "Quantitative MSAT Technical Report Documentation Standard", and "Review Standard for a Quantitative MSAT Technical Report", available on the TxDOT Environmental Toolkit and the TxDOT Air Quality Toolkit websites. The methodology, assumptions, and procedure used in the MSAT analysis are discussed in detail in the following sections. The existing year (2020), design year (2050) Build, and No-Build scenarios were analyzed as part of the MSAT analysis.

2.1 Qualitative Analysis

2.1.1 Background Information

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS)¹. In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA)². These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

2.1.2 Motor Vehicle Emissions Simulator (MOVES)

According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and VMT data. MOVES2014 incorporates the effects of three new Federal emissions standard rules not included in MOVES2010. These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344), heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during model years 2017-2025 (79 FR 60344). Since the release of MOVES2014, EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide³, EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

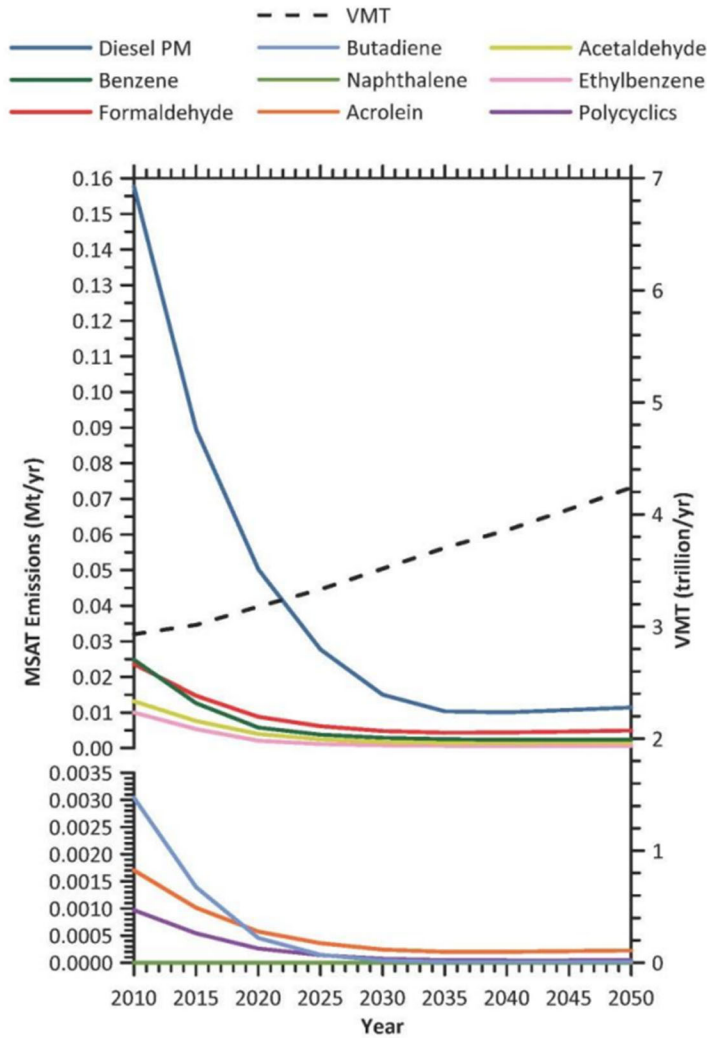
Using EPA's MOVES2014a model, as shown in **Figure 2-1**, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.

¹ <https://www.epa.gov/iris>

² <https://www.epa.gov/national-air-toxics-assessment>

³ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100NNR0.txt>

Figure 2-1: FHWA Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways Using EPA's MOVES2014a Model⁴



Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.

Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorological, and other factors.

Diesel PM is the dominant component of MSAT emissions, making up 50 to 70 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES2014a will notice some differences in emissions compared with MOVES2010b. MOVES2014a is based on updated data on some emissions and pollutant processes compared to MOVES2010b, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES2014a emissions forecasts are based on lower VMT projections than MOVES2010b, consistent with recent trends suggesting reduced nationwide VMT growth compared to historical trends.

⁴ https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm#fig1

2.1.3 MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

2.1.4 Project Specific MSAT Information

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*⁵.

The VMT estimated for each of the Build Alternatives is slightly higher than that for the No-Build Alternative because each of the Build Alternatives are longer than the existing facility. Additionally, the Build Alternatives support new development expected in the area and will attract trips that would have occurred on local roads if the new facility was not built. There could also be localized differences in MSAT from indirect effects of the project such as associated access traffic, emissions of evaporative MSAT (e.g., benzene) from parked cars, and emissions of diesel particulate matter from delivery trucks. The travel lanes contemplated as part of the Build Alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each Build Alternative there may be localized areas where ambient concentrations of MSAT would be higher than under the other Build Alternatives. The localized differences in MSAT concentrations would likely be most pronounced along the proposed roadway segments within the northern part of the Study Area, where no current alignment exists, due to there being a baseline of little to no MSAT emissions in this area. However, the magnitude and the duration of these potential increases cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Also, travel to other destinations would be reduced with subsequent decreases in emissions at those locations. For all Future Alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent from 2010 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the Study Area are likely to be lower in the future than they are today.

2.1.5 Incomplete or Unavailable Information for Project Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process

⁵https://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemi ssions.cfm

through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action. Consistent with 40 CFR 1502.22 (regarding incomplete and unavailable information) FHWA does not conduct MSAT health impacts for the reasons described below.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the CAA and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the IRIS, which is “a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects”.⁶ Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the HEI. A number of HEI studies are summarized in Appendix D of FHWA’s *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*.⁷ Among the adverse health effects linked to MSAT compounds at high exposures are: cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations⁸ or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupported assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI⁹. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, “[t]he absence of adequate data to develop a sufficiently

⁶ EPA, <http://www.epa.gov/iris/>

⁷ https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm

⁸ HEI Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>

⁹ Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>

confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk¹⁰.”

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the CAA to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than one in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable¹¹.

Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable. Because of the limitations in the methodologies for forecasting the health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, which are better suited for quantitative analysis.

In this document, a quantitative MSAT assessment is provided relative to the various alternatives and has acknowledged that the Preferred Alternative, when identified, may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

2.2 Quantitative Analysis

A quantitative analysis of MSAT emissions was performed to assess the difference in MSAT emissions between the 2020 Existing, 2050 Build (proposed), and 2050 No-Build scenarios for the affected network links. For the purposes of this MSAT analysis, the affected network links for the 2020 Existing and 2050 scenarios were considered to be all of the links within the Study Area, and the existing section of US 380 between Coit Road and FM 1827 (**Exhibit 3 of Attachment A**). The analysis was performed in accordance with the methodology established during the Air Quality Consultative Call with TxDOT on March 11, 2022. A second meeting was held on May 23, 2022, to discuss expanding the roadway segments analyzed in the future Build and No-Build

¹⁰ EPA IRIS database, Diesel Engine Exhaust, Section II.C.
https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_summary.pdf

¹¹ [https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/\\$file/07-1053-1120274.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf)

scenarios to include the portions of US 380 that are not directly affected by the project. In addition to the methodology discussed in these calls, the analysis was conducted in accordance with Environmental Guide: Volume 2 Activity Instructions (July 2021).

MSAT emissions are calculated by multiplying the applicable emission factor for each priority MSAT by the VMT for each time period for each network link. The aggregated VMT for each of the affected network links is used to determine the total VMT for the network, and the aggregated emission for each priority MSAT is the total MSAT emissions of the affected network.

The VMT for each segment analyzed for the Project was aggregated by road type categories (frontage roads, ramps, mainlanes, and local roads) for the 2020 Existing, 2050 Build, and 2050 No-Build Scenarios based on link lengths and average daily traffic (ADT) from the line diagrams provided by HDR, Inc. (2050 No-Build and 2050 Build Scenarios) and the NCTCOG (2020 Existing Scenarios). The future Build and future No-Build traffic volumes for US 380 were estimated by Burns & McDonnell utilizing the methodology discussed in the conference call on May 23, 2022, and approved by the Dallas District. These values were estimated by determining the expecting percentage increase of traffic for the area and calculating the increases for these segments based on the NCTCOG data provided for the existing year.

VMTs were calculated for both the Base (2020) and Future No-Build (2050) Scenarios, as well as for proposed Segments A, B, C, D, and E and for the future build Segment F (which is the existing US 380/University Drive). The VMTs and MSAT emissions for each Build Alternative—Purple (A/E/D), Blue (A/E/C), Brown (B/E/C), and Gold (B/E/D). The total annual VMT within the Study Area for the 2020 Existing scenario is 468,838,325, and the total VMT for the 2050 No-Build Scenario is 573,934,351. The total annual VMT for each future design (Build 2050) Scenario were predicted and found to be 893,615,616 (Purple), 912,522,553 (Blue), 838,065,768 (Brown), and 856,972,706 (Gold). The VMT totals by road type category are shown in **Table 2-1**. Traffic data utilized in the MSAT analysis is listed in **Exhibit 4**.

Table 2-1: VMT per Day by Road Type and Design Scenario

Road Type	Base (Existing) Year 2020	No Build 2050	Build 2050			
	VMT per day	VMT per day	VMT per day			
Alignment	Green (F)	Green (F)	Purple (A/E/D/F)	Blue (A/E/C/F)	Brown (B/E/C/F)	Gold (B/E/D/F)
Frontage Roads	--	--	122,914	118,810	108,235	104,131
On/Off Ramps	--	--	510,894	526,050	441,733	456,889
Main Lanes- Restricted	--	--	1,457,458	1,477,845	1,407,001	1,427,388
University Drive (Unrestricted)	1,284,489	1,448,143	218,454	218,454	218,454	218,454
Local roads	--	124,280	138,542	158,903	120,648	141,008
Annual Total	468,838,325	573,934,351	893,615,616	912,522,553	838,065,768	856,972,706

Both peak (congested) and off-peak (free flowing) hours were included in the quantitative MSAT analysis because MSAT emissions are higher at slower speeds. To conservatively account for peak-hour traffic, it was assumed that the entire network experiences 6 hours of congestion per day, with the remaining 18 hours assumed to

experience free-flowing traffic. The existing congested speeds were provided in the Existing 2020 from the NCTCOG information; the future (2050) Build congested speeds were provided in the traffic information provided by HDR, Inc. Free-flow speeds for these two scenarios were determined to be the speed limit for the area plus 5 miles per hour (mph).

The current daily traffic volume capacity for the existing US 380 corridor, as a 6-lane arterial roadway, is approximately 60,000 vpd based on NCTCOG capacity thresholds. Future No-Build traffic demand is anticipated to exceed 120,000 vehicles per day and represents over twice the available capacity US 380 can currently support. As a result, excessive traffic queueing and delays are projected in future No-Build conditions along US 380 which are accounted for via an assumed average 5 mph travel speed during peak hours and 15 mph during off-peak hour timeframes. These congested (peak) and “free-flow” (off-peak) vehicle speeds were utilized in the MSAT analysis.

For the purposes of the MSAT analysis, representative speeds were used for each road type category (frontage roads, ramps, main lanes, and local roads) during both peak and off-peak hours. Average peak hour speeds for the frontage roads, ramps, mainlanes, and local roads were obtained from the VISSIM traffic simulation models developed by HDR. A conservative value for peak-hour frontage road speeds was also provided by HDR. As mentioned above, the most representative posted speed for each road type was used for off-peak hour traffic speeds. The speeds used in the MSAT analysis for each road type, year, and traffic condition are shown in **Table 2-2** and **Table 2-3**.

Table 2-2: Peak and Off-Peak Speeds Used for MSAT Analysis For Proposed Future Build (2050) Segments

	Ramps		Frontage Roads		Mainlanes		Local Road	
	Peak Speed (mph)	Off-Peak Speed (mph)	Peak Speed (mph)	Off-Peak Speed (mph)	Peak Speed (mph)	Off-Peak Speed (mph)	Peak Speed (mph)	Off-Peak Speed (mph)
Segment A	51	55	37	60	69	75	21	40
Segment B	52	55	34	60	69	75	18	40
Segment C	51	55	38	60	70	75	25	40
Segment D	54	55	45	60	66	75	25	40
Segment E	49	55	34	60	69	75	33	40

Table 2-3: Peak and Off-Peak Speeds Used for MSAT Analysis For Existing Segments in Existing (2020), Future No-Build (2050) and Future Build (2050) Analyses

Road Type	Base Year		No Build 2050		Build 2050	
	Peak Hours Speed (mph)	Off-Peak Hours Speed (mph)	Peak Hours Speed (mph)	Off-Peak Hours Speed (mph)	Peak Hours Speed (mph)	Off-Peak Hours Speed (mph)
Segment F – University Drive						
US 380	30	40	5	15	30	40
Local Roads	--	--	20	30	See Above	See Above

MSAT emission factors were taken from emission rate look-up tables (ERLT) provided by TxDOT for the Dallas District Area. These emission factors were generated using MOVES2014 by TxDOT for use in these analyses. MOVES2014 is a modeling software that estimates emission rates of MSATs and other pollutants by using project-specific information such as traffic volumes, age distribution of vehicles, vehicle type distribution, fuel composition, and other region-specific data. The MSAT emission rates generally decrease from year to year because of several factors. These include decreased emissions from more efficient internal combustion engines and increasing numbers of electric vehicles. The Dallas District Area ERLT provided by TxDOT includes emission factors in grams per mile for each MSAT for years 2020 through 2050 at speeds of 2.5 mph and 3 mph to 75 mph in 1 mph increments. Emission factors for 2020 were used for the Existing scenario and emission factors from the year 2050 were used for the 2050 Build and 2050 No-Build Scenarios. For the Existing (2020) Scenario, the Urban Restricted emission factors were utilized for the proposed US 380 segments since the freeways have frontage roads and ramps that allow for access onto and off of the freeways. Urban unrestricted emission factors were utilized for US 380 since these facilities do not currently have frontage roads or ramps to access the roadway nor are there plans to add frontage roads and ramps in the existing sections (Segment F) of US 380.

Additionally, a project to improve US 380 east of McKinney from Airport Drive to CR 458 (CSJs 0135-03-046 and 0135-04-033) was environmentally cleared in January 2020 that would widen existing US 380 east of Airport Drive to a 6-lane divided urban facility within the US 380 Study Area. This project will not add ramps and frontage roads to this section of US 380. Since no frontage roads exist or are planned for existing US 380, that roadway used the unrestricted emission factors provided in the ERLT.

The road types, speeds, and scenarios listed in **Table 2-2** and **Table 2-3** were used to determine the MSAT emission factors used in the analysis. These values were taken from the Dallas District Area ERLT. The corresponding emission factors along with detailed calculations can be found in **Table 2-4** through **Table 2-11**.

Table 2-4: Existing Emission Factors by Road Type for Peak and Off-peak Hours

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	University Drive/US 380 Unrestricted	30	1.19E-03	1.19E-04	1.20E-04	1.07E-03	6.15E-05	3.41E-03	5.43E-05	5.29E-04	8.93E-04
Off-Peak	University Drive/US 380 Unrestricted	40	9.67E-04	9.80E-05	9.75E-05	8.79E-04	5.07E-05	2.60E-03	4.51E-05	4.34E-04	7.04E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-5: Future No-Build (2050) Emission Factors by Road Type for Peak and Off-peak Hours

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	University Drive/US 380 Unrestricted	5	8.98E-04	1.32E-04	5.23E-06	1.61E-03	7.47E-05	1.73E-03	3.33E-05	5.35E-04	1.54E-03
Peak	Local Roads	20	4.36E-04	5.37E-05	1.91E-06	6.31E-04	2.93E-05	8.42E-04	1.73E-05	2.13E-04	5.64E-04
Off-Peak	Main Lanes - Unrestricted	15	3.65E-04	4.31E-05	1.48E-06	5.00E-04	2.32E-05	7.34E-04	1.47E-05	1.70E-04	4.38E-04
Off-Peak	Local Roads	30	2.82E-04	3.19E-05	1.06E-06	3.66E-04	1.70E-05	6.23E-04	1.15E-05	1.25E-04	3.06E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-6: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment A

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	Frontage Roads	37	2.38E-04	2.76E-05	9.24E-07	3.18E-04	1.48E-05	4.89E-04	1.02E-05	1.08E-04	2.52E-04
Peak	Ramps	51	1.98E-04	2.25E-05	7.31E-07	2.56E-04	1.19E-05	3.98E-04	9.21E-06	8.76E-05	1.92E-04
Peak	Main Lanes - Restricted	69	2.50E-04	4.24E-05	1.61E-06	5.10E-04	2.36E-05	1.24E-03	1.23E-05	1.70E-04	1.80E-04
Peak	Local Roads	21	3.52E-04	4.14E-05	1.42E-06	4.80E-04	2.23E-05	7.17E-04	1.42E-05	1.63E-04	4.18E-04
Off-Peak	Frontage Roads	60	1.96E-04	2.09E-05	6.46E-07	2.34E-04	1.09E-05	3.47E-04	9.19E-06	8.06E-05	1.74E-04
Off-Peak	Ramps	55	1.95E-04	2.17E-05	6.97E-07	2.46E-04	1.14E-05	3.69E-04	9.17E-06	8.45E-05	1.83E-04
Off-Peak	Main Lanes - Restricted	75	3.12E-04	4.30E-05	1.48E-06	5.00E-04	2.32E-05	1.30E-03	1.43E-05	1.70E-04	1.96E-04
Off-Peak	Local Roads	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-7: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment B

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	Frontage Roads	34	2.54E-04	2.94E-05	9.82E-07	3.38E-04	1.57E-05	5.25E-04	1.06E-05	1.15E-04	2.72E-04
Peak	Ramps	52	1.97E-04	2.23E-05	7.22E-07	2.53E-04	1.18E-05	3.90E-04	9.20E-06	8.68E-05	1.90E-04
Peak	Main Lanes - Restricted	69	2.50E-04	4.24E-05	1.61E-06	5.10E-04	2.36E-05	1.24E-03	1.23E-05	1.70E-04	1.80E-04
Peak	Local Roads	18	3.89E-04	4.66E-05	1.62E-06	5.44E-04	2.52E-05	7.70E-04	1.56E-05	1.84E-04	4.80E-04
Off-Peak	Frontage Roads	60	1.96E-04	2.09E-05	6.46E-07	2.34E-04	1.09E-05	3.47E-04	9.19E-06	8.06E-05	1.74E-04
Off-Peak	Ramps	55	1.95E-04	2.17E-05	6.97E-07	2.46E-04	1.14E-05	3.69E-04	9.17E-06	8.45E-05	1.83E-04
Off-Peak	Main Lanes - Restricted	75	3.12E-04	4.30E-05	1.48E-06	5.00E-04	2.32E-05	1.30E-03	1.43E-05	1.70E-04	1.96E-04
Off-Peak	Local Roads	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-8: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment C

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	Frontage Roads	38	2.33E-04	2.71E-05	9.05E-07	3.11E-04	1.45E-05	4.82E-04	1.00E-05	1.06E-04	2.46E-04
Peak	Ramps	51	1.98E-04	2.25E-05	7.31E-07	2.56E-04	1.19E-05	3.98E-04	9.21E-06	8.76E-05	1.92E-04
Peak	Main Lanes - Restricted	70	2.57E-04	4.23E-05	1.58E-06	5.06E-04	2.35E-05	1.25E-03	1.25E-05	1.69E-04	1.82E-04
Peak	Local Roads	25	3.08E-04	3.61E-05	1.23E-06	4.18E-04	1.94E-05	6.62E-04	1.25E-05	1.42E-04	3.56E-04
Off-Peak	Frontage Roads	60	1.96E-04	2.09E-05	6.46E-07	2.34E-04	1.09E-05	3.47E-04	9.19E-06	8.06E-05	1.74E-04
Off-Peak	Ramps	55	1.95E-04	2.17E-05	6.97E-07	2.46E-04	1.14E-05	3.69E-04	9.17E-06	8.45E-05	1.83E-04
Off-Peak	Main Lanes - Restricted	75	3.12E-04	4.30E-05	1.48E-06	5.00E-04	2.32E-05	1.30E-03	1.43E-05	1.70E-04	1.96E-04
Off-Peak	Local Roads	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-9: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment D

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	Frontage Roads	45	2.08E-04	2.40E-05	7.94E-07	2.75E-04	1.28E-05	4.42E-04	9.38E-06	9.38E-05	2.12E-04
Peak	Ramps	54	1.96E-04	2.19E-05	7.05E-07	2.48E-04	1.16E-05	3.76E-04	9.18E-06	8.52E-05	1.85E-04
Peak	Main Lanes - Restricted	66	2.27E-04	4.27E-05	1.68E-06	5.20E-04	2.41E-05	1.23E-03	1.16E-05	1.73E-04	1.76E-04
Peak	Local Roads	25	3.08E-04	3.61E-05	1.23E-06	4.18E-04	1.94E-05	6.62E-04	1.25E-05	1.42E-04	3.56E-04
Off-Peak	Frontage Roads	60	1.96E-04	2.09E-05	6.46E-07	2.34E-04	1.09E-05	3.47E-04	9.19E-06	8.06E-05	1.74E-04
Off-Peak	Ramps	55	1.95E-04	2.17E-05	6.97E-07	2.46E-04	1.14E-05	3.69E-04	9.17E-06	8.45E-05	1.83E-04
Off-Peak	Main Lanes - Restricted	75	3.12E-04	4.30E-05	1.48E-06	5.00E-04	2.32E-05	1.30E-03	1.43E-05	1.70E-04	1.96E-04
Off-Peak	Local Roads	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-10: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment E

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	Frontage Roads	34	2.54E-04	2.94E-05	9.82E-07	3.38E-04	1.57E-05	5.25E-04	1.06E-05	1.15E-04	2.72E-04
Peak	Ramps	49	2.01E-04	2.29E-05	7.51E-07	2.61E-04	1.22E-05	4.13E-04	9.25E-06	8.94E-05	1.98E-04
Peak	Main Lanes - Restricted	69	2.50E-04	4.24E-05	1.61E-06	5.10E-04	2.36E-05	1.24E-03	1.23E-05	1.70E-04	1.80E-04
Peak	Local Roads	33	2.61E-04	3.00E-05	1.00E-06	3.44E-04	1.60E-05	5.48E-04	1.08E-05	1.17E-04	2.80E-04
Off-Peak	Frontage Roads	60	1.96E-04	2.09E-05	6.46E-07	2.34E-04	1.09E-05	3.47E-04	9.19E-06	8.06E-05	1.74E-04
Off-Peak	Ramps	55	1.95E-04	2.17E-05	6.97E-07	2.46E-04	1.14E-05	3.69E-04	9.17E-06	8.45E-05	1.83E-04
Off-Peak	Main Lanes - Restricted	75	3.12E-04	4.30E-05	1.48E-06	5.00E-04	2.32E-05	1.30E-03	1.43E-05	1.70E-04	1.96E-04
Off-Peak	Local Roads	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

Table 2-11: 2050 Build Emission Factors by Road Type for Peak and Off-peak Hours—Segment F

Traffic Conditions	Road Type	Speed (mph)	BENZ (g/mi)	NAP (g/mi)	BUTA (g/mi)	FORM (g/mi)	ACROL (g/mi)	Diesel PM (g/mi)	POM (g/mi)	ACE (g/mi)	ETB (g/mi)
Peak	University Drive/US 380 Unrestricted	30	2.82E-04	3.19E-05	1.06E-06	3.66E-04	1.70E-05	6.23E-04	1.15E-05	1.25E-04	3.06E-04
Off-Peak	University Drive/US 380 Unrestricted	40	2.24E-04	2.60E-05	8.69E-07	2.99E-04	1.39E-05	4.69E-04	9.79E-06	1.02E-04	2.35E-04

(a) BENZ = benzene; NAP = naphthalene; BUTA = butadiene; FORM = formaldehyde; ACROL = acrolein; PM = particulate matter; POM = polycyclic organic matter; ACE = acetaldehyde; ETB = ethylbenzene

2.2.1 Analysis Results

MSAT emissions in the Study Area were calculated for the 2020 Existing, 2050 No-Build, and four Build Alternatives composed of the study Segments A, B, C, D, and E. The 2050 No-Build Scenario is expected to see a 27 percent reduction of total mass of MSAT from the 2020 Existing Scenario, while VMT increased 22 percent. The calculations show that the MSAT emissions decreased 43 percent for the Blue Alternative, 42 percent for the Purple Alternative, 46 percent for the Brown Alternative, and 45 percent for the Gold Alternative under the 2050 Build scenarios when compared to the 2020 Existing Scenario, with VMTs increasing 91, 95, 79, and 83 percent, respectively. Although the VMT is increasing, the MSAT emissions are decreasing due to improved combustion efficiencies, higher average vehicle speed, and the electrification of the US fleet. The VMT and predicted MSAT emissions for each scenario are shown in **Table 2-12**.

The table shows a decrease in overall MSAT emissions is predicted for the 2050 Build Scenarios compared to the 2020 Existing Scenario. The total tons per year of MSAT emissions in 2020 Existing are 3.52 and the MSAT emissions for the 2050 Build Blue Alternative, Purple Alternative, Brown Alternative, and Gold Alternative scenarios are 2.01, 2.04, 1.99, and 1.94 tons per year, respectively. These equate to 43, 42, 46, and 45 percent decreases, respectively, in total MSAT emissions when compared to the 2020 Existing Scenario. MSAT emissions for the 2050 Build Alternatives decrease despite total VMT increasing by 91, 95, 79, and 83 percent, respectively, over the 2020 Existing Scenario.

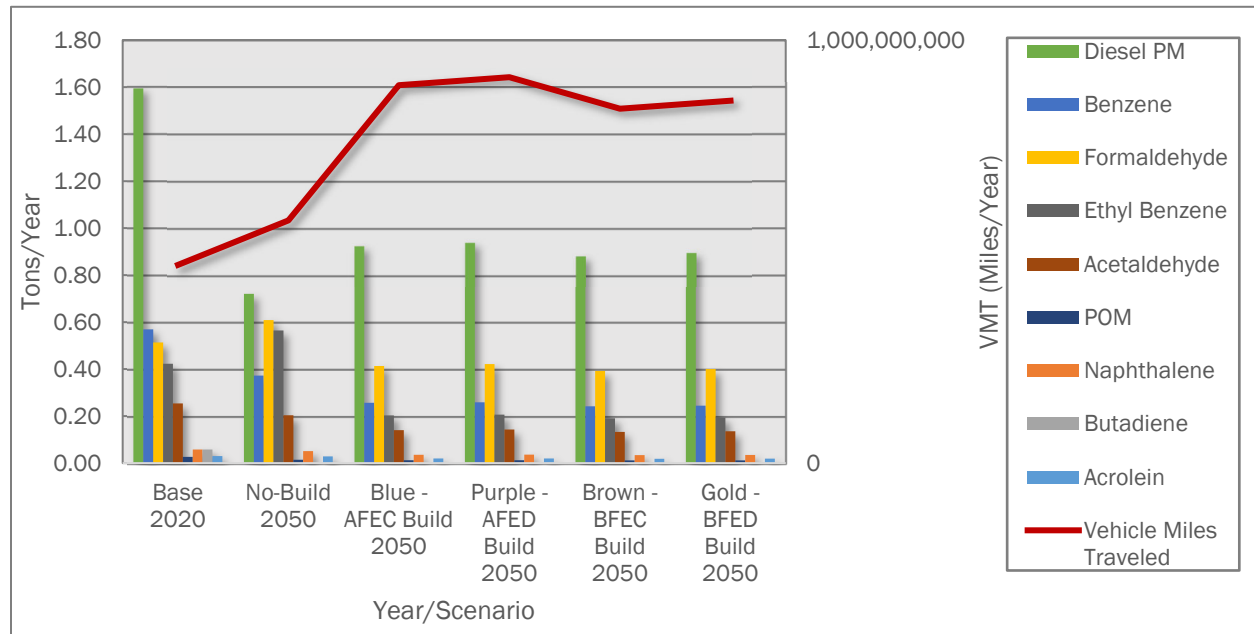
Table 2-12: Mass of MSAT Emissions in Tons per Year and Percent Change in 2050 (Build) Compared to the 2020 Base Scenario

Pollutant	Base (Existing) 2020 (ton/yr)	Blue Alternative		Purple Alternative		Brown Alternative		Gold Alternative		No-Build 2050	Percent Change of No-Build 2050 Compared to 2050
		MSAT Emissions	Percent Change from 2020	MSAT Emissions	Percent Change from 2020	MSAT Emissions	Percent Change from 2020	MSAT Emissions	Percent Change from 2020		
Acrolein	2.95E-02	1.92E-02	-35%	1.95E-02	-34%	1.82E-02	-38%	1.86E-02	-37%	2.83E-02	-4%
Acetaldehyde	0.25	0.14	-45%	0.14	-44%	0.13	-48%	0.14	-47%	0.20	-20%
Benzene	0.57	0.26	-55%	0.26	-55%	0.24	-58%	0.24	-57%	0.37	-34%
Butadiene	0.06	1.24E-03	-98%	1.27E-03	-98%	1.18E-03	-98%	1.21E-03	-98%	1.92E-03	-97%
Diesel PM	1.59	0.93	-42%	0.94	-41%	0.88	-45%	0.90	-44%	0.72	-55%
Ethylbenzene	0.42	0.20	-52%	0.21	-51%	0.19	-55%	0.19	-54%	0.57	34%
Formaldehyde	0.51	0.41	-20%	0.42	-18%	0.39	-24%	0.40	-22%	0.61	19%
Naphthalene	0.06	0.04	-38%	0.04	-37%	0.03	-41%	0.03	-40%	5.08E-02	-11%
POM	2.62E-02	1.18E-02	-55%	1.19E-02	-54%	1.11E-02	-57%	1.13E-02	-57%	1.43E-02	-45%
Millions VMT	469	894	91%	913	95%	838	79%	857	83%	574	22%
Total MSAT	3.52	2.01	-43%	2.04	-42%	1.90	-46%	1.94	-45%	2.57	-27%

Under the 2050 No-Build Scenario, an overall reduction in MSAT emissions is expected to be seen. The 2050 No-Build Scenario would result in a 27 percent reduction in MSAT emissions. This is due to increases in combustion efficiency of engines and the electrification of the US fleet. However, the congestion expected for the 2050 No-Build Scenario will cause significant speed reductions, increasing the expected corridor-specific MSATs. The 2050 Build Scenarios have higher predicted annual VMTs due to slight increases in daily volumes and longer alignment distances; however, the Build Scenarios will greatly reduce congestion, allowing for higher traffic speeds, which further reduces the overall expected MSAT emissions.

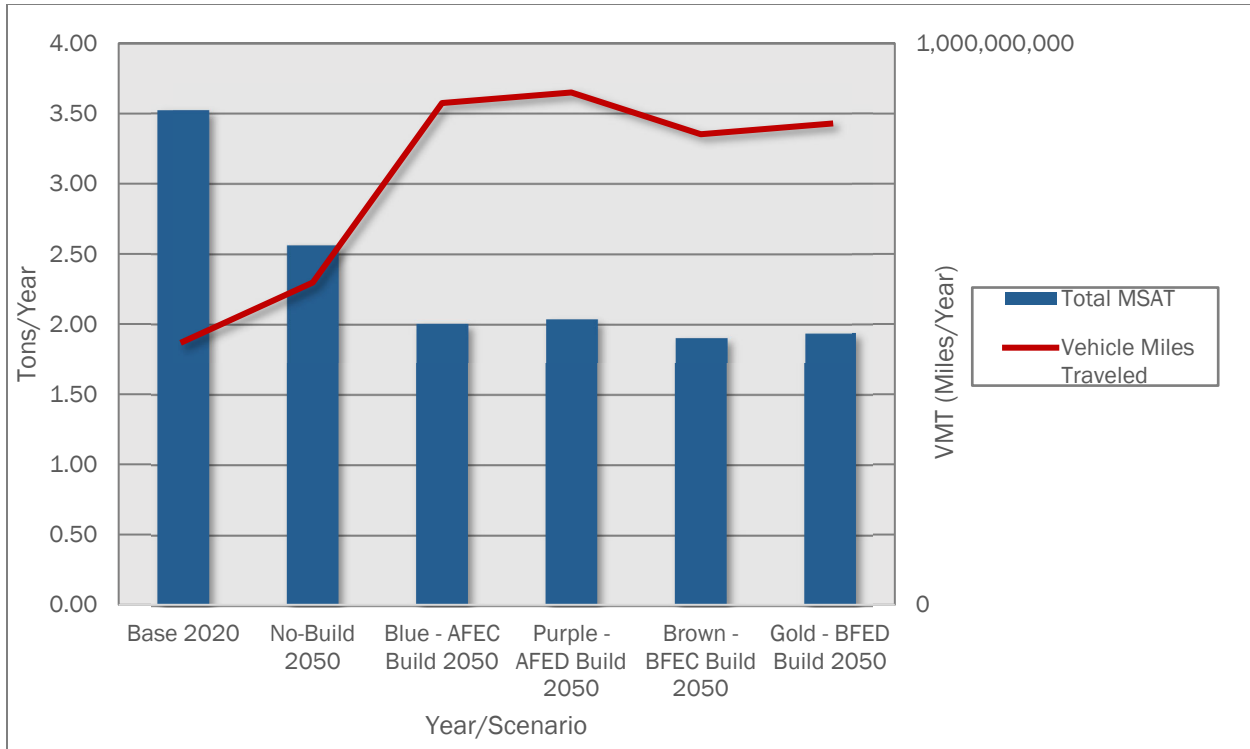
In contrast to the overall pollutant reductions, the new, proposed US 380 will be a freeway, with ramps and frontage roads connecting the proposed alignment to the existing local roadway network. The ELRTs calculated for these restricted freeways are higher for diesel PM than for their unrestricted counterparts, which also allows for slightly higher predicted MSAT emissions for the future Build Alternatives analyzed for this pollutant. While DPM is currently calculated to be higher in the 2050 Build Scenarios than the 2050 No-Build Scenario, the overall MSATs are expected to be higher in the 2050 No-Build Scenario. **Graph 2-2** shows the priority MSAT emissions and VMT for each scenario.

Graph 2-2: Priority MSAT Emissions and VMT



The results show that there will be a decrease in MSAT emissions for the 2050 No-Build and all 2050 Build Alternatives when compared to the base year (2020 Existing) Scenario, as shown in **Graph 2-3**.

Graph 2-3: Total MSAT Emissions and VMT per Scenario



2.2.2 Conclusion

With implementation of a 2050 Build Alternative - Blue, Purple, Brown, or Gold - VMT in 2050 along US 380 and the local roadway network would increase by approximately 91, 95, 79, or 83 percent, respectively, compared to 2020 (No-Build). This increase is due to higher volumes of traffic expected to utilize the roadway network analyzed due to population growth in the area and the diversion of traffic from the local roadway network to the new US 380 freeway, a slightly longer route. While the VMT for the Build Alternatives are expected to increase slightly, the total MSAT emissions are predicted to decrease by approximately 43, 42, 46, or 45 percent, respectively. This reduction of MSAT emissions within the network area is due to higher combustion efficiencies of combustion engines, as well as the electrification of the US fleet. If the proposed improvements are not implemented, the VMT under the 2050 No-Build Scenario would increase by approximately 25 percent compared to the 2020 (No-Build) Scenario. While the VMT in the 2050 No-Build Scenario is lower than that predicted in the four analyzed 2050 Build Scenarios, the increase in vehicles on the existing roadway will cause significant congestion in the Future No-Build Scenario. This congestion and very low traffic speeds offset the difference in VMT between the 2050 Build and 2050 No-Build Scenarios, causing the No-Build Scenario to have higher total MSAT emissions than any of the four Future (2050) Build Alternatives.

ATTACHMENT A: EXHIBITS

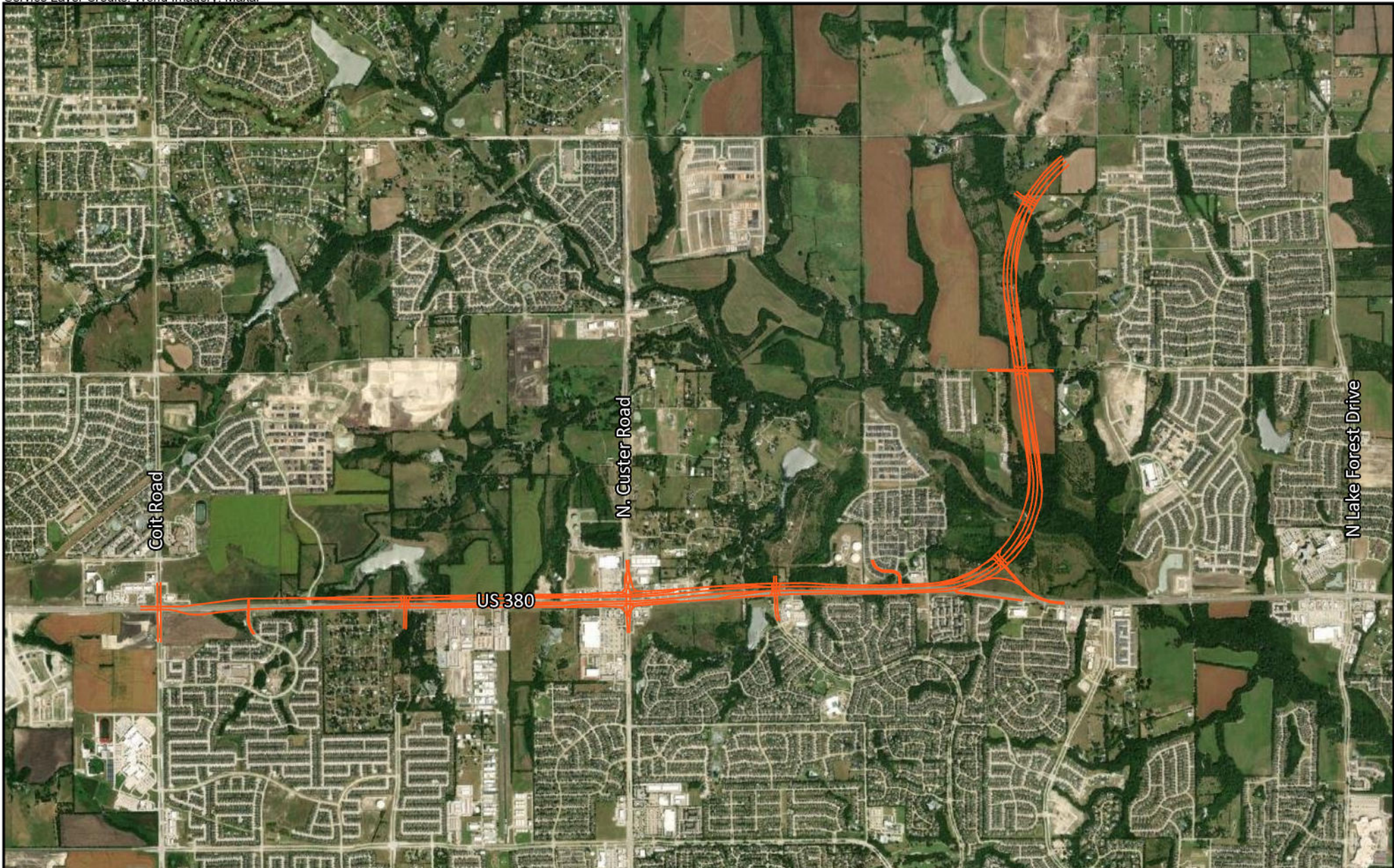


Exhibit 1
2050 Build Segment A
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

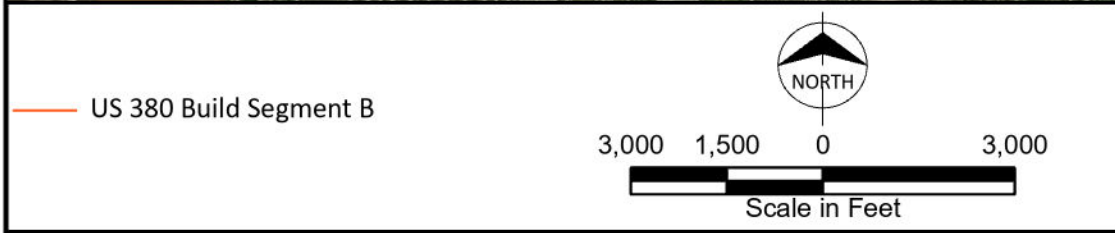
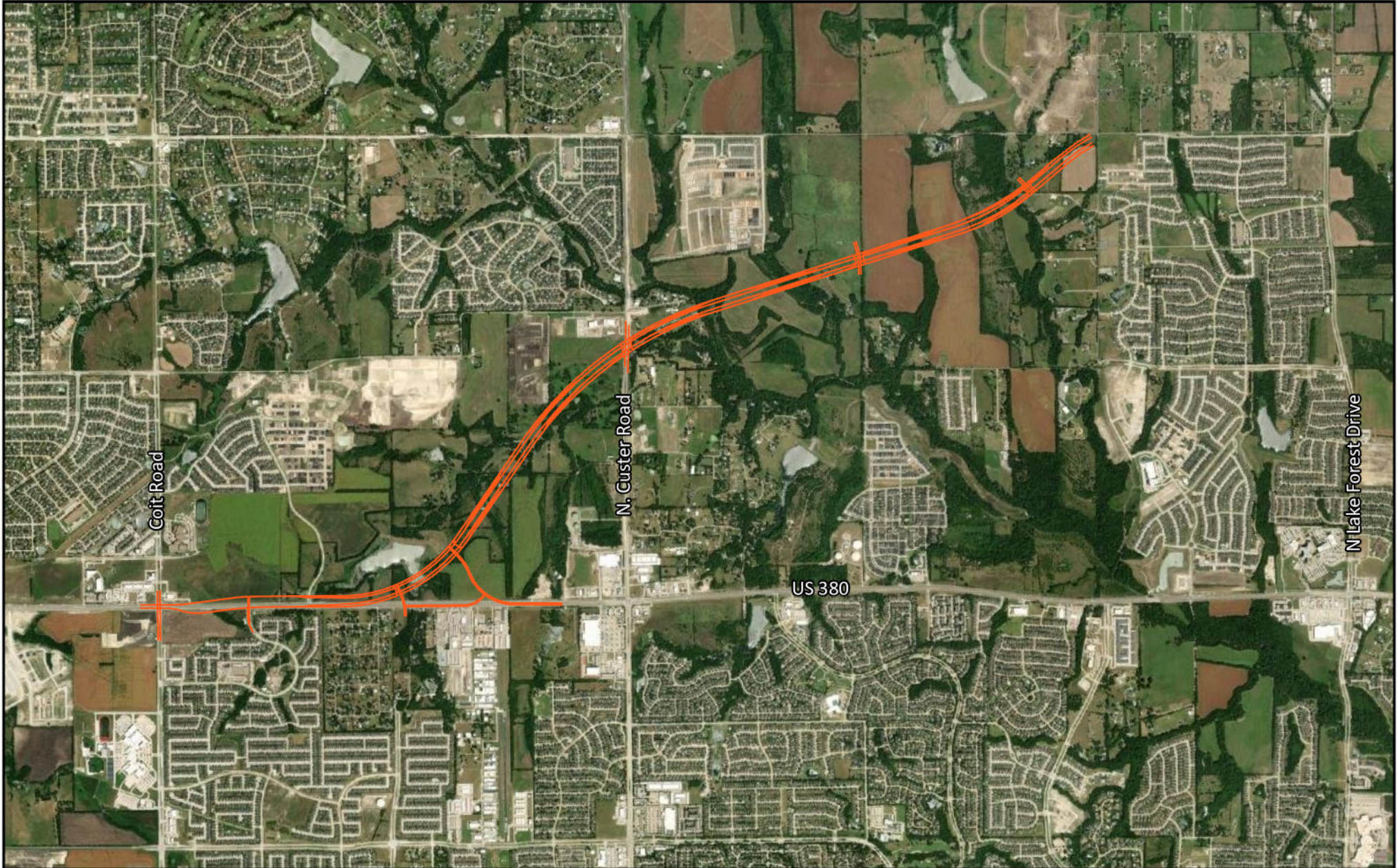


Exhibit 1
2050 Build Segment B
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

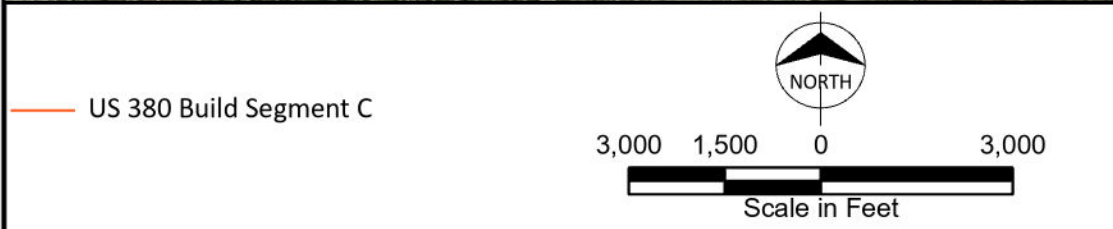


Exhibit 1
2050 Build Segment C
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

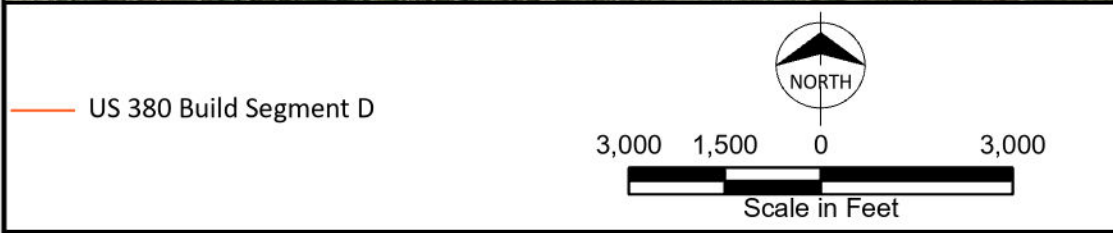


Exhibit 1
2050 Build Segment D
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

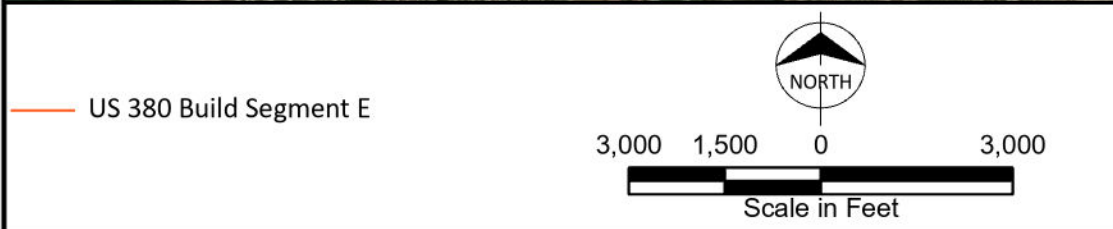
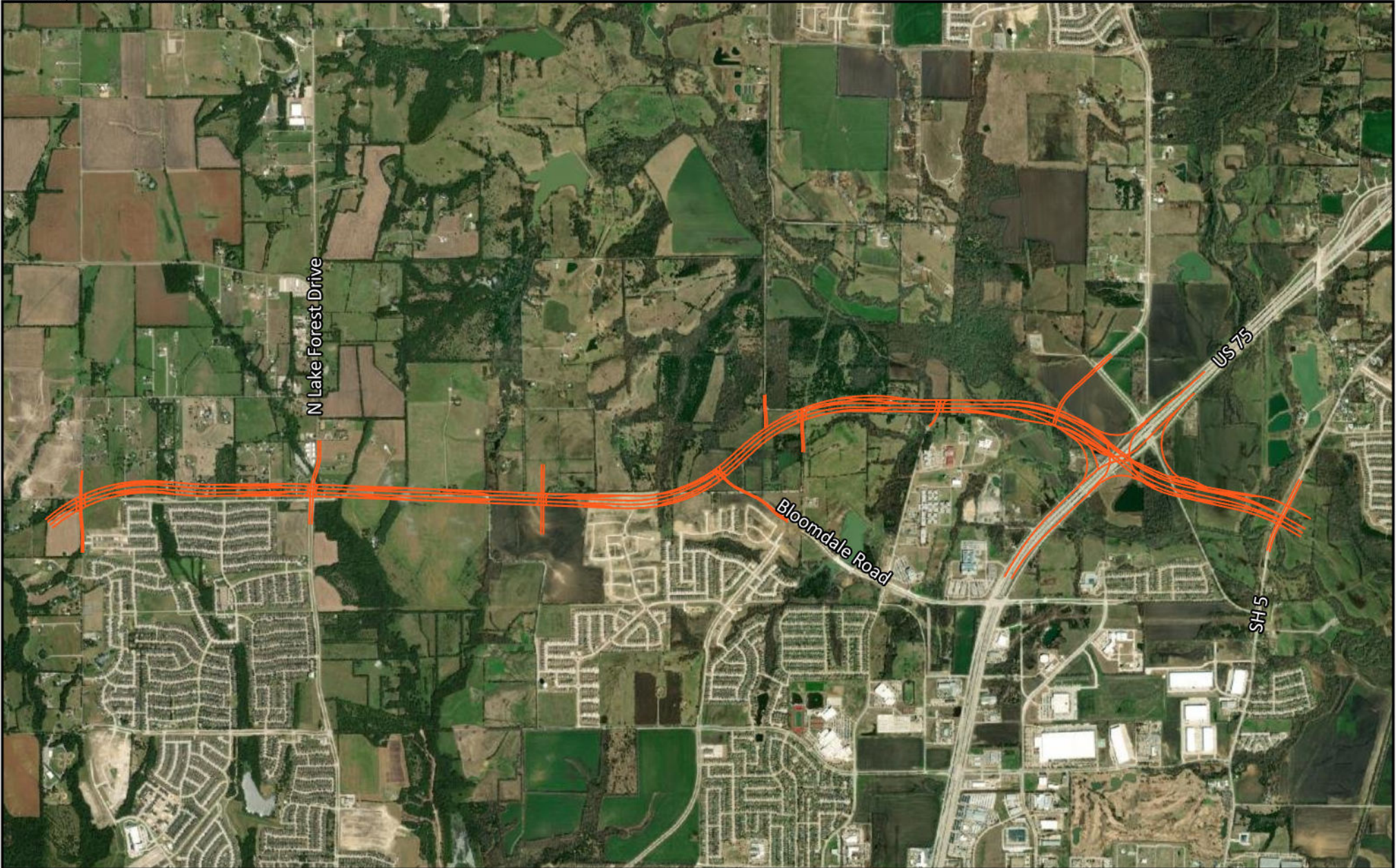


Exhibit 3
2050 Build Segment E
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

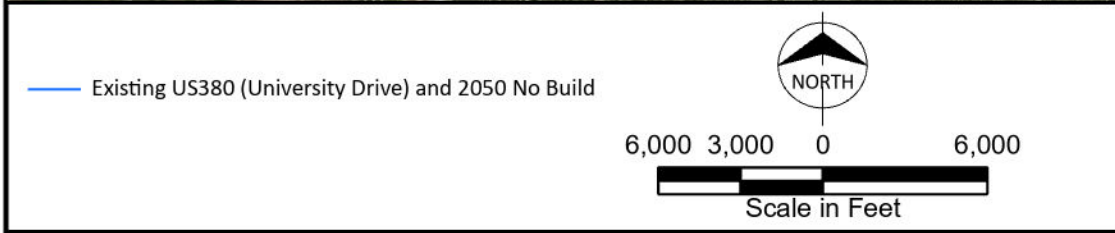
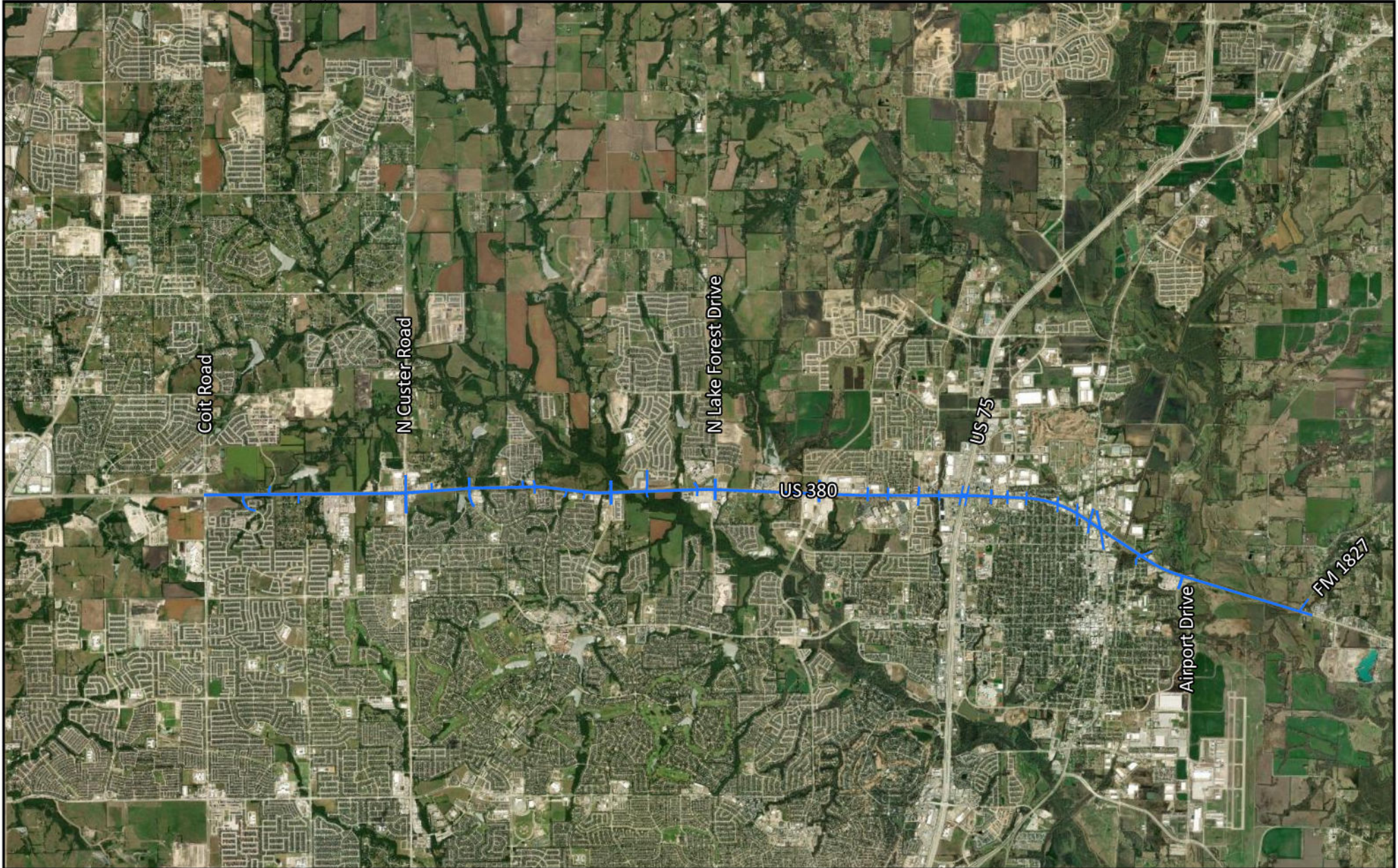
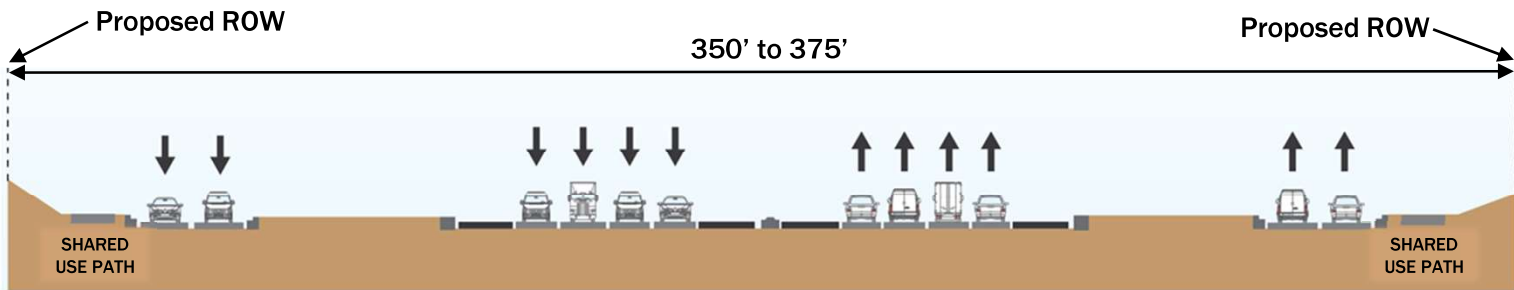


Exhibit 1
Existing US380 and 2050 No Build
Analyzed Links for MSAT Analysis
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

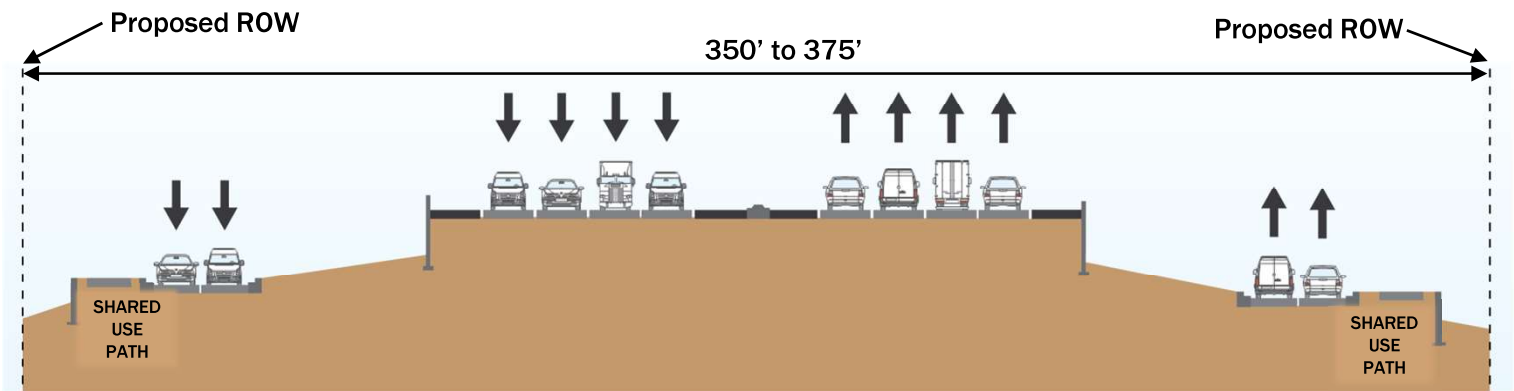
8-LANE TYPICAL SECTION

ROW width varies by location.



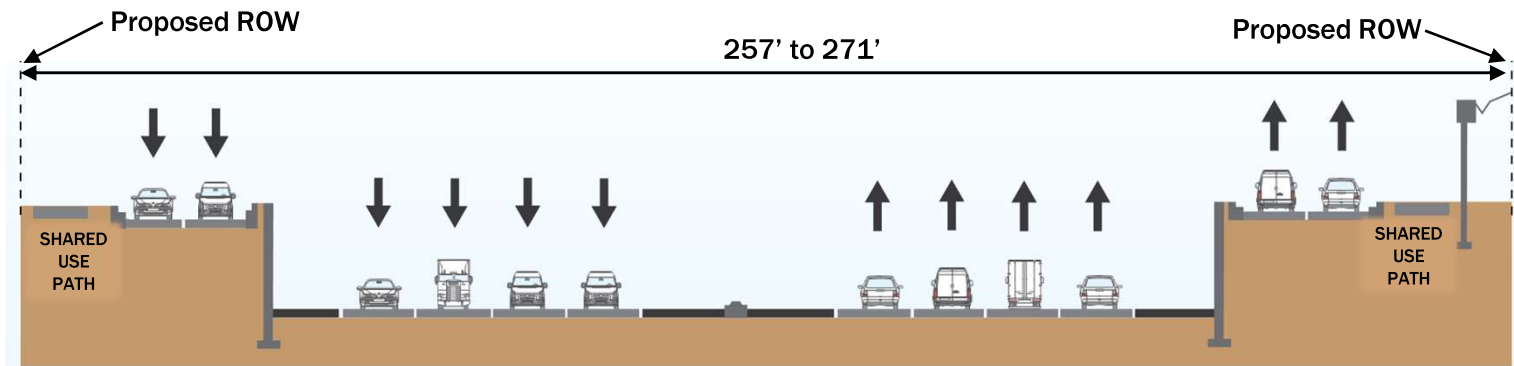
8-LANE TYPICAL SECTION – Below-grade Frontage Roads

ROW width varies by location.



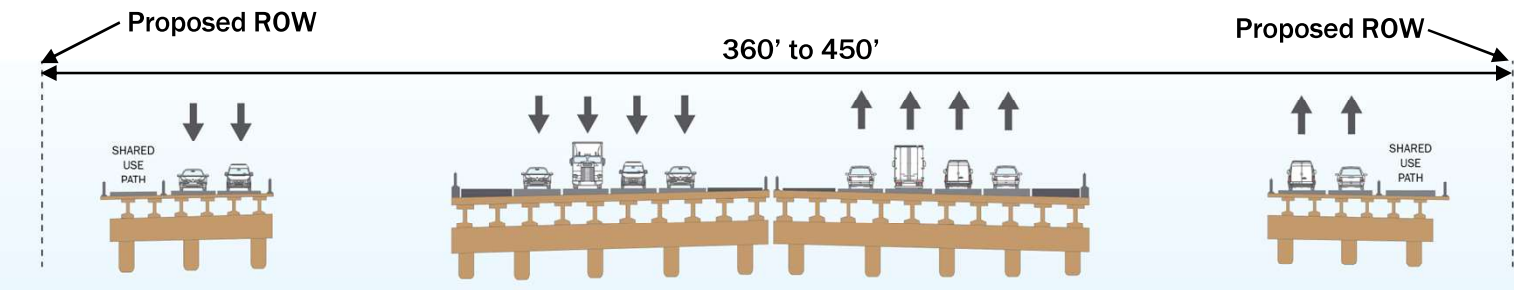
8-LANE TYPICAL SECTION – Below-grade Mainlanes

ROW width varies by location.



8-LANE TYPICAL SECTION – Elevated on Bridge

ROW width varies by location.



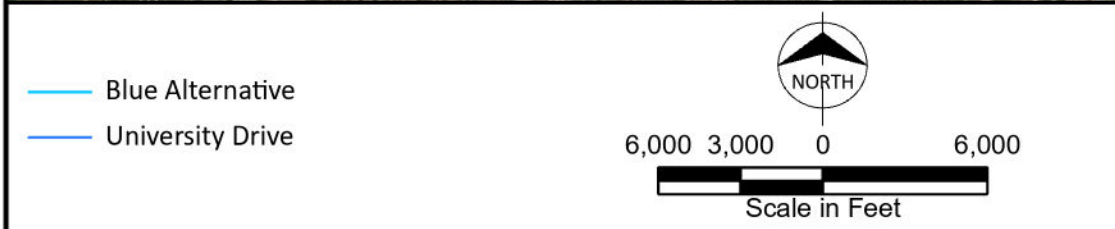
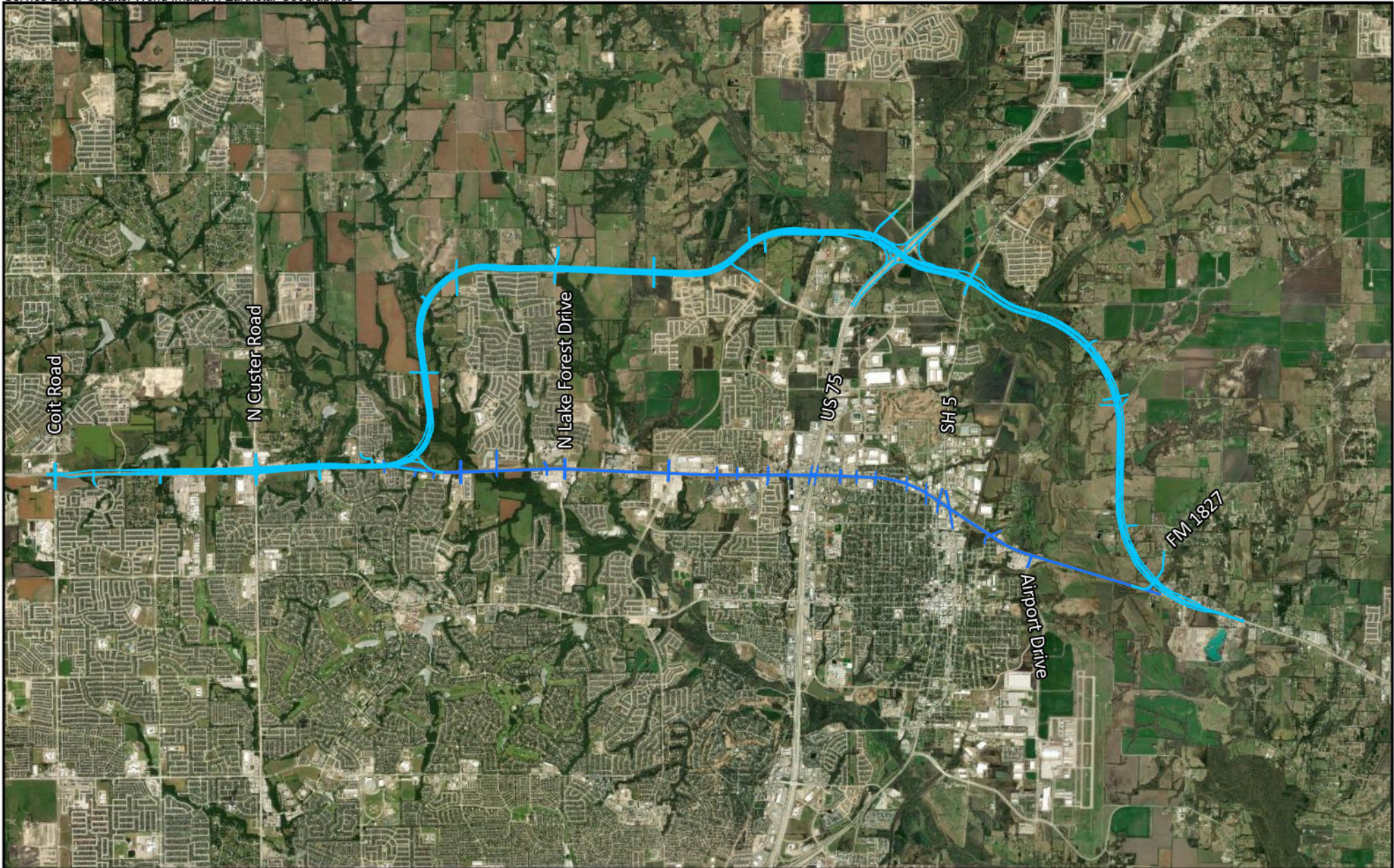


Exhibit 3
2050 Build (Blue Alternative)
Analyzed Links for MSAT Analysis
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

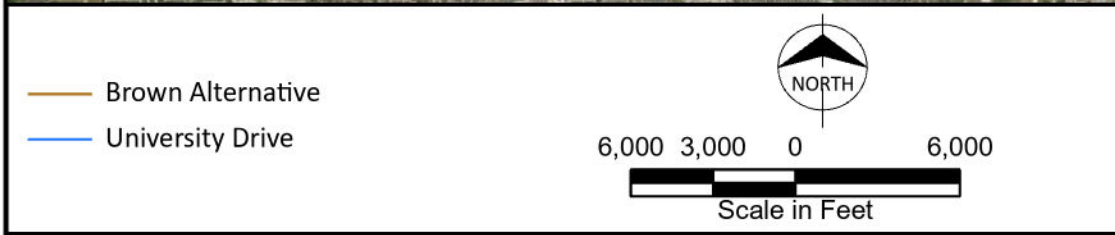
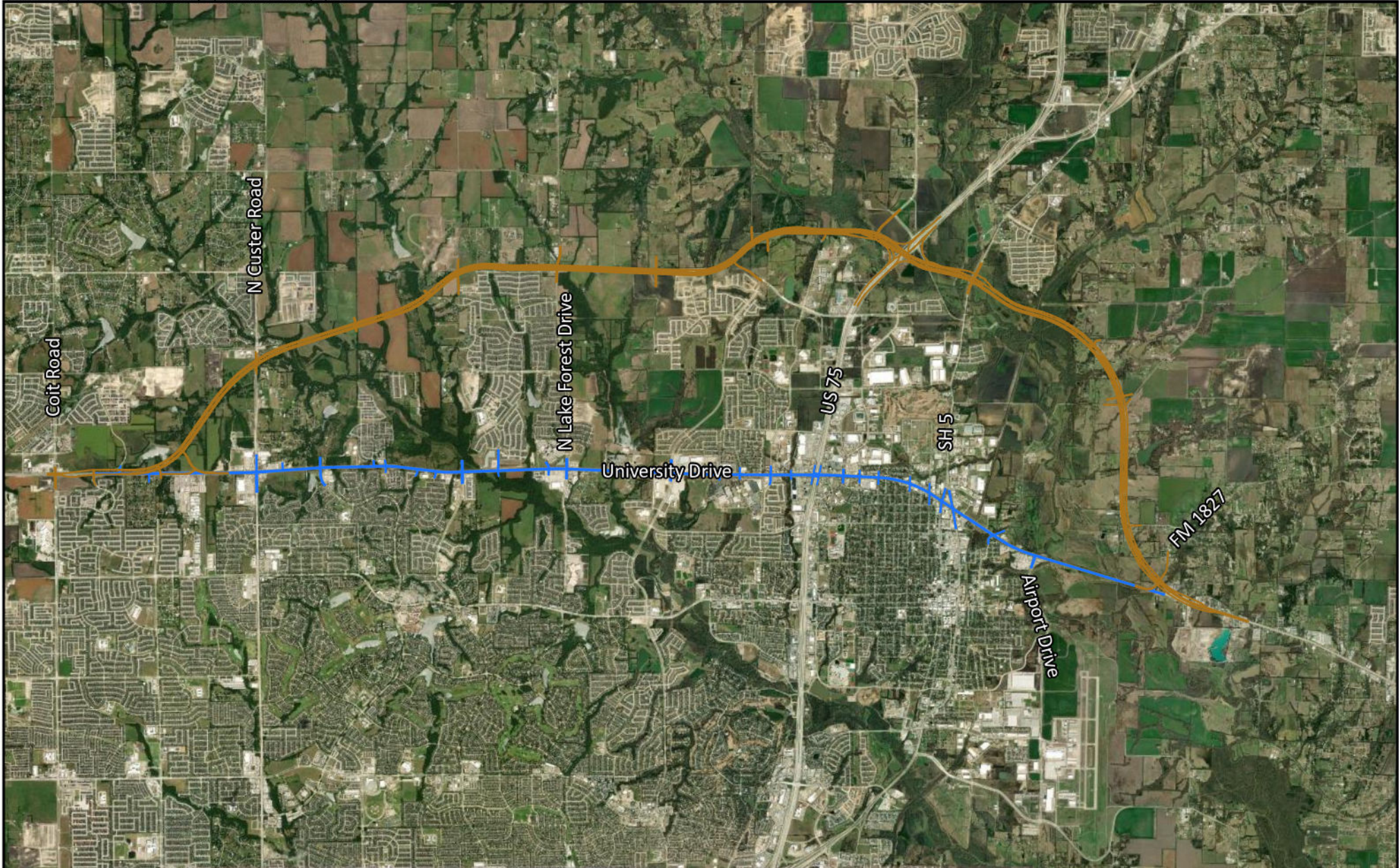


Exhibit 3
2050 Build (Brown Alternative)
Analyzed Links for MSAT Analysis
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

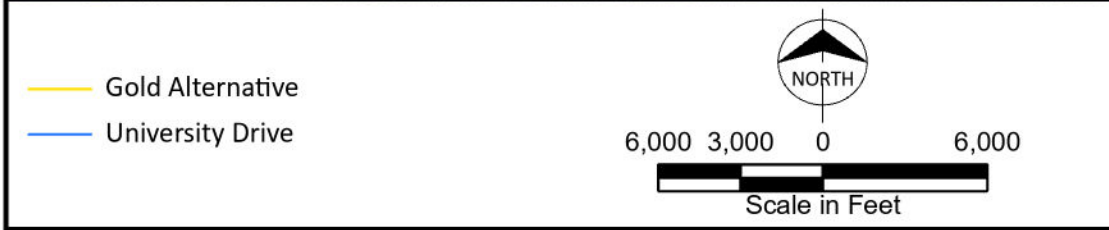
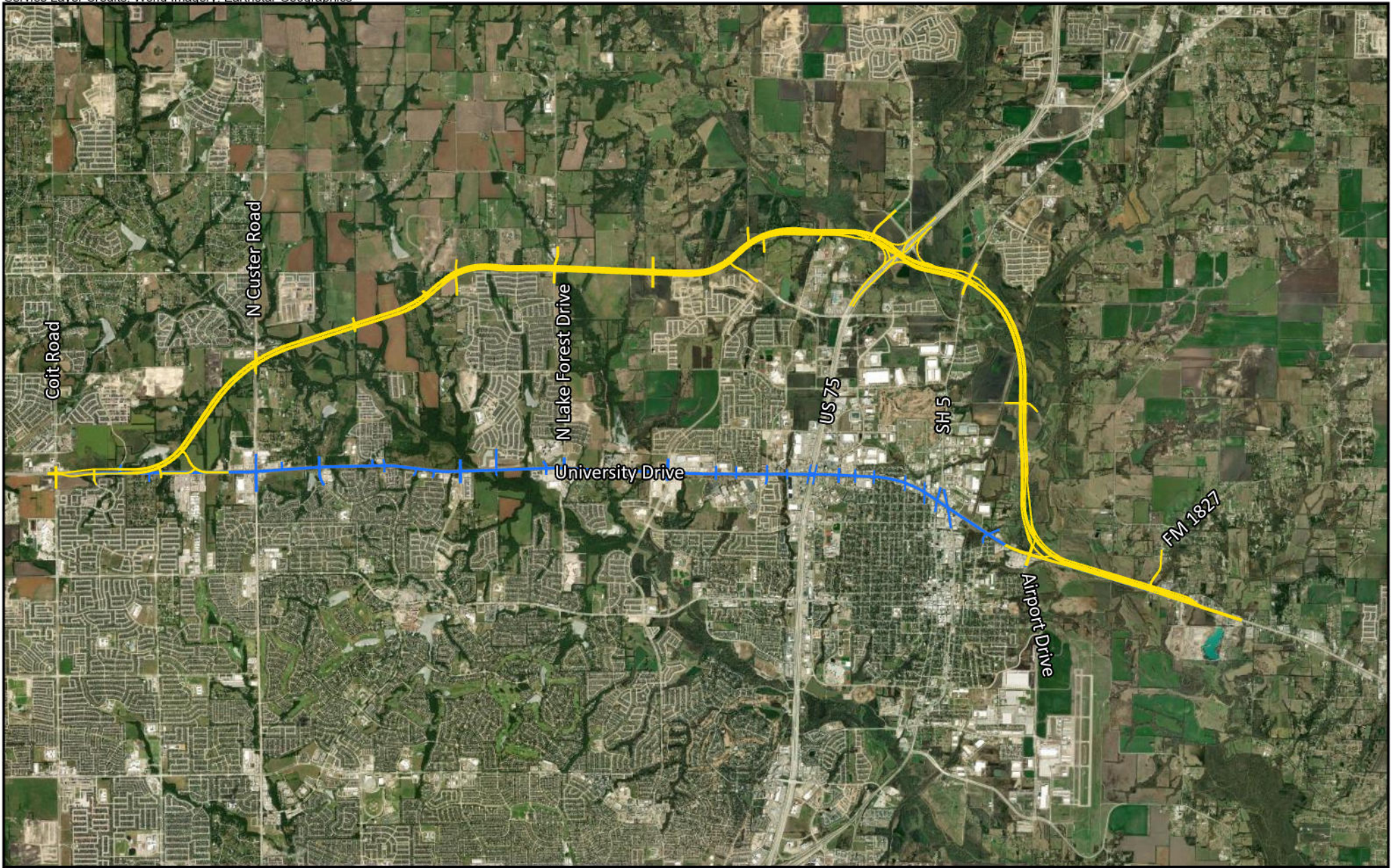


Exhibit 3
2050 Build (Gold Alternative)
Analyzed Links for MSAT Analysis
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

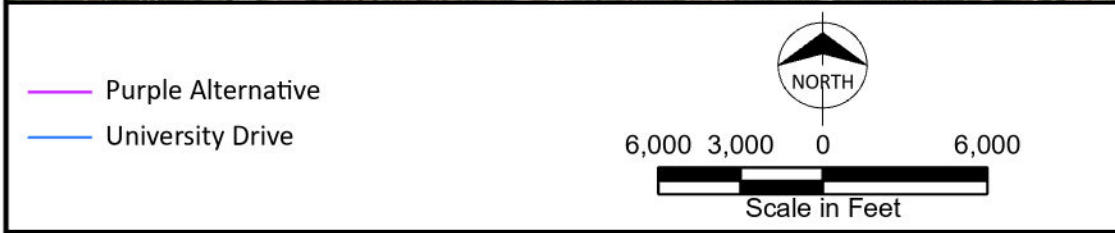
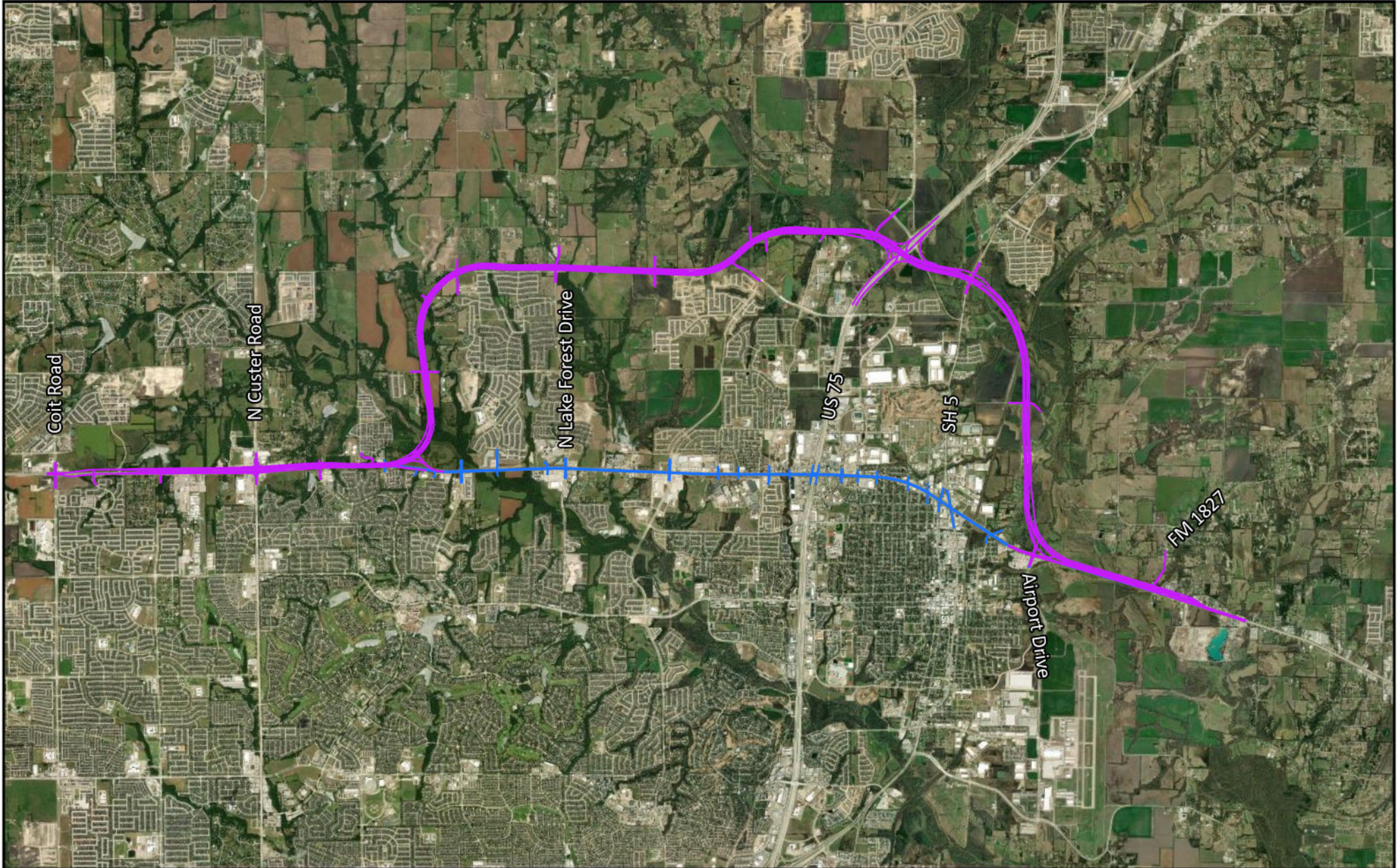


Exhibit 3
2050 Build (Purple Alternative)
Analyzed Links for MSAT Analysis
US 380 McKinney
CSJs 0135-02-065, 0135-03-053, & 0135-15-002
Collin County

Traffic Data

Table 4a: Provided Traffic for the Existing (2020) Scenario

Road Type	Road Name	Segment Length (miles)	AM AB Peak	AM BA Peak	PM AB Peak	PM BA Peak	Total ADT	Daily Peak Traffic Volume (3 hrs each way)	Peak VMT	Free-Flow VMT
Mainlane - Unrestricted	US 380/Univeristy Drive	2.02	5668.2	4798.3	7076.28	7669.24	126060.1	75636.06	152784.8412	101856.5608
Mainlane - Unrestricted	US 380/Univeristy Drive	0.63	6265.41	2982.4	4689.41	8108.5	110228.6	66137.16	41666.4108	27777.6072
Mainlane - Unrestricted	US 380/Univeristy Drive	0.54	4775.97	2982.95	4690.57	6313.61	93815.5	56289.3	30396.222	20264.148
Mainlane - Unrestricted	US 380/Univeristy Drive	0.9	4775.97	2982.95	4690.57	6313.61	93815.5	56289.3	50660.37	33773.58
Mainlane - Unrestricted	US 380/Univeristy Drive	1.04	6177.72	3747.13	6030.75	7862.52	119090.6	71454.36	74312.5344	49541.6896
Mainlane - Unrestricted	US 380/Univeristy Drive	0.88	7873.26	4659.9	7211.4	9904.64	148246	88947.6	78273.888	52182.592
Mainlane - Unrestricted	US 380/Univeristy Drive	0.17	8889.83	4791.07	7616.46	11065.41	161813.85	97088.31	16505.0127	11003.3418
Mainlane - Unrestricted	US 380/Univeristy Drive	0.48	5981.97	3492.94	5431.15	7335.75	111209.05	66725.43	32028.2064	21352.1376
Mainlane - Unrestricted	US 380/Univeristy Drive	0.21	5213.21	3153.16	4756.33	6325.66	97241.8	58345.08	12252.4668	8168.3112
Mainlane - Unrestricted	US 380/Univeristy Drive	0.31	5213.21	3153.16	4756.33	6325.66	97241.8	58345.08	18086.9748	12057.9832
Mainlane - Unrestricted	US 380/Univeristy Drive	0.2	5517.58	4104.48	5803.49	8041.05	117333	70399.8	14079.96	9386.64
Mainlane - Unrestricted	US 380/Univeristy Drive	0.22	5517.58	4104.48	5803.49	8041.05	117333	70399.8	15487.956	10325.304
Mainlane - Unrestricted	US 380/Univeristy Drive	0.07	5827.09	4035.68	4040.8	9089.03	114963	68977.8	4828.446	3218.964
Mainlane - Unrestricted	US 380/Univeristy Drive	0.24	5788.1	2151.09	4407.27	7434.98	98907.2	59344.32	14242.6368	9495.0912
Mainlane - Unrestricted	US 380/Univeristy Drive	0.16	5267.3	1934.42	3516.87	6186.43	84525.1	50715.06	8114.4096	5409.6064
Mainlane - Unrestricted	US 380/Univeristy Drive	0.19	4792.42	2146.05	3807.42	5872.45	83091.7	49855.02	9472.4538	6314.9692
Mainlane - Unrestricted	US 380/Univeristy Drive	0.32	4607.55	1937.42	3431.43	5610.69	77935.45	46761.27	14963.6064	9975.7376
Mainlane - Unrestricted	US 380/Univeristy Drive	0.22	4486.36	2092.94	3447.1	5360.37	76933.85	46160.31	10155.2682	6770.1788
Mainlane - Unrestricted	US 380/Univeristy Drive	0.08	4421.57	1683.16	3094.45	4908.64	70539.1	42323.46	3385.8768	2257.2512
Mainlane - Unrestricted	US 380/Univeristy Drive	0.08	4171.3	1683.22	2980.81	4908.64	68719.85	41231.91	3298.5528	2199.0352
Mainlane - Unrestricted	US 380/Univeristy Drive	0.13	4509.85	1766.68	3069.33	4883.87	71148.65	42689.19	5549.5947	3699.7298
Mainlane - Unrestricted	US 380/Univeristy Drive	0.49	5838.13	3377.49	5897.63	7707.53	114103.9	68462.34	33546.5466	22364.3644
Mainlane - Unrestricted	US 380/Univeristy Drive	0.46	5919.47	3786.66	6222.75	7680.27	118045.75	70827.45	32580.627	21720.418
Mainlane - Unrestricted	US 380/Univeristy Drive	1.22	5283.18	5420.45	7554.15	7430.82	128443	77065.8	94020.276	62680.184

Table 4b: Provided Traffic Data for the Future No-Build (2050) Scenario

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Mainlanes - Unrestricted	EB US 380 Airport to FM 1827	EB	64400	3220	5340	6439	9660	16020	31316.95	47219.33	78536.29
Local Road	Coit SB-1	SB	18800	1650	1110	561	4950	3330	879.75	1117.75	1997.50
Local Road	Coit NB-2	NB	18400	1040	1390	577	3120	4170	796.65	1214.10	2010.76
Local Road	Coit SB-2	SB	18200	1560	1130	750	4680	3390	1146.31	1438.92	2585.23
Local Road	Coit NB-1	NB	18200	1300	1400	758	3900	4200	1162.84	1449.96	2612.80
Local Road	Prestwick Hollow NB	NB	3500	270	210	1177	810	630	321.00	459.21	780.21
Local Road	Prestwick Hollow SB	SB	2600	210	150	1223	630	450	250.16	352.08	602.23
Local Road	Lakewood SB	SB	1900	120	150	450	360	450	69.03	92.90	161.93
Local Road	Lakewood NB	NB	2300	210	150	438	630	450	89.59	101.20	190.80
Local Road	Red Bud SB	SB	1700	90	120	462	270	360	55.13	93.63	148.75
Local Road	Red Bud NB	NB	1200	120	60	460	360	180	47.05	57.50	104.55
Local Road	Custer SB-2	SB	33500	2700	2330	1044	8100	6990	2983.70	3640.16	6623.86
Local Road	Custer NB-1	NB	30500	1890	2360	1046	5670	7080	2525.85	3516.38	6042.23
Local Road	Walnut Grove NB	NB	500	30	30	405	90	90	13.81	24.55	38.35
Local Road	Walnut Grove SB	SB	1000	60	60	402	180	180	27.41	48.73	76.14
Local Road	Stonebridge SB-2	SB	16600	1050	1170	983	3150	3510	1239.92	1850.57	3090.49
Local Road	Stonebridge NB-1	NB	13700	850	870	961	2550	2610	939.16	1554.34	2493.50
Local Road	Tremont SB	SB	4400	300	280	323	900	840	106.44	162.72	269.17
Local Road	Tremont NB	NB	3000	100	260	317	300	780	64.84	115.27	180.11
Local Road	Grassmere SB-1	SB	2500	180	240	297	540	720	70.88	69.75	140.63
Local Road	Grassmere NB-2	NB	700	60	60	291	180	180	19.84	18.74	38.58
Local Road	Grassmere NB-1	NB	700	60	60	300	180	180	20.45	19.32	39.77
Local Road	Grassmere SB-2	SB	2200	120	240	274	360	720	56.05	58.12	114.17
Local Road	Freedom SB	SB	700	60	60	338	180	180	23.05	21.77	44.81
Local Road	Freedom NB	NB	1100	90	90	345	270	270	35.28	36.59	71.88
Local Road	Forest Ridge NB	NB	1800	150	150	316	450	450	53.86	53.86	107.73
Local Road	Forest Ridge SB	SB	2500	240	180	373	720	540	89.01	87.60	176.61
Local Road	Ridge SB-1	SB	9900	750	480	597	2250	1440	417.22	702.15	1119.38
Local Road	Ridge NB-1	NB	13700	900	1060	591	1700	3180	658.16	875.31	1533.47
Local Road	Auburn Hills SB-1	SB	3100	230	180	1091	690	540	254.15	386.40	640.55
Local Road	Auburn Hills NB-2	NB	3300	230	180	1081	690	540	251.82	423.80	675.63
Local Road	Baylor Scott & White SB-1	SB	3400	100	270	378	300	810	79.47	163.94	243.41
Local Road	Baylor Scott & White NB-2	NB	3100	250	160	388	750	480	90.39	137.42	227.80
Local Road	Lake Forest SB-1	SB	28300	2130	2160	528	6390	6480	1287.00	1543.00	2830.00
Local Road	Lake Forest NB-2	NB	29800	1810	2480	533	5430	7440	1299.19	1709.03	3008.22
Local Road	Hardin SB-1	SB	17600	1260	1350	689	3780	4050	1021.76	1274.91	2296.67
Local Road	Hardin NB-2	NB	18100	1100	1290	686	3300	3870	931.56	1420.07	2351.63
Local Road	Skyline SB-1	SB	4800	310	440	384	930	1320	163.64	185.45	349.09
Local Road	Skyline NB-2	NB	5700	330	460	377	990	1380	169.22	237.77	406.99
Local Road	Wisteria SB-1	SB	2100	170	150	363	510	450	66.00	78.38	144.38
Local Road	Wisteria NB-2	NB	2100	90	220	360	270	660	63.41	79.77	143.18
Local Road	Community SB-2	SB	8000	800	670	509	2400	2010	425.13	346.08	771.21
Local Road	Community NB-1	NB	11700	790	870	511	2370	2610	481.97	650.36	1132.33
Local Road	Towne Crossing SB-2	SB	3100	180	330	215	540	990	62.30	63.93	126.23
Local Road	Towne Crossing NB-2	NB	4800	210	500	216	630	1500	87.14	109.23	196.36
Local Road	US 75 SBFR-1	SB	39000	2470	3090	296	7410	9270	935.09	1251.27	2186.36
Local Road	US 75 NBFR-4	NB	45100	1870	3720	311	5610	11160	987.78	1668.68	2656.46
Local Road	US 75 NBFR U	WB	6800	240	550	439	720	1650	197.05	368.33	565.38
Local Road	US 75 SBFR U	EB	9700	210	790	433	630	2370	246.02	549.45	795.47
Local Road	Redbud SB-2	SB	7900	410	560	359	1230	1680	197.86	339.28	537.14
Local Road	Redbud NB-1	NB	10100	500	900	356	1500	2700	283.18	397.80	680.98
Local Road	Graves SB-1	SB	7500	370	740	313	1110	2220	197.40	247.20	444.60
Local Road	Graves NB-1	NB	4200	200	370	313	600	1110	101.37	147.61	248.98
Local Road	Waddill SB-2	SB	3000	210	260	326	630	780	87.06	98.17	185.23
Local Road	Waddill NB-1	NB	3100	220	280	324	660	840	92.05	98.18	190.23
Local Road	College SB-2	SB	1800	130	150	374	390	450	59.50	68.00	127.50
Local Road	College NB-1	NB	1800	100	190	368	300	570	60.64	64.82	125.45

Table 4b: Provided Traffic Data for the Future No-Build (2050) Scenario

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Church SB-2	SB	1800	100	150	588	300	450	83.52	116.93	200.45
Local Road	Church NB-1	NB	1600	90	150	584	270	450	79.64	97.33	176.97
Local Road	Tennessee SB-1	SB	3900	270	420	672	810	1260	263.45	232.91	496.36
Local Road	Tennessee NB-2	NB	4300	320	290	689	960	870	238.80	322.32	561.12
Local Road	McDonald SB-2	SB	21100	1360	1590	1079	4080	4770	1808.55	2503.36	4311.91
Local Road	McDonald NB-1	NB	16900	1050	1600	1050	3150	4800	1580.97	1779.83	3360.80
Local Road	Throckmorton SB-1	SB	4100	390	230	617	1170	690	217.35	261.76	479.11
Local Road	Throckmorton NB-2	NB	3500	170	290	595	510	870	155.51	238.90	394.41
Local Road	Airport SB	SB	31400	2330	1690	694	6990	5070	1585.16	2542.04	4127.20
Local Road	Airport NB	NB	28600	1520	2150	681	4560	6450	1420.04	2268.71	3688.75
Local Road	FM 1827 SB	SB	9200	640	490	795	1920	1470	510.43	874.80	1385.23
Local Road	FM 1827 NB	NB	7400	370	620	788	1110	1860	443.25	661.14	1104.39
Mainlanes - Unrestricted	EB US 380 Coit to Prestwick Hollow	EB	70800	4060	3940	2027	12180	11820	9213.64	17966.59	27180.23
Mainlanes - Unrestricted	EB US 380 Lakewood to Red Bud	EB	71300	4060	3970	1556	12180	11910	7099.25	13912.64	21011.89
Mainlanes - Unrestricted	EB US 380 Red Bud to Custer	EB	70800	4060	3940	5676	12180	11820	25800.00	50310.00	76110.00
Mainlanes - Unrestricted	EB US 380 Custer to Walnut Grove	EB	70000	4210	4130	1390	12630	12390	6586.70	11841.33	18428.03
Mainlanes - Unrestricted	EB US 380 Walnut Grove to Stonebridge	EB	70000	4210	4130	1971	12630	12390	9339.85	16790.83	26130.68
Mainlanes - Unrestricted	EB US 380 Stonebridge to Tremont	EB	70900	4480	4080	2825	13440	12240	13739.77	24194.41	37934.19
Mainlanes - Unrestricted	EB US 380 Tremont to Grassmere	EB	70600	4530	4050	644	13590	12150	3139.50	5471.56	8611.06
Mainlanes - Unrestricted	EB US 380 Grassmere to Freedom	EB	70000	4530	3960	1678	13590	11880	8094.44	14151.77	22246.21
Mainlanes - Unrestricted	EB US 380 Freedom to Forest Ridge	EB	70400	4560	3990	970	13680	11970	4712.22	8221.12	12933.33
Mainlanes - Unrestricted	EB US 380 Forest Ridge to Ridge	EB	70600	4530	4050	1397	13590	12150	6810.38	11869.21	18679.58
Mainlanes - Unrestricted	EB US 380 Ridge to Auburn Hills	EB	73100	4710	4230	1894	14130	12690	9620.66	16601.20	26221.86
Mainlanes - Unrestricted	EB US 380 Auburn Hills to Baylor Scott&White	EB	73100	4710	4230	2665	14130	12690	13536.99	23359.13	36896.12
Mainlanes - Unrestricted	EB US 380 Baylor Scott&White to Lake Forest	EB	72700	4590	4320	950	13770	12960	4809.38	8271.12	13080.49
Mainlanes - Unrestricted	EB US 380 Lake Forest to Hardin	EB	77200	5410	5110	5508	16230	15330	32922.82	47610.82	80533.64
Mainlanes - Unrestricted	EB US 380 Hardin to Skyline	EB	68300	4730	4640	2568	14190	13920	13671.68	19546.95	33218.64
Mainlanes - Unrestricted	EB US 380 Skyline to Wisteria	EB	68400	4750	4690	1071	14250	14070	5744.45	8129.86	13874.32
Mainlanes - Unrestricted	EB US 380 Wisteria to Community	EB	64500	4410	4660	1634	13230	13980	8420.67	11540.13	19960.80
Mainlanes - Unrestricted	EB US 380 Community to Towne Crossing	EB	65300	4100	4770	1057	12300	14310	5327.04	7745.33	13072.37
Mainlanes - Unrestricted	EB US 380 Towne Crossing to US 75 SBFR	EB	64100	4000	4620	1164	12000	13860	5700.95	8430.18	14131.14
Mainlanes - Unrestricted	EB US 380 US 75 SBFR to US 75 NBFR	EB	47200	2800	3790	324	8400	11370	1213.16	1683.20	2896.36
Mainlanes - Unrestricted	EB US 380 US 75 NBFR to Redbud	EB	47200	2650	3790	1281	7950	11370	4687.30	6764.07	11451.36
Mainlanes - Unrestricted	EB US 380 Redbud to Graves	EB	43100	2520	3680	864	7560	11040	3043.64	4009.09	7052.73
Mainlanes - Unrestricted	EB US 380 Graves to Waddill	EB	45500	2620	3960	1002	7860	11880	3746.11	4888.55	8634.66
Mainlanes - Unrestricted	EB US 380 Waddill to College	EB	46600	2660	3990	1693	7980	11970	6396.85	8545.16	14942.01
Mainlanes - Unrestricted	EB US 380 College to Church	EB	46100	2570	3970	1145	7710	11910	4254.72	5742.35	9997.06
Mainlanes - Unrestricted	EB US 380 Church to Tennessee	EB	45300	2440	3930	789	7320	11790	2855.64	3913.62	6769.26
Mainlanes - Unrestricted	EB US 380 Tennessee to McDonald	EB	42700	2190	3800	690	6570	11400	2348.35	3231.76	5580.11
Mainlanes - Unrestricted	EB US 380 McDonald to Throckmorton	EB	45800	2340	4050	2532	7020	12150	9192.89	12770.30	21963.18
Mainlanes - Unrestricted	EB US 380 Throckmorton to Airport	EB	45200	2390	3920	2489	7170	11760	8923.63	12383.72	21307.35
Mainlanes - Unrestricted	EB US 380 End	EB	59400	2980	4900	672	8040	14700	3008.73	4551.27	7560.00
Mainlanes - Unrestricted	WB US 380 Start	WB	57900	4140	2970	655	12420	8910	2646.05	4536.62	7182.67
Mainlanes - Unrestricted	WB US 380 FM 1827 to Airport	WB	64700	4650	3280	6449	13950	9840	29057.14	49967.54	79024.68
Mainlanes - Unrestricted	WB US 380 Airport to Throckmorton	WB	42700	3010	2320	2435	9030	6960	7374.18	12317.96	19692.14
Mainlanes - Unrestricted	WB US 380 Throckmorton to McDonald	WB	41500	3080	2260	2629	9240	6780	7976.63	12686.92	20663.54
Mainlanes - Unrestricted	WB US 380 McDonald to Tennessee	WB	33700	2510	2220	658	7530	6660	1768.38	2431.36	4199.73
Mainlanes - Unrestricted	WB US 380 Tennessee to Church	WB	36400	2690	2640	798	8070	7920	2416.67	3084.69	5501.36
Mainlanes - Unrestricted	WB US 380 Church to College	WB	37100	2740	2850	1144	8220	8550	3633.50	4404.83	8038.33
Mainlanes - Unrestricted	WB US 380 College to Waddill	WB	37000	2760	2890	1693	8280	8670	5434.91	6428.91	11863.83
Mainlanes - Unrestricted	WB US 380 Waddill to Graves	WB	36500	2740	2880	1004	8220	8640	3205.95	3734.58	6940.53
Mainlanes - Unrestricted	WB US 380 Graves to Redbud	WB	36200	2690	2930	862	8070	8790	2752.52	3157.40	5909.92
Mainlanes - Unrestricted	WB US 380 Redbud to US 75 NBFR	WB	42100	2950	3420	1270	8850	10260	4596.53	5529.79	10126.33
Mainlanes - Unrestricted	WB US 380 US 75 NBFR to US 75 SBFR	WB	60700	4380	4830	322	13140	14490	1685.01	2016.77	3701.78
Mainlanes - Unrestricted	WB US 380 US 75 SBFR to Towne Crossing	WB	55900	4430	4200	1177	13290	12600	5771.31	6689.73	12461.04
Mainlanes - Unrestricted	WB US 380 Towne Crossing to Community	WB	62500	4740	4590	1058	14220	13770	5608.60	6915.07	12523.67
Mainlanes - Unrestricted	WB US 380 Hardin to Lake Forest	WB	77100	5150	5830	5498	15450	17490	34300.02	45983.27	80283.30

Table 4b: Provided Traffic Data for the Future No-Build (2050) Scenario

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Mainlanes - Unrestricted	WB US 380 Lake Forest to Baylor Scott & White	WB	68400	4540	4460	958	13620	13380	4898.86	7511.59	12410.45
Mainlanes - Unrestricted	WB US 380 Baylor Scott & White to Auburn Hills	WB	71800	4480	4710	2660	13440	14130	13889.43	22282.54	36171.97
Mainlanes - Unrestricted	WB US 380 Auburn Hills to Ridge	WB	71800	4480	4710	1895	13440	14130	9894.91	15874.21	25769.13
Mainlanes - Unrestricted	WB US 380 Ridge to Forest Ridge	WB	68400	4340	4490	1406	13020	13470	7053.97	11160.13	18214.09
Mainlanes - Unrestricted	WB US 380 Forest Ridge to Grassmere	WB	67500	4280	4400	2654	12840	13200	13089.05	20839.93	33928.98
Mainlanes - Unrestricted	WB US 380 Grassmere to Tremont	WB	68400	4340	4490	631	13020	13470	3165.76	5008.56	8174.32
Mainlanes - Unrestricted	WB US 380 Tremont to Stonebridge	WB	70100	4490	4540	2825	13470	13620	14494.18	23011.98	37506.16
Mainlanes - Unrestricted	WB US 380 Stonebridge to Walnut Grove	WB	69100	4310	4360	1974	12930	13080	9724.19	16109.78	25833.98
Mainlanes - Unrestricted	WB US 380 Walnut Grove to Custer	WB	69100	4310	4360	1388	12930	13080	6837.48	11327.45	18164.92
Mainlanes - Unrestricted	WB US 380 Custer to Red Bud	WB	72100	4300	4070	5673	12900	12210	26978.98	50487.55	77466.53
Mainlanes - Unrestricted	WB US 380 Red Bud to Lakewood	WB	72100	4330	4040	1559	12990	12120	7414.11	13874.51	21288.62
Mainlanes - Unrestricted	WB US 380 Lakewood to Prestwick Hollow	WB	72200	4330	4040	1364	12990	12120	6486.75	12164.92	18651.67
Mainlanes - Unrestricted	WB US 380 Prestwick Hollow to Coit	WB	72100	4300	4070	2032	12900	12210	9663.55	18084.03	27747.58
Local Road	Custer SB-1	SB	21700	1750	1340	888	5250	4020	1559.05	2090.50	3649.55
Local Road	Custer NB-2	NB	16500	800	1470	892	2400	4410	1150.48	1637.02	2787.50
Local Road	Auburn Hills SB-2	SB	1500	90	90	274	270	270	28.02	49.82	77.84
Local Road	Auburn Hills NB-1	NB	1500	90	90	269	270	270	27.51	48.91	76.42
Local Road	Lake Forest SB-2	SB	19200	1170	1630	515	3510	4890	819.32	1053.41	1872.73
Local Road	Lake Forest NB-1	NB	16500	1060	1370	510	3180	4110	704.15	889.60	1593.75
Local Road	Hardin SB-2	SB	15900	1120	1120	394	3360	3360	501.45	685.02	1186.48
Local Road	Hardin NB-1	NB	21000	1260	1650	390	3780	4950	644.83	906.31	1551.14
Local Road	Skyline SB-2	SB	900	80	110	255	240	330	27.53	15.94	43.47
Local Road	Skyline NB-1	NB	900	70	70	255	210	210	20.28	23.18	43.47
Local Road	Wisteria SB-2	SB	11900	1050	510	205	3150	1530	181.70	280.32	462.03
Mainlanes - Unrestricted	WB US 380 Community to Wisteria	WB	61700	4330	4560	1631	12990	13680	8238.40	10820.82	19059.22
Mainlanes - Unrestricted	WB US 380 Skyline to Hardin	WB	63600	4170	4770	2569	12510	14310	13049.35	17895.42	30944.77
Mainlanes - Unrestricted	WB US 380 Wisteria to Skyline	WB	64600	4220	4880	1077	12660	14640	5568.58	7608.35	13176.93
Local Road	Wisteria NB-1	NB	10900	520	870	212	1560	2610	167.43	270.22	437.65
Local Road	Community SB-1	SB	9800	650	720	437	1950	2160	340.16	470.93	811.10
Local Road	Community NB-2	NB	13500	1360	840	435	4080	2520	543.75	568.47	1112.22
Local Road	Towne Crossing SB-1	SB	7200	380	590	214	1140	1770	117.94	173.88	291.82
Local Road	Towne Crossing NB-1	NB	6100	220	480	210	660	1440	83.52	159.09	242.61
Local Road	US 75 SBFR-2	SB	29300	2260	2300	205	6780	6900	531.14	606.46	1137.59
Local Road	US 75 SBFR-3	SB	51000	3410	3760	159	10230	11280	647.74	888.05	1535.80
Local Road	US 75 SBFR-4	SB	57800	3650	4310	311	10950	12930	1406.57	1997.94	3404.51
Local Road	US 75 NBFR-1	NB	60800	3180	4890	303	9540	14670	1389.32	2099.77	3489.09
Local Road	US 75 NBFR-2	NB	54000	2940	4340	203	8820	13020	839.68	1236.45	2076.14
Local Road	US 75 NBFR-3	NB	35400	1660	2930	163	4980	8790	425.10	667.74	1092.84
Local Road	Redbud SB-1	SB	11400	540	1010	330	1620	3030	290.63	421.88	712.50
Local Road	Redbud NB-2	NB	11800	500	970	333	1500	2910	278.13	466.07	744.20
Local Road	Graves SB-2	SB	4000	220	350	313	660	1050	101.37	135.75	237.12
Local Road	Graves NB-2	NB	5600	300	430	307	900	1290	127.34	198.27	325.61
Local Road	Waddill SB-1	SB	1400	100	130	296	300	390	38.68	39.80	78.48
Local Road	Waddill NB-2	NB	900	90	130	292	270	390	36.50	13.27	49.77
Local Road	College SB-1	SB	1600	120	150	348	360	450	53.39	52.07	105.45
Local Road	College NB-2	NB	2200	160	170	354	480	510	66.38	81.13	147.50
Local Road	Church SB-1	SB	3600	220	380	482	660	1140	164.32	164.32	328.64
Local Road	Church NB-2	NB	3500	290	210	485	870	630	137.78	183.71	321.50
Local Road	Tennessee SB-2	SB	5600	330	420	581	990	1260	247.59	368.63	616.21
Local Road	Tennessee NB-1	NB	6100	310	580	565	930	1740	285.71	367.04	652.75
Local Road	McDonald SB-1	SB	14800	970	1220	935	2910	3660	1163.44	1457.40	2620.83
Local Road	McDonald NB-2	NB	15300	1080	1020	956	3240	3060	1140.68	1629.55	2770.23
Local Road	Throckmorton SB-2	SB	5200	350	340	594	1050	1020	232.88	352.13	585.00
Local Road	Throckmorton NB-1	NB	2800	250	210	587	750	630	153.42	157.87	311.29
Mainlanes - Unrestricted	EB US 380 Prestwick Hollow to Lakewood	EB	71800	4150	3970	1366	12450	11910	6302.23	12273.30	18575.53
Local Road	Stonebridge SB-1	SB	17100	1130	980	546	3390	2940	654.58	1113.72	1768.30
Local Road	Stonebridge NB-2	NB	14300	840	910	541	2520	2730	537.93	927.28	1465.21

Table 4b: Provided Traffic Data for the Future No-Build (2050) Scenario

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Ridge SB-2	SB	14800	1120	810	595	3360	2430	652.47	1015.33	1667.80
Local Road	Ridge NB-2	NB	9700	490	770	588	1470	2310	420.95	659.27	1080.23
Local Road	Baylor Scott & White SB-2	SB	5300	290	420	298	870	1260	120.22	178.91	299.13
Local Road	Baylor Scott & White NB-1	NB	8000	260	650	295	780	1950	152.53	294.44	446.97

Table 4c: Provided Traffic Data for the Future Build (2050) Segment A

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Sement Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Prestwick Hollow SB-2	SB	0.00	0.00	0.00	577.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow NB-1	NB	0.00	0.00	0.00	577.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow SB-1	SB	0.00	0.00	0.00	243.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow NB-2	NB	0.00	0.00	0.00	243.00	0.00	0.00	0.00	0.00	0.00
Local Road	Driveway NB	WB	0.00	0.00	0.00	1523.00	0.00	0.00	0.00	0.00	0.00
Local Road	EB US 380 to Coit	EB	71400.00	5210.00	6130.00	413.00	15630.00	18390.00	2661.03	2923.85	5584.89
Frontage Roads	WB Prestwick Hollow to Coit	WB	72100.00	6100.00	5070.00	2039.00	18300.00	15210.00	12940.70	14902.46	27843.16
Frontage Roads	EB Coit to Prestick Hollow	EB	70800.00	5170.00	6180.00	2044.00	15510.00	18540.00	13181.48	14226.70	27408.18
Local Road	Coit SB-1	SB	18800.00	1790.00	1410.00	561.00	5370.00	4230.00	1020.00	977.50	1997.50
Local Road	Coit NB-2	NB	18400.00	1510.00	1440.00	577.00	4530.00	4320.00	967.13	1043.63	2010.76
Local Road	Coit SB-2	SB	18200.00	1690.00	1260.00	750.00	5070.00	3780.00	1257.10	1328.13	2585.23
Local Road	Coit NB-1	NB	18200.00	1750.00	1550.00	758.00	5250.00	4650.00	1421.25	1191.55	2612.80
Frontage Roads	WB Mainlane OFR to Prestwick Hollow	WB	72100.00	6100.00	5070.00	1129.00	18300.00	15210.00	7165.30	8251.54	15416.84
Frontage Roads	WB Independence U to Mainlane OFR	WB	14200.00	1220.00	1100.00	2291.00	3660.00	3300.00	3019.95	3141.45	6161.40
Frontage Roads	EB Prestick Hollow to Mainlane ONR	EB	70800.00	5170.00	6180.00	1172.00	15510.00	18540.00	7558.07	8157.39	15715.45
Frontage Roads	EB Mainlane ONR to Independence U	EB	12800.00	940.00	1120.00	2214.00	2820.00	3360.00	2591.39	2775.89	5367.27
Mainlanes	WB Custer ONR to US 380 WB	WB	57900.00	4880.00	3970.00	2934.00	14640.00	11910.00	14753.35	17420.63	32173.98
Mainlanes	EB US 380 Start to Custer OFR	EB	58000.00	4230.00	5060.00	2881.00	12690.00	15180.00	15207.10	16440.25	31647.35
Frontage Roads	WB Independence to Independence U	WB	14000.00	1200.00	1080.00	133.00	3600.00	3240.00	172.30	180.36	352.65
Frontage Roads	WB Independence U to Independence	WB	14000.00	1160.00	1130.00	155.00	3480.00	3390.00	201.68	209.31	410.98
Frontage Roads	EB Independence U to Independence	EB	12600.00	920.00	1100.00	167.00	2760.00	3300.00	191.67	206.85	398.52
Frontage Roads	EB Independence to Independence U	EB	12600.00	920.00	1070.00	139.00	2760.00	3210.00	157.16	174.54	331.70
Local Road	Independence NB U	NB	200.00	20.00	20.00	323.00	60.00	60.00	7.34	4.89	12.23
Local Road	Independence SB U	SB	200.00	20.00	20.00	318.00	60.00	60.00	7.23	4.82	12.05
Frontage Roads	WB Custer ONR to Independence U	WB	14200.00	1180.00	1150.00	1580.00	3540.00	3450.00	2091.70	2157.54	4249.24
Frontage Roads	EB Independence U to Custer OFR	EB	12800.00	940.00	1090.00	1710.00	2820.00	3270.00	1972.33	2173.13	4145.45
Ramps	WB Custer ONR	WB	15100.00	1330.00	1450.00	1224.00	3990.00	4350.00	1933.36	1567.09	3500.45
Ramps	EB Custer OFR	EB	15000.00	1300.00	1060.00	1354.00	3900.00	3180.00	1815.59	2031.00	3846.59
Mainlanes	WB Independence OFR to Custer ONR	WB	42800.00	3550.00	2520.00	3474.00	10650.00	7560.00	11981.35	16179.10	28160.45
Mainlanes	EB Custer OFR to Independence ONR	EB	43000.00	2930.00	4000.00	3585.00	8790.00	12000.00	14115.94	15080.09	29196.02
Frontage Roads	WB Independence OFR to Custer ONR	WB	29300.00	2510.00	2600.00	667.00	7530.00	7800.00	1764.77	1764.77	3701.34
Frontage Roads	EB Custer OFR to Independence ONR	EB	27800.00	2240.00	2150.00	594.00	6720.00	6450.00	1481.63	1645.88	3127.50
Frontage Roads	WB Custer CD to Independence OFR	WB	23200.00	1970.00	1980.00	1324.00	5910.00	5940.00	2971.48	2846.10	5817.58
Ramps	WB Independence OFR	WB	6100.00	540.00	620.00	1592.00	1620.00	1860.00	1049.27	789.97	1839.24
Ramps	EB Independence ONR	EB	7900.00	690.00	630.00	1647.00	2070.00	1890.00	1235.25	1229.01	2464.26
Frontage Roads	EB Independence ONR to Custer CD	EB	19900.00	1550.00	1520.00	1139.00	4650.00	4560.00	1986.78	2306.04	4292.82
Frontage Roads	WB Custer to Custer CD	WB	15300.00	1260.00	1200.00	1148.00	3780.00	3600.00	1604.59	1722.00	3326.59
Mainlanes	WB Custer OFR to Independence OFR	WB	48900.00	4090.00	3140.00	4229.00	12270.00	9420.00	17372.54	21793.77	39166.31
Mainlanes	EB Independence ONR to Custer ONR	EB	50900.00	3620.00	4630.00	4143.00	10860.00	13890.00	19420.31	20518.84	39939.15
Frontage Roads	EB Custer CD to Custer	EB	12800.00	850.00	1060.00	1237.00	2550.00	3180.00	1342.43	1656.36	2998.79
Local Road	Custer SB-1	SB	20800.00	1690.00	1670.00	242.00	5070.00	5010.00	462.00	491.33	953.33
Local Road	Custer SB RT	SB	4200.00	350.00	300.00	543.00	1050.00	900.00	200.54	231.39	431.93
Local Road	Custer SB-2	SB	16600.00	1340.00	1370.00	525.00	4020.00	4110.00	808.38	842.19	1650.57
Local Road	Custer SB-3	SB	27600.00	2320.00	2300.00	226.00	6960.00	6900.00	593.25	588.11	1181.36
Local Road	Custer SB-4	SB	22500.00	1840.00	1820.00	330.00	5520.00	5460.00	686.25	720.00	1406.25
Local Road	Custer SB-5	SB	32000.00	2460.00	2620.00	320.00	7380.00	7860.00	923.64	1015.76	1939.39
Local Road	Custer NB-5	NB	19500.00	1560.00	1550.00	250.00	4680.00	4650.00	441.76	481.53	923.30
Local Road	Custer NB-4	NB	14300.00	1110.00	1140.00	531.00	3330.00	3420.00	678.84	759.29	1438.13
Local Road	Custer NB-3	NB	25400.00	2020.00	2040.00	223.00	6060.00	6120.00	514.42	558.34	1072.77
Local Road	Custer NB-2	NB	22100.00	1790.00	1780.00	307.00	5370.00	5340.00	622.72	662.26	1284.98
Local Road	Custer NB-1	NB	33000.00	2710.00	2780.00	345.00	8130.00	8340.00	1076.16	1080.09	2156.25
Local Road	Custer NB LT	NB	11100.00	910.00	900.00	149.00	2730.00	2700.00	153.23	160.01	313.24
Local Road	EB Custer RT	EB	9500.00	620.00	800.00	363.00	1860.00	2400.00	292.88	360.25	653.13
Local Road	WB Custer RT	WB	5200.00	450.00	410.00	553.00	1350.00	1230.00	270.22	274.41	544.62
Local Road	WB Custer LT	WB	11000.00	980.00	930.00	233.00	2940.00	2790.00	252.86	232.56	485.42

Table 4c: Provided Traffic Data for the Future Build (2050) Segment A

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Sement Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Custer SB LT	SB	5100.00	480.00	480.00	123.00	1440.00	1440.00	67.09	51.72	118.81
Local Road	Custer NB RT	NB	10900.00	920.00	1000.00	303.00	2760.00	3000.00	330.55	294.97	625.51
Frontage Roads	EB Custer to Custer CD	EB	16000.00	1400.00	1480.00	1021.00	4200.00	4440.00	1670.73	1423.21	3093.94
Frontage Roads	WB Custer CD to Custer	WB	16200.00	1430.00	1340.00	901.00	4290.00	4020.00	1418.05	1346.38	2764.43
Frontage Roads	EB Custer CD to Custer ONR	EB	23100.00	2100.00	1940.00	833.00	6300.00	5820.00	1912.11	1732.26	3644.38
Frontage Roads	WB Custer OFR to Custer CD	WB	24100.00	2140.00	2120.00	936.00	6420.00	6360.00	2265.55	2006.73	4272.27
Frontage Roads	WB Stonebridge U to Custer OFR	WB	15600.00	1420.00	1360.00	1142.00	4260.00	4080.00	1803.84	1570.25	3374.09
Ramps	WB Custer OFR	WB	8500.00	720.00	760.00	1065.00	2160.00	2280.00	895.57	818.92	1714.49
Ramps	EB Custer ONR	EB	6500.00	720.00	600.00	1164.00	2160.00	1800.00	873.00	559.95	1432.95
Frontage Roads	EB Custer ONR to Stonebridge U	EB	16600.00	1380.00	1340.00	1194.00	4140.00	4020.00	1845.27	1908.59	3753.86
Mainlanes	EB Custer ONR to Exist US 380 OFR	EB	57400.00	4340.00	5230.00	4409.00	13020.00	15690.00	23973.94	23957.24	47931.17
Frontage Roads	WB Stonebridge to Stonebridge U	WB	15400.00	1400.00	1340.00	111.00	4200.00	4020.00	172.81	150.94	323.75
Frontage Roads	WB Stonebridge U to Stonebridge	WB	16700.00	1440.00	1570.00	144.00	4320.00	4710.00	246.27	209.18	455.45
Frontage Roads	WB Tremont to Stonebridge U	WB	16900.00	1460.00	1590.00	2688.00	4380.00	4770.00	4658.18	3945.45	8603.64
Frontage Roads	EB Stonebridge U to Stonebridge	EB	16400.00	1360.00	1320.00	151.00	4080.00	3960.00	229.93	239.08	469.02
Frontage Roads	EB Stonebridge to Stonebridge U	EB	16200.00	1480.00	1160.00	128.00	4440.00	3480.00	192.00	200.73	392.73
Local Road	Stonebridge SB-1	SB	13900.00	1170.00	1020.00	155.00	3510.00	3060.00	192.87	215.18	408.05
Local Road	Stonebridge SB-2	SB	15300.00	1200.00	1280.00	261.00	3600.00	3840.00	367.77	388.53	756.31
Local Road	Stonebridge SB-3	SB	16400.00	1230.00	1390.00	577.00	3690.00	4170.00	858.94	933.25	1792.20
Local Road	Stonebridge NB-3	NB	15000.00	1090.00	1380.00	155.00	3270.00	4140.00	217.53	222.81	440.34
Local Road	Stonebridge NB-2	NB	15100.00	1080.00	1410.00	261.00	3240.00	4230.00	369.26	377.16	746.42
Local Road	Stonebridge NB-1	NB	16000.00	1230.00	1360.00	574.00	3690.00	4080.00	844.69	894.70	1739.39
Local Road	Tremont SB	SB	3800.00	330.00	310.00	969.00	990.00	930.00	352.36	345.02	697.39
Local Road	Tremont NB	NB	3700.00	270.00	330.00	969.00	810.00	990.00	330.34	348.69	679.03
Frontage Roads	EB Stonebridge U to Driveway	EB	16400.00	1500.00	1180.00	3959.00	4500.00	3540.00	6028.48	6268.42	12296.89
Local Road	Driveway SB	EB	3400.00	320.00	210.00	1562.00	960.00	630.00	470.38	535.46	1005.83
Mainlanes	EB Exist US 380 OFR to CR124 OFR	EB	46200.00	3190.00	4440.00	1296.00	9570.00	13320.00	5618.45	5721.55	11340.00
Frontage Roads	WB Exist US 380 to Exist US 380 U	WB	33600.00	2580.00	3100.00	274.00	7740.00	9300.00	884.27	859.36	1743.64
Frontage Roads	WB Exist US 380 U to Exist US 380	WB	21200.00	2090.00	1810.00	205.00	6270.00	5430.00	454.26	368.84	823.11
Frontage Roads	WB Exist US 380 OFR to Exist US 380 U	WB	21400.00	2110.00	1840.00	1185.00	6330.00	5520.00	2659.52	2143.32	4802.84
Frontage Roads	EB Exist US 380 U to Exist US 380	EB	12800.00	1160.00	940.00	220.00	3480.00	2820.00	262.50	270.83	533.33
Frontage Roads	EB Exist US 380 to US 380 U	EB	15000.00	1280.00	1140.00	186.00	3840.00	3420.00	255.75	272.66	528.41
Local Road	Exist US 380 SB-1	WB	5200.00	670.00	420.00	345.00	2010.00	1260.00	213.66	126.11	339.77
Local Road	Exist US 380 NB-2	WB	17600.00	1160.00	1710.00	347.00	3480.00	5130.00	565.85	590.82	1156.67
Local Road	Exist US 380 SB-2	WB	5700.00	730.00	470.00	553.00	2190.00	1410.00	377.05	219.94	596.99
Local Road	Exist US 380 SB-3	EB	16900.00	1880.00	1260.00	1087.00	5640.00	3780.00	1939.31	1539.92	3479.22
Local Road	Exist US 380 NB-1	WB	20300.00	1340.00	1960.00	1621.00	4020.00	5880.00	3039.38	3192.88	6232.25
Mainlanes	EB CR124 OFR to Exist US 380 ONR	EB	41900.00	2750.00	3890.00	3316.00	8250.00	11670.00	12510.36	13804.11	26314.47
Ramps	EB CR124 OFR	WB	4300.00	440.00	550.00	704.00	1320.00	1650.00	396.00	177.33	573.33
Frontage Roads	EB Exist US 380 U to CR124 OFR	EB	15200.00	1300.00	1170.00	780.00	3900.00	3510.00	1094.66	1150.80	2245.45
Frontage Roads	EB CR124 OFR to Exist US 380 ONR	EB	19500.00	1740.00	1720.00	994.00	5220.00	5160.00	1954.11	1716.91	3671.02
Frontage Roads	WB CR124 U to Exist US 380 OFR	WB	10600.00	1000.00	770.00	2908.00	3000.00	2310.00	2924.52	2913.51	5838.03
Ramps	WB Exist US380 OFR	WB	10800.00	1100.00	1070.00	2100.00	3300.00	3210.00	2589.20	1706.25	4295.45
Frontage Roads	EB Exist US 380 ONR to CR124 U	EB	13300.00	1230.00	1240.00	2587.00	3690.00	3720.00	3630.62	2885.88	6516.50
Mainlanes	WB Bloomdale ONR to Exist US 380 OFR	WB	51200.00	4720.00	3450.00	1214.00	14160.00	10350.00	5635.44	6136.68	11772.12
Mainlanes	EB Exist US 380 ONR to Bloomdale OFR	EB	48100.00	3260.00	4370.00	1300.00	9780.00	13110.00	5635.80	6207.01	11842.80
Local Road	CR124 WB U	WB	200.00	20.00	20.00	350.00	60.00	60.00	7.95	5.30	13.26
Local Road	CR124 EB U	EB	200.00	20.00	20.00	346.00	60.00	60.00	7.86	5.24	13.11
Local Road	CR124 EB-1	EB	7900.00	730.00	660.00	600.00	2190.00	1980.00	473.86	423.86	897.73
Local Road	CR124 EB-2	EB	9300.00	830.00	820.00	279.00	2490.00	2460.00	261.56	229.86	491.42
Local Road	CR124 EB-3	EB	8900.00	950.00	840.00	585.00	2850.00	2520.00	594.97	391.11	986.08
Local Road	CR124 WB-3	WB	8400.00	740.00	770.00	603.00	2220.00	2310.00	517.35	441.97	959.32
Local Road	CR124 WB-2	WB	8300.00	690.00	690.00	278.00	2070.00	2070.00	217.98	219.03	437.01
Local Road	CR124 WB-1	WB	10700.00	860.00	840.00	585.00	2580.00	2520.00	565.06	620.45	1185.51
Frontage Roads	SB CR124 to CR124 U	SB	10400.00	980.00	750.00	132.00	2940.00	2250.00	129.75	130.25	260.00

Table 4c: Provided Traffic Data for the Future Build (2050) Segment A

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Peak AM Volume (Hourly)	Peak PM Volume (Hourly)	Sement Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Frontage Roads	SB CR124 U to CR124	SB	11900.00	1130.00	990.00	141.00	3390.00	2970.00	169.84	147.94	317.78
Frontage Roads	NB CR124 U to CR124	NB	13100.00	1210.00	1220.00	173.00	3630.00	3660.00	238.86	190.37	429.22
Frontage Roads	NB CR124 to CR124 U	NB	15900.00	1260.00	1350.00	143.00	3780.00	4050.00	212.06	218.56	430.63
Frontage Roads	WB Bloomdale ONR to CR124 U	WB	12100.00	1150.00	1010.00	1496.00	3450.00	3030.00	1836.00	1592.33	3428.33
Frontage Roads	EB CR124 U to Bloomdale OFR	EB	16100.00	1280.00	1370.00	1563.00	3840.00	4110.00	2353.38	2412.59	4765.97
Ramps	WB Bloomdale ONR	WB	7100.00	620.00	490.00	1375.00	1860.00	1470.00	867.19	981.77	1848.96
Mainlanes	WB CR124 OFR to Bloomdale ONR	WB	44100.00	4100.00	2960.00	3418.00	12300.00	8880.00	13710.84	14837.23	28548.07
Mainlanes	EB Bloomdale OFR to CR124 ONR	EB	44200.00	2990.00	3980.00	3391.00	8970.00	11940.00	13429.13	14957.65	28386.78
Ramps	EB Bloomdale OFR	WB	3900.00	270.00	390.00	1464.00	810.00	1170.00	549.00	532.36	1081.36
Frontage Roads	WB CR124 OFR to Bloomdale ONR	WB	19200.00	1770.00	1500.00	963.00	5310.00	4500.00	1789.21	1712.61	3501.82
Frontage Roads	EB Bloomdale OFR to CR124 ONR	EB	20000.00	1550.00	1760.00	512.00	4650.00	5280.00	962.91	976.48	1939.39
Ramps	WB CR124 OFR	WB	8800.00	850.00	690.00	1139.00	2550.00	2070.00	996.63	901.71	1898.33
Ramps	EB CR124 ONR	EB	10000.00	690.00	950.00	1387.00	2070.00	2850.00	1292.43	1334.46	2626.89
Frontage Roads	EB CR124 ONR to Bloomdale U	EB	10000.00	860.00	810.00	1414.00	2580.00	2430.00	1341.69	1336.34	2678.03
Mainlanes	WB US 380 Start to CR214 OFR	WB	52900.00	4950.00	3650.00	1502.00	14850.00	10950.00	7339.32	7709.13	15048.45
Mainlanes	EB CR124 ONR to Lake Forest OFR	EB	54200.00	3680.00	4930.00	1494.00	11040.00	14790.00	7308.72	8027.42	15336.14
Frontage Roads	WB Bloomdale U to CR124 OFR	WB	10400.00	920.00	810.00	1235.00	2760.00	2430.00	1213.95	1218.63	2432.58
Frontage Roads	WB Bloomdale to Bloomdale U	WB	10200.00	900.00	790.00	159.00	2700.00	2370.00	152.68	154.48	307.16
Frontage Roads	WB Bloomdale U to Bloomdale	WB	12300.00	1140.00	1010.00	197.00	3420.00	3030.00	240.65	218.27	458.92
Frontage Roads	EB Bloomdale U to Bloomdale	EB	9800.00	840.00	790.00	208.00	2520.00	2370.00	192.64	193.42	386.06
Frontage Roads	EB Bloomdale to Bloomdale U	EB	11800.00	900.00	950.00	153.00	2700.00	2850.00	160.82	181.11	341.93
Local Road	Bloomdale EB-1	EB	11500.00	770.00	930.00	248.00	2310.00	2790.00	239.55	300.61	540.15
Local Road	Bloomdale EB-2	EB	6900.00	490.00	560.00	285.00	1470.00	1680.00	170.03	202.41	372.44
Local Road	Bloomdale WB-2	WB	11600.00	950.00	990.00	229.00	2850.00	2970.00	252.42	250.69	503.11
Local Road	Bloomdale WB-1	WB	4900.00	430.00	400.00	284.00	1290.00	1200.00	133.93	129.63	263.56
Local Road	Bloomdale WB U	WB	200.00	20.00	20.00	365.00	60.00	60.00	8.30	5.53	13.83
Frontage Roads	WB US 380 to Bloomdale U	WB	12500.00	1160.00	1030.00	1080.00	3480.00	3090.00	1343.86	1212.95	2556.82
Frontage Roads	EB Bloomdale U to Ridge	EB	12000.00	920.00	970.00	1033.00	2760.00	2910.00	1109.30	1238.43	2347.73
Frontage Roads	WB Exist US 380 ONR to Tremont	WB	16800.00	1400.00	1610.00	1920.00	4200.00	4830.00	3283.64	2825.45	6109.09
Local Road	Independence NB-1	NB	3900.00	460.00	280.00	474.00	1380.00	840.00	199.30	150.82	350.11
Local Road	Independence SB-2	SB	3900.00	420.00	360.00	462.00	1260.00	1080.00	204.75	136.50	341.25
Local Road	Independence SB-1	SB	2300.00	270.00	230.00	259.00	810.00	690.00	73.58	39.24	112.82
Local Road	Independence NB-2	NB	2300.00	310.00	180.00	260.00	930.00	540.00	72.39	40.87	113.26
Local Road	EB Custer LT	EB	3300.00	230.00	260.00	228.00	690.00	780.00	63.48	79.02	142.50
Ramps	EB Exist US 380 OFR	EB	11200.00	1150.00	790.00	1393.00	3450.00	2370.00	1535.47	1419.38	2954.85
Frontage Roads	EB Driveway to Exist US 380 U	EB	13000.00	1180.00	970.00	1024.00	3540.00	2910.00	1250.91	1270.30	2521.21
Frontage Roads	WB Coit to US 380 WB	WB	73100.00	6480.00	5280.00	410.00	19440.00	15840.00	2739.55	2936.78	5676.33
Local Road	Bloomdale EB U	EB	200.00	20.00	20.00	372.00	60.00	60.00	8.45	5.64	14.09
Ramps	EB Exist US 380 ONR	EB	6200.00	510.00	480.00	1710.00	1530.00	1440.00	961.88	1046.08	2007.95
Local Road	Exist US 380 SB U	WB	200.00	20.00	30.00	504.00	60.00	90.00	14.32	4.77	19.09
Local Road	Exist US 380 NB U	NB	200.00	20.00	30.00	601.00	60.00	90.00	17.07	5.69	22.77
Frontage Roads	EB Custer CD	EB	7100.00	700.00	460.00	2664.00	2100.00	1380.00	1755.82	1826.45	3582.27
Frontage Roads	WB Custer CD	WB	7900.00	710.00	780.00	2514.00	2130.00	2340.00	2128.33	1633.15	3761.48
Local Road	Stonebridge SB U	SB	200.00	20.00	20.00	308.00	60.00	60.00	7.00	4.67	11.67
Local Road	Stonebridge NB U	NB	200.00	20.00	20.00	309.00	60.00	60.00	7.02	4.68	11.70
Ramps	WB Exist US 380 ONR	WB	17000.00	1200.00	1520.00	1131.00	3600.00	4560.00	1747.91	1893.57	3641.48
Mainlanes	WB Exist US 380 OFR to Exist US 380 ONR	WB	40400.00	3610.00	2380.00	5180.00	10830.00	7140.00	17629.66	22005.19	39634.85
Frontage Roads	WB Exist US 380 U to Exist US 380 ONR	WB	33800.00	2600.00	3130.00	118.00	7800.00	9390.00	384.17	371.21	755.38
Mainlanes	WB Exist US 380 ONR to Custer OFR	WB	57400.00	4810.00	3900.00	3834.00	14430.00	11700.00	18973.94	22706.28	41680.23

Table 4d: Provided Traffic Data for the Future Build (2050) Segment B

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Length (ft)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Prestwick Hollow NB-1	NB	0.00	0.00	0.00	332.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow SB-2	SB	0.00	0.00	0.00	566.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow NB-2	NB	0.00	0.00	0.00	253.00	0.00	0.00	0.00	0.00	0.00
Local Road	Prestwick Hollow SB-1	SB	0.00	0.00	0.00	254.00	0.00	0.00	0.00	0.00	0.00
Frontage Roads	EB US 380 to Coit	EB	71400.00	5210.00	6130.00	409.00	15630.00	18390.00	2635.26	2895.53	5530.80
Frontage Roads	WB Coit to US 380 WB	WB	73100.00	6480.00	5280.00	404.00	19440.00	15840.00	2699.45	2893.80	5593.26
Frontage Roads	EB Prestick Hollow to Mainlane ONR	EB	70800.00	5170.00	6180.00	1163.00	15510.00	18540.00	7500.03	8094.74	15594.77
Frontage Roads	EB Univeristy U to EB Custer OFR	EB	6500.00	160.00	300.00	1553.00	480.00	900.00	405.90	1505.94	1911.84
Frontage Roads	EB Custer OFR to EB University ONR	EB	17300.00	830.00	1110.00	1646.00	2490.00	3330.00	1814.34	3578.80	5393.14
Frontage Roads	EB University ONR to EB Custer U	EB	10800.00	650.00	860.00	1996.00	1950.00	2580.00	1712.48	2370.25	4082.73
Frontage Roads	EB Stonebridge OFR to EB Custer ONR	EB	11000.00	810.00	1130.00	980.00	2430.00	3390.00	1080.23	961.44	2041.67
Frontage Roads	EB Custer ONR to EB Stonebridge U	EB	4500.00	430.00	540.00	2072.00	1290.00	1620.00	1141.95	623.95	1765.91
Frontage Roads	WB Bloomdale U to WB Bloomdale	WB	12300.00	1140.00	1010.00	708.00	3420.00	3030.00	864.89	784.43	1649.32
Frontage Roads	WB Stonebridge OFR to WB Bloomdale ONR	WB	14400.00	1450.00	1200.00	639.00	4350.00	3600.00	962.13	780.60	1742.73
Frontage Roads	WB Bloomdale ONR to WB Stonebridge U	WB	9800.00	990.00	880.00	1222.00	2970.00	2640.00	1298.38	969.73	2268.11
Frontage Roads	WB Custer OFR to WB Stonebridge ONR	WB	13900.00	1390.00	1040.00	898.00	4170.00	3120.00	1239.85	1124.20	2364.05
Frontage Roads	WB Stonebridge ONR to WB Custer U	WB	8200.00	760.00	520.00	1451.00	2280.00	1560.00	1055.27	1198.17	2253.45
Frontage Roads	WB Custer U to WB University OFR	WB	10600.00	800.00	730.00	2963.00	2400.00	2190.00	2575.79	3372.66	5948.45
Frontage Roads	WB Univeristy OFR to WB Custer ONR	WB	17100.00	1280.00	1250.00	913.00	3840.00	3750.00	1312.44	1644.44	2956.88
Mainlanes	EB Custer OFR to EB Univeristy ONR	EB	48200.00	3380.00	4470.00	4298.00	10140.00	13410.00	19170.06	20065.47	39235.53
Mainlanes	EB Stonebridge OFR to EB Custer ONR	EB	51600.00	3410.00	4440.00	4034.00	10230.00	13320.00	17992.56	21430.63	39423.18
Mainlanes	EB Bloomdale OFR to EB Stonebridge ONR	EB	51100.00	3480.00	4640.00	3319.00	10440.00	13920.00	15312.66	16808.72	32121.38
Mainlanes	WB US 380 to WB Stonebridge OFR	WB	52900.00	4950.00	3650.00	1655.00	14850.00	10950.00	8086.93	8494.41	16581.34
Mainlanes	WB Custer OFR to WB Stonebridge ONR	WB	48300.00	4530.00	3240.00	4162.00	13590.00	9720.00	18374.28	19698.56	38072.84
Mainlanes	WB University OFR to WB Custer ONR	WB	47500.00	4680.00	3240.00	4326.00	14040.00	9720.00	19467.00	19450.61	38917.61
Frontage Roads	WB Stonebridge U to WB Stonebridge	WB	9600.00	970.00	860.00	684.00	2910.00	2580.00	711.20	532.43	1243.64
Frontage Roads	WB US 380 to WB Bloomdale U	WB	12500.00	1160.00	1030.00	1152.00	3480.00	3090.00	1433.45	1293.82	2727.27
Frontage Roads	EB Bloomdale U to EB Bloomdale	EB	9800.00	800.00	810.00	676.00	2400.00	2430.00	618.39	636.31	1254.70
Frontage Roads	EB Stonebridge U to EB Stonebridge	EB	4300.00	410.00	520.00	478.00	1230.00	1560.00	252.58	136.70	389.28
Frontage Roads	EB Custer U to EB Custer	EB	10600.00	630.00	840.00	582.00	1890.00	2520.00	486.10	682.31	1168.41
Frontage Roads	WB Prestwick Hollow to Coit	WB	72100.00	6100.00	5070.00	2047.00	18300.00	15210.00	12991.47	14960.93	27952.41
Frontage Roads	EB Coit to Prestick Hollow	EB	70800.00	5170.00	6180.00	2048.00	15510.00	18540.00	13207.27	14254.55	27461.82
Frontage Roads	WB Mainlane OFR to Prestwick Hollow	WB	72100.00	6100.00	5070.00	1061.00	18300.00	15210.00	6733.73	7754.54	14488.28
Mainlanes	EB US 380 Start to Custer OFR	EB	59000.00	4050.00	5280.00	4256.00	12150.00	15840.00	22561.64	24995.94	47557.58
Mainlanes	WB Custer ONR to WB US 380 Start	WB	57900.00	5180.00	4010.00	4391.00	15540.00	12030.00	22928.01	25223.30	48151.31
Frontage Roads	WB Independence U to Mainlane OFR	WB	14200.00	920.00	1060.00	2225.00	2760.00	3180.00	2503.13	3480.78	5983.90
Frontage Roads	WB University to WB Independence	WB	13100.00	870.00	1040.00	1480.00	2610.00	3120.00	1606.14	2065.83	3671.97
Frontage Roads	EB Independence U to Independence	EB	11600.00	1100.00	870.00	114.00	3300.00	2610.00	127.60	122.85	250.45
Local Road	Independence NB U	NB	200.00	20.00	30.00	255.00	60.00	90.00	7.24	2.41	9.66
Local Road	Independence NB-2	NB	2800.00	200.00	210.00	290.00	600.00	630.00	67.56	86.23	153.79
Local Road	Independence SB-2	SB	2500.00	210.00	270.00	278.00	630.00	810.00	75.82	55.81	131.63
Frontage Roads	EB Indpendence to EB University	EB	11000.00	1060.00	820.00	1560.00	3180.00	2460.00	1666.36	1583.64	3250.00
Local Road	University SB-2	SB	12400.00	1370.00	810.00	1121.00	4110.00	2430.00	1388.51	1244.14	2632.65

Table 4d: Provided Traffic Data for the Future Build (2050) Segment B

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Length (ft)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	University NB-3	NB	10300.00	550.00	830.00	253.00	1650.00	2490.00	198.38	295.17	493.54
Local Road	University SB-1	SB	3700.00	440.00	250.00	254.00	1320.00	750.00	99.58	78.41	177.99
Local Road	University NB-2	NB	14300.00	560.00	850.00	1116.00	1680.00	2550.00	894.07	2128.43	3022.50
Frontage Roads	WB Custer ONR to WB University U	WB	6700.00	780.00	480.00	1935.00	2340.00	1440.00	1385.28	1070.11	2455.40
Ramps	WB Custer ONR	WB	10400.00	500.00	770.00	1629.00	1500.00	2310.00	1175.47	2033.16	3208.64
Ramps	EB University ONR	EB	6500.00	180.00	250.00	1305.00	540.00	750.00	318.84	1287.70	1606.53
Ramps	WB University OFR	WB	6500.00	480.00	520.00	1801.00	1440.00	1560.00	1023.30	1193.84	2217.14
Local Road	NB Custer U	NB	200.00	20.00	20.00	769.00	60.00	60.00	17.48	11.65	29.13
Mainlanes	WB Stonebridge ONR to WB University OFR	WB	54000.00	5160.00	3760.00	1826.00	15480.00	11280.00	9254.50	9420.50	18675.00
Mainlanes	EB University ONR to EB Stonebridge OFR	EB	54700.00	3560.00	4720.00	2122.00	10680.00	14160.00	9983.05	12000.55	21983.60
Frontage Roads	WB Custer U to WB Custer	WB	8000.00	740.00	500.00	659.00	2220.00	1500.00	464.30	534.19	998.48
Local Road	Custer SB-3	SB	21400.00	1800.00	1490.00	243.00	5400.00	4470.00	454.24	530.64	984.89
Local Road	Custer NB-1	NB	21000.00	1090.00	1900.00	432.00	3270.00	5700.00	733.91	984.27	1718.18
Local Road	Custer NB-2	NB	21200.00	1030.00	1820.00	324.00	3090.00	5460.00	524.66	776.25	1300.91
Local Road	Custer SB-2	SB	18700.00	1750.00	1400.00	329.00	5250.00	4200.00	588.84	576.37	1165.21
Local Road	Custer SB-1	SB	19300.00	1630.00	1410.00	426.00	4890.00	4230.00	735.82	821.34	1557.16
Local Road	Custer NB-3	NB	19400.00	870.00	1620.00	294.00	2610.00	4860.00	415.94	664.28	1080.23
Frontage Roads	EB Custer to EB Custer U	EB	7700.00	640.00	830.00	211.00	1920.00	2490.00	176.23	131.48	307.71
Frontage Roads	EB Custer U to EB Stonebridge OFR	EB	7900.00	660.00	850.00	1937.00	1980.00	2550.00	1661.86	1236.30	2898.16
Local Road	SB Custer U	SB	200.00	20.00	20.00	854.00	60.00	60.00	19.41	12.94	32.35
Ramps	WB Stonebridge ONR	WB	5700.00	630.00	520.00	1631.00	1890.00	1560.00	1065.71	695.03	1760.74
Ramps	EB Stonebridge OFR	EB	3100.00	150.00	280.00	1339.00	450.00	840.00	327.14	459.01	786.16
Ramps	WB Custer OFR	WB	4600.00	460.00	300.00	1647.00	1380.00	900.00	711.20	723.68	1434.89
Ramps	EB Custer ONR	EB	6500.00	380.00	590.00	1717.00	1140.00	1770.00	946.30	1167.43	2113.73
Frontage Roads	WB Stonebridge to WB Stonebridge U	WB	9100.00	910.00	720.00	135.00	2730.00	2160.00	125.03	107.64	232.67
Frontage Roads	WB Stonebridge U to WB Custer OFR	WB	9300.00	930.00	740.00	2465.00	2790.00	2220.00	2338.95	2002.81	4341.76
Local Road	NB Stonebridge U	NB	200.00	20.00	20.00	635.00	60.00	60.00	14.43	9.62	24.05
Local Road	Stonebridge NB-1	NB	13500.00	970.00	1070.00	193.00	2910.00	3210.00	223.70	269.76	493.47
Local Road	Stonebridge SB-3	SB	12600.00	1050.00	1170.00	176.00	3150.00	3510.00	222.00	198.00	420.00
Local Road	Stonebridge SB-2	SB	13500.00	1290.00	1220.00	268.00	3870.00	3660.00	382.20	303.02	685.23
Local Road	Stonebridge SB-1	SB	13200.00	1260.00	1160.00	271.00	3780.00	3480.00	372.63	304.88	677.50
Local Road	Stonebridge NB-2	NB	12800.00	930.00	930.00	268.00	2790.00	2790.00	283.23	366.47	649.70
Local Road	Stonebridge NB-3	NB	13000.00	960.00	1010.00	271.00	2880.00	3030.00	303.34	363.90	667.23
Frontage Roads	EB Stonebridge to EB Stonebridge U	EB	5900.00	690.00	710.00	148.00	2070.00	2130.00	117.73	47.65	165.38
Frontage Roads	EB Stonebridge U to EB Bloomdale OFR	EB	6100.00	710.00	730.00	1860.00	2130.00	2190.00	1521.82	627.05	2148.86
Local Road	SB Stonebridge U	SB	200.00	20.00	20.00	834.00	60.00	60.00	18.95	12.64	31.59
Mainlanes	WB Bloomdale ONR to WB Custer OFR	WB	52900.00	4990.00	3540.00	1500.00	14970.00	10620.00	7269.89	7758.52	15028.41
Mainlanes	EB Custer ONR to EB Bloomdale OFR	EB	58100.00	3790.00	5030.00	1499.00	11370.00	15090.00	7512.03	8982.64	16494.68
Ramps	WB Bloomdale ONR	WB	4600.00	460.00	320.00	1369.00	1380.00	960.00	606.72	585.97	1192.69
Ramps	EB Bloomdale OFR	EB	7000.00	310.00	390.00	1352.00	930.00	1170.00	537.73	1254.70	1792.42
Frontage Roads	EB Stonebridge ONR to EB Bloomdale U	EB	10000.00	820.00	830.00	710.00	2460.00	2490.00	665.63	679.07	1344.70
Frontage Roads	EB Bloomdale OFR to EB Stonebridge ONR	EB	13100.00	1020.00	1120.00	899.00	3060.00	3360.00	1093.10	1137.37	2230.47
Ramps	EB Stonebridge ONR	EB	3100.00	200.00	290.00	1096.00	600.00	870.00	305.14	338.35	643.48

Table 4d: Provided Traffic Data for the Future Build (2050) Segment B

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Length (ft)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Mainlanes	WB Stonebridge OFR to WB Bloomdale ONR	WB	48300.00	4530.00	3220.00	3787.00	13590.00	9660.00	16675.71	17966.73	34642.44
Frontage Roads	WB Bloomdale to WB Bloomdale U	WB	9600.00	1010.00	750.00	112.00	3030.00	2250.00	112.00	91.64	203.64
Frontage Roads	WB Bloomdale U to WB Stonebridge OFR	WB	9800.00	1030.00	770.00	1447.00	3090.00	2310.00	1479.89	1205.83	2685.72
Local Road	NB Bloomdale U	NB	200.00	20.00	20.00	818.00	60.00	60.00	18.59	12.39	30.98
Local Road	Bloomdale NB-1	NB	4900.00	390.00	430.00	268.00	1170.00	1290.00	124.86	123.85	248.71
Local Road	Bloomdale SB-2	SB	6900.00	490.00	570.00	269.00	1470.00	1710.00	162.01	189.52	351.53
Local Road	Bloomdale SB-1	SB	10900.00	880.00	900.00	185.00	2640.00	2700.00	187.10	194.81	381.91
Local Road	Bloomdale NB-2	NB	11600.00	910.00	1020.00	194.00	2730.00	3060.00	212.74	213.47	426.21
Mainlanes	EB Stonebridge ONR to US 380 EB	EB	54200.00	3680.00	4930.00	2024.00	11040.00	14790.00	9901.50	10875.17	20776.67
Ramps	WB Stonebridge OFR	WB	4600.00	420.00	430.00	1763.00	1260.00	1290.00	851.45	684.50	1535.95
Frontage Roads	EB Bloomdale to EB Bloomdale U	EB	11800.00	900.00	950.00	113.00	2700.00	2850.00	118.78	133.76	252.54
Frontage Roads	EB Bloomdale U to US 380 EB	EB	12000.00	920.00	970.00	1619.00	2760.00	2910.00	1738.59	1940.96	3679.55
Local Road	SB Bloomdale U	SB	200.00	20.00	20.00	841.00	60.00	60.00	19.11	12.74	31.86
Frontage Roads	EB Mainlane ONR to Independence U	EB	11800.00	1120.00	900.00	2215.00	3360.00	2700.00	2542.22	2407.97	4950.19
Local Road	Coit SB-2	SB	18200.00	1690.00	1260.00	748.00	5070.00	3780.00	1253.75	1324.58	2578.33
Local Road	Coit NB-1	NB	18200.00	1750.00	1550.00	761.00	5250.00	4650.00	1426.88	1196.27	2623.14
Local Road	Coit NB-2	NB	18400.00	1510.00	1440.00	347.00	4530.00	4320.00	581.62	627.62	1209.24
Local Road	Coit SB-1	SB	18800.00	1790.00	1410.00	340.00	5370.00	4230.00	618.18	592.42	1210.61
Frontage Roads	WB Custer to WB Custer U	WB	10400.00	780.00	710.00	211.00	2340.00	2130.00	178.63	236.98	415.61
Frontage Roads	WB Univeristy U to WB University	WB	6500.00	760.00	460.00	220.00	2280.00	1380.00	152.50	118.33	270.83
Frontage Roads	EB University to EB University U	EB	6300.00	140.00	280.00	219.00	420.00	840.00	52.26	209.05	261.31
Local Road	SB Univeristy U	SB	200.00	20.00	20.00	334.00	60.00	60.00	7.59	5.06	12.65
Local Road	Independence NB-3	NB	2800.00	200.00	190.00	238.00	600.00	570.00	52.74	73.47	126.21
Local Road	Independence SB-1	SB	1900.00	170.00	200.00	238.00	510.00	600.00	50.03	35.61	85.64
Frontage Roads	WB Independence to Independence U	WB	14000.00	900.00	1030.00	97.00	2700.00	3090.00	106.37	150.83	257.20
Local Road	EB Connector Independence to University	EB	2900.00	210.00	220.00	1957.00	630.00	660.00	478.13	596.74	1074.87
Local Road	EB Connector Independence to University	WB	4600.00	340.00	370.00	1939.00	1020.00	1110.00	782.21	907.07	1689.28
Local Road	University SB-3	SB	14900.00	1540.00	990.00	1797.00	4620.00	2970.00	2583.19	2487.89	5071.08
Local Road	University NB-1	NB	18500.00	860.00	1180.00	1774.00	2580.00	3540.00	2056.23	4159.49	6215.72
Local Road	Independence SB-3	SB	6500.00	490.00	560.00	218.00	1470.00	1680.00	130.06	138.31	268.37
Local Road	Independence NB-1	NB	5100.00	350.00	350.00	218.00	1050.00	1050.00	86.70	123.86	210.57
Ramps	EB Custer OFR	EB	10800.00	670.00	810.00	1347.00	2010.00	2430.00	1132.70	1622.52	2755.23

Table 4e: Provided Traffic Data for the Future Build (2050) Segment C

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Mainlanes	EB US 380 Start to EB CR 338 OFR	EB	47000	3140.00	4310.00	1982.00	9,420	12,930	8,390	9,253	17,643
Frontage Roads	EB Frontage to CR 338 OFR	EB	6900	460.00	690.00	3547.00	1,380	2,070	2,318	2,318	4,635
Ramps	EB CR 338 OFR	EB	3200	220.00	290.00	1568.00	660	870	454	496	950
Mainlanes	EB CR 338 OFR to EB McDonald ONR	EB	43800	2920.00	4020.00	4366.00	8,760	12,060	17,216	19,002	36,218
Frontage Roads	EB CR 338 OFR to McDonald ONR	EB	10100	680.00	980.00	1005.00	2,040	2,940	948	975	1,922
Ramps	EB McDonald ONR	EB	6900	460.00	690.00	1792.00	1,380	2,070	1,171	1,171	2,342
Mainlanes	EB McDonald ONR to EB CR 331 OFR	EB	50700	3380.00	4710.00	1511.00	10,140	14,130	6,945	7,564	14,509
Frontage Roads	EB McDonald ONR to CR 338 U	EB	3200	220.00	290.00	2506.00	660	870	726	793	1,519
Frontage Roads	EB CR 338 U to CR 331 OFR	EB	2900	250.00	270.00	1831.00	750	810	541	465	1,006
Mainlanes	EB CR 331 OFR to EB CR 331 ONR	EB	40800	2760.00	3800.00	5697.00	8,280	11,400	21,234	22,788	44,022
Mainlanes	EB CR 331 ONR to FM 1827 OFR	EB	46500	3210.00	4330.00	2396.00	9,630	12,990	10,265	10,836	21,101
Mainlanes	EB FM 1827 OFR to EB CR 335 ONR	EB	36100	2360.00	3360.00	3818.00	7,080	10,080	12,409	13,696	26,104
Mainlanes	EB CR 335 ONR to US 380 EB	EB	37100	2470.00	3450.00	4553.00	7,410	10,350	15,315	16,677	31,992
Frontage Roads	EB US 380 Merge to Existing US 380	EB	59400	4040.00	5520.00	1561.00	12,120	16,560	8,479	9,082	17,561
Mainlanes	WB US 380 Diverge to WB FM1827 ONR	WB	32600	3150.00	2440.00	5328.00	9,450	7,320	16,922	15,974	32,896
Mainlanes	WB FM1827 ONR to CR 331 OFR	WB	45900	4400.00	3620.00	3499.00	13,200	10,860	15,944	14,473	30,417
Mainlanes	WB CR 331 OFR to CR 331 ONR	WB	41400	4030.00	3250.00	6824.00	12,090	9,750	28,227	25,280	53,506
Mainlanes	WB CR 331 ONR to McDonald OFR	WB	46000	4530.00	3650.00	1516.00	13,590	10,950	7,046	6,162	13,208
Mainlanes	WB McDonald OFR to WB CR 338 ONR	WB	42200	4180.00	3360.00	3475.00	12,540	10,080	14,887	12,886	27,774
Mainlanes	WB CR 338 ONR to US 380 WB	WB	49000	4860.00	3970.00	2988.00	14,580	11,910	14,991	12,739	27,730
Local Road	CR 338 NB-1	NB	2200	160.00	190.00	325.00	480	570	65	71	135
Local Road	CR 338 NB-2	NB	4300	310.00	380.00	408.00	930	1,140	160	172	332
Local Road	CR 338 SB-1	SB	4900	500.00	470.00	426.00	1,500	1,410	235	161	395
Local Road	CR 338 SB-2	SB	1900	190.00	170.00	326.00	570	510	67	51	117
Ramps	EB CR 331 OFR	EB	9900	620.00	910.00	1349.00	1,860	2,730	1,173	1,357	2,529
Local Road	CR 338 SB U	SB	200	20.00	20.00	347.00	60	60	8	5	13
Frontage Roads	EB CR 331 OFR to New Built Road U	EB	12800	870.00	1180.00	592.00	2,610	3,540	690	746	1,435
Local Road	New Built Road EB U	EB	200	20.00	20.00	701.00	60	60	16	11	27
Frontage Roads	EB New Built Road U to New Built Road	EB	12600	850.00	1160.00	511.00	2,550	3,480	584	636	1,219
Local Road	New Built Road WB U	WB	200	20.00	20.00	460.00	60	60	10	7	17
Frontage Roads	EB New Built Road U to CR 331	EB	14700	1080.00	1380.00	264.00	3,240	4,140	369	366	735
Local Road	CR 331 WB	WB	1000	100.00	100.00	789.00	300	300	90	60	149
Local Road	CR 331 EB	EB	1000	100.00	100.00	794.00	300	300	90	60	150
Frontage Roads	EB CR 331 to CR 331 ONR	EB	14700	1080.00	1380.00	1233.00	3,240	4,140	1,723	1,709	3,433
Ramps	EB CR 331 ONR	EB	5700	450.00	530.00	1584.00	1,350	1,590	882	828	1,710
Frontage Roads	EB CR 331 ONR to U-Turn	EB	9000	630.00	850.00	2459.00	1,890	2,550	2,068	2,124	4,191
Local Road	EB U	EB	200	20.00	20.00	667.00	60	60	15	10	25
Frontage Roads	EB U-Turn to U-Turn	EB	8800	610.00	830.00	640.00	1,830	2,490	524	543	1,067
Frontage Roads	EB U-Turn to FM 1827 OFR	EB	10000	740.00	940.00	2610.00	2,220	2,820	2,491	2,452	4,943
Ramps	EB FM 1827 OFR	EB	10400	850.00	970.00	1723.00	2,550	2,910	1,782	1,612	3,394
Frontage Roads	EB FM 1827 OFR to CR 335 ONR	EB	20400	1590.00	1910.00	1331.00	4,770	5,730	2,647	2,496	5,143
Ramps	EB CR 335 ONR	EB	1000	110.00	90.00	832.00	330	270	95	63	158
Frontage Roads	EB FM 1827 to FM 1827 U	EB	22100	1550.00	2050.00	130.00	4,650	6,150	266	278	544
Local Road	University Dr NB-1	NB	20000	1600.00	1920.00	1248.00	4,800	5,760	2,496	2,231	4,727
Frontage Roads	WB Existing US 380 to US 380 Diverge	WB	57900	5270.00	4280.00	2273.00	15,810	12,840	12,334	12,592	24,926
Frontage Roads	WB US 380 Diverge to FM 1827 U	WB	25300	2120.00	1840.00	2304.00	6,360	5,520	5,184	5,856	11,040
Local Road	FM 1827 SB U	SB	200	20.00	20.00	772.00	60	60	18	12	29
Frontage Roads	WB FM 1827 U to FM 1827	WB	25100	2100.00	1820.00	609.00	6,300	5,460	1,356	1,539	2,895
Local Road	FM 1827 NB-2	NB	13300	1110.00	1290.00	309.00	3,330	3,870	421	357	778
Local Road	FM 1827 NB-3	NB	10000	850.00	850.00	1577.00	2,550	2,550	1,523	1,464	2,987

Table 4e: Provided Traffic Data for the Future Build (2050) Segment C

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	FM 1827 SB-1	SB	8800	850.00	800.00	1561.00	2,550	2,400	1,463	1,138	2,602
Local Road	FM 1827 SB-2	SB	16800	1340.00	1240.00	311.00	4,020	3,720	456	534	990
Local Road	University Dr SB-3	SB	20300	1720.00	1590.00	1204.00	5,160	4,770	2,264	2,365	4,629
Frontage Roads	WB FM 1827 U to FM 1827 ONR	WB	20900	1910.00	1870.00	1303.00	5,730	5,610	2,798	2,359	5,158
Ramps	WB FM1827 ONR	WB	13300	1250.00	1180.00	918.00	3,750	3,540	1,267	1,045	2,312
Frontage Roads	WB FM 1827 ONR to FM 2933	WB	7600	660.00	690.00	1839.00	1,980	2,070	1,411	1,236	2,647
Local Road	FM 2933 EB	EB	2200	160.00	240.00	580.00	480	720	132	110	242
Local Road	FM 2933 WB	WB	1400	150.00	120.00	589.00	450	360	90	66	156
Frontage Roads	WB FM 2933 to U-Turn	WB	6800	650.00	570.00	1822.00	1,950	1,710	1,263	1,084	2,347
Local Road	WB U	WB	1200	130.00	110.00	698.00	390	330	95	63	159
Frontage Roads	WB U-Turn to U-Turn	WB	5600	520.00	460.00	593.00	1,560	1,380	330	299	629
Frontage Roads	WB U-Turn to CR 331 OFR	WB	5800	540.00	480.00	2027.00	1,620	1,440	1,175	1,052	2,227
Ramps	WB CR 331 OFR	WB	4500	370.00	370.00	1942.00	1,110	1,110	817	839	1,655
Frontage Roads	WB FM 2933 OFR to FM 2933A	WB	10300	910.00	850.00	2017.00	2,730	2,550	2,017	1,918	3,935
Local Road	FM 2933A EB	EB	1000	100.00	100.00	439.00	300	300	50	33	83
Local Road	FM 2933A WB	WB	1000	100.00	100.00	412.00	300	300	47	31	78
Frontage Roads	WB FM 2933A to New Built Road U	WB	10300	910.00	850.00	199.00	2,730	2,550	199	189	388
Frontage Roads	WB New Built Road U to New Built Road	WB	10100	890.00	830.00	261.00	2,670	2,490	255	244	499
Frontage Roads	WB New Built Road U to CR 331 ONR	WB	10500	1020.00	900.00	871.00	3,060	2,700	950	782	1,732
Ramps	WB CR 331 ONR	WB	4600	500.00	400.00	1509.00	1,500	1,200	772	543	1,315
Frontage Roads	WB CR 331 ONR to CR 338 U	WB	5900	520.00	500.00	2113.00	1,560	1,500	1,225	1,137	2,361
Frontage Roads	WB CR 338 to CR 338 U	WB	6600	660.00	590.00	126.00	1,980	1,770	89	68	158
Frontage Roads	WB CR 338 U to McDonald OFR	WB	6800	680.00	610.00	2000.00	2,040	1,830	1,466	1,110	2,576
Ramps	WB McDonald OFR	WB	3800	350.00	290.00	1308.00	1,050	870	476	466	941
Frontage Roads	WB McDonald OFR to CR 338 ONR	WB	10600	1030.00	900.00	1015.00	3,090	2,700	1,113	925	2,038
Ramps	WB CR 338 ONR	WB	6800	680.00	610.00	1192.00	2,040	1,830	874	661	1,535
Frontage Roads	WB CR 338 ONR to US 380 End	WB	3800	350.00	290.00	4192.00	1,050	870	1,524	1,493	3,017
Local Road	CR 338 NB U	NB	200	20.00	20.00	342.00	60	60	8	5	13
Frontage Roads	EB CR 338 U to CR 338	EB	3000	200.00	270.00	129.00	600	810	34	39	73
Frontage Roads	WB CR 338 U to CCR 338	WB	5700	500.00	480.00	115.00	1,500	1,440	64	60	124
Frontage Roads	EB FM 1827 U to US 380 EB Merge	EB	22300	1570.00	2070.00	3588.00	4,710	6,210	7,421	7,733	15,154
Frontage Roads	EB CR 338 to CR 338 U	EB	2700	230.00	250.00	125.00	690	750	34	30	64
Local Road	New Built Road EB-1	EB	9100	680.00	900.00	547.00	2,040	2,700	491	452	943
Local Road	New Built Road EB-2	EB	8600	620.00	810.00	327.00	1,860	2,430	266	267	533
Local Road	New Built Road EB-3	EB	9700	650.00	920.00	468.00	1,950	2,760	417	442	860
Local Road	New Built Road WB-1	WB	10000	980.00	780.00	468.00	2,940	2,340	468	418	886
Local Road	New Built Road WB-2	WB	8700	840.00	620.00	327.00	2,520	1,860	271	268	539
Local Road	New Built Road WB-3	WB	7300	690.00	510.00	541.00	2,070	1,530	369	379	748
Frontage Roads	EB New Built Road to New Built Road U	EB	14500	1060.00	1360.00	118.00	3,180	4,080	162	162	324
Frontage Roads	WB New Built Road to New Built Road U	WB	10300	1000.00	880.00	128.00	3,000	2,640	137	113	250
Local Road	FM 1827 U NB	NB	500	40.00	50.00	808.00	120	150	41	35	77
Frontage Roads	EB CR 335 ONR to FM1827 U	EB	19400	1480.00	1820.00	1133.00	4,440	5,460	2,124	2,039	4,163
Frontage Roads	EB FM 1827 U to FM1827	EB	18900	1440.00	1770.00	628.00	4,320	5,310	1,145	1,103	2,248
Frontage Roads	WB FM 1827 to FM 1827 U	WB	20400	1870.00	1820.00	133.00	5,610	5,460	279	235	514

Table 4g: Provided Traffic Data for the Future Build (2050) SegmentE

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Ridge Rd SB-1	SB	12000	1080.00	1030.00	572.00	3240.00	3090.00	685.75	614.25	1300.00
Local Road	Ridge Rd NB-3	NB	13300	1250.00	1220.00	554.00	3750.00	3660.00	777.49	618.00	1395.49
Mainlanes	EB US 380 to Lake Forest Dr OFR	EB	54200	3680.00	4930.00	1623.00	11040.00	14790.00	7939.79	8720.55	16660.34
Frontage Roads	EB Ridge Rd U to Lake Forest Dr OFR	EB	15300	1130.00	1160.00	2028.00	3390.00	3480.00	2638.70	3237.89	5876.59
Ramps	EB Lake Forest Dr OFR	EB	6900	480.00	760.00	1379.00	1440.00	2280.00	971.57	830.53	1802.10
Frontage Roads	EB Lake Forest Dr OFR to Ridge Rd ONR	EB	22200	1610.00	1920.00	1443.00	4830.00	5760.00	2894.20	3172.96	6067.16
Ramps	EB Ridge Rd ONR	EB	12600	790.00	870.00	1130.00	2370.00	2610.00	1065.80	1630.80	2696.59
Frontage Roads	EB Ridge Rd ONR to Lake Forest Dr U	EB	9600	820.00	1050.00	1528.00	2460.00	3150.00	1623.50	1154.68	2778.18
Mainlanes	EB Lake Forest Dr OFR to Ridge Rd ONR	EB	47300	3200.00	4170.00	3943.00	9600.00	12510.00	16511.31	18811.40	35322.71
Mainlanes	EB Ridge Rd ONR to CR 1006 OFR	EB	59900	3990.00	5040.00	1572.00	11970.00	15120.00	8065.43	9768.43	17833.86
Mainlanes	WB Ridge Rd OFR to Lake Forest Dr ONR	WB	45200	4210.00	3120.00	3950.00	12630.00	9360.00	16450.85	17363.54	33814.39
Frontage Roads	WB Lake Forest Dr U to Ridge Rd OFR	WB	7400	900.00	620.00	1833.00	2700.00	1860.00	1583.05	985.93	2568.98
Ramps	WB Ridge Rd OFR	WB	17900	1470.00	1370.00	1382.00	4410.00	4110.00	2230.05	2455.14	4685.19
Frontage Roads	WB Ridge Rd OFR to Lake Forest Dr ONR	WB	25300	2370.00	1990.00	1231.00	7110.00	5970.00	3049.52	2849.02	5898.54
Ramps	WB Lake Forest Dr ONR	WB	7700	740.00	530.00	1355.00	2220.00	1590.00	977.76	998.29	1976.04
Mainlanes	WB Lake Forest Dr ONR to US 380 WB	WB	52900	4950.00	3650.00	1672.00	14850.00	10950.00	8170.00	8581.67	16751.67
Frontage Roads	WB Lake Forest Dr ONR to Ridge Rd U	WB	17600	1630.00	1460.00	1984.00	4890.00	4380.00	3483.27	3130.06	6613.33
Frontage Roads	EB Lake Forest Dr U to CR 1006 OFR	EB	16400	1870.00	1590.00	2109.00	5610.00	4770.00	4146.10	2404.58	6550.68
Ramps	EB CR 1006 OFR	EB	4900	220.00	310.00	1213.00	660.00	930.00	365.28	760.42	1125.70
Frontage Roads	CR 1006 OFR to Lake Forest Dr ONR	EB	21300	2090.00	1900.00	775.00	6270.00	5700.00	1756.96	1369.46	3126.42
Ramps	EB Lake Forest Dr ONR	EB	13700	1460.00	1280.00	1106.00	4380.00	3840.00	1721.84	1147.89	2869.73
Frontage Roads	Lake Forest Dr ONR to CR 1006 U	EB	7600	630.00	620.00	2067.00	1890.00	1860.00	1468.04	1507.19	2975.23
Frontage Roads	WB CR 1006 U to Lake Forest Dr OFR	WB	9000	740.00	590.00	2221.00	2220.00	1770.00	1678.37	2107.43	3785.80
Frontage Roads	WB Lake Forest Dr OFR to CR 1006 ONR	WB	20300	1800.00	1670.00	781.00	5400.00	5010.00	1539.81	1462.90	3002.71
Local Road	Lake Forest Dr SB-3	SB	13200	1110.00	1340.00	632.00	3330.00	4020.00	879.77	700.23	1580.00
Local Road	Lake Forest Dr NB-2	NB	15700	1250.00	1300.00	260.00	3750.00	3900.00	376.70	396.40	773.11
Local Road	Lake Forest Dr SB-2	SB	22400	2220.00	2120.00	261.00	6660.00	6360.00	643.60	463.67	1107.27
Local Road	Lake Forest Dr NB-3	NB	24900	2020.00	2200.00	1004.00	6060.00	6600.00	2407.32	2327.45	4734.77
Mainlanes	EB CR 1006 OFR to Lake Forest Dr ONR	EB	55000	3770.00	4730.00	3081.00	11310.00	14190.00	14879.83	17213.92	32093.75
Mainlanes	WB Lake Forest Dr OFR to CR 1006 ONR	WB	57600	5360.00	4260.00	3062.00	16080.00	12780.00	16736.61	16667.02	33403.64
Mainlanes	WB CR 1006 ONR to Ridge Rd OFR	WB	63100	5680.00	4490.00	1539.00	17040.00	13470.00	8892.97	9499.24	18392.22
Ramps	WB CR 1006 ONR	WB	5500	320.00	230.00	1133.00	960.00	690.00	354.06	826.15	1180.21
Ramps	WB Lake Forest Dr OFR	WB	11300	1060.00	1080.00	1163.00	3180.00	3240.00	1414.10	1074.89	2489.00
Local Road	CR 1006 SB-3	SB	5600	460.00	740.00	647.00	1380.00	2220.00	441.14	245.08	686.21
Local Road	CR 1006 NB-1	NB	4900	400.00	630.00	643.00	1200.00	1890.00	376.30	220.42	596.72
Local Road	CR 1006 SB-2	SB	6000	560.00	780.00	261.00	1680.00	2340.00	198.72	97.88	296.59
Local Road	CR 1006 SB-1	SB	8700	720.00	820.00	648.00	2160.00	2460.00	567.00	500.73	1067.73
Local Road	CR 1006 NB-2	NB	5500	450.00	570.00	261.00	1350.00	1710.00	151.26	120.61	271.88
Local Road	CR 1006 NB-3	NB	7400	590.00	930.00	647.00	1770.00	2790.00	558.77	348.01	906.78
Frontage Roads	CR 1006 U to Bloomdale Rd E OFR	EB	7400	680.00	720.00	1488.00	2040.00	2160.00	1183.64	901.82	2085.45
Ramps	EB Bloomdale Rd E OFR	EB	13700	1440.00	1120.00	797.00	4320.00	3360.00	1159.27	908.70	2067.97
Frontage Roads	EB Bloomdale Rd E OFR to CR 1006	EB	21100	2120.00	1840.00	1000.00	6360.00	5520.00	2250.00	1746.21	3996.21
Ramps	CR 1006 ONR	EB	2800	260.00	150.00	1389.00	780.00	450.00	323.57	413.02	736.59
Frontage Roads	WB Bloomdale Rd E U to CR 1006 OFR	WB	18600	1510.00	1780.00	1305.00	4530.00	5340.00	2439.46	2157.70	4597.16
Ramps	WB CR 1006 OFR	WB	3400	150.00	180.00	1437.00	450.00	540.00	269.44	655.90	925.34

Table 4g: Provided Traffic Data for the Future Build (2050) SegmentE

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Frontage Roads	WB CR 1006 OFR to Bloomdale Rd E ONR	WB	22000	1660.00	1960.00	854.00	4980.00	5880.00	1756.52	1801.81	3558.33
Ramps	WB Bloomdale Rd E ONR	WB	13800	940.00	1050.00	1365.00	2820.00	3150.00	1543.38	2024.23	3567.61
Mainlanes	WB CR 1006 OFR to Bloomdale Rd E ONR	WB	55100	5480.00	4290.00	3687.00	16440.00	12870.00	20467.04	18009.04	38476.08
Mainlanes	WB Bloomdale Rd E ONR to Lake Forest Dr OFR	WB	68900	6420.00	5340.00	1614.00	19260.00	16020.00	10784.45	10277.02	21061.48
Mainlanes	EB Bloomdale Rd E OFR to CR 1006 ONR	EB	55000	3790.00	4890.00	3128.00	11370.00	14670.00	15426.73	17156.61	32583.33
Mainlanes	EB CR 1006 ONR to Hardin ONR	EB	57800	4050.00	5040.00	4570.00	12150.00	15120.00	23603.01	26424.64	50027.65
Local Road	Bloomdale Rd E NB-1	NB	16200	1300.00	1370.00	1731.00	3900.00	4110.00	2626.01	2685.02	5311.02
Local Road	Bloomdale Rd E NB-2	NB	14300	1110.00	1200.00	270.00	3330.00	3600.00	354.38	376.88	731.25
Local Road	Bloomdale Rd E SB-1	SB	3600	360.00	300.00	272.00	1080.00	900.00	102.00	83.45	185.45
Local Road	Bloomdale Rd E SB-2	SB	16700	1670.00	1500.00	1769.00	5010.00	4500.00	3186.21	2408.92	5595.13
Frontage Roads	EB Bloomdale Rd E U to Hardin U	EB	9000	950.00	810.00	1983.00	2850.00	2430.00	1983.00	1397.11	3380.11
Local Road	Hardin SB-2	SB	3100	370.00	310.00	684.00	1110.00	930.00	264.27	137.32	401.59
Local Road	Hardin NB-1	NB	4000	400.00	380.00	705.00	1200.00	1140.00	312.44	221.65	534.09
Local Road	Hardin SB-1	SB	3300	310.00	280.00	271.00	930.00	840.00	90.85	78.53	169.38
Mainlanes	WB Community Ave ONR to CR 1006 OFR	WB	58500	5630.00	4470.00	2394.00	16890.00	13410.00	13738.30	12786.14	26524.43
Local Road	Hardin NB-2	NB	1400	120.00	170.00	270.00	360.00	510.00	44.49	27.10	71.59
Frontage Roads	EB Hardin U to Hardin ONR	EB	10700	1080.00	850.00	609.00	3240.00	2550.00	667.82	566.32	1234.15
Frontage Roads	EB Community Ave U to Trinity Falls OFR	EB	3300	280.00	380.00	1611.00	840.00	1140.00	604.13	402.75	1006.88
Ramps	EB Trinity Falls Pkwy OFR	EB	4900	430.00	390.00	1217.00	1290.00	1170.00	567.01	562.40	1129.41
Frontage Roads	EB Trinity Falls OFR to Trinity Falls Pkwy	EB	8200	710.00	770.00	900.00	2130.00	2310.00	756.82	640.91	1397.73
Local Road	Community Ave SB-1	SB	3500	400.00	290.00	270.00	1200.00	870.00	105.85	73.13	178.98
Local Road	Community Ave NB-2	NB	2200	160.00	230.00	270.00	480.00	690.00	59.83	52.67	112.50
Frontage Roads	WB Community Ave ONR to Hardin OFR	WB	200	60.00	30.00	1690.00	180.00	90.00	86.42	-22.41	64.02
Frontage Roads	WB Hardin OFR to Hardin U	WB	10200	820.00	1010.00	708.00	2460.00	3030.00	736.16	631.57	1367.73
Ramps	EB Hardin ONR	EB	8400	850.00	620.00	1316.00	2550.00	1860.00	1099.16	994.48	2093.64
Mainlanes	EB Trinity Falls Pkwy OFR to US 75 OFR	EB	61300	4470.00	5270.00	1309.00	13410.00	15810.00	7244.13	7953.17	15197.29
Mainlanes	EB US 75 OFR to Trinity Falls Pkwy ONR	EB	44100	2870.00	3850.00	2387.00	8610.00	11550.00	9114.00	10822.88	19936.88
Mainlanes	WB US 75 ONR to Hardin OFR	WB	62100	5950.00	4930.00	2337.00	17850.00	14790.00	14446.91	13039.40	27486.31
Ramps	WB Hardin OFR	WB	10000	760.00	980.00	1395.00	2280.00	2940.00	1379.15	1262.90	2642.05
Mainlanes	EB Trinity Falls Pkwy ONR to McDonald St OFR	EB	47900	3190.00	4200.00	1514.00	9570.00	12600.00	6357.08	7377.88	13734.96
Mainlanes	EB McDonald St OFR to US 75 ONR	EB	35000	2300.00	3190.00	2595.00	6900.00	9570.00	8094.63	9107.07	17201.70
Mainlanes	EB US 75 ONR to US 380 EB	EB	47000	3140.00	4310.00	569.00	9420.00	12930.00	2408.55	2656.41	5064.96
Mainlanes	WB US 380 to US 75 OFR	WB	49000	4860.00	3970.00	573.00	14580.00	11910.00	2874.77	2442.85	5317.61
Mainlanes	WB US 75 OFR to McDonald St ONR	WB	37000	3740.00	3130.00	2118.00	11220.00	9390.00	8267.42	6574.63	14842.05
Mainlanes	WB McDonalds St ONR to Trinity Falls Pkwy OFR	WB	51600	5390.00	4200.00	1819.00	16170.00	12600.00	9911.48	7865.11	17776.59
Mainlanes	WB Trinity Falls Pkwy OFR to US 75 ONR	WB	45400	4810.00	3700.00	3010.00	14430.00	11100.00	14554.03	11327.41	25881.44
Ramps	EB DC US 380 to US 75 SB	EB	7100	670.00	560.00	1701.00	2010.00	1680.00	1188.77	1098.56	2287.33
Ramps	EB DC US 380 to US 75 NB	EB	10100	930.00	860.00	3377.00	2790.00	2580.00	3434.56	3025.23	6459.79
Frontage Roads	EB Trinity Falls Pkwy ONR to US 380 FR RT	EB	5800	490.00	560.00	558.00	1470.00	1680.00	332.90	280.06	612.95
Ramps	EB Trinity Falls Pkwy ONR	EB	3800	320.00	350.00	1345.00	960.00	1050.00	512.02	455.98	967.99
Frontage Roads	EB US 380 FR RT to McDonald St OFR	EB	5400	450.00	530.00	3428.00	1350.00	1590.00	1908.77	1597.14	3505.91
Frontage Roads	EB McDonald St OFR to McDonald St	EB	18300	1340.00	1540.00	1493.00	4020.00	4620.00	2443.09	2731.51	5174.60
Frontage Roads	EB McDonald St to CR 338 OFR	EB	6900	460.00	690.00	559.00	1380.00	2070.00	365.26	365.26	730.51
Ramp	EB McDonald St OFR	EB	12900	890.00	1010.00	1093.00	2670.00	3030.00	1179.94	1490.45	2670.40
Ramps	NB DC US 75 to US 380 EB	NB	6000	420.00	560.00	1833.00	1260.00	1680.00	1020.65	1062.31	2082.95

Table 4g: Provided Traffic Data for the Future Build (2050) SegmentE

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Ramps	SB DC US 75 to US 380 EB	SB	6000	420.00	560.00	2152.00	1260.00	1680.00	1198.27	1247.18	2445.45
Ramps	WB DC US 380 to US 75 SB	WB	6000	560.00	420.00	3334.00	1680.00	1260.00	1856.43	1932.20	3788.64
Frontage Roads	WB Frontage to McDonald St	WB	3800	350.00	290.00	578.00	1050.00	870.00	210.18	205.80	415.98
Local Road	N McDonald St NB-3	NB	14800	960.00	1370.00	646.00	2880.00	4110.00	855.22	955.54	1810.76
Local Road	N McDonald St SB-1	SB	17400	1750.00	1220.00	647.00	5250.00	3660.00	1091.81	1040.35	2132.16
Local Road	N McDonald St SB-2	SB	12300	1160.00	880.00	458.00	3480.00	2640.00	530.86	536.07	1066.93
Local Road	N McDonald St NB-2	NB	23700	1980.00	2030.00	457.00	5940.00	6090.00	1041.23	1010.07	2051.31
Local Road	N McDonald St SB-3	SB	21100	1900.00	1480.00	636.00	5700.00	4440.00	1221.41	1320.18	2541.59
Local Road	N McDonald St NB-1	NB	21100	1840.00	1780.00	638.00	5520.00	5340.00	1312.25	1237.33	2549.58
Frontage Roads	WB McDonald St to McDonald St ONR	WB	17800	1960.00	1290.00	717.00	5880.00	3870.00	1324.01	1093.15	2417.16
Frontage Roads	WB McDonald St ONR to US 380 FR Exit	WB	3200	310.00	220.00	1169.00	930.00	660.00	352.03	356.46	708.48
Frontage Roads	WB US 380 FR Exit to Trinity Falls Pkwy OFR	WB	2100	190.00	140.00	3441.00	570.00	420.00	645.19	723.39	1368.58
Local Road	McDonalds St WB RT	WB	1100	120.00	80.00	893.00	360.00	240.00	101.48	84.56	186.04
Ramps	WB McDonalds St ONR	WB	14600	1650.00	1070.00	1470.00	4950.00	3210.00	2271.82	1792.95	4064.77
Ramps	WB DC US 380 to US 75 NB	WB	6000	560.00	420.00	2644.00	1680.00	1260.00	1472.23	1532.32	3004.55
Frontage Roads	WB Trinity Falls Pkwy OFR to Trinity Falls Pkwy	WB	8300	770.00	640.00	423.00	2310.00	1920.00	338.88	326.06	664.94
Ramps	WB Trinity Falls Pkwy OFR	WB	6200	580.00	500.00	1345.00	1740.00	1500.00	825.34	754.02	1579.36
Ramps	SB DC US 75 to US 380 WB	SB	9800	660.00	700.00	1979.00	1980.00	2100.00	1529.23	2143.92	3673.14
Ramps	NB DC US 75 to US 380 WB	WB	6900	480.00	530.00	2280.00	1440.00	1590.00	1308.41	1671.14	2979.55
Local Road	EB US 380 to US 75 SB RT	EB	400	40.00	30.00	754.00	120.00	90.00	29.99	27.13	57.12
Frontage Roads	EB Frontage to Ridge Rd U	EB	12000	920.00	970.00	619.00	2760.00	2910.00	664.72	742.10	1406.82
Frontage Roads	WB Ridge Rd U to Bloomdale Rd W U	WB	12500	1160.00	1030.00	782.00	3480.00	3090.00	973.06	878.27	1851.33
Frontage Roads	WB CR 1006 ONR to Lake Forest Dr U	WB	14800	1480.00	1440.00	1933.00	4440.00	4320.00	3207.02	2211.23	5418.26
Mainlanes	EB Lake Forest Dr ONR to Bloomdale Rd E OFF	EB	68700	5230.00	6010.00	1949.00	15690.00	18030.00	12447.02	12912.13	25359.15
Frontage Roads	CR 1006 U to CR 1006	EB	7400	610.00	600.00	164.00	1830.00	1800.00	112.75	117.10	229.85
Local Road	CR 1006 NB U	NB	200	20.00	20.00	305.00	60.00	60.00	6.93	4.62	11.55
Local Road	CR 1006 SB U	SB	200	20.00	20.00	288.00	60.00	60.00	6.55	4.36	10.91
Frontage Roads	WB Bloomdale Rd E ONR to CR 1006 U	WB	8200	720.00	910.00	1648.00	2160.00	2730.00	1526.27	1033.12	2559.39
Local Road	Bloomdale Rd E NB U	NB	200	20.00	20.00	305.00	60.00	60.00	6.93	4.62	11.55
Local Road	Bloomdale Rd E SB U	SB	2100	230.00	170.00	302.00	690.00	510.00	68.64	51.48	120.11
Frontage Roads	WB CR 201 to Bloomdale Rd E U	WB	9800	970.00	1030.00	1364.00	2910.00	3090.00	1550.00	981.67	2531.67
Local Road	Hardin NB U	NB	1300	110.00	160.00	293.00	330.00	480.00	44.95	27.19	72.14
Local Road	Hardin SB U	SB	200	20.00	20.00	288.00	60.00	60.00	6.55	4.36	10.91
Frontage Roads	EB Hardin ONR to Community Ave U	EB	2300	230.00	230.00	2255.00	690.00	690.00	589.38	392.92	982.29
Local Road	Community Ave NB U	NB	200	20.00	20.00	298.00	60.00	60.00	6.77	4.52	11.29
Local Road	Community Ave SB U	SB	200	20.00	20.00	311.00	60.00	60.00	7.07	4.71	11.78
Frontage Roads	WB Trinity Falls Pkwy to Community Ave U	WB	7900	740.00	610.00	2549.00	2220.00	1830.00	1955.20	1858.65	3813.84
Mainlanes	EB Hardin ONR to Trinity Falls Pkwy OFR	EB	66200	4900.00	5660.00	1597.00	14700.00	16980.00	9582.00	10440.99	20022.99
Local Road	Lake Forest Dr SB-1	SB	24200	2410.00	2200.00	1002.00	7230.00	6600.00	2624.56	1967.94	4592.50
Local Road	Lake Forest Dr NB-1	NB	13300	1190.00	1060.00	629.00	3570.00	3180.00	804.12	780.29	1584.41
Frontage Roads	EB CR 1006 ONR to Bloomdale Rd E U	EB	18300	1860.00	1690.00	1515.00	5580.00	5070.00	3055.82	2195.03	5250.85
Local Road	Trinity Falls Pkwy NB-1	NB	1400	170.00	140.00	361.00	510.00	420.00	63.59	32.13	95.72
Local Road	Trinity Falls Pkwy SB-2	SB	2800	270.00	280.00	368.00	810.00	840.00	115.00	80.15	195.15
Local Road	Trinity Falls Pkwy NB-2	NB	5200	380.00	370.00	1715.00	1140.00	1110.00	730.82	958.19	1689.02
Local Road	Trinity Falls Pkwy SB-1	SB	4700	450.00	480.00	1745.00	1350.00	1440.00	922.07	631.24	1553.31

Table 4g: Provided Traffic Data for the Future Build (2050) SegmentE

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	AM Peak Volume (Hourly)	PM Peak Volume (Hourly)	Segment Length (feet)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	Ridge Rd SB-3	SB	6400	610.00	560.00	961.00	1830.00	1680.00	638.85	526.00	1164.85
Local Road	Ridge Rd NB-1	NB	5900	520.00	510.00	981.00	1560.00	1530.00	574.11	522.09	1096.19
Local Road	Ridge Rd SB-2	SB	10900	970.00	900.00	295.00	2910.00	2700.00	313.44	295.56	609.00
Local Road	Ridge Rd NB-2	NB	7100	670.00	660.00	290.00	2010.00	1980.00	219.15	170.81	389.96
Local Road	Community Ave NB-1	NB	4100	320.00	430.00	376.00	960.00	1290.00	160.23	131.74	291.97
Local Road	Community Ave SB-2	SB	4400	510.00	340.00	368.00	1530.00	1020.00	177.73	128.94	306.67
Frontage Roads	WB Ridge Rd to Ridge Rd U	WB	12300	1140.00	1010.00	169.00	3420.00	3030.00	206.45	187.24	393.69
Frontage Roads	EB Ridge Rd to Rd Ridge U	EB	15100	1110.00	1140.00	157.00	3330.00	3420.00	200.71	248.29	449.00
Frontage Roads	WB Lake Forest Dr to Lake Forest Dr U	WB	7200	880.00	600.00	125.00	2640.00	1800.00	105.11	65.34	170.45
Frontage Roads	EB Lake Forest Dr to Lake Forest Dr U	EB	16200	1850.00	1570.00	115.00	5550.00	4710.00	223.47	129.38	352.84
Local Road	Ridge Rd NB U	NB	200	20.00	20.00	319.00	60.00	60.00	7.25	4.83	12.08
Local Road	Ridge Rd SB U	SB	200	20.00	20.00	310.00	60.00	60.00	7.05	4.70	11.74
Local Road	Lake Forest Dr NB U	NB	200	20.00	20.00	291.00	60.00	60.00	6.61	4.41	11.02
Local Road	Lake Forest Dr SB U	SB	200	20.00	20.00	301.00	60.00	60.00	6.84	4.56	11.40
Frontage Roads	EB Ridge Rd U to Ridge Rd	EB	11800	900.00	950.00	137.00	2700.00	2850.00	144.01	162.17	306.17
Frontage Roads	WB Ridge Rd U to Ridge Rd	WB	17400	1610.00	1440.00	134.00	4830.00	4320.00	232.22	209.38	441.59
Frontage Roads	EB Lake Forest Dr U to Lake Forest Dr	EB	9400	800.00	1030.00	144.00	2400.00	3090.00	149.73	106.64	256.36
Frontage Roads	WB Lake Forest Dr U to Lake Forest Dr	WB	14600	1460.00	1420.00	155.00	4380.00	4260.00	253.64	174.96	428.60
Frontage Roads	WB CR 1006 to CR 1006 U	WB	8800	720.00	570.00	123.00	2160.00	1710.00	90.15	114.85	205.00
Frontage Roads	CR 1006 to CR 1006 U	EB	7200	660.00	700.00	118.00	1980.00	2100.00	91.18	69.73	160.91
Frontage Roads	WB CR 1006 U to CR 1006	WB	8000	700.00	890.00	137.00	2100.00	2670.00	123.77	83.81	207.58
Frontage Roads	WB Bloomdale Rd E to Bloomdale Rd E U	WB	18400	1490.00	1760.00	95.00	4470.00	5280.00	175.43	155.63	331.06
Frontage Roads	EB Bloomdale Rd E U to Bloomdale Rd E	EB	18100	1840.00	1670.00	142.00	5520.00	5010.00	283.19	203.59	486.78
Frontage Roads	EB Bloomdale Rd E to Bloomdale Rd E U	EB	6900	720.00	640.00	103.00	2160.00	1920.00	79.59	55.01	134.60
Frontage Roads	WB Bloomdale Rd E U to Bloomdale Rd E	WB	7700	740.00	860.00	139.00	2220.00	2580.00	126.36	76.34	202.71
Frontage Roads	EB Hardin to Hardin U	EB	10500	1060.00	830.00	134.00	3180.00	2490.00	143.90	122.58	266.48
Frontage Roads	WB Hardin U to Hardin	WB	10000	800.00	990.00	115.00	2400.00	2970.00	116.96	100.84	217.80
Frontage Roads	EB Hardin U to Hardin	EB	7700	840.00	650.00	124.00	2520.00	1950.00	104.98	75.86	180.83
Frontage Roads	WB Hardin to Hardin U	WB	8100	610.00	880.00	160.00	1830.00	2640.00	135.45	110.00	245.45
Frontage Roads	EB Community Ave U to Community Ave	EB	2100	210.00	210.00	107.00	630.00	630.00	25.53	17.02	42.56
Frontage Roads	WB Community Ave to Community Ave U	WB	6400	480.00	530.00	124.00	1440.00	1590.00	71.16	79.14	150.30
Frontage Roads	EB Community Ave to Community Ave U	EB	3100	260.00	360.00	133.00	780.00	1080.00	46.85	31.23	78.09
Frontage Roads	WB Community Ave U to Community Ave	WB	7700	720.00	590.00	141.00	2160.00	1770.00	104.95	100.68	205.63
Frontage Roads	EB Trinity Falls Pkwy to Trinity Falls ONR	EB	9600	810.00	910.00	177.00	2430.00	2730.00	172.98	148.84	321.82
Ramps	WB Community Ave ONR	WB	6400	440.00	520.00	2496.00	1320.00	1560.00	1361.45	1664.00	3025.45
Mainlanes	WB Hardin OFR to Community Ave ONR	WB	52100	5190.00	3950.00	2174.00	15570.00	11850.00	11289.98	10161.80	21451.78
Frontage Roads	WB Community Ave U to Community Ave ONR	WB	6600	500.00	550.00	543.00	1500.00	1650.00	323.95	354.80	678.75
Local Road	CR 201 NB	NB	3300	250.00	360.00	720.00	750.00	1080.00	249.55	200.45	450.00
Local Road	CR 201 SB	SB	3700	500.00	350.00	734.00	1500.00	1050.00	354.49	159.87	514.36
Frontage Roads	WB Hardin U to CR 201	WB	9400	720.00	1040.00	767.00	2160.00	3120.00	767.00	598.49	1365.49

Table 4h: Provided Traffic Data for the Future Build (2050) Segment F

Road Type	Road Name	Traffic Direction	Daily Traffic Volume	Length (ft)	Morning Congested Vehicle Volume	Afternoon Congested Vehicle Volume	Daily Congested VMT	Daily Free-Flow VMT	Daily Total VMT
Local Road	University Drive	EB/WB	28073.00	41087.00	3509.13	3509.13	54613.42	163840.25	218453.66

ATTACHMENT B: MEETING MINUTES



US 380 McKinney EIS MSAT Conference Call

US 380 EIS - Coit Road to FM 1827
CSJs 0135-02-065, 0135-03-053, 0135-15-002

March 11, 2022

Discussion Agenda



Welcome, Introductions, and Opening Remarks - *Stephen Endres, PE – TxDOT PM and attendees*

TxDOT Invitees:

- Stephen Endres, PE – Dallas District PM
- Christine Polito – Dallas District Environmental Manager
- Dan Perge – Assistant APD Engineer
- Michelle Lueck – ENV Project Delivery Manager
- Tim Wright – Dallas District Traffic Specialist
- Tim Wood – ENV Lead Air Quality Specialist
- Glendora Lopez – ENV Air Quality Subject Matter Expert/Reviewer

NCTCOG Invitees:

- Jeff Neal – Senior Program Manager, Streamlined Project Delivery and Data Management
- Berrien Barks – Program Manager, Roadway Corridor and Subarea Studies
- Samuel Simmons – Senior Transportation Planner, Transportation Planning
- Nathan Drozd – Principal Transportation Planner
- Sandy Wesch, PE, AICP – Principal Transportation Planner

Burns & McDonnell Invitees:

- Josh Robertson, PE – Schematic/Environmental PM
- Shari Cannon-Mackey, CEP, ENV SP – NEPA Lead
- Tess Fuller – Air Quality Lead

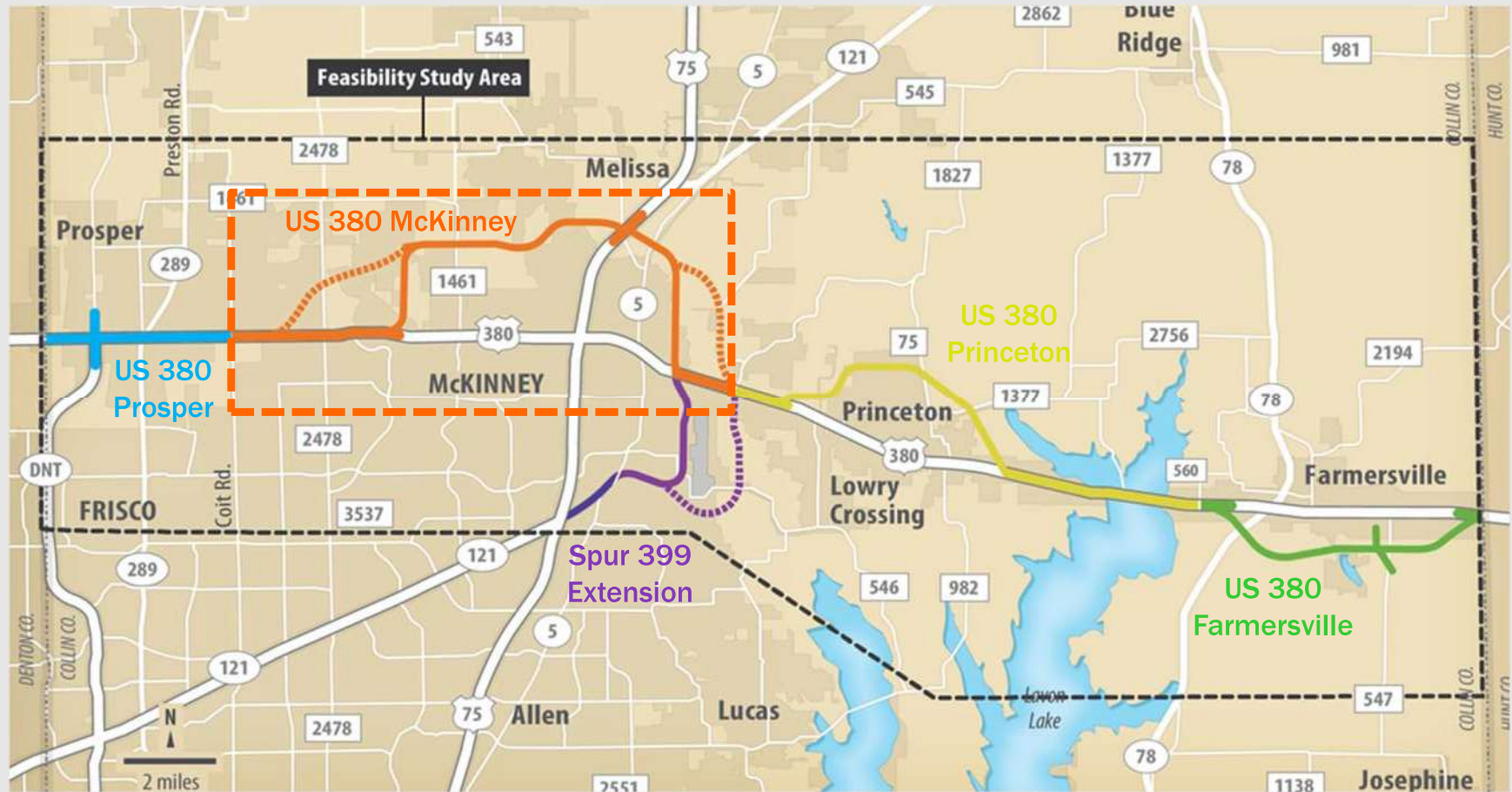
Project Description - *Stephen Endres*

Reason for Initiating the MSAT Conference Call – *Shari Cannon-Mackey – NEPA Lead, Burns & McDonnell* *Josh Robertson, PE – PM, Burns & McDonnell*

Status of Current Schematic/Environmental Process for the US 380 McKinney Project - *Shari Cannon-Mackey / Josh Robertson*

Discussion and Adjournment - *All*

Project Description – US 380 Feasibility Study – 5 Independent Projects



US 380 McKinney – Study Process and Schedule



US 380 McKinney EIS – Coit Road to FM 1827

Milestone	Date
Agency Scoping	October 29, 2020
NOI – Published in FR	December 11, 2020
Public Scoping	Jan 21-Feb 5, 2021
Public Meeting	March 22, 2022
Public Hearing*	Fall 2022
ROD (target)*	Spring 2023

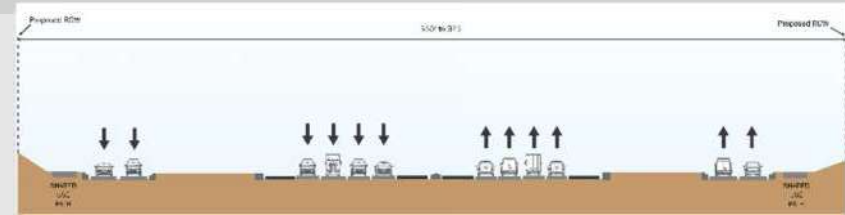
**Anticipated timeframes, actual dates to be determined*

Project Description

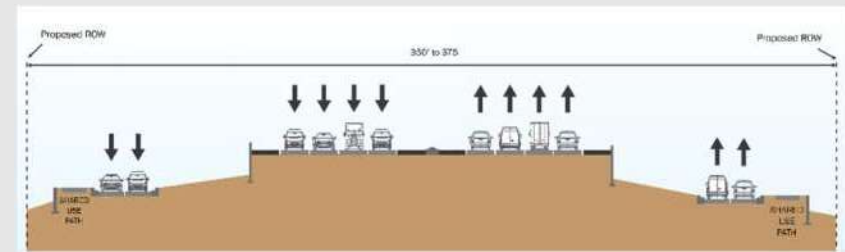


US 380 is proposed to be an eight-lane, access-controlled freeway with one-way frontage roads on each side within an anticipated right-of-way width of between 350 to 450 feet depending on location. (Frontage roads may be eliminated, and the primary travel lanes may be depressed/lowered or elevated [on bridge/viaduct] to minimize impacts on sensitive resources). The freeway facility would also include ramps, direct connector roadways, frontage roads, and arterial roadways to support connectivity to the existing roadway network. Grade-separated interchanges would be constructed at major crossroads including US 75/ SH 5 (multi-level interchange), existing US 380 (both project termini), and other major local connectors as determined needed and feasible.

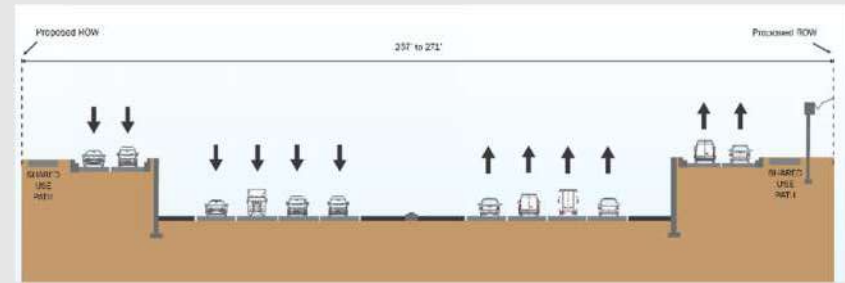
The typical freeway section would consist of: 4 12-foot-wide travel lanes in each direction, 12-foot-wide turn lanes, 10-foot-wide inside shoulders (4-foot-wide may be considered in some locations), and 10-foot-wide outside shoulders. Ramps would be 14 feet-wide with 2-foot-wide inside shoulders and 6-foot-wide outside shoulders, with curb & gutter. Bridges/overpasses along the main lanes would have a desirable vertical clearance of 18.5 feet (minimum of 16.5 feet); vertical clearance over railroads would be 23.5 feet. Ramps, direct connector roadways, frontage roads, and arterial roadway improvements would follow similar design criteria. Median barriers would be included. As the study advances, the following decisions will be made based on location and to minimize impacts if appropriate: bridge/structure type, type/location of permanent/temporary easements, minimum ROW width (compressed sections), locations of depressed/lowered roadway sections, safety lighting/signage/ITS.



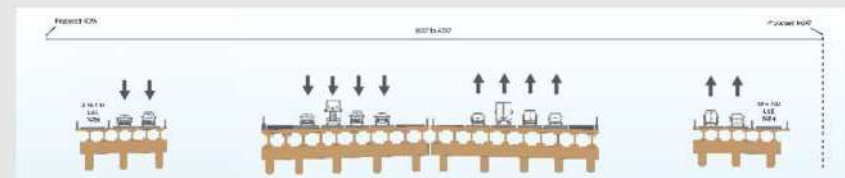
At-Grade Typical Section



Depressed FR Typical Section

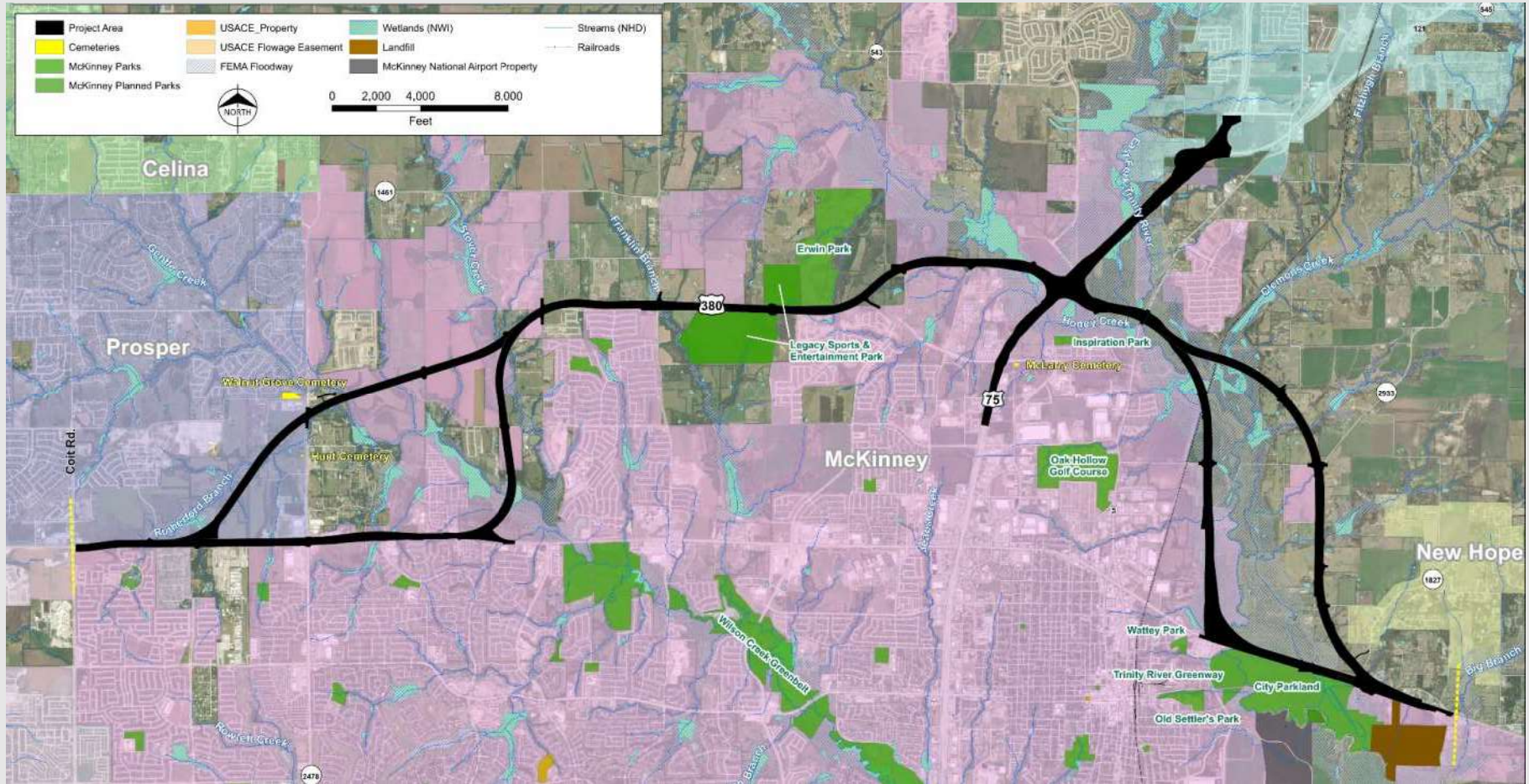


Depressed ML Typical Section

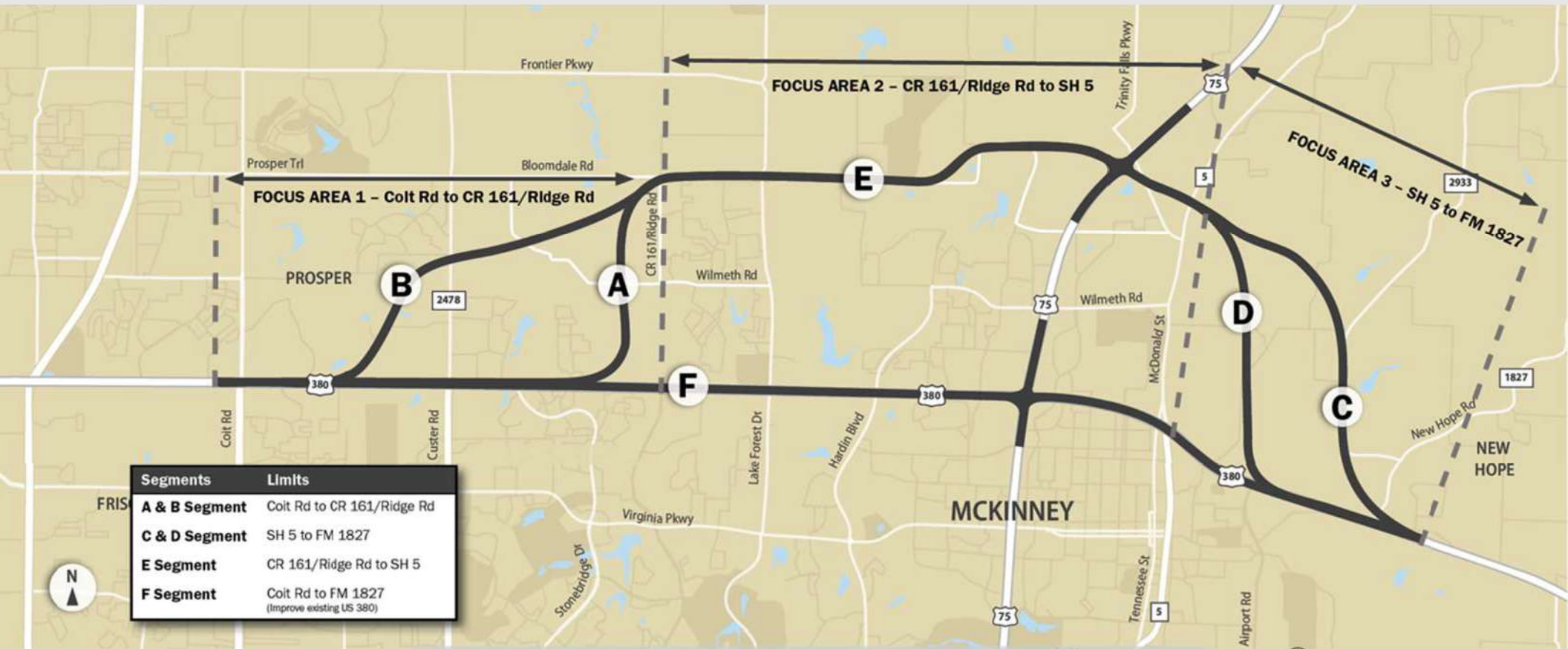


Elevated Typical Section

US 380 McKinney Study Area



US 380 McKinney – Study Segments



Modifications may continue to be made to the alignments as the study progresses.

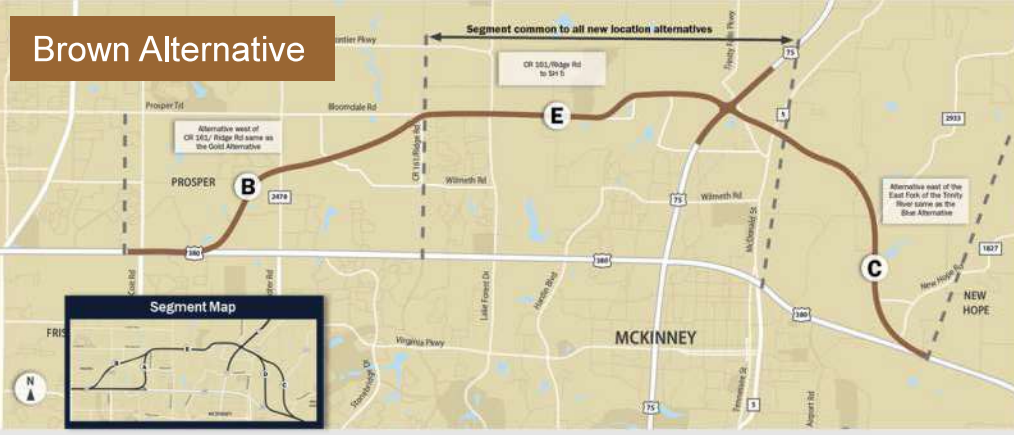
US 380 McKinney – End-to-End Alternatives to be Carried Forward



Purple Alternative



Brown Alternative



Blue Alternative



Gold Alternative



Modifications may continue to be made to the alignments as the study progresses.

US 380 McKinney



Based on findings of the US 380 Feasibility Study - the high number of residential and commercial displacements, the effects on community cohesion and access, and potential impacts to public facilities including parks - improvement of the existing US 380 corridor between Coit Road and FM 1827 is not considered a reasonable alternative and is not being studied further in the EIS.



PURPOSE



MANAGE
CONGESTION



IMPROVE
EAST-WEST MOBILITY



IMPROVE
SAFETY

NEED

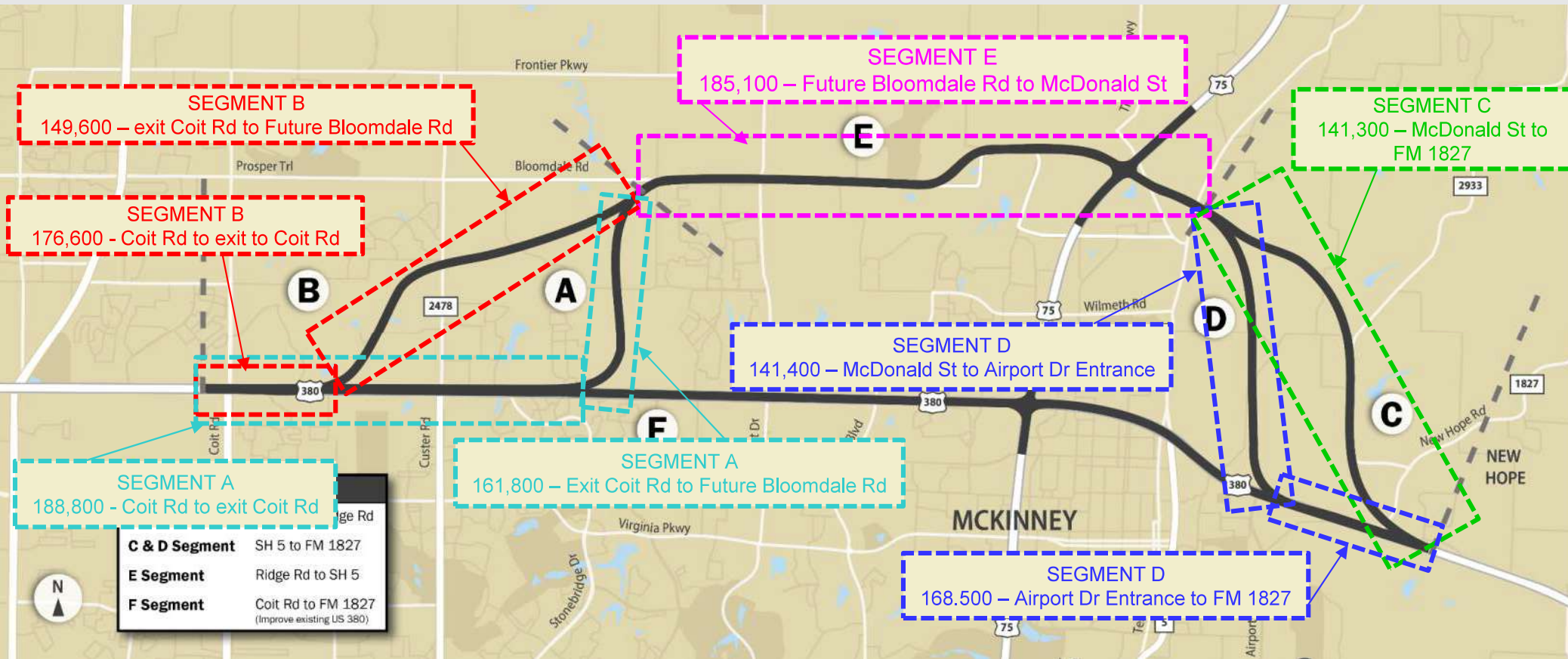
Population growth within the central portion of Collin County has caused increases in current and forecasted traffic volumes that exceed the capacity of US 380 between Coit Road and FM 1827, leading to increased congestion, reduced mobility, and higher crash rates compared to other similar roadways in the region.

US 380 McKinney – Traffic Data

Design Year = 2050



TPP Approved Traffic Volumes (TAHD and ESALs) received 16-FEB-2022



US 380 McKinney – Traffic Data



SEG A	Coit Rd to Exit to Coit Rd	Exit Coit Rd to Future Bloomdale Rd W
MAINLANES	142,900	115,900
FRONTAGE ROADS	45,900	
TOTAL	188,800	161,800

SEG B	Coit Rd to Exit to Coit Rd	Exit Coit Rd to Future Bloomdale Rd W
MAINLANES	142,900	115,900
FRONTAGE ROADS	33,700	
TOTAL	176,600	149,600

SEG C	McDonald St to FM 1827
MAINLANES	109,000
FRONTAGE ROADS	32,300
TOTAL	141,300

SEG D	McDonald St to FM 1827	McDonald St to Entrance from Airport Dr	Entrance from Airport Dr to FM 1827
MAINLANES	130,900		
FRONTAGE ROADS		10,500	37,600
TOTAL		141,400	168,500

SEG E	Future Bloomdale Rd to McDonald St
MAINLANES	137,600
FRONTAGE ROADS	47,500
TOTAL	185,100

- ✓ Letting Year = 2026
- ✓ ETC Year = 2030
- ✓ Design Year = 2050

- ✓ No-Build Traffic Volumes (US 380) 2050:
 - East of US 75 = 89,100 ADT
 - West of US 75 = 114,400 ADT

- ✓ Emission Rate (ERLT) Look-up tables are available for Collin County

- ✓ Methodology to determine VMT

US 380 McKinney – MSAT Quantitative Analysis



- Traffic data
- Obtaining VMT breakdowns for various timeframes
- Obtaining congested speeds for each timeframe
- Anticipated project schedule, including environmental approval date and ETC year
- MSAT analysis base year, design year, interim year (if recommended)
- Emissions model to be used
- MSAT emission rate tables/methodology for developing emission rates

- ✓ Letting Year = 2026
- ✓ ETC Year = 2030
- ✓ Design Year = 2050
- ✓ No-Build Traffic Volumes (US 380) 2050:
 - East of US 75 = 89,100 ADT
 - West of US 75 = 114,400 ADT
- ✓ Emission Rate (ERLT) Look-up tables are available for Collin County
- ✓ Methodology to determine VMT



Additional questions or concerns
regarding the US 380 Project?



Appendix P-4: Transportation Conformity

September 22, 2023

Transmitted Via E-mail

Mrs. Barbara C. Maley, AICP
Env/Tranp Plan Coord & Air Quality Specialist
Barbara.Maley@dot.gov


Re: Request for Project-Level Conformity Determination
Collin County
CSJ 0135-02-065, 0135-15-002
US 380: From Coit Road to Jct. US 380/East University (East of McKinney)

Dear Mrs. Maley:

Attached is the copy of the Transportation Conformity Report Form for your review and concurrence.

A project-level conformity determination is requested from you. If you have any questions regarding this project, please contact me at (512) 840-9720.

Sincerely,

DocuSigned by:

D7144948868E4E9...

Glendora Lopez
Air Specialist
Environmental Affairs Division

Attachment(s)



Transportation Conformity Report Form

Project Facility Name: US 380

MPO Project IDs: FT1-2.80.1, FT1-2.90.1, and FT1-2.100.1

Project CSJ Numbers¹: 0135-02-065, 0135-15-002

Project Limits From: Coit Road

Project Limits To: Jct. US 380/East University (East of McKinney)

Project Sponsor: TxDOT Dallas District

Project Description²: From Coit Road to Lakewood Drive – Reconstruct 6 lane arterial to 6 lane arterial (transitional work).

From Lakewood Drive to Jct. US 380/University Drive – Reconstruct and widen 6 lane arterial as an 8 lane freeway and construct 0 to 4/6 lane frontage roads.

From Jct. US 380/West University (West of McKinney) to Jct. US 380/East University (East of McKinney) – Construct 0 to 8 lane freeway with 0 to 4/6 lane frontage roads.

Due to the extensive number and length of bridges, the new interchange locations to provide connectivity to new and existing roadways, the complexity of temporary road closures and detours from Coit Rd. to Tremont Blvd. along the existing US 380 alignment, and the relocation of major regional utilities, this project is anticipated to take 3-4 years to construct.

Date of anticipated environmental decision/re-evaluation: 09/2023

Let Year: 2026

ETC³ Year: 2030

Conformity Year⁴: 2036

Total Project Cost⁵: \$1.6B

Adding Capacity?: Yes No

¹ Consider adding CSJ clarification in parentheses when it does not specifically lead to construction, such as a right of way (ROW) CSJ. For example, CSJ XXXX-XX-XXX (ROW).

² Project description, project details, and other project information should include enough detail in order to make a determination of project consistency with the MTP, TIP, STIP, and corresponding transportation conformity determination. The project description should include for both the build and no-build scenarios: the type of lanes, the number of lanes, direct connectors, and anything else specifically mentioned in the applicable RTP and STIP reference pages. Yet, the project description should not be copied verbatim from the NEPA project description, ECOS, or TxDOTCONNECT, or contain information irrelevant to conformity such as, but not limited to, lane widths, drainage information, right of way information, or project setting.

³ The ETC or estimated time of completion year is the date the entire project as described in the environmental review document will be open to traffic. Usually, two years after the let year.

⁴ If this project is NOT considered regionally significant by the MPO, enter "N/A – non-regionally significant". In addition, note that the conformity year is sometimes referred to as the network year. When a MTP identifies a specific timeframe during which a project will be operational, the last year of that timeframe is the conformity year.

⁵ Total project cost includes all funding phases (PE, ROW, construction, contingency, indirect, etc...)



Transportation Conformity Report Form

Counties: Collin

Project Classification: CE EA EIS Re-evaluation

Important Information

A determination of project-level conformity is not permanent. It is recommended that conformity be checked early and often in the project development process, but that this specific form be coordinated within 60 days of the anticipated environmental decision to avoid coordinating the form more than once. The following events would require a project's conformity determination to be reevaluated.

1. Changes to the project's design concept, scope, limit, funding, or estimated time of completion (ETC) year
2. Changes to the project's listing in the MTP, TIP, or STIP related to design concept, scope and limits; funding or ETC year
3. New conformity determinations on the applicable MTP, TIP, or STIP (even if it occurs after the FHWA/FTA project-level conformity determination has been made)

In particular, if there is a planned MTP update/amendment and associated transportation conformity determination expected to be completed on or near the time of project approval, it is recommended that the project sponsor prepare this conformity determination after the plan update/amendment and associated transportation conformity determination is completed, if the update/amendment will affect the project as specified in item 1 above. Consult with ENV air specialist if further assistance is needed.

Instructions

Check the appropriate box for each question, using the most current information available, and be aware that the answers will dictate which questions must be answered for each specific project. Start with Step One, and follow the instructions included in each step, if any additional instructions are provided.

The information displayed between carets, <like this> represents a field that should be customized with project specific information. In the electronic file, these fields are highlighted in grey. Content prompts, like **Choose an item**, represent dropdown menus, which also must be customized with project specific information.

If the form requires the preparer to "STOP" because something is lacking, then it is recommended that the time it would take to make the necessary changes to the MTP, TIP, or project should be re-evaluated against the project's proposed letting date (i.e., letting date may need to be adjusted).

Step 1: Is this a federal project with a federal lead other than FHWA/FTA?

- Yes – STOP. Transportation conformity does not apply to the project, however, general conformity may apply.**

Consult the ENV air specialist regarding this project and potential general conformity requirements.

- No – Continue to Step 2.**



Transportation Conformity Report Form

Step 2: Is this a FHWA/FTA project⁶?

- Yes – Proceed to Step 4.
 No – Continue to Step 3.

Step 3: Is this project considered regionally significant⁷ in accordance with [40 CFR 93.101](#) or [30 TAC 114.260\(d\)\(2\)\(iv\)](#)?

- Yes – Continue to Step 4.
 No – **STOP. In accordance with 40 CFR 93.102(a)(2), a project level transportation conformity determination is not required for non-regionally significant, non-FHWA/FTA projects.**

Step 4: Is the project located in a nonattainment or maintenance area⁸ for ozone⁹, nitrogen dioxide (NO₂), carbon monoxide (CO), or particulate matter (PM_{2.5} or PM₁₀)?

- Yes – **Transportation conformity rules apply.** The project is located in the EPA designated **DFW severe nonattainment**¹⁰ area for **2008 ozone NAAQS and moderate nonattainment for the 2015 Ozone NAAQS**. Continue to Step 5.
 No – **STOP. Transportation conformity does not apply to the project.**

Step 5: Is the project exempt¹¹ from conformity in accordance with [40 CFR 93.126](#)¹² or [40 CFR 93.128](#)¹³?

- Yes – **STOP. Transportation conformity does not apply to the project.** This project falls under the following exemption: *Choose an item.*
 No – Continue to Step 6.

Step 6: Is the project exempt from the regional conformity analysis in accordance with [40 CFR 93.127](#) AND also not located in a PM or CO nonattainment or maintenance area¹⁴?

- Yes – **STOP. Transportation conformity does not apply to the project. The project is exempt from regional conformity requirements and there are no**

⁶ Note that this includes projects which may not have federal funding but would otherwise require federal approval.

⁷ If a project is on the MPO's NON-regionally significant project list, it is not regionally significant. Each MPO may have different criteria for designating a project as regionally significant.

⁸ If unsure about the nonattainment or maintenance status, it can be checked in multiple locations, including: the [EPA Greenbook](#), the [TCEQ website](#), or the applicable table in the [Air Quality toolkit](#).

⁹ Note the 1997 ozone standard was revoked by EPA.

¹⁰ Area classifications can be either maintenance, marginal nonattainment, moderate nonattainment, serious nonattainment, severe-15 nonattainment, severe-17 nonattainment, or extreme nonattainment

¹¹ Most added capacity projects will not be exempt, whereas most non-added capacity projects will be exempt.

¹² Ultimately, the interpretation of what projects types meet these exemption criteria is under the purview of the federal lead agency. For example, although it could be interpreted to meet some of the exemption project types, a project changing from general purpose to managed lanes is NOT considered to be exempt from conformity.

¹³ Grouped CSJ projects, by rule, must be exempt under these criteria.

¹⁴ This currently only applies to projects in El Paso.



Transportation Conformity Report Form

additional hot-spot requirements to address. This project falls under the following exemption: *Choose an item.*

No – Continue to Step 7.

Step 7: Does the project fall within the boundaries¹⁵ of an MPO?

Yes – Proceed to Step 9.

No – Continue to Step 8.

Step 8: Is the project design concept, scope and limits, conformity analysis year, and funding consistent with an approved¹⁶ regional conformity analysis for an isolated rural area that meets the requirements of [40 CFR 93.109](#)?

Yes – **The project is consistent with an approved regional conformity determination that meets the requirements of 40 CFR 93.109 for isolated rural areas.** Proceed to Step 16.

No – **STOP. The project is not consistent with a regional conformity determination for an isolated rural area. TxDOT will not take final action until the project is consistent with an approved regional conformity determination that meets the requirements of 40 CFR 93.109 for isolated rural areas.**

Do not sign this form. Please ensure that the project is included in and consistent with an approved regional conformity determination then reevaluate the project using this form.

Step 9: Are all of the project phases¹⁷ for the entire project described in the environmental document included in the fiscally constrained portion of the MTP?

Yes – Continue to Step 10.

No – **STOP. The project was not included in the area's regional conformity determination, and, therefore, is not consistent with it.** The MTP needs to be amended to include this project and a new conformity determination needs to be made on the MTP before consistency can be determined for the project, or the project needs to be revised to be consistent with the existing MTP.

Consult with the district TP&D and MPO on how to proceed.

Step 10: Is at least one phase of the project beyond the NEPA study (corridor study) included in either the appropriate year of the conforming TIP¹⁸ or in Appendix D (if will not be let within the timeframe of the TIP)?

¹⁵ i.e., within a Metropolitan Planning Area (MPA)

¹⁶ The Consultation Partners are responsible for approving regional conformity analyses.

¹⁷ A project phase is a separate portion of a project such as: NEPA study, ROW acquisition, final design, construction, and/or partial construction.

¹⁸ In Texas, a conforming TIP is one that has been included into the STIP, so projects must be in the STIP in order to show that they come from a conforming TIP.



Transportation Conformity Report Form

- Yes – Continue to Step 11.
- No – **STOP. The project is not included in the conforming TIP and is therefore not consistent with it.** At least one phase of the project must be added to the conforming TIP before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

Step 11: Are the current project limits the same¹⁹ or do they fall within the project limits listed in the MTP and STIP?

- Yes – Continue to Step 12.
- No – **STOP. The project is not consistent with the conforming MTP and TIP.** Either the MTP and TIP, or the project needs to be revised before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

Step 12: Is the activity being proposed the same as that in the MTP and STIP project description in both type²⁰ of facility and number²¹ of lanes?

- Yes – Continue to Step 13.
- No – **STOP. The project is not consistent with the conforming MTP and TIP.** Either the MTP and TIP, or the project needs to be revised before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

Step 13: Does the project's ETC year fall between its identified conformity year²² in the MTP and the previous conformity year identified in the MTP?

- Yes – Continue to Step 14.
- No – **STOP. The project is not consistent with the conforming MTP and TIP.** Either the MTP and TIP or the project needs to be revised before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

- N/A – This project is non-regionally significant. Continue to Step 14.

Step 14: Is the estimated total project cost or the cost identified in the MTP greater than \$1,500,000?

¹⁹ The limits are considered the same if the logical termini noted in the environmental document fall within the limits of the project noted in the MTP or the logical termini noted in the environmental document are not significantly greater (~1mile) than the limits noted in the MTP due to transition areas for safety or other factors required to be considered when establishing logical termini for environmental document purposes.

²⁰ The type of activity refers to the type of enhancement, such as: main lanes, frontage roads, HOV lanes, direct connectors, bridge replacement, etc...

²¹ The number refers to the amount of each activity type, such as: number of main lanes or number of frontage lanes.

²² For the purposes of this determination, the term conformity year is synonymous with the network analysis year for the MTP.



Transportation Conformity Report Form

- Yes – Proceed to Step 15.
- No – Fiscal constraint requirements do not apply. This project is consistent with the currently conforming MTP and TIP. Proceed to Step 16.

Step 15: Does the estimated project cost exceed what is contained in the MTP by more than 50%²³?

- Yes – **STOP. The project is not consistent with the MTP and TIP because it is not fiscally constrained.** Either the MTP and TIP, or the project needs to be revised before consistency can be determined or a case-by-case decision will need to be made by FHWA.

Consult with the district TP&D and MPO on how to proceed.

- No – **This project is consistent with the currently conforming MTP and TIP.**
Continue to Step 16.

Step 16: Is the project located in either a CO, PM_{2.5}, or PM₁₀ nonattainment or maintenance area²⁴?

- Yes – Continue to Step 17.
- No – **Hot-spot conformity requirements do not apply.** Proceed to Step 21.

Step 17: Is this a state or local project with NO federal funding and NO federal decision required?

- Yes – **Hot-spot conformity requirements do not apply.** Proceed to Step 21.
- No – **Hot-spot conformity requirements apply.** Request the local MPO to initiate a consultation call with the Consultation Partners.

Fill out the Decision Form: Project of Local Air Quality Concern (POAQC) to present the project data to the Consultation Partners for review prior to the consultation call.

Continue to Step 18.

Step 18: Did the consultation partners determine that this is a project of air quality concern (POAQC)?

- Yes – **A hot-spot analysis is required and must be approved by the Consultation Partners.**

Conduct a hot-spot analysis in accordance with the methodology approved by the Consultation Partners, and use the applicable [EPA hot-spot guidance](#).

Continue to Step 19.

- No – **A hot-spot analysis is not required because the project is not a POAQC. The Consultation Partners made this determination on <insert date>.**

Proceed to Step 21.

²³ Multiply the MTP cost by 1.5. The current estimated total project cost should not exceed this amount.

²⁴ Note that this currently only applies to projects in El Paso.



Step 19: Does the approved hot-spot analysis verify that the project will not cause, contribute to, or worsen a violation of applicable CO, PM_{2.5}, or PM₁₀ NAAQS or that the project will at least improve conditions from that of the no-build alternative?

Yes – The project is not anticipated to cause, contribute to, or worsen a violation of the applicable NAAQS. Continue to Step 20.

No – STOP. The project, as it is currently presented, does not comply with conformity requirements because it is anticipated to cause, contribute to, or worsen a violation of the applicable NAAQS.

Identify and get Consultation Partner agreement upon mitigation measures to offset project impacts to air quality. Reevaluate this project using this form once these mitigation measures have been identified and committed to.

Step 20: Have all the agreed upon mitigation measures as well as any applicable SIP control measures received a written commitment?

Yes – Continue to Step 21.

No – STOP.

Do not proceed until there are written commitments to implement all the agreed upon mitigation measures and any applicable SIP control measures. Reevaluate this project using this form once these commitments have been made in writing.

N/A because no mitigation is required and there are no applicable SIP control measures which affect this project, continue to Step 21.



Step 21: The transportation conformity evaluation is complete.

Attach applicable pages of the MTP and the STIP, typical sections²⁵, hot-spot analyses and determinations, and any conformity related public comment and response. Implement the following processing instructions as applicable.

- This is a regionally significant State-only project with no FHWA/FTA action required (the answer to Steps 3 is yes); therefore:

Submit this form to the ENV air specialist. If ENV concurs that all project level conformity requirements have been met, ENV shall sign the form below. Coordination with FHWA/FTA is not required.

Retain this form in the project file.

- This is a FHWA/FTA non-exempt project (the answer to Steps 2 and 4 is yes, and the answer to Steps 5 and 6 is no); therefore:

Submit this form to the ENV air specialist. After ENV air specialist review, ENV will coordinate this form with FHWA/FTA for a project level conformity determination. If FHWA/FTA agrees that all project level conformity requirements have been met, they shall sign the project level conformity determination line below. A project level conformity determination is not complete and project clearance cannot be given until FHWA/FTA signs this form.

Retain this form and any coordination with FHWA/FTA in the project file.

²⁵ Preferably one existing and one build typical section that is representative of the project for each section of the project where there is a significant difference in the existing or build design (i.e., a typical section that is generically representative of the existing and build conditions). Preferably NOT typical sections representing specific cross-sections of the schematic.



Transportation Conformity Report Form

Project CSJ Numbers: 0135-02-065, 0135-15-002

TxDOT ENV Transportation Conformity Validation Complete:

Signature DocuSigned by:

D7144948868E4E9...

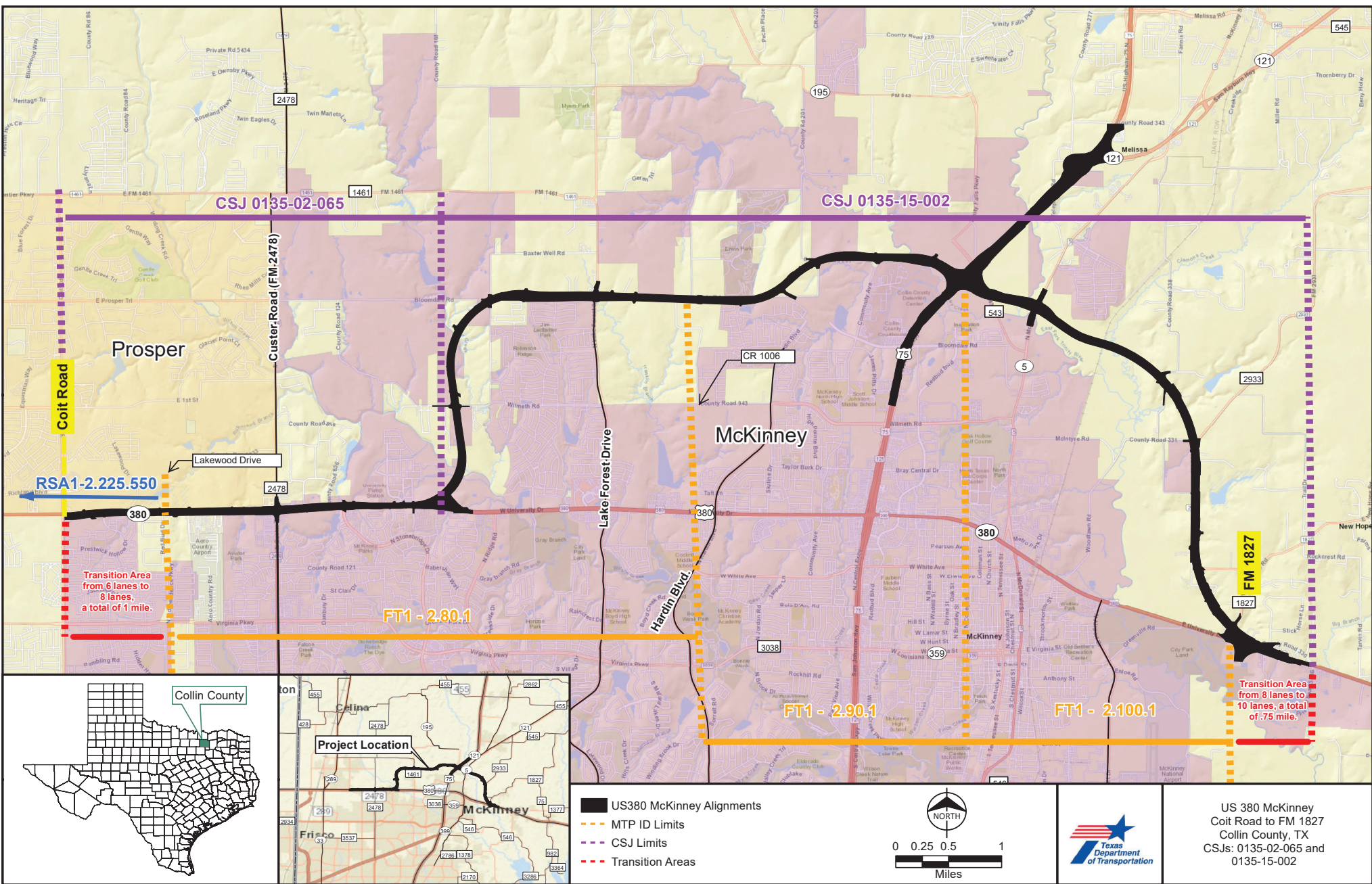
Name: Glendora Lopez
Title: Environmental Specialist
Date: 9/22/2023

FHWA/FTA Determination of the Project-level Conformity:

Signature **BARBARA C MALEY** Digitally signed by BARBARA C MALEY
Date: 2023.09.26 18:05:19 -05'00'

Name:
Title: Air Quality Specialist and Transportation Planner
Date:

NOTE: FHWA project-level conformity determination is based upon clarification provided by TxDOT (attached).



Freeway, Tollway, Express/HOV/Tolled Managed Lanes Recommendations Summary

July 10, 2023

FT Corridor	MTP ID	Facility	From	To	2023 Lanes	2026 Lanes	2036 Lanes	2045 Lanes	Asset Optimization Description	Total Project Cost
57 - US 380 Farmersville Bypass	2.140.2	US 380 Farmersville Bypass	West of CR 698/CR 699	East of CR 698/CR 699 (Hunt County Line)			4 (Frwy), 4/6 (Frtg-C)	4 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
58 - US 380 Freeway	2.50.1	US 380	West of Legacy Drive	SH 289			6 (Frwy), 4/6 (Frtg-C)	6 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
58 - US 380 Freeway	2.50.2	US 380	SH 289	Lakewood Drive			6 (Frwy), 4/6 (Frtg-C)	6 (Frwy), 4/6 (Frtg-C)		\$3,196,700,966
58 - US 380 Freeway	2.110.1	US 380	Spur 399 Extension	West of CR 337			10 (Frwy), 4/6 (Frtg-C)	10 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
58 - US 380 Freeway	2.130.1	US 380	East of CR 456	CR 560			8 (Frwy), 4/6 (Frtg-C)	8 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
59 - US 380 McKinney Bypass	2.80.1	US 380 McKinney Bypass	Lakewood Drive	CR 1006			8 (Frwy), 4/6 (Frtg-C)	8 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
59 - US 380 McKinney Bypass	2.90.1	US 380 McKinney Bypass	CR 1006	US 75			8 (Frwy), 4/6 (Frtg-C)	8 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
59 - US 380 McKinney Bypass	2.100.1	US 380 McKinney Bypass	US 75	US 380			8 (Frwy), 4/6 (Frtg-C)	8 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2
60 - US 380 Princeton Bypass	2.110.2	US 380	West of CR 337	East of CR 406			10 (Frwy), 4/6 (Frtg-C)	10 (Frwy), 4/6 (Frtg-C)		Included w/ 2.50.2

(Frwy): Freeway Lanes; (Toll): Tolled Lanes; (Frtg-D): Discontinuous Frontage Lanes; (Frtg-C): Continuous Frontage Lanes; CD: Collector-Distributor Lanes; (ML/T-C): Tolled Concurrent Managed Lanes; (ML/T-R): Tolled Reversible Managed Lanes; (Tech-C): Concurrent Technology Lanes; (ExL-R): Reversible Express Lanes; (Rural): Rural highways with some grade-separated intersections but also allow some roads and/or driveways direct access to the facility

NB, SB, EB, WB: Directional Lanes; X/Y Lanes: X is the minimum and Y is the maximum number of lanes (for both directions)

*Temporary use of shoulder lanes during the peak periods to add additional capacity in interim years before ultimate improvements

NOTE: Asset Optimization improvements are typically low-cost improvements implemented prior to, or in lieu of, ultimate capacity improvement. These types of improvements are targeted to address location-specific operation, safety, and bottleneck issues within the corridor, and do not affect Transportation Conformity.



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Project Management

Reports

Support

Project Management > Area List > STIPs (M-NCTCOG) > Revisions () > TIP Instances (Unassigned) > Highway Projects (Unassigned) > Project Details

Color Key: - Business rule violation - Value changed in current session - Different from DCIS or latest approved copy

Data

Statewide STIP Revision Phase Construction

District County Engineering

MPO Highway Environmental

CSJ TIP FY Engineering

Right-of-Way

Acquisition

Utilities

Transfer

Total Project Cost Information

Prelim Engineering	\$7,425,000
ROW Purchase	\$33,000,000
Construction Cost	\$165,692,800
Const Engineering	\$7,269,061
Contingencies	\$6,065,540
Indirect Costs	\$4,466,161
Bond Financing	\$0
Potential Chg Ord	\$0

Revision Date NOX (Kg /D): 0.0000

Project Sponsor VOC (Kg /D): 0.0000

MPO Proj Number PM10 (Kg /D): 0.0000

MTP Reference PM2.5 (Kg /D): 0.0000

City CO (Lbs /D):

Total Project Cost \$223,918,562

YOE Cost

Toll

TCM

Limits From

Limits To

Project Description FROM COIT RD TO LAKEWOOD RD: RECONSTRUCT 6 TO 6 LANE ARTERIAL; FROM LAKEWOOD TO JCT US 380/UNIVERSITY DRIVE: RECONSTRUCT AND WIDEN 6 LANE ARTERIAL AS AN 8 LANE FREEWAY WITH 0 TO 4/6 LANE CONTINUOUS FRONTAGE ROADS

P7 Remarks REVISE SCOPE

Project History REGIONAL 10-YEAR PLAN PROJECT; PART OF 2022 SE CONNECTOR CAT 2/12 EXCHANGE

Authorized Funding by Category/Share

Category	Federal	State	Regional	Local Match	Local Contributions	Total
SW PE	\$0	\$7,425,000	\$0	\$0	\$0	\$7,425,000
SW ROW	\$26,400,000	\$3,300,000	\$0	\$3,300,000	\$0	\$33,000,000
Total	\$26,400,000	\$10,725,000	\$0.00	\$3,300,000	\$0.00	\$40,425,000

DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST	
DALLAS	NCTCOG	COLLIN	0135-02-065	2024	US 380	E,ENG,R,ACQ	VARIOUS	\$40,425,000	
LIMITS FROM: COIT ROAD				PROJECT SPONSOR: TXDOT-DALLAS					
LIMITS TO: JCT US 380/UNIVERSITY DRIVE				REVISION DATE: 08/2023					
PROJECT FROM COIT RD TO LAKEWOOD RD: RECONSTRUCT 6 TO 6 LANE ARTERIAL; FROM LAKEWOOD TO JCT US 380/UNIVERSITY DRIVE: RECONSTRUCT AND WIDEN 6 LANE ARTERIAL AS AN 8 LANE FREEWAY WITH 0 TO 4/6 LANE CONTINUOUS FRONTAGE ROADS				MPO PROJ NUM: 13067					
DESCR: JCT US 380/UNIVERSITY DRIVE: RECONSTRUCT AND WIDEN 6 LANE ARTERIAL AS AN 8 LANE FREEWAY WITH 0 TO 4/6 LANE CONTINUOUS FRONTAGE ROADS				FUNDING CAT(S): SW PE,SW ROW					
REMARKS P7: REVISE SCOPE				PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT; PART OF 2022 SE CONNECTOR CAT 2/12 EXCHANGE					
TOTAL PROJECT COST INFORMATION				AUTHORIZED FUNDING BY CATEGORY/SHARE					
PRELIM ENG: \$	7,425,000	COST OF APPROVED PHASES \$40,425,000	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	33,000,000		SW PE	\$0	\$7,425,000	\$0	\$0	\$0	\$7,425,000
CONST COST: \$	165,692,800		SW	\$26,400,000	\$3,300,000	\$0	\$3,300,000	\$0	\$33,000,000
CONST ENG: \$	7,269,061		ROW						
CONTING: \$	6,065,540		TOTAL	\$26,400,000	\$10,725,000	\$0	\$3,300,000	\$0	\$40,425,000
INDIRECT: \$	4,466,161								
BOND FIN: \$	0								
POT CHG ORD: \$	0								
TOTAL COST: \$	223,918,562								

TIP History

2023-2026 STIP		08/2023 Revision: Approved 08/28/2023								
DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST		
DALLAS	NCTCOG	COLLIN	0135-02-065	2024	US 380	E,ENG,R,ACQ	VARIOUS	\$ 40,425,000		
LIMITS FROM: COIT ROAD		PROJECT SPONSOR: TXDOT-DALLAS								
LIMITS TO: JCT US 380/UNIVERSITY DRIVE		REVISION DATE: 08/2023								
PROJECT: FROM COIT RD TO LAKEWOOD RD: RECONSTRUCT 6 TO 6 LANE ARTERIAL FROM LAKEWOOD TO		MPO PROJ NUM: 13067								
DESCR: JCT US 380/UNIVERSITY DRIVE: RECONSTRUCT AND WIDEN 6 LANE ARTERIAL AS AN 8 LANE FREEWAY WITH 0 TO 4/6 LANE CONTINUOUS FRONTAGE ROADS		FUNDING CAT(S): SW PE, SW ROW								
REMARKS P7: REVISE SCOPE		PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT, PART OF 2022 SE CONNECTOR CAT 2/12 EXCHANGE								
TOTAL PROJECT COST INFORMATION			AUTHORIZED FUNDING BY CATEGORY/SHARE							
PRELIM ENG: \$	7,425,000	COST OF APPROVED PHASES	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL	
ROW PURCH: \$	33,000,000		SW PE	\$ 0	\$ 7,425,000	\$ 0	\$ 0	\$ 0	\$ 7,425,000	
CONST COST: \$	165,692,800		SW	\$ 26,400,000	\$ 3,300,000	\$ 0	\$ 3,300,000	\$ 0	\$ 33,000,000	
CONST ENG: \$	7,269,061		ROW							
CONTING: \$	6,065,540		TOTAL	\$ 26,400,000	\$ 10,725,000	\$ 0	\$ 3,300,000	\$ 0	\$ 40,425,000	
INDIRECT: \$	4,466,161									
BOND FIN: \$	0									
POT CHG ORD: \$	0									
TOTAL COST: \$	223,918,562									

2023-2026 STIP		07/2022 Revision: Not Approved 11/18/2022								
DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST		
DALLAS	NCTCOG	COLLIN	0135-02-065	2024	US 380	E,ENG,R,ACQ	VARIOUS	\$ 40,425,000		
LIMITS FROM: COIT ROAD		PROJECT SPONSOR: TXDOT-DALLAS								
LIMITS TO: JCT US 380/UNIVERSITY DRIVE		REVISION DATE: 07/2022								
PROJECT: RECONSTRUCT 6 LANE ARTERIAL TO 6 LANE FREEWAY AND CONSTRUCT 0 TO 4/6 LANE FRONTAGE		MPO PROJ NUM: 13067								
DESCR: ROADS		FUNDING CAT(S): SW PE, SW ROW								
REMARKS P7:		PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT								
TOTAL PROJECT COST INFORMATION			AUTHORIZED FUNDING BY CATEGORY/SHARE							
PRELIM ENG: \$	7,425,000	COST OF APPROVED PHASES	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL	
ROW PURCH: \$	33,000,000		SW PE	\$ 0	\$ 7,425,000	\$ 0	\$ 0	\$ 0	\$ 7,425,000	
CONST COST: \$	165,692,800		SW	\$ 26,400,000	\$ 3,300,000	\$ 0	\$ 3,300,000	\$ 0	\$ 33,000,000	
CONST ENG: \$	7,269,061		ROW							
CONTING: \$	6,065,540		TOTAL	\$ 26,400,000	\$ 10,725,000	\$ 0	\$ 3,300,000	\$ 0	\$ 40,425,000	
INDIRECT: \$	4,466,161									
BOND FIN: \$	0									
POT CHG ORD: \$	0									
TOTAL COST: \$	223,918,562									

Comment History

Time	User	Comment	Related Approval
2023/08/28 18:28:11	Barbara Maley	Approved. Approval based on Mobility 2045 2022 Update as found conforming on December 15, 2022 July 2023 FT and June 2023 RSA Administrative Revisions. Approval also based on NCTCOG CGotti August 22 2023 confirmation that STIP limits Coit to Lakewood is within MTP limits Lovers Lane to Lakewood; and STIP limits Lakewood to Univ 380 is within MTP limits Lakewood to CR 1006, almost US 75. Additional visuals confirming MTP and STIP limits provided by DAL BCallaway on August 22 2023. See upload.	08/2023: Approved
2022/11/18 08:59:06	Barbara Maley	Not approved due to Plan to Program inconsistencies.	07/2022: Not Approved



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Project Management

Reports

Support

Project Management > Area List > STIPs (M-NCTCOG) > Revisions () > TIP Instances (Unassigned) > Highway Projects (Unassigned) > Project Details

Color Key: - Business rule violation - Value changed in current session - Different from DCIS or latest approved copy

Data

Statewide STIP Revision
 District County
 MPO Highway
 CSJ TIP FY

Phase Construction
 Engineering
 Environmental
 Engineering
 Right-of-Way
 Acquisition
 Utilities
 Transfer

Total Project Cost Information

Prelim Engineering	\$36,337,500
ROW Purchase	\$417,000,000
Construction Cost	\$764,326,901
Const Engineering	\$49,910,547
Contingencies	\$41,080,401
Indirect Costs	\$22,165,480
Bond Financing	\$0
Potential Chg Ord	\$0

Revision Date NOX (Kg /D): 0.0000
 Project Sponsor VOC (Kg /D): 0.0000
 MPO Proj Number PM10 (Kg /D): 0.0000
 MTP Reference PM2.5 (Kg /D): 0.0000
 City CO (Lbs /D):
 Limits From
 Limits To

Total Project Cost \$1,330,820,829

YOE Cost

Toll

TCM

Project Description

P7 Remarks

Project History

Authorized Funding by Category/Share

Category	Federal	State	Regional	Local Match	Local Contributions	Total
SW PE	\$0	\$36,337,500	\$0	\$0	\$0	\$36,337,500
SW ROW	\$333,600,000	\$67,250,000	\$0	\$16,150,000	\$0	\$417,000,000
Total	\$333,600,000	\$103,587,500	\$0.00	\$16,150,000	\$0.00	\$453,337,500

DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST	
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 453,337,500	
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)				PROJECT SPONSOR: TXDOT-DALLAS					
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)				REVISION DATE: 11/2022					
PROJECT CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS				MPO PROJ NUM: 13070					
DESCR: PROJECT CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS				FUNDING CAT(S): SW PE,SW ROW					
REMARKS P7: INCREASE ROW FUNDING IN FY2024				PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT					
TOTAL PROJECT COST INFORMATION				AUTHORIZED FUNDING BY CATEGORY/SHARE					
PRELIM ENG: \$	36,337,500	COST OF APPROVED PHASES \$ 453,337,500	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	417,000,000		SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	764,326,901		SW	\$ 333,600,000	\$ 67,250,000	\$ 0	\$ 16,150,000	\$ 0	\$ 417,000,000
CONST ENG: \$	49,910,547		ROW						
CONTING: \$	41,080,401		TOTAL	\$ 333,600,000	\$ 103,587,500	\$ 0	\$ 16,150,000	\$ 0	\$ 453,337,500
INDIRECT: \$	22,165,480								
BOND FIN: \$	0								
POT CHG ORD: \$	0								
TOTAL COST: \$	1,330,820,829								

TIP History

2023-2026 STIP

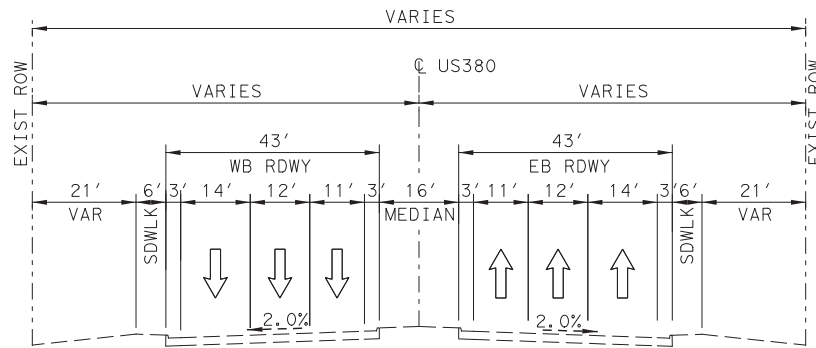
11/2022 Revision: Not Approved 01/16/2023

DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 453,337,500
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)							PROJECT SPONSOR: TXDOT-DALLAS	
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)							REVISION DATE: 11/2022	
PROJECT DESCR: CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS							MPO PROJ NUM: 13070	
REMARKS P7: INCREASE ROW FUNDING IN FY2024							FUNDING CAT(S): SW PE, SW ROW	
TOTAL PROJECT COST INFORMATION							PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT	
AUTHORIZED FUNDING BY CATEGORY/SHARE								
PRELIM ENG: \$	36,337,500	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	417,000,000	SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	764,326,901	SW	\$ 333,600,000	\$ 67,250,000	\$ 0	\$ 16,150,000	\$ 0	\$ 417,000,000
CONST ENG: \$	49,910,547	ROW						
CONTING: \$	41,080,401	TOTAL	\$ 333,600,000	\$ 103,587,500	\$ 0	\$ 16,150,000	\$ 0	\$ 453,337,500
INDIRECT: \$	22,165,480							
BOND FIN: \$	0							
POT CHG ORD: \$	0							
TOTAL COST: \$	1,330,820,829							

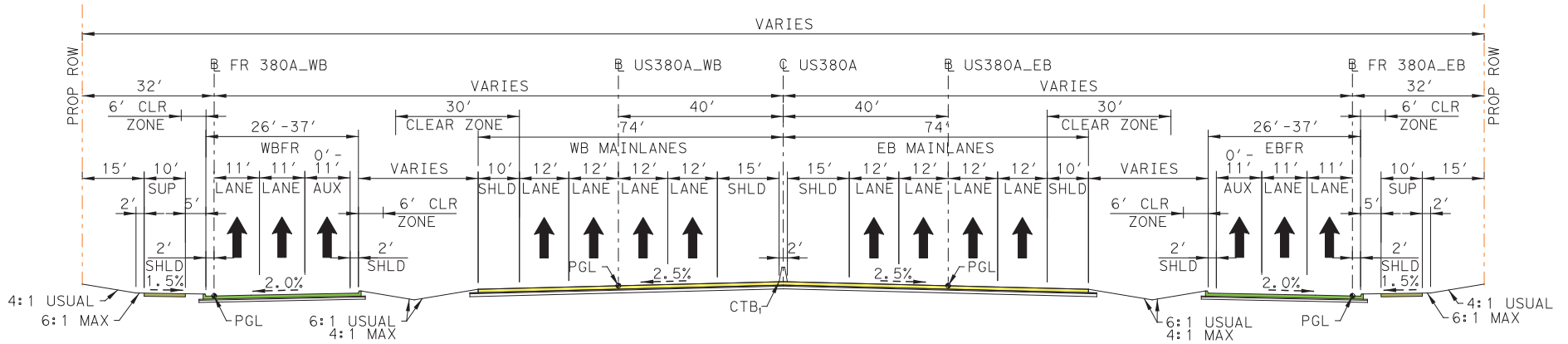
2023-2026 STIP								
07/2022 Revision: Not Approved 11/17/2022								
DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 197,837,500
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)							PROJECT SPONSOR: TXDOT-DALLAS	
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)							REVISION DATE: 07/2022	
PROJECT DESCR: CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS							MPO PROJ NUM: 13070	
REMARKS P7:							FUNDING CAT(S): SW PE, SW ROW	
TOTAL PROJECT COST INFORMATION							PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT	
AUTHORIZED FUNDING BY CATEGORY/SHARE								
PRELIM ENG: \$	36,337,500	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	161,500,000	SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	723,246,500	SW	\$ 129,200,000	\$ 16,150,000	\$ 0	\$ 16,150,000	\$ 0	\$ 161,500,000
CONST ENG: \$	49,910,547	ROW						
CONTING: \$	41,080,401	TOTAL	\$ 129,200,000	\$ 52,487,500	\$ 0	\$ 16,150,000	\$ 0	\$ 197,837,500
INDIRECT: \$	22,165,480							
BOND FIN: \$	0							
POT CHG ORD: \$	0							
TOTAL COST: \$	1,034,240,428							

Comment History

Time	User	Comment	Related Approval
2023/01/16 16:15:55	Barbara Maley	Not approved. Approval pending FFCS confirmation.	11/2022: Not Approved
2022/11/17 22:12:29	Barbara Maley	Not approved due to Plan to Program inconsistencies. Not approved. Approval pending FFCS confirmation.	07/2022: Not Approved



EXISTING US 380
6-LANE ARTERIAL



PROPOSED US 380
8-LANE FREEWAY WITH 4/6-LANE FRONTAGE ROADS

DRAFT

NOT INTENDED FOR CONSTRUCTION,
BIDDING, OR PERMIT PURPOSES

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of Transportation

US 380 EIS
CCSJ 0135-03-053
McKINNEY, TEXAS
APRIL 10, 2023

**BURNS
& MCDONNELL**

BURNS & MCDONNELL
ENGINEERING CO., INC
13737 NOEL ROAD,
SUITE 700
DALLAS, TEXAS, 75240
TEXAS REGISTERED
ENGINEERING FIRM F-845

SHEET 1 OF 1

CLARIFICATION

From: [Glendora Lopez](#)
To: [Maley, Barbara \(FHWA\)](#); [Brenda Callaway](#); [Christine Polito](#)
Cc: [Tim Wood](#); [Campos, Jose \(FHWA\)](#)
Subject: RE: CRF for the US 380 From Coit Road to Jct. US 380/East University (East of McKinney) (CSJ 0135-02-065, 0135-15-002)
Date: Monday, September 25, 2023 3:01:35 PM
Attachments: [image001.png](#)
[CSJ 0135-15-002_STIP pages.pdf](#)
[Schematic Snippets.docx](#)

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Barbara,

Thank you for organizing the Teams call.

- The portion of the schematic has been provided showing the project portion from Coit Road to Lakewood Drive and a representative portion of the project west of Lakewood Drive.
- The work on US 75 (N, S) is ramping, striping, signing, and widening the shoulder (no added lanes).
- I have attached the approved STIP page for CSJ 0135-15-002.

Please let ENV know if there is any other information we can provide for this evaluation.

Thank you,



Glendora Lopez | Environmental Specialist
Environmental Affairs Division | 6230 E Stassney Ln, Austin, Texas 78744
Office: (512) 840-9720 | Email: Glendora.Lopez@TxDOT.gov

From: Maley, Barbara (FHWA) <Barbara.Maley@dot.gov>
Sent: Monday, September 25, 2023 2:40 PM
To: Glendora Lopez <Glendora.Lopez@txdot.gov>; Brenda Callaway <Brenda.Callaway@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Cc: Tim Wood <Tim.Wood@txdot.gov>; Campos, Jose (FHWA) <Jose.Campos@dot.gov>
Subject: RE: CRF for the US 380 From Coit Road to Jct. US 380/East University (East of McKinney) (CSJ 0135-02-065, 0135-15-002)

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Glendora, Brenda, and Christine:

Thanks for the Teams call.

Glendora:

In support of FHWA's further consideration, I understand the following:

- a portion of the overall schematic will be provided;
- it will be confirmed that the US 75 portion (N, S) is for ramping, striping, and signing; and
- approved STIP pages will be provided for CSJ 0135-15-002.

Thanks.

Signed,
Barbara
512.536.5926

From: Glendora Lopez <Glendora.Lopez@txdot.gov>
Sent: Friday, September 22, 2023 10:42 AM
To: Maley, Barbara (FHWA) <Barbara.Maley@dot.gov>
Cc: Tim Wood <Tim.Wood@txdot.gov>; Campos, Jose (FHWA) <Jose.Campos@dot.gov>
Subject: CRF for the US 380 From Coit Road to Jct. US 380/East University (East of McKinney) (CSJ 0135-02-065, 0135-15-002)

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good morning Barbara,

Please review and respond to the attached CRF correspondence Letter for US 380 from Coit Road to Jct. US 380/East University (East of McKinney) in Collin County (CSJ 0135-02-065, 0135-15-002).

The TxDOT Dallas District respectfully requests an expedited review before the end of September 28, 2023, or sooner, if at all possible.

Please note:

- RSA1-2.225.550 is listed as an MTP reference in the STIP page for CSJ 0135-02-065. However, RSA1-2.225.550 was approved in the adjoining US 380 Prosper/Frisco Project (CSJ CSJs 0135-11-024, 0135-02-068, 0135-10-065). Preliminary transitional work will be done between Coit Road and Lakewood Drive as a part of this project, which is why it is listed in the MTP reference. The transitional work is reconstructing the portion of Coit Road and Lakewood Drive from a 6 lane arterial to a 6 lane arterial with a wider median. This condition will serve as the frontage roads for the freeway that is covered under the adjoining US 380 Prosper/Frisco Project (CSJ CSJs 0135-11-024, 0135-02-068, 0135-10-065).

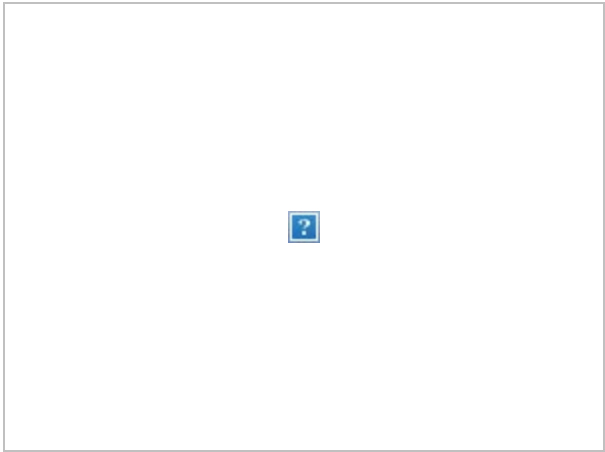
Thank you,

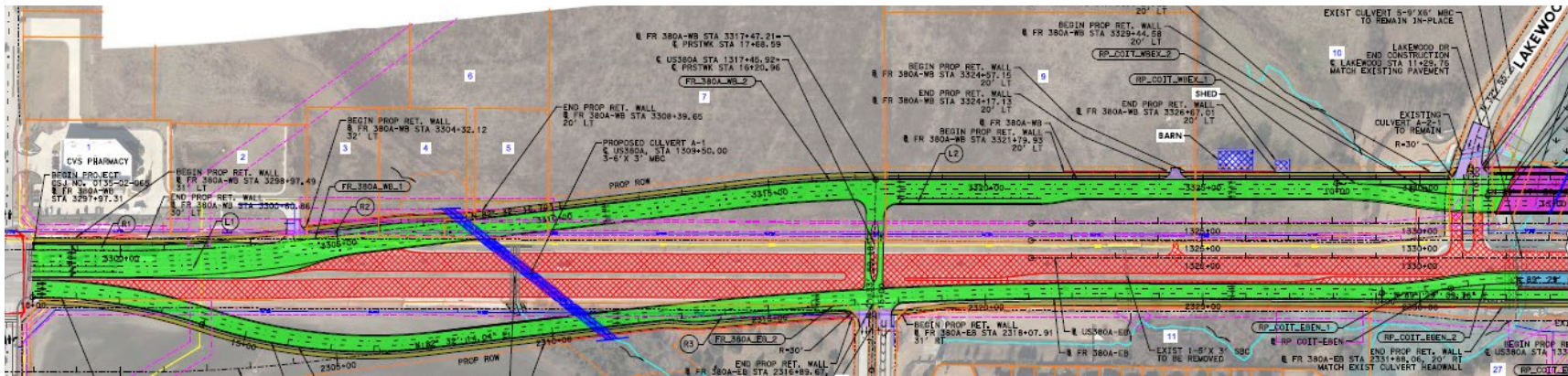


Glendora Lopez | Environmental Specialist

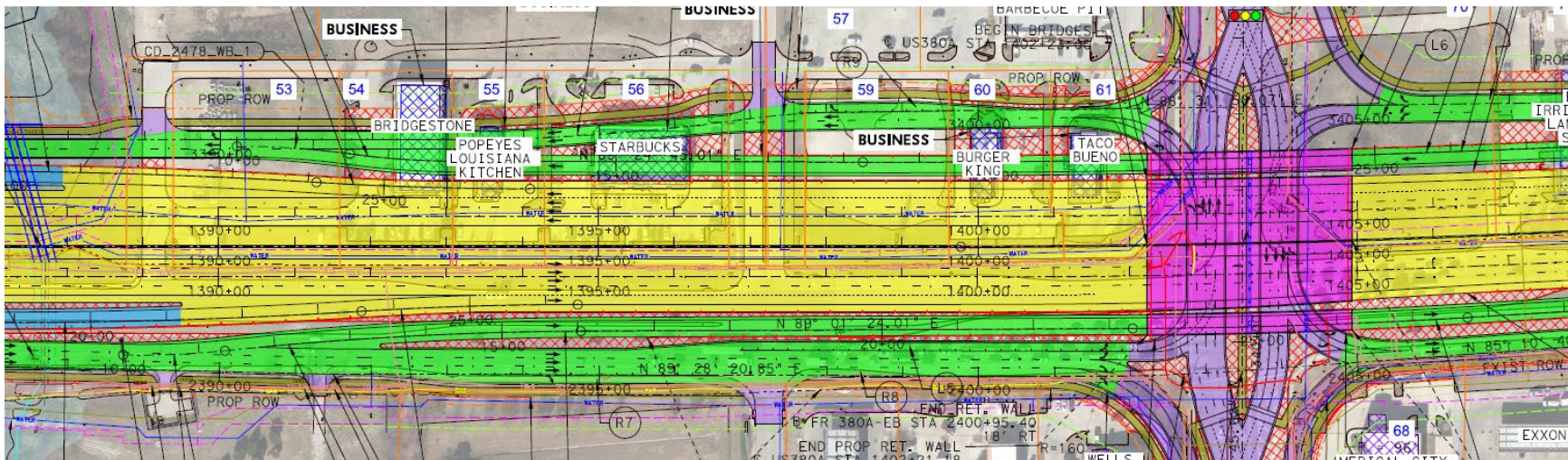
Environmental Affairs Division | 6230 E Stassney Ln, Austin, Texas 78744

Office: (512) 840-9720 | Email: Glendora.Lopez@TxDOT.gov





Approximately 0.65 miles (Coit Road to Lakewood Drive)



Remaining 6.9 miles (Representative schematic west of Lakewood Drive: 8 lane with 4/6 frontage roads)

Project Management > [Area List](#) > [STIPs \(M-NCTCOG\)](#) > [Revisions \(\)](#) > [TIP Instances \(Unassigned\)](#) > [Highway Projects \(Unassigned\)](#) > Project Details

Color Key: - Business rule violation - Value changed in current session - Different from DCIS or latest approved copy Data

Statewide <input type="checkbox"/>	STIP Revision <input type="text" value="None"/>	Phase <input type="checkbox"/> Construction	Total Project Cost Information
District <input type="text" value="DALLAS"/>	County <input type="text" value="COLLIN"/>	<input checked="" type="checkbox"/> Engineering	Prelim Engineering <input type="text" value="\$36,337,500"/>
MPO <input type="text" value="NCTCOG"/>	Highway <input type="text" value="US 380"/>	<input type="checkbox"/> Environmental	ROW Purchase <input type="text" value="\$417,000,000"/>
CSJ <input type="text" value="0135 - 15 - 002"/>	TIP FY <input type="text" value="2024"/>	<input checked="" type="checkbox"/> Engineering	Construction Cost <input type="text" value="\$764,326,901"/>
		<input checked="" type="checkbox"/> Right-of-Way	Const Engineering <input type="text" value="\$49,910,547"/>
		<input checked="" type="checkbox"/> Acquisition	Contingencies <input type="text" value="\$41,080,401"/>
		<input type="checkbox"/> Utilities	Indirect Costs <input type="text" value="\$22,165,480"/>
		<input type="checkbox"/> Transfer	Bond Financing <input type="text" value="\$0"/>

Revision Date <input type="text" value="11/2022"/>	NOX (<input type="text" value="1"/> /D): <input type="text" value="0.0000"/>	Potential Chg Ord <input type="text" value="\$0"/>
Project Sponsor <input type="text" value="TXDOT-DALLAS"/>	VOC (<input type="text" value="1"/> /D): <input type="text" value="0.0000"/>	Total Project Cost <input type="text" value="\$1,330,820,829"/>
MPO Proj Number <input type="text" value="13070"/>	PM10 (<input type="text" value="1"/> /D): <input type="text" value="0.0000"/>	YOE Cost <input type="text" value=""/>
MTP Reference <input type="text" value="FT1-2.80.1, FT1-2.90.1, FT1-2.100.1"/>	PM2.5 (<input type="text" value="1"/> /D): <input type="text" value="0.0000"/>	Toll <input type="checkbox"/>
City <input type="text" value="MCKINNEY"/>	CO (<input type="text" value="1"/> /D): <input type="text" value=""/>	TCM <input type="checkbox"/>

Limits From

Limits To

Project Description

P7 Remarks

Project History

Authorized Funding by Category/Share

Category	Federal	State	Regional	Local Match	Local Contributions	Total
SW PE <input type="text" value="v"/>	\$0	\$36,337,500	\$0	\$0	\$0	\$36,337,500
SW ROV <input type="text" value="v"/>	\$333,600,000	\$67,250,000	\$0	\$16,150,000	\$0	\$417,000,000
Total	\$333,600,000	\$103,587,500	\$0.00	\$16,150,000	\$0.00	\$453,337,500

DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST	
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 453,337,500	
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)				PROJECT SPONSOR: TXDOT-DALLAS					
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)				REVISION DATE: 11/2022					
PROJECT: CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS				MPO PROJ NUM: 13070					
DESCR:				FUNDING CAT(S): SW PE,SW ROW					
REMARKS P7: INCREASE ROW FUNDING IN FY2024				PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT					
TOTAL PROJECT COST INFORMATION				AUTHORIZED FUNDING BY CATEGORY/SHARE					
PRELIM ENG: \$	36,337,500	COST OF APPROVED PHASES	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	417,000,000		SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	764,326,901		SW	\$ 333,600,000	\$ 67,250,000	\$ 0	\$ 16,150,000	\$ 0	\$ 417,000,000
CONST ENG: \$	49,910,547		ROW						
CONTING: \$	41,080,401		TOTAL	\$ 333,600,000	\$ 103,587,500	\$ 0	\$ 16,150,000	\$ 0	\$ 453,337,500
INDIRECT: \$	22,165,480								
BOND FIN: \$	0								
POT CHG ORD: \$	0								
TOTAL COST: \$	1,330,820,829								

TIP History

DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST	
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 453,337,500	
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)				PROJECT SPONSOR: TXDOT-DALLAS					
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)				REVISION DATE: 11/2022					
PROJECT: CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS				MPO PROJ NUM: 13070					
DESCR:				FUNDING CAT(S): SW PE,SW ROW					
REMARKS P7: INCREASE ROW FUNDING IN FY2024				PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT					
TOTAL PROJECT COST INFORMATION				AUTHORIZED FUNDING BY CATEGORY/SHARE					
PRELIM ENG: \$	36,337,500	COST OF APPROVED PHASES \$ 453,337,500	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	417,000,000		SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	764,326,901		SW	\$ 333,600,000	\$ 67,250,000	\$ 0	\$ 16,150,000	\$ 0	\$ 417,000,000
CONST ENG: \$	49,910,547		ROW						
CONTING: \$	41,080,401		TOTAL	\$ 333,600,000	\$ 103,587,500	\$ 0	\$ 16,150,000	\$ 0	\$ 453,337,500
INDIRECT: \$	22,165,480								
BOND FIN: \$	0								
POT CHG ORD: \$	0								
TOTAL COST: \$	1,330,820,828								

2023-2026 STIP									
07/2022 Revision: Not Approved 11/17/2022									
DISTRICT	MPO	COUNTY	CSJ	TIP FY	HWY	PHASE	CITY	YOE COST	
DALLAS	NCTCOG	COLLIN	0135-15-002	2024	US 380	E,ENG,R,ACQ	MCKINNEY	\$ 197,837,500	
LIMITS FROM: JCT US 380/WEST UNIVERSITY (WEST OF MCKINNEY)				PROJECT SPONSOR: TXDOT-DALLAS					
LIMITS TO: JCT US 380/EAST UNIVERSITY (EAST OF MCKINNEY)				REVISION DATE: 07/2022					
PROJECT: CONSTRUCT 0 TO 8 LANE FREEWAY AND 0 TO 4/6 LANE FRONTAGE ROADS				MPO PROJ NUM: 13070					
DESCR:				FUNDING CAT(S): SW PE, SW ROW					
REMARKS P7:				PROJECT HISTORY: REGIONAL 10-YEAR PLAN PROJECT					
TOTAL PROJECT COST INFORMATION				AUTHORIZED FUNDING BY CATEGORY/SHARE					
PRELIM ENG: \$	36,337,500	COST OF APPROVED PHASES \$ 197,837,500	CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL MATCH	LC	TOTAL
ROW PURCH: \$	161,500,000		SW PE	\$ 0	\$ 36,337,500	\$ 0	\$ 0	\$ 0	\$ 36,337,500
CONST COST: \$	723,246,500		SW	\$ 129,200,000	\$ 16,150,000	\$ 0	\$ 16,150,000	\$ 0	\$ 161,500,000
CONST ENG: \$	49,910,547		ROW						
CONTING: \$	41,080,401		TOTAL	\$ 129,200,000	\$ 52,487,500	\$ 0	\$ 16,150,000	\$ 0	\$ 197,837,500
INDIRECT: \$	22,165,480								
BOND FIN: \$	0								
POT CHG ORD: \$	0								
TOTAL COST: \$	1,034,240,428								

Comment History

Time	User	Comment	Related Approval
2023/06/16 11:09:30	Barbara Maley	Approved. Approval based on Mobility 2045 2022 Update. TxDOT must ensure appropriate Federal functional classification action for this project (all phases).This includes frontage roads.	11/2022: Approved
2023/01/16 16:15:55	Barbara Maley	Not approved. Approval pending FFCS confirmation.	11/2022: Not Approved
2022/11/17 22:12:29	Barbara Maley	Not approved due to Plan to Program inconsistencies. Not approved. Approval pending FFCS confirmation.	07/2022: Not Approved