Appendix C: Interagency Consultation

Metrolina Region Conformity Discussion
September 30, 2020

Attendees:
David Hooper, RFATS; Alex Riemondy, CDOT; Mark Kinnamon, CDOT; Randi Gates, GCLMPO; Leslie Coolidge, SC DHEC; Anna Gallup, CDOT; Catherine Mahoney, CRTPO; Dianna Myers, EPA; Andy Bailey, NCDOT; Dominique Boyd, NCDOT; Sarah Larocca, EPA; Phil Conrad, CRMPO; Shelia Blanchard, NCDAQ; Phyllis Jones, NCDDOT; Jill Vitas, NCDAQ; Yolanda Morris, FHWA-SC, Suzette Morales, FHWA-NC; Loretta Barren, FHWA-NC; Richard Wong, EPA; Brian Phillip, NCDAQ; Tammy Manning, NCDAQ; Samuel Christmas, SC DHEC; George Hoops, FHWA-NC

Purpose - To discuss the upcoming conformity process schedules and concerns for SC and NC MPOs

The RFATS MTP conformity process is about to get underway. Anna Gallup should have model runs completed mid to late October. The model runs will utilize the latest planning assumptions from all 4-MPOs, and have a 2050 horizon year. The MTP process should be complete by June 2021.

NCDOT has proposed TIP amendment changes impacting CRTPO (approx. 15 projects), CRMPO (approx. 2 projects) and GCLMPO (approx. 3 projects). There remains the potential for additional changes in future TIPs that could impact transportation conformity.

Anna was concerned about having and using 2-different models. The current model has a 2045 horizon year and coincides with all the current 2045 MTPs. The RFATS model will have a 2050 horizon year and is updated with the latest SE data from all 4-MPOs. The NC MPOs have adopted new SE data but have not used it for modelling purposes. Dianna, explained that based on the conformity regulation the MPOs would need to use the latest and available SE data for transportation conformity. Based on that discussion it was determined that the updated 2050 model would become the official and only model for the region.

Loretta explained that the NC MPOs are in a SIP revision process to increase budgets. Dianna stated that the SIP revision is an 18-month process, and will require an approval from EPA, adequacy is not an option. She further stated that, she would work with us as much as possible on the approval date. She will coordinate internally and let us know the schedule.

Loretta ask Phil and Randi if they wanted to move forward with their TIP amendments, since SIP budgets are not a concern for their areas. Randi indicated there was no urgency, so she would recommend waiting. Phil wanted to think further about it. He also asked, if a test model run could be conducted to see if CRTPO could pass without budget changes. Anna, indicated she could do the model runs but would need assistance from NCDAQ for the Moves process. Tammy stated that further discussions with Todd Paisley with NCDAQ would be needed.

Next Steps:

1. Anna will move forward with the RFATS transportation conformity process, including the NC amendments as a test.
2. Anna will contact Randi and Tammy with NCDAQ to discuss running the Moves model for the NC test runs

3. Anna will contact Loretta when test runs are complete, so that at least a conference call can be scheduled to discuss next steps
4. Dianna Myers will let us know the NC SIP revision schedule

Metrolina Regional TIP Transportation Conformity Meeting

June 29, 2021, 3 pm Conference Call (Microsoft TEAMS)

Attendees:

CDOT – Anna Gallup, Martin Kinnamon, Alex Riemondy
CRMPO – Phil Conrad
CRTPO – Neil Burke, Travis Johnson
EPA – Josue Borrero, Sarah Larocca, Dianna Myers, Richard Wong
FHWA – Loretta Barren, George Hoops
GCLMPO – Randi Gates
Mecklenburg Co. – Megan Green
NCDAQ – Brian Phillips, Jill Vitas
NCDOT -Andy Bailey, Phyllis Jones

Meeting objective:

EPA released the SIP amendment for public comment, and the comment period ends July 23. If no comments are received the process could be completed 60ish-days after July 23, but if comments are received it could add an additional 30-days to the process. Anticipated completion is the end of September or the end of October. With all the steps in between; drafting the report, MPOs release documents for public review, MPO boards take action, 30-day agency review, FHWA action April. The MPOs MTP expires in March 2022, conformity lapse.. We don't anticipate any problems with this short delay.

Is there a need to proceed with the TIP process or fold the TIP project changes into the MTP process and process one conformity process?

The MPOs discussed the upcoming STIP changes that could have 2 million dollars in impacts on project costs.

The MPOs indicated they do not want to proceed with this round of STIP changes, if it means they will have to complete an additional conformity process for additional STIP changes. It is expected that NCDOT will present the new STIP changes over the summer.

Anna asked that Loretta prepare a draft schedule for the MTP process.

Loretta agreed to prepare a draft schedule for the MTP process, and to contact David Wasserman and discuss when NCDOT will likely release the additional STIP changes.

Loretta spoke with David Wasserman after the meeting, regarding upcoming STIP changes. David does not believe detailed STIP changes will be available to include in a conformity process that begins in 2020.

David will contact the MPOs to discuss any pressing NCDOT projects that might need to be included in the conformity process.

Based on the above information from David and our discussion today, I suggest we proceed to incorporate the ongoing STIP changes into the MTP conformity process with a planned kick-off in September.

Metrolina Area Transportation Conformity: Pre-Analysis Consensus Plan (8-Hour Ozone)

September 8, 2021

Prepared Cooperatively Between the
Charlotte Regional Transportation Planning Organization, Cabarrus Rowan Metropolitan Planning Organization, the Gaston Cleveland Lincoln Metropolitan Planning Organization and the Rocky River Rural Planning Organization
North Carolina Department of Transportation
and the
Federal Highway Administration

Metrolina Area Transportation Conformity: Pre-Analysis Consensus Plan

September 8, 2021

The Charlotte Regional Transportation Planning Organization (CRTPO) and the North Carolina Department of Transportation (NCDOT-representing rural portions of the Metrolina maintenance area are proposing the following plan and procedures to conduct a transportation conformity analysis. This plan is being submitted to the interagency consultation partners for soliciting consensus before commencement of a full-scale transportation conformity analysis. The plans and procedures may be revised as the MPO's and NCDOT proceed with the analysis. After consensus is reached; notification of changes will be made to the interagency consultation partners.

Metrolina Area MPOs (*for this conformity process*):

- Charlotte Regional Transportation Planning Organization (CRTPO)
- Cabarrus Rowan Metropolitan Planning Organization (CRMPO)
- Gaston Cleveland Lincoln Metropolitan Planning Organization (GCLMPO)

Donut Areas:

- Rural portion of Union county outside of the MPO area

The following pollutants will be included in this conformity determination:

1997 8-Hour Ozone - No regional emissions analysis per 40 CFR 93.109(c).

- 2008 8-Hour Ozone

Metropolitan Transportation Plan (MTP) and Metropolitan Transportation Improvement Program (MTIP)

1. **Existing Land Use and Demographics: For CRTPO, CRMPO, GCLMPO and rural (donut) Union County**

Staff collected data as outlined in Attachment A. An economist was contracted to produce population, household, and employment estimates in five-year increments from 2010 to 2050 using

a top down approach. The Regional partners then applied local knowledge to finalize the county totals in their areas and produce the Traffic Analysis Zone (TAZ) level base year data. CRMPO also applied local knowledge to produce their TAZ level projections. CRTPO and GCLMPO used the Metrolina CommunityViz Model v2.0 as a base year data management tool and applied the model to develop TAZ level projections. The Metrolina CommunityViz Model was developed under contract to the Centralina Council of Governments and City Explained, Inc.

Data sources include the following:

- 2018 Census Estimates
- 2014-2018 American Community Survey, North Carolina Office of State Budget and Management 2018 data and projections;
- NCSTM Gen 4 SE data for P6.0;
- 2018 InfoUSA employment data;
- Institute of Transportation Engineers Trip Generation Manual, Ninth Edition;
- 2010 Public Use Microdata Sample (PUMS) data;
- Bureau of Economic Analysis (BEA) data;
- area school system data;
- building permit data;
- tax data;
- zoning; and
- land use plans

2. MTP Model Validation (Base) Year:
2018

TIP Years: 2020-2029

4. MTP Horizon Year: 2050

5. MTP Travel Demand Intermediate Years: 2025, 2035, and 2045

6. Transportation Conformity Analysis Years (2008 8-Hour Ozone)

The Tables below summarize transportation conformity analysis methods and years for the different parts of the Metrolina non-attainment/maintenance areas. Specific conformity year information is listed in the following tables:

2008 O3 Maintenance SIP

County	Area model status	Area emissions budget status	Emissions analysis source		Emission comparison years		
					2026[2] *(modeled)*	**2035** *(modeled)*	**2045 Horizon** *(modeled)*
Charlotte Region TPO-Rocky River RPO MVEB (all of Mecklenburg and *portions of Union and Iredell County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]		O3	O3	O3
Cabarrus Rowan MPO (*portions of Cabarrus and Rowan County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]		O3	O3	O3
Gaston Cleveland Lincoln MPO (*portions of Gaston and Lincoln County in the maintenance area*)	Modeled all	2008 8-Hour Ozone Maintenance Plan	MRM[1]		O3	O3	O3

1. The base year of the MRM is 2018
2. 2026 is a SIP MVEB for NOx and VOC

Additional table notes and explanations:

County:

- 2008 Ozone: The Metrolina area is maintenance for the 2008 Ozone Standard which consists of 1 whole county and 6 partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO-partial), Lincoln (GCLMPO partial) and Iredell (CRTPO-partial).

***Note:** a donut area is an area outside the MPO boundary but within the non-attainment/maintenance area.*

Model Status: Mecklenburg, Union, Cabarrus, Rowan, Gaston, and Lincoln, plus one partial county (Iredell) are completely within the Metrolina Regional Model (MRM) boundary.

Emissions analysis years:

- 2008 8-hour Ozone Standard Maintenance SIP: 2026 (modeled) 2035 (modeled) 2045 (modeled) & 2050 (modeled)

Emission analysis source: The VMT and speeds for the regional emissions analysis (REA) will be derived from the MRM.

Emission Comparison Years:

- Motor Vehicle Emissions Budget Test
  - **2008 8-Hour Ozone Maintenance SIP**: *(Gaston-partial, Mecklenburg, Cabarrus-partial, Rowan-partial, Union-partial, Lincoln-partial, and Iredell-partial,* 2026 (modeled-compare to 2026), 2035 (modeled- compare to 2026 MVEB), 2045 (modeled-compare to 2026 MVEB), and 2050 (modeled-compare to 2026 MVEB)

List of Specific Conformity Years

2008 8-Hour Ozone Maintenance SIP

Horizon: 2045

a. 2008 8-Hour Ozone Maintenance SIP MVEB Years: 2026
b. Emission comparison years (NOx and VOC): 2026 (modeled), 2035, 2045 & 2050

7. Non-attainment / Maintenance Counties:

- 2008 8 Hour Ozone Maintenance Area: Gaston Co. (partial)., Mecklenburg Co., Cabarrus Co. (partial), Rowan Co.(partial), Union Co.(partial), Lincoln (partial), and Iredell Co. (partial)

8. Land-Use Demographics Projections/Forecast:

Land-use demographic projections for the region were developed using both a top-down and bottom-up approach.

An economist was contracted to develop regional and county level population, household, and employment projections for 5-year increments from 2010 to 2050 through a top-down forecasting approach. The economist's forecasting model is based on the metropolitan growth of 43 mid-sized US regions and calibrated to trends and capture rates in the Metrolina region over the past 40 years. Refer to the *METROLINA REGIONAL DEMOGRAPHIC AND ECONOMIC DATA AND*

DATA FORECASTS (DRAFT REPORT), December 12, 2012, by Stephen J. Appold, PhD for more detailed information. MPO and RPO staff also reviewed county level projections from the sources referenced previously in this section and then applied local knowledge reflecting current local policies and plans to finalize county-level control totals for 2025, 2035, 2045, and 2050.

TAZ level 2025, 2035, 2045, and 2050 population, household, and employment data was projected for CRTPO and GCLMPO through a top-down /bottom-up forecasting approach using the Metrolina CommunityViz Model v2.0. CRMPO applied local knowledge through a manual process to allocate projected data to the TAZ level. For both approaches, data inventoried for the base year was used as quantitative inputs to the process of deriving projections. Qualitative inputs to the projections to both processes include future land use plans, building permits data, transportation plans and other capital improvements plans (such as water and sewer extensions and schools construction), and other factors limiting development (such as soils, floodplains, and water supply watershed regulations). Refer to the Metrolina CommunityViz Model v2.0 Technical Summary Document, September 2, 2020, by Matt Noonkester, AICP, City Explained, Inc. for detailed information.

9. Travel Demand Model: Metrolina Regional Model (MRM)

The regional travel demand model is a simplified tour-based model developed for a 2-state, 12-county (9 whole, 3 partial) region (refer to Attachment B). The modeling area encompasses 4 MPOs and 1 RPOs.

As described previously, a multitude of land use and demographic data was collected as input into the model. Additional data collected includes transit and highway network data as well as multiple travel surveys. Transit data collected includes routes, headways, and travel times. Refer to Attachment C for the highway network data dictionary. Following is a list of the travel surveys completed:

2001 (Freeway) and 2013 (non-freeway and freeway) External Travel Survey;
2018 Passive Origin Destination Data;
2012 Household Travel Survey;
2013 On-board Transit Survey of Express and Local Buses and South Corridor Light Rail Transit (LRT) Survey and Counts;
2018 HERE Speed Data; and
2017-2019 Vehicle Classification Counts

10. Mode Split / Mode Choice:

The nested logit mode-choice model is structured similar to the Houston-Galveston Area Council's regional travel model. Nesting and mode constants were developed using CATS's on-board ridership survey conducted in 2013.

Transit paths include in-vehicle travel time, out-of-vehicle time (walking / driving and waiting), transfers, and direct cost (fare, parking). Four trip purposes are modeled. For the Home-Based Work, Home-Based-Other, and Home-Based University trip purposes, the potential transit Council's regional travel model. Nesting and mode constraints were developed using CATS's on-board ridership survey conducted in 2013.

Walk, drive, and drop-off approaches are handled in the nesting structure. Parking is provided at selected suburban stations.

The mode choice model was developed under contract with AECOM Consult

11. Local Street Count & VMT Estimate:

Vehicle miles of travel (VMT) – the sum of the distance that each vehicle travels during a specified period (day, year, etc.) – is the most typical measure of the level of travel in an area. Like most statistics, it is still impossible to actually measure. To do so, *all* vehicles would have to be monitored all day. The most common method of estimating VMT uses traffic counts. We have a large count database from CDOT, NCDOT, and SCDOT including counts from 2000 – 2019. Each count will be factored to the base year 2018. Average Daily Traffic volumes will be factored to Average Weekday volumes. The adjusted base-year weekday counts are then aggregated by County and functional class. The average (mean) volume for each county / functional class will be multiplied by the number of road miles to obtain VMT. For future year estimates, the travel demand model, calibrated to the base year counts and VMT, will provide VMT for thoroughfares (VMT = assigned volume * length).

Local streets make up 60%-70% of the roadway miles, but a much smaller fraction of VMT. Most serve to accumulate traffic from neighborhoods. The bulk of the trip is then made on thoroughfares (that are modeled). Few local streets are included in the model. Counts are sporadic and usually concentrated on local streets experiencing traffic problems. Many of the local streets are represented by zonal centroid connectors in the model. We will use the centroid connectors times 2 to better approximate actual local VMT. VMT derived with this method compares favorably with local VMT estimated using street miles and assumed volumes. The centroid method provides a better method of relating VMT to high growth TAZs.

12. Rural (Donut) Area Projects

The rural areas do not develop long range transportation plans like the MPOs. The rural area projects that are included in the conformity regional emissions analysis (REA) come from the State TIP. It is NCDOT's position that projects that are in the State TIP and have right of way or construction phases scheduled in the first seven years should be included in the REA. In addition, for rural areas adjacent to an MPO the MPO may extend projects outside their boundary to a logical terminus. The MPO may include the portion outside of their MPO boundary in the financial element of their MTP.

13. VMT Adjustments:

No VMT adjustments are used.

14. Motor Vehicle Emissions Budgets

Three ozone maintenance areas are included within the seven-county Metrolina area:

a. 2008 8-Hour Ozone NAAQS Maintenance Area.
The Charlotte-Gastonia-Salisbury, North Carolina Marginal Nonattainment Area for the 2008 8-hour ozone NAAQS was redesignated as attainment on July 28, 2015 with an effective date of August 27, 2015. The maintenance plan was revised, with modifications to the NOx and VOC MVEBs, with an effective date of October 15, 2015. The maintenance area consists of 1 whole county and 6 partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO-partial), Lincoln (GCLMPO partial) and Iredell (CRMPO-partial). Motor vehicle emissions budgets (MVEBs) were established for three sub-areas within the Metrolina area which are generally defined by MPO jurisdictional boundaries. The MVEBs are show in the table below.

NOx Budgets: 2008 8-hour Ozone NAAQS				
Budget Area	**MVEB Year**	**Comparison Years & MVEB (kg/day)**		
		2026	**2035**	**2045**
Cabarrus Rowan MPO	2026	4903	4903	4903
Gaston Cleveland Lincoln MPO	2026	3768	3768	3768
Mecklenburg Union MPO/ Rocky River RPO	2026	12,241	12,241	12,241

VOC Budgets: 2008 8-hour Ozone NAAQS				
Budget Area	**MVEB Year**	**Comparison Years & MVEB (kg/day)**		
		2026	**2035**	**2045**
Cabarrus Rowan MPO	2026	4,888	4,888	4,888
Gaston Cleveland Lincoln MPO	2026	3,472	3,472	3,472
Mecklenburg Union MPO/ Rocky River RPO	2026	11,943	11,943	11,943

15. Control Strategies: Emission reduction credits will be taken for the following on-road mobile SIP commitments or Federal programs. Currently there are no TCMs in the Metrolina Area SIPs.

Strategy	**Methodology/Approach**
I/M Program	*Accounted for in the MOVES model*
Tier 2/Tier 3 vehicle's Emission Standards	*Accounted for in the MOVES model*
Low Sulfur Gasoline and Diesel fuels	*Accounted for in the MOVES model*
Heavy Duty Vehicle Rules 2004 and 2007	*Accounted for in the MOVES model*
Low RVP Gasoline	*Accounted for in the MOVES model*
On board vapor recovery	*Accounted for in the MOVES model*

16. MOVES Model Settings: The following model-input parameters will be used in the conformity analysis.

- **2008 Eight Hour Ozone Standard Maintenance Area*:** Cabarrus (partial), Gaston (partial), Lincoln (partial), Mecklenburg, Rowan (partial), Union (partial) and Iredell (partial)

MOVES Model (MOVES2014a)

MOVES Model Settings: The following MOVES model-input parameters will be used in the conformity analysis performed by DAQ.

Parameter	**Details**	**Data Source**
a. ***Emissions Model Version(s):***	(MOVES2014b) or latest	
b. ***Emission Model Runs:***	Typical Summer Weekday (NOx and VOC)	
c. ***Evaluation month:***	July (NOx and VOC)	
d. travel periods	***Time Periods:*** VMT and speeds modeled for 4 daily (see item #24 below) will be processed according to USEPA guidance to generate hourly speed and VMT distribution data in the required MOVES input formats.	
e. ***Pollutants Reported:***	NOx, VOC	
f. ***Emissions Budget Years:***	2008 NAAQS: 2026 (NOx and VOC)	
g. ***Emissions Analysis Years:***	2008 NAAQS: 2026, 2035, 2045, and 2050	
h. ***Temperature and Relative Humidity:***	**2008 NAAQS**: July 2014 monthly average 24-hour temperature and relative humidity profiles from the Charlotte-Douglas International Airport (KCLT).	
i. ***Vehicle Classes:***	13	

j. ***VMT mix:*** Statewide mix based on 2017 data using the method in the August 2004 USEPA Guidance.

k. ***Speed Distribution:*** Regional Model MRM22v1.0

l. **Source type (vehicle type) *age distribution:*** The latest available 2017 (may use 2018 if available) vehicle registration data provided by NCDOT, which also includes a breakdown of the number of vehicles by model year, will be used to create the required source type age distribution input file for each county. As per EPA guidance, the source type age distribution will not be projected for future years.

m. ***I/M Program:*** The following I/M program parameters will apply: compliance rate = 96%, waiver rate = 5% with an exemption for vehicles from the 3-year latest model years.

n. ***RVP:*** July 9.0 psi for all counties

o. ***Source Type (vehicle type) Population:*** Vehicle population estimates will be developed for each future modeling year based on the latest available 2016 vehicle registration data provided by NCDOT. This data includes the total number of registered vehicles by county, divided into nine source type categories. The data will first be reorganized into thirteen source type categories (i.e. passenger cars, light commercial trucks, combination long-haul trucks, etc.) as required for MOVES2014a. These source type population estimates will then be projected for each required modeling year, using the same base and future year-county human population data that were used in the TDM model, according to the following formula:

Total Vehicle Population $_{\textbf{future year}}$ = Total Vehicle Population $_{\text{base year}}$ * (Human Population $_{\text{future year}}$ / Human Population $_{\text{base year}}$)

p. ***Strategies:*** None

17. Emissions analysis units, conversion factors, significant figures, rounding and truncating conventions:
Units= Kilograms or Grams
Grams to tons conversion factor= Divide x grams by 907184.7 to get tons
Round to 2 decimal places

18. CMAQ Projects: Not Applicable

19. Regionally Significant Projects (Federal and Non-Federal): Not Applicable

20. List of Exempt Projects and Non-Regionally Significant Projects (Federally Funded): Not Applicable

21. **Conformity Schedule:** *(A draft conformity schedule has been developed and is provided as an attachment to this document)*

22. Conformity Determinations: Four organizations will be responsible for making conformity determinations in two distinctive parts of the Metrolina non-attainment/maintenance areas:

i. The CRTPO within its metropolitan area boundary (MAB) -all of Mecklenburg County and parts of Union and Iredell County
ii. The CRMPO within its metropolitan area boundary (MAB) – parts of Cabarrus and Rowan County
iii. The GCLMPO within its metropolitan area boundary (MAB) – parts of Gaston and Lincoln County
iv. The NCDOT for the rural areas are comprised of the parts of Union County that are outside of any MPO MAB

Each of these responsible organizations must make a conformity determination for its respective area to ensure all areas will be designated in conformity.

The following resolutions will be needed for this conformity process:

- CRTPO/CRMPO/GCLMPO
  - 2050 MTP adoption
  - 2020-2029 TIP amendment adoption
  - Conformity Determination for the 2050 MTP
  - Conformity Determination for the 2020-2029 amended TIP
- NCDOT Conformity Determination for the donut area of Union County

23. Other

- Any reference to York County in this document has been removed since EPA has made the 8-hour ozone designations. Although a portion of York County, South Carolina was designated as part of the bi-state Charlotte 8-hour ozone nonattainment area, they are allowed to demonstrate transportation conformity independent of the North Carolina portion of this nonattainment area. Therefore, the planning assumptions and methodologies used for the York County, South Carolina portion of this nonattainment area is reflected in a separate transportation conformity determination that is generated by the Rock Hill-Fort Mill Area Transit Study Metropolitan Planning Organization.

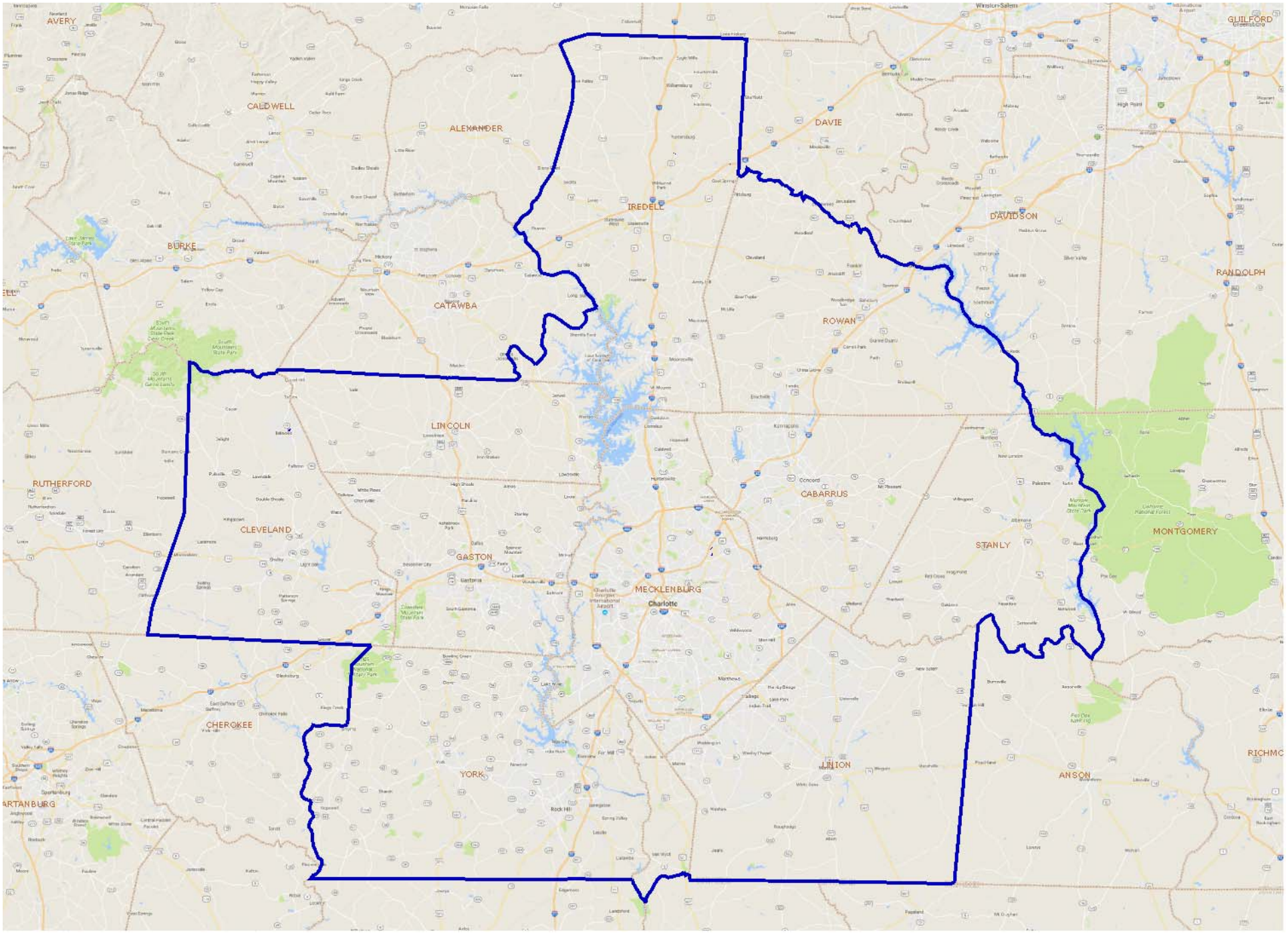
- The techniques used for this conformity process are the following:
  - VMT and speed will be done for 4 times of day (the 4 times of days are summed for the regional emissions analysis)
    - 6:30 am - 9:30 am
    - 9:30 am - 3:30 pm
    - 3:30 pm - 6:30 pm
    - 6:30 pm - 6:30 am
  - For the MOVES modeling component, the times of day will consist of whole hours and are as follows:
    - 6:00 am – 9:00 am
    - 9:00 am - 3:00 pm
    - 3:00 pm - 6:00 pm
    - 6:00 pm - 6:00 am

ATTACHMENT A
MRM18v1.0 SE Data Dictionary

Data Fields:

TAZ	Modeled Traffic Analysis Zone
HH	Number of households in TAZ
POP	Total population in TAZ
POP_HHS	Household population in TAZ
POP_GRP	Group quarters population in TAZ
MED_INC	Median HH income in TAZ
LOIND	Number of manufacturing, industrial, warehouse, rail transportation, water transportation, pipeline transportation, wholesale, and utilities employees based on NAICS
HIIND	Number of construction, communication, waste management, postal service, air transportation, and truck transportation employees based on NAICS
RTL	Number of retail employees based on NAICS
HWY	Number of highway retail employees based on NAICS
LOSVC	Number of low visitor service employees based on NAICS
HISVC	Number of high visitor service employees based on NAICS
OFFGOV	Number of office and government employees base on NAICS
EDUC)	Number of school, college, and university employees based in NAICS
STU_K8	Number of pupils enrolled in public or private kindergarten, elem., and middle schools
STU_HS	Number of pupils enrolled in public or private high schools
STU_CU	Number of pupils in public or private colleges and universities
TOTEMP	Total number of employees (sum of LOIND, HIIND, RTL, HWY, LOSVC, HISVC, OFFGOV, and EDUC fields)
DORM	A "1" entered in this field indicates there are dorms located in the TAZ
STCNTY)	State and County FIPS code
AREA	GIS calculated TAZ area (square miles)
SEQ	Sequential TAZ numbering system needed for the mode split model
AREA_LU	Partner reported area (square miles) of TAZ less the area of bodies of water
DISTRICT	TAZs grouped into sub-county "districts" (used in the 2002 and 2010 SE employment data reconciliation processes); STCNTY concatenated with sequenced numbers (ie. Cabarrus County has 4 sub-county districts: 1, 2, 3, and 4) – refer to attached Metrolina TAZ Sub-County Regions mapping

Attachment B



Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
1	**ID**	**Int**	**10**			**TransCad ID**	TransCad	
2	**Length**	**Real**	**10**	**2**		**Length (miles)**	TransCad	
3	**Dir**	**Int**	**2**			**Direction code**	Model Team	
					1	One way - A to B		
					0	Two way		
					-1	One way - B to A		
4	**Anode**	**Int**	**6**			**A node number**	TransCad ID	
5	**Bnode**	**Int**	**6**			**B node number**	TransCad ID	
6	**StrName**	**Char**	**20**			**Street name**	Model Team	
7	**Secondnam**	**Char**	**20**			**Secondary street name**	DOT	
8	**A_CrossStr**	**Char**	**20**			**Crossing str name at A node**	Model Team	
9	**B_CrossStr**	**Char**	**20**			**Crossing str name at B node**	Model Team	
10	**funcl**	**Int**	**8**			**Model functional class**	Model Team	
					1	Freeway		
					2	Expressway		
					3	Class II major tfare		
					4	Major tfare		
					5	Minor tfare		
					6	Collector street		
					7	Local Street		
					8	Ramp to surface street		
					9	Freeway-freeway ramp		
					22	HOV 2+ / Busway		
					23	HOV 3+ / Busway		
					24	HOT 2+ / Busway		
					25	HOT 3+ / Busway		
					30	Transit Only - Rail		
					40	Transit Only - Busway		
					82	Hwy to HOV 2+ / HOT2+		
					83	Hwy to HOV 3+ / HOT 3+		
					84	Transit Only - connect to Tran		
					90	Centroid connector		
					92	Centroid conn to transit sta		
					900+	Add 900 for links not in current network		
11	**fedfunc**	**Char**	**2**			**Federal functional class**	State DOTs	
					IU	Urban Interstate		
					IR	Rural Interstate		
					FU	Urban other freeway		
					PU	Urban Principal arterial		
					PR	Rural Principal arterial		
					MU	Urban Minor arterial		
					MR	Rural Minor arterial		
					CU	Urban collector		
					CM	Rural - Major collector		
					CR	Rural - Minor collector		
					LU	Urban - Local street		
					LR	Rural - Local street		
					HO	HOV		
					TR	Transit only		
12	**fedfunc_AQ**	**Char**	**5**			**Air quality functional class**	Model Team	Fedfunc - not mileage restricted
						County + fedfuncl concatenated		Non-attainment area only
13	**AQ_2008NA**	**Char**	**1**			**Y or N**	Model Team	In 2008 NAAQ NA area or not
14	**Co_fedfun**	**Char**	**5**			**County + fedfuncl concatenated**	Model Team	Fedfunc - not mileage restricted
15	**lanes**	**Int**	**2**			**Total number of lanes**	calc	Field check
16	**lanesAB**	**Int**	**1**			**Trunk no. of lanes A to B**	Calc / field check	lanes / 2 (field check odd nos.)
17	**lanesBA**	**Int**	**1**			**Trunk no. of lanes B to A**	Calc / field check	lanes / 2 (field check odd nos.)
18	**factype**	**Char**	**1**			**Facility type**	Field check	
					F	Freeway		
					E	Expressway		
					R	Ramp		
					D	Divided - no median breaks		
					M	Divided - median breaks only		
					B	Divided - left turn bays		
					T	Undivided - left turn bays		
					C	Undivided - continuous left		use in checking odd no. of lanes
					U	Undivided - no left provision		
19	**SpdLimit**	**Int**	**8**			**Speed limit (MPH)**	Field check	Use in link speed calc

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
20	**SpdLimitRun**	**Int**	**8**			**Speed limit (MPH) adjusted in future for area type**	calc	Use in link speed calc
21	**parking**	**Char**	**1**			**On-street parking**	Field check	Use in link speed / cap calc
					Y	Parking allowed		
					N	Parking not allowed		
					A	No parking in AM peak		
					P	No parking in PM peak		
					B	No parking in peak		
22	**pedactivity**	**Char**	**1**			**Pedestrian activity**	Field check	Use in link speed / cap calc
					H	High pedestrian activity		
					M	Medium pedestrian activity		
					L	Low pedestrian activity		
					X	Pedestrians prohibited		
23	**developden**	**Char**	**1**			**Development density**	Field check	Use in link speed / cap calc
					H	High development density		
					M	Medium development density		
					L	Low development density		
					X	Roadside development prohibitied		
24	**drivewyden**	**Char**	**1**			**Driveway density**	Field check	Use in link speed / cap calc
					H	High driveway density		
					M	Medium driveway density		
					L	Low driveway density		
					X	Driveways prohibited		
25	**landuse**	**Char**	**1**			**Land Use**	Field check	Use in link speed / cap calc
					D	Center city	Model team	Consider shifting to numeric
					R	Residential		
					C	Commercial		
					I	Industrial		
					O	Open		
					X	Roadside development prohibitied		
26	**areatp**	**Char**	**1**			**Area Type**	Calculated	Use in link speed / cap calc
					1	CBD		start w/ partners
					2	Fringe		
					3	Urban		
					4	Suburban		
					5	Rural		
27	**A_LeftLns**	**Int**	**1**			**No. of left turn lanes at A node**	Field check	Use in A intersection delay / capacity calc
28	**A_ThruLns**	**Int**	**1**			**No. of through lanes at A node**	Field check	Use in A intersection delay / capacity calc
29	**A_RightLns**	**Int**	**1**			**No. of right turn lanes at A node**	Field check	Use in A intersection delay / capacity calc
30	**A_control**	**Char**	**1**			**Control at A node**	Field check	Use in A intersection delay / capacity calc
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
31	**A_prohibit**	**Char**	**1**			**Prohibitions at A node**	Field check	Field check on turn lanes
					N	No prohibitions		included "X" - assign here
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
32	**B_LeftLns**	**Int**	**1**			**No. of left turn lanes at B node**	Field check	Use in B intersection delay / capacity calc
33	**B_ThruLns**	**Int**	**1**			**No. of through lanes at B node**	Field check	Use in B intersection delay / capacity calc
34	**B_RightLns**	**Int**	**1**			**No. of right turn lanes at B node**	Field check	Use in B intersection delay / capacity calc
35	**B_control**	**Char**	**1**			**Control at A node**	Field check	Use in B intersection delay / capacity calc
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
36	**B_prohibit**	**Char**	**1**			**Prohibitions at B node**	Field check	Field check on turn lanes
					N	No prohibitions		included "X" - assign here
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
37	**alpha**	**Real**	**10**	**2**		**Alpha - V/C delay function**	Model team	Calibration
38	**beta**	**Real**	**10**	**2**		**Beta - V/C delay function**	Model team	Calibration
39	**Count**	**Char**	**1**	**0**		**2000 Count**	Model team	Y or N
40	**AAWT00**	**Int**	**10**			**2001 Count**	calc	Calibration check
41	**CNTAAWT05**	**Int**	**10**			**Count for calibration**	calc	Calibration check
42	**CNTAAWT10**	**Int**	**10**			**2010 Count**	calc	Calibration check
43	**CNTAAWT11**	**Int**	**10**			**2011 Count**	calc	Calibration check
44	**CNTAAWT12**	**Int**	**10**			**2012 Count**	calc	Calibration check
45	**CNTAAWT13**	**Int**	**10**			**2012 Count**	calc	Calibration check
46	**CNTAAWT14**	**Int**	**10**			**2012 Count**	calc	Calibration check
47	**CNTAAWT15**	**Int**	**10**			**2012 Count**	calc	Calibration check
48	**Calib10**	**Int**	**10**			**Count for 2010 Calibration**	calc	Count for 2010 calibration/validation (accounts for data collected ranging from 2010 to 2013)
49	**Calib15**	**Int**	**10**			**Count for 2015 Calibration**	calc	Count for 2010 calibration/validation (accounts for data collected ranging from 2013 to 2015)
50	**CntSrc00**	**Char**	**3**			**Source of 2000 AAWT**	Model team	
					CW	Charlotte AAWT		
					SW	State AAWT		
					SD	State AADT(fac)		
					I1	Interpolated 1 year between counts		
					I2	Interpolated 2 year between counts		
					I3	Interpolated 3 year between counts		
					FU	Growth factor up		
					FD	Growth factor down		
51	**CntSrc02**	**Char**	**3**			**Source of 2002 AAWT**	Model team	
					CW	Charlotte AAWT		
					SW	State AAWT		
					SD	State AADT(fac)		
					I4	Interpolated 1 year between counts		
					I5	Interpolated 2 year between counts		
					I6	Interpolated 3 year between counts		
					FU	Growth factor up		
					FD	Growth factor down		
52	**CntSrc05**	**Char**	**3**			**Source of 2005 AAWT**	Model team	
					CW	Charlotte AAWT		
					SW	State AAWT		
					SD	State AADT(fac)		
					I1	Interpolated 1 year between counts		
					I2	Interpolated 2 year between counts		
					I3	Interpolated 3 year between counts		
					FU	Growth factor up		
					FD	Growth factor down		
53	**CntSrc10**	**Char**	**3**			**Source of Calib10**	Model team	
					CW	Charlotte AAWT		
					SW	State AAWT		
					SD	State AADT(fac)		
					I4	Interpolated 1 year between counts		
					I5	Interpolated 2 year between counts		
					I6	Interpolated 3 year between counts		
					FU	Growth factor up		
					FD	Growth factor down		
54	**MTK05**	**Int**	**10**			**2005 Medium Truck Count**	calc	Calibration check
55	**MTK10**	**Int**	**10**			**2010/11/12 Medium Truck Count**	calc	Calibration check
56	**MTK15**	**Int**	**10**			**2015/14/13 Medium Truck Count**	calc	Calibration check
57	**HTK05**	**Int**	**10**			**2005 Heavy Truck Count**	calc	Calibration check
58	**HTK10**	**Int**	**10**			**2010/11/12 Heavy Truck Count**	calc	Calibration check
59	**HTK15**	**Int**	**10**			**2015/14/13 Heavy Truck Count**	calc	Calibration check

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
60	**ScrIn**	**Int**	**10**			**Screenline Identification**	Model team	use w/ aawt05
					1	NS (RR Wilkinson / N. Tryon)		
					2	CSX RR (Monroe Road)		
					3	Long Creek		
					4	NS RR (Albemarle Road)		
					5	South Meck		
					6	Mallard Creek		
					7	Briar Creek Sugar Creek		
					8	NS RR (South Boulevard)		
					9	NS RR (westside)		
					10	Catawba River		
					11	Eastern N-S (Eastern Iredell, Meck, and Union Co. lines)		
					12	Northern E-W (N. Gaston, Meck, Cabarrus, and Stanly Co. lines)		
					13	I-85		
					14	Southern E-W (Southern Gaston, Meck, and Cabarrus County lines)		
					15	I-77		
					16	Western N-S (W.Gaston Co. line & split between York and Rock Hill)		
					17	US 74 (Union County)		
					18	US 321 (North Carolina)		
						Not screen line		
61	**TMCcode_ab**	**Char**	**10**	**0**		**Cross reference to Inrix TT data segments - AB direction**	Inrix Data	Cross Reference
62	**TMCcode_ba**	**Char**	**10**	**0**		**Cross reference to Inrix TT data segments - BA direction**	Inrix Data	Cross Reference
63	**TT_RTE**	**Int**	**8**			**Inrix Route**	Inrix Data	
64	**TT_KEY_AB**	**Int**	**8**			**Inrix Route AB direction**	Inrix Data	
65	**TT_KEY_BA**	**Int**	**8**			**Inrix Route BA direction**	Inrix Data	
66	**State**	**Int**	**2**			**State FIPS code**	Model team	
					37	North Carolina		
					45	South Carolina		
67	**County**	**Int**	**3**	**0**		**County FIPS code**	Model team	
					25	Cabarrus		
					35	Catawba		
					45	Cleveland		
					71	Gaston		
					97	Iredell		
					109	Lincoln		
					119	Mecklenburg		
					159	Rowan		
					167	Stanly		
					179	Union NC		
					57	Lancaster		
					91	York		
					999	External station		
68	**TAZ**	**Real**	**8**			**TAZ number**	area type model	
69	**locclass1**	**Int**	**8**			**Locally assigned functional class**	MPO	modified July 5, 06 (CDOT)
					1	Freeway		
					2	Expressway		
					3	Class II major tfare		
					4	Major tfare		
					5	Minor tfare		
					6	Collector street		
					7	Local Street		
					8	Ramp to surface street		
					9	Freeway-freeway ramp		
70	**locclass2**	**Int**	**8**			**Local class system**	MPO	e.g. Corridor ID
71	**reverselane**	**Int**	**6**			**No. of reversible lanes**	Model team	Additional reversible lanes
72	**reversetime**	**Char**	**1**			**Time period - reversible lanes**	Model team	
73	**SPfreeAB**	**Real**	**10**	**2**		**Composite (link + intersection) free speed A to B (MPH)**	Capspd	Length / (TTfreeAB / 60)
74	**SPfreeBA**	**Real**	**10**	**2**		**Composite (link + intersection) free speed B to A (MPH)**	Capspd	Length / (TTfreeBA / 60)
75	**SPpeakAB**	**Real**	**10**	**2**		**Composite (link + intersection) congested speed A to B (MPH)**	Capspd	Length / (TTpeakAB / 60), NOT UPDATED IN FEEDBACK

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
76	SPpeakBA	Real	10	2		Composite (link + intersection) congested speed B to A (MPH)	Capspd	Length / (TTcongestBB / 60), NOT UPDATED IN FEEDBACK
77	TTfreeAB	Real	10	2		Composite (link + int) travel time free speed A to B (min)	Capspd	Network characteristics * lookups
78	TTfreeBA	Real	10	2		Composite (link + int) travel time free speed B to A (min))	Capspd	Network characteristics * lookups
79	TTpeakAB	Real	10	2		Composite travel time congested speed A to B (min)	Capspd	TTfreeAB * lookup (initial), NOT UPDATED IN FEEDBACK
80	TTpeakBA	Real	10	2		Composite travel time congested speed B to A (min)	Capspd	TTfreeBA * lookup (initial), NOT UPDATED IN FEEDBACK
81	TTlinkFrAB	Real	10	2		Travel time A to B - free speed - link factors only (min)	Capspd	Link characteristics * lookups
82	TTlinkFrBA	Real	10	2		Travel time B to A - free speed - link factors only (min)	Capspd	Link characteristics * lookups
83	TTlinkPkAB	Real	10	2		Travel time A to B - congested speed - link factors only (min)	Capspd	TTlinkfreeAB * congestion factor lookup
84	TTlinkPkBA	Real	10	2		Travel time B to A - congested speed - link factors only (min)	Capspd	TTlinkfreeBA * congestion factor lookup
85	IntDelFr_A	Real	10	2		A node intersectino delay - free speed (min)	Capspd	Intersection characteristics (A node) * lookups (Seconds)
86	IntDelFr_B	Real	10	2		B node intersection delay - free speed (min)	Capspd	Intersection characteristics (B node) * lookups (Seconds)
87	IntDelPk_A	Real	10	2		A node Intersection delay - congested (min)	Capspd	Intersection characteristics (A node) * lookups (Seconds)
88	IntDelPk_B	Real	10	2		B node intersection delay - congested (min)	Capspd	Intersection characteristics (B node) * lookups (Seconds)
89	capPk3hrAB	Real	10	2		Peak 3 hour total capacity (link + intersection) A to B (tot veh)	Capspd	cap1hrAB * peak fac
90	capPk3hrBA	Real	10	2		Peak 3 hour total capacity B to A	Capspd	cap1hrBA * peak fac
91	capMidAB	Real (8 bytes)	10	2		Midday total capacity A to B	Capspd	cap1hrAB * midday fac
92	capMidBA	Real (8 bytes)	10	2		Midday total capacity B to A	Capspd	cap1hrBA * midday fac
93	CapNightAB	Real (8 bytes)	10	2		Night total capacity A to B	Capspd	cap1hrAB * night fac
94	CapNightBA	Real (8 bytes)	10	2		Night total capacity B to A	Capspd	cap1hrBA * night fac
95	cap1hrAB	Real	10	2		One hour link capacity A to B	Capspd	Lane, intesection characteristics * lookups
96	cap1hrBA	Real	10	2		One hour link capacity B to A	Capspd	Lane, intersection characteristics * lookups
97	TTPkEstAB	Real	10	2		Time/distance impedance - free speed A to B	Capspd	A(Length) + B(TTfreeAB)
98	TTPkEstBA	Real	10	2		Time/distance impedance - free speed B to A	Capspd	A(Length) + B(TTfreeBA)
99	TTPkPrevAB	Real	10	2		Congested travel time A to B previous assignment	Capspd, feedback	Round 2 feedback spd
100	TTPkPrevBA	Real	10	2		Congested travel time B to A previous assignment	Capspd. feedback	Round 2 feedback spd
101	TTPkAssnAB	Real	10	2		Congested travel time A to B current assignment	Capspd, feedback	Final feedback speed
102	TTPkAssnBA	Real	10	2		Congested travel time B to A current assignment	Capspd, feedback	Final feedback speed
103	TTpkLocAB	Real	10	2		Local bus travel time - congested speed A to B	Capspd	Lookup, capped at 90% of peak speed travel time A to B
104	TTpkLocBA	Real	10	2		Local bus travel time - congested speed B to A	Capspd	Lookup, capped at 90% of peak speed travel time B to A
105	TTpkXprAB	Real	10	2		Express bus travel time - congested speed A to B	Capspd	Lookup, capped at 90% of peak speed travel time A to B
106	TTpkXprBA	Real	10	2		Express bus travel time - congested speed B to A	Capspd	Lookup, capped at 90% of peak speed travel time B to A
107	TTPkNStAB	Real	10	2		Non-stop bus travel time - congested speed A to B	Capspd	=TTPkAssnAB or guideway speed with no stops
108	TTPkNStBA	Real	10	2		Non-stop bus travel time - congested speed B to A	Capspd	=TTPkAssnBA or guideway speed with no stops

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
109	TTpkSkSAB	Real	10	2		Skip stop bus travel time - congested speed A to B	Capspd	=TTPkAssnAB or guideway speed with skip stops
110	TTpkSkSBA	Real	10	2		Skip stop bus travel time - congested speed B to A	Capspd	=TTPkAssnBA or guideway speed with skip stops
111	TTfrLocAB	Real	10	2		Local bus travel time - free speed A to B	Capspd	Lookup, capped at 90% of free speed travel time A to B
112	TTfrLocBA	Real	10	2		Local bus travel time - free speed B to A	Capspd	Lookup, capped at 90% of free speed travel time B to A
113	TTfrXprAB	Real	10	2		Express bus travel time - free speed A to B	Capspd	Lookup, capped at 90% of free speed travel time A to B
114	TTfrXprBA	Real	10	2		Express bus travel time - free speed B to A	Capspd	Lookup, capped at 90% of free speed travel time B to A
115	TTFrNStAB	Real	10	2		Non-stop bus travel time - free speed A to B	Capspd	=TTFreeAB or guideway speed with no stops
116	TTFrNStBA	Real	10	2		Non-stop bus travel time - free speed B to A	Capspd	=TTFreeAB or guideway speed with no stops
117	TTfrSkSAB	Real	10	2		Skip stop bus travel time - free speed A to B	Capspd	=TTFreeAB or guideway speed with skip stops
118	TTfrSkSBA	Real	10	2		Skip stop bus travel time - free speed B to A	Capspd	=TTFreeAB or guideway speed with skip stops
119	PkLocLUAB	Real	10	2		Local bus lookup travel time - peak A to B	Capspd	Lookup, NO capping
120	PkLocLUBA	Real	10	2		Local bus lookup travel time - peak B to A	Capspd	Lookup, NO capping
121	PkXprLUAB	Real	10	2		Express bus lookup travel time - peak A to B	Capspd	Lookup, NO capping
122	PkXprLUBA	Real	10	2		Express bus lookup travel time - peak B to A	Capspd	Lookup, NO capping
123	TTwalkAB	Real	10	2		Walk travel time A to B	Capspd	Len * 20 (3 MPH), 9999 for funcl 1,2,8,9, 20-89, Non-directional
124	TTwalkBA	Real	10	2		Walk travel time B to A	Capspd	Len * 20 (3 MPH), 9999 for funcl 1,2,8,9, 20-89, Non-directional
125	TTbikeAB	Real	10	2		Bike travel time A to B	Capspd	7 MPH, 9999 for funcl 1,2,8,9, 20-89, Directional
126	TTbikeBA	Real	10	2		Bike travel time B to A	Capspd	7 MPH, 9999 for funcl 1,2,8,9, 20-89, Directional
127	ImpPkAB	Real	10	2		Peak Impedance A to B	Capspd	TTPeakAB * 0.6 + length * 0.4
128	ImpPkBA	Real	10	2		Peak Impedance B to A	Capspd	TTPeakBA * 0.6 + length * 0.4
129	ImpFreeAB	Real	10	2		Off-peak Impedance A to B	Capspd	TTFreeAB * 0.6 + length * 0.4
130	ImpFreeBA	Real	10	2		Off-peak Impedance B to A	Capspd	TTFreeBA * 0.6 + length * 0.4
131	TollAB	Real	10	2		Toll for link (cents)	Macro	
132	TollBA	Real	10	2		Toll for link (cents)	Macro	
133	HOTAB	Real	10	2		Managed Lane Toll for link (cents)	Macro	
134	HOTBA	Real	10	2		Managed Lane Toll for link (cents)	Macro	
135	Mode	Int	10			Flag for non-transit links to be included in transit network	Model Team	Flagged with a value of 1
136	BRT_Flag	Int	10					
137	datestamp	Int	8			Date stamp	Model team	
138	Level	Int	10			Cross-reference to old networks	Model team	
139	themecode	Int	8				Model team	
140	TOLL_PRJID	Int	8			Cross-reference to tolls.bin	Model team	
141	HOT_PRJID	Int	8			Cross-reference to tolls.bin	Model team	
142	ITS_Code	Int	8			AQ off-model code	Model team	currently not used
143	ITS_Segment	Int	8			AQ off-model code	Model team	currently not used
144	UrbanRural	Char	1			MOVES code	calc from AT	U or R
145	RoadTypeAQ	Int	2			MOVES code	Model team	
146	projnum1	Int	4			Project number ID, project 1	Model team	Project ID - network creation
147	dir_prj1	Int	2			future dir code, project 1	Plan	
					1	One way - A to B		
					0	Two way		
					-1	One way - B to A		

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
148	**funcl_prj1**	**Int**	**3**			**future funcl, project 1**	Plan	
					1	Freeway		
					2	Expressway		
					3	Class II major tfare		
					4	Major tfare		
					5	Minor tfare		
					6	Collector street		
					7	Local Street		
					8	Ramp to surface street		
					9	Freeway-freeway ramp		
					22	HOV 2+ / Busway		
					23	All-Pay Managed Lanes		
					24	HOT 2+ (2+ free, all others pay)		
					25	HOT 3+ (3+ free, all others pay)		
					30	Transit Only - Rail		
					40	Transit Only - Busway		
					82	Hwy to HOV 2+		
					83	Hwy to HOV 3+		
					84	Transit Only - connect to Tran		
					90	Centroid connector		
					92	Centroid conn to transit sta		
					900+	Add 900 for links not in project network		
149	**lnsAB_prj1**	**Int**	**1**			**future lanes A to B, project 1**	Plan	
150	**lnsBA_prj1**	**Int**	**1**			**future lanes B to A, project 1**	Plan	
151	**facttypprj1**	**Char**	**1**			**future facility type, project 1**	Plan	
					F	Freeway		
					E	Expressway		
					R	Ramp		
					D	Divided - no median breaks		
					M	Divided - median breaks only		
					B	Divided - left turn bays		
					T	Undivided - left turn bays		
					C	Undivided - continuous left		
					U	Undivided - no left provision		
152	**Acntl_prj1**	**Char**	**1**			**future control at A, project 1**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
153	**Aprhb_prj1**	**Char**	**1**			**future prohibitions at A, proj 1**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
154	**Aleft_prj1**	**Int**	**1**			**future Left turn lns at A, proj 1**	Plan, est	
155	**Athru_prj1**	**Int**	**1**			**future thru lanes at A, proj 1**	Plan, est	
156	**Arite_prj1**	**Int**	**1**			**future right turn lns at A, proj 1**	Plan, es+l159	
157	**Bcntl_prj1**	**Char**	**1**			**future control at B, project 1**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
158	**Bprhb_prj1**	**Char**	**1**			**future prohibitions at B, proj 1**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
159	**Bleft_prj1**	**Int**	**1**			**future Left turn lns at B, proj 1**	Plan, est	
160	**Bthru_prj1**	**Int**	**1**			**future thru lanes at B, proj 1**	Plan, est	
161	**Brite_prj1**	**Int**	**1**			**future right turn lns at B, proj 1**	Plan, est	
162	**projnum2**	**Int**	**4**			**Project number ID, project 2**	Model team	Project ID - network creation

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
163	**dir_prj2**	**Int**	**2**			**future dir code, project 2**	Plan	
					1	One way - A to B		
					0	Two way		
					-1	One way - B to A		
164	**funcl_prj2**	**Int**	**3**			**future funcl, project 2**	Plan	
					1	Freeway		
					2	Expressway		
					3	Class II major tfare		
					4	Major tfare		
					5	Minor tfare		
					6	Collector street		
					7	Local Street		
					8	Ramp to surface street		
					9	Freeway-freeway ramp		
					22	HOV 2+ / Busway		
					23	HOV 3+ / Busway		
					30	Transit Only - Rail		
					40	Transit Only - Busway		
					82	Hwy to HOV 2+		
					83	Hwy to HOV 3+		
					84	Transit Only - connect to Tran		
					90	Centroid connector		
					92	Centroid conn to transit sta		
					900+	Add 900 for links not in project network		
165	**InsAB_prj2**	**Int**	**1**			**future lanes A to B, project 2**	Plan	
166	**InsBA_prj2**	**Int**	**1**			**future lanes B to A, project 2**	Plan	
167	**facttypprj2**	**Char**	**1**			**future facility type, project 2**	Plan	
					F	Freeway		
					E	Expressway		
					R	Ramp		
					D	Divided - no median breaks		
					M	Divided - median breaks only		
					B	Divided - left turn bays		
					T	Undivided - left turn bays		
					C	Undivided - continuous left		
					U	Undivided - no left provision		
168	**Acntl_prj2**	**Char**	**1**			**future control at A, project 2**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
169	**Aprhb_prj2**	**Char**	**1**			**future prohibitions at A, proj 2**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
170	**Aleft_prj2**	**Int**	**1**			**future Left turn lns at A, proj 2**	Plan, est	
171	**Athru_prj2**	**Int**	**1**			**future thru lanes at A, proj 2**	Plan, est	
172	**Arite_prj2**	**Int**	**1**			**future right turn lns at A, proj 2**	Plan, est	
173	**Bcntl_prj2**	**Char**	**1**			**future control at B, project 2**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
174	**Bprhb_prj2**	**Char**	**1**			**future prohibitions at B, proj 2**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
175	**Bleft_prj2**	**Int**	**1**			**future Left turn lns at B, proj 2**	Plan, est	
176	**Bthru_prj2**	**Int**	**1**			**future thru lanes at B, proj 2**	Plan, est	
177	**Brite_prj2**	**Int**	**1**			**future right turn lns at B, proj 2**	Plan, est	
178	**projnum3**	**Int**	**4**			**Project number ID, project 3**	Model team	Project ID - network creation

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
179	**dir_prj3**	**Int**	**2**			**future dir code, project 3**	Plan	
					1	One way - A to B		
					0	Two way		
					-1	One way - B to A		
180	**funcl_prj3**	**Int**	**3**			**future funcl, project 3**	Plan	
					1	Freeway		
					2	Expressway		
					3	Class II major tfare		
					4	Major tfare		
					5	Minor tfare		
					6	Collector street		
					7	Local Street		
					8	Ramp to surface street		
					9	Freeway-freeway ramp		
					22	HOV 2+ / Busway		
					23	HOV 3+ / Busway		
					30	Transit Only - Rail		
					40	Transit Only - Busway		
					82	Hwy to HOV 2+		
					83	Hwy to HOV 3+		
					84	Transit Only - connect to Tran		
					85	Walk Only - connect to Tran		
					90	Centroid connector		
					92	Centroid conn to transit sta		
					900+	Add 900 for links not in project network		
181	**lnsAB_prj3**	**Int**	**1**			**future lanes A to B, project 3**	Plan	
182	**lnsBA_prj3**	**Int**	**1**			**future lanes B to A, project 3**	Plan	
183	**facttypprj3**	**Char**	**1**			**future facility type, project 3**	Plan	
					F	Freeway		
					E	Expressway		
					R	Ramp		
					D	Divided - no median breaks		
					M	Divided - median breaks only		
					B	Divided - left turn bays		
					T	Undivided - left turn bays		
					C	Undivided - continuous left		
					U	Undivided - no left provision		
184	**Acntl_prj3**	**Char**	**1**			**future control at A, project 3**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
185	**Aprhb_prj3**	**Char**	**1**			**future prohibitions at A, proj 3**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
186	**Aleft_prj3**	**Int**	**1**			**future Left turn lns at A, proj 3**	Plan, est	
187	**Athru_prj3**	**Int**	**1**			**future thru lanes at A, proj 3**	Plan, est	
188	**Arite_prj3**	**Int**	**1**			**future right turn lns at A, proj 3**	Plan, est	
189	**Bcntl_prj3**	**Char**	**1**			**future control at B, project 3**	Plan	
					T	Through		
					L	Signal (light)		
					S	Stop		
					F	Four way stop (all appr. stop)		
					Y	Yield		
					R	Round about		
190	**Bprhb_prj3**	**Char**	**1**			**future prohibitions at B, proj 3**	Plan	
					N	No prohibitions		
					L	No left		
					R	No right		
					T	No through		
					C	No turns		
191	**Bleft_prj3**	**Int**	**1**			**future Left turn lns at B, proj 3**	Plan, est	
192	**Bthru_prj3**	**Int**	**1**			**future thru lanes at B, proj 3**	Plan, est	
193	**Brite_prj3**	**Int**	**1**			**future right turn lns at B, proj 3**	Plan, est	

Field	FIELD_NAME	TYPE	WIDTH	DEC	Value	Description	Source	Notes
194	Notes	Char	24			User notes for reference	Model team	
195	CCSTYLE	Int	12			line style	Model team	