APPENDIX 16B - AIR QUALITY TRAFFIC DATA REQUEST

Project		Existing Year	
Highway		Project Completion Year	
County		Project Design Year	
Key #			

Local Carbon Monoxide (CO)

Are all signalized intersections for the build alternative in the range of LOS A to C?

Note: If ranking shows the LOS of all intersections are in the LOS A to C range , then just a qualitative analysis is needed. Intersections at LOS D or higher require a quantitative analysis.

Qualitative Analysis required?

Qualitative Analysis traffic data requirements:
Traffic analysis results including v/c ratio, LOS, and delay for each intersection from available technical memorandums or analysis output

Quantitative Analysis required?

Quantitative Analysis traffic data requirements:

1 - Tabular ranking of signalized intersections affected by the project by LOS/delay and total entering volume for project completion and design year for build alternative only

2 - For the top 3 ranked intersections; software output reports showing the following:
- Lane configurations
- Signal controller type (pre-timed, actuated, or semi-actuated)
- Lane saturation flow rates (permitted and protected turns as appropriate), vph
- Traffic volumes by lane (each link) (vph)
- Total cycle length (s)
- Effective green time (s)
- Yellow time (s)
- Average red time length (each approach) (s)
- Signal cycle timing for each movement
- Clearance lost time (s)

3 - Free flow speeds for links at the selected intersections (mi/hr)

4 - Arrival type for links at the selected intersections (1 to 5 for best to worst progression)

FHWA CO Categorical Hot Spot Analysis

Following traffic data is needed for the build completion and design years for the top 3 locations:

- Area type (urban/rural)
- Maximum grade for intersection (< 6%)
- Single-unit and combination truck percentage (<20%)
- Peak hour average speed for each approach (15 to 45 mph)
- Peak hour volume for each approach (≤2640 vph)
- Peak hour intersection Level of Service (A,B,C, D, E)
- Angle of cross streets for intersection (≥ 75 degrees)
- Maximum number of through lanes for any approach (≤ 4)
- Maximum number of left turn lanes for any approach (≤ 2)
- Minimum lane width across all approach lanes (≥ 10 ft)
- Median width (ft)

Particulate Matter (PM_{10} or $PM_{2.5}$) Hot Spot Analysis - Qualitative

Traffic data required for roadway links approaching or over identified thresholds from AQ analyst:

- Existing AADT
- Project completion year No Build AADT
- Project completion year Build AADT
- Design year No Build AADT
- Design year Build AADT
- Diesel truck percentages

Particulate Matter (PM_{10} or $PM_{2.5}$) Hot Spot Analysis - Quantitative

Required traffic data for each flagged link from screening:

- Design speed (mph)
- prevailing operating speed (mph)
- Existing year AADT
- Heavy truck percentage
- Diesel vehicle volume and percentage
- Peak hour LOS for intersection if heavy truck AADT exceeds 10,000
- Heavy truck volume intersection percentage

Mobile Source Air Toxicity (MSAT) Analysis

Analysis Cases

- Existing AADT
- No-Build AADT
- Build AADT

MSAT Qualititative Analysis

Required traffic data:

- Regional Annual VMT and average regional speed OR
- Project link ADT and average speed

- Percent diesel vehicles by link

MSAT Quantitative Analysis

Required traffic data on identified links:

- Link length
- AADT
- VMT
- Roadway type (freeway, ramp, or arterial street)
- Ramp fraction vehdile hours traveled (VHT)
- Average speed fractions (%)
  - AM peak speed
  - PM peak speed
  - Off peak day speed
  - Off peak night speed
- VMT daily fractions (%) or number of hours
  - AM peak period
  - PM Peak period
  - Off-peak daytime
  - Off-peak nighttime
- Percent autos, medium & heavy trucks or other vehicle classes as specifed

Notes: Build AADTs in excess of 140,000 will require a quantitative analysis which requires coordination and a methodology memorandum between the traffic analyst, the AQ analyst, ODOT Environmental, and FHWA