



# Working together to plan for the future

**INTERAGENCY CONSULTATION COMMITTEE (ICC)**  
**February 26, 2015 - 9:00 AM**  
**COMPASS, 700 NE 2nd Street, 2<sup>nd</sup> Floor Large Conference Room**  
**Meridian, Idaho**

**\*\* AGENDA \*\***

**I. CALL TO ORDER (8:30)**

**II. AGENDA ADDITIONS/CHANGES**

**III. OPEN DISCUSSION/ANNOUNCEMENTS**

**IV. CONSENT AGENDA**

**Note: No minutes. Quorum was not reached at the November 20, 2014, meeting.**

**V. ACTION ITEM**

- 9:10 \*A. **Approve Project-Level Conformity Modeling Assumptions** **ACHD, ITD and HDR**  
*Project-Level Air Quality Screening policy (PLAQ) can no longer be used. As a result, some projects require screening and analysis for project level conformity for CO in northern Ada County. ACHD, ITD, and HDR, the firm conducting the analysis, will present the assumptions proposed for the project-level analysis for State Street and Collister Drive Intersection and seek ICC approval of the assumptions.*

**VI. INFORMATION/DISCUSSION ITEM**

- 9:40 **A. Agency Updates**  
*If time permits at the end of the meeting, voting representatives are welcome to provide brief updates to ICC on items pertaining to air quality. Please keep updates to five minutes and on topic.*

**VII. OTHER**

- A. Next Meeting: April 7, 2015**

**VIII. ADJOURNMENT (10:00)**

**\*Enclosures will be sent 14-days in advance of the meeting. Times are approximate. Agenda is subject to change.**

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**Intersection State Street and Collister Drive  
Project No.: A013 (481), Key No.: 13481  
ACHD Project No. 713014**

**Project-Level Carbon Monoxide Air Quality Analysis**

**Introduction:**

HDR is completing the design and project-level Hot Spot analysis for the reconstruction of the State Street & Collister Drive intersection project (the Project) for the Idaho Transportation Department (ITD). As part of the National Environmental Policy Act (NEPA) analysis (anticipated to be a Documented Categorical Exclusion), HDR will complete an air quality impact analysis for the project. Because the project is located in a maintenance area for carbon monoxide (CO) and particulate matter (PM<sub>10</sub>), the project must demonstrate conformity to the National Ambient Air Quality Standards (NAAQS) for both CO and PM<sub>10</sub>.

**Background:**

ITD's Project Level Air Quality Screening Policy (PLAQ) is no longer allowed for assessment of criteria pollutant emissions because it was based on an emissions model (MOBILE) that is no longer recognized by the Environmental Protection Agency (EPA).

In recent years, EPA has released several versions of the Motor Vehicle Emission Simulator (MOVES) model for estimating on-road vehicle emissions, replacing the MOBILE model on which the PLAQ was based. To date, the PLAQ screening policy has not been revised to reflect the MOVES emissions model. As a result, transportation projects in Idaho must now document conformity determinations by conducting project-specific modeling assessments using EPA-approved models (that is, MOVES) when the project does not meet the Federal Highway Administration's (FHWA's) Categorical Hot-Spot Finding Tool or is otherwise exempt from transportation conformity requirements.

**Status:**

The intersection of State Street and Collister Drive project is a federal-aid project that will revise the geometry of the existing T-intersection, add an additional eastbound and westbound travel lane on State Street, and capacity improvements on Collister Drive with the addition of a right turn bay at the signal. The project will also incorporate pedestrian facilities and bicycle lanes. This project is required to demonstrate conformity for both PM<sub>10</sub> and CO because it is located in Ada County, is using federal funds, and is increasing capacity along a principal arterial (State Street).

The transportation conformity rule identifies projects that require a PM<sub>10</sub> hot-spot analysis. Among other requirements, the rule requires PM<sub>10</sub> hot-spot analyses for:

- New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles [Section 93.123(b)(1)(i)], and
- Projects affecting intersections that are at a Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes related to the project [Section 93.123(b)(1)(ii)].

EPA guidance recommends PM<sub>10</sub> hot-spot analyses for new highways or expressways that serve a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and where 8% or more of the AADT is diesel truck traffic (Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment Areas, Appendices).

The State Street and Collister Project Charter (December 12, 2014), indicates that 2039 AADT traffic volumes on State Street will be about 51,000 vehicles per day, of which about 1.6% will be truck volumes. Because of the low daily traffic volumes (including truck traffic which could use diesel fuel), PM<sub>10</sub> hot-spot modeling is not proposed for the Project.

As noted above, the project does not need to quantify PM<sub>10</sub> impacts because it is not substantially increasing the number of diesel vehicles using the roadway. A qualitative assessment of PM<sub>10</sub> and Mobile Source Air Toxics (MSAT) impacts will be included. However the project is required to quantify CO impacts using MOVES and the EPA-approved dispersion model (CAL3QHC).

Attached are the inputs/assumptions proposed for the CO analysis of the project. A “screening level” evaluation as discussed in EPA guidance (“Using MOVES in Project-Level Carbon Monoxide Analyses (December 2010)”) approach using CAL3QHC is proposed. This level of analysis uses worst-case meteorological and traffic data to estimate the maximum likely impacts of emissions from traffic operating on State Street and Collister Drive. It is likely the screening level analysis will be sufficient to show that the NAAQS will not be exceeded by the project given Ada County’s “Limited Maintenance” status for CO. If the “screening level” analysis shows an exceedance of the CO NAAQS, a refined approach will be required using CAL3QHCR (the “refined” version of CAL3AHC).

CAL3QHCR has two levels, or tiers, of evaluation available. Both tiers use one year’s worth of location-specific, hourly meteorological data. A “Tier I” analysis uses the same traffic data as the screening analysis while the “Tier II” analysis uses hourly traffic data for each day of a given week. Should the screening analysis be unsuccessful, a Tier I approach will be used.

Currently, MOVES version 2010b has been selected for the analysis. However, MOVES2014 was released by EPA on July 31, 2014, and has replaced MOVES2010b. It is assumed MOVES2010b is the preferred model given that it will provide results that are consistent with current regional conformity demonstration(s). The Interagency Consultation Committee (ICC) could choose to use MOVES2014 for this analysis, or can choose to use MOVES2010b invoking the 2 year grace period provided by EPA. The ICC should consult with FHWA before providing guidance to ITD (and the consultant) regarding which version of the MOVES model to use for this project-level conformity analyses.

**Requested Action:**

It is requested that ICC review and approve the inputs/assumptions attached and the methodology proposed for the proposed project. MOVES regional conformity files from COMPASS are requested for 2015 (existing), 2019 (to represent the year of opening), and 2040 (the design year). This includes a decision regarding which version of MOVES needs to be used (MOVES2010b or MOVES2014).

MOVES 2010b

Input Parameter		Source**	Assumption(s)	Comment(s)	
Age Distribution		COMPASS regional runs	NA		
Met Data		January	Worst Case for CO		
Fuel Supply		COMPASS regional runs	NA		
Fuel Formulation		COMPASS regional runs	NA		
I/M		COMPASS regional runs	NA		
Project-Level Inputs	Links	Link ID	As defined in CAL3QHC	Links defined for dispersion modeling	CAL3QHC has two types of links, free flow and queue. Only Free Flow links have a speed associated with them. Link IDs will correspond to those in the dispersion model.
		Road Type	Moves Default	Urban Unrestricted	Each link is associated with a MOVES Road Type
		Length	Determined from design file	NA	Same length as input into the dispersion model
		Volume	Traffic Analysis	Only analyzing AM and PM peak hours	As provided by traffic analysis
		Average Speed	Traffic analysis	Derived from traffic analysis using distance and travel time estimates.	Free flow links only. Queue links have a speed of 0 per EPA guidance.
		Grade	Traffic Analysis	0%	Assumed to be flat terrain
Off-Network Sources		NA	No off network sources will be included	Not required for the run	
Link Source Types	Source Types	MOVES Default			
	Source Type Hour Fraction	Traffic Analysis	Based on regional inputs for weekday Source Type VMT fraction by hour and source type VMT fraction by roadtype.		
Op Mode Distribution		MOVES Defaults	NA	Based on typical drive cycles.	
Link Drive Schedules		NA	NA	Using schedules for MOVES road types and average speeds.	

CAL3QHC (Dispersion Model)

		Input Parameter	Source*	Assumption(s)	Comment(s)
Met Options	Settling and Deposition	0 cm/sec	EPA Modeling Guidance	NA	
	Averaging time	60 min	EPA Modeling Guidance	NA	
	Surface Roughness	175	EPA Modeling Guidance	NA	Assumed the area best fits the definition of an office area.
	Wind Speed	1 m/sec	EPA Modeling Guidance	NA	
	Stability Class	D (4) Neutral	EPA Modeling Guidance	Urban area	
	Mixing Height	1000 m	EPA Modeling Guidance	NA	
	Wind directions	360 degrees	EPA Modeling Guidance	NA	10 degree increments
Links	Free Flow		NA	- Lengths based on design file imagery, - Height = 0 - Mixing Zone with = road width + 6m - At-grade - Volumes from Traffic forecasts/counts (AM peak or PM peak) - MOVES emissions factor (g/veh-mile)	Design file imagery and EPA guidance used to develop inputs for free-flow links.
	Queue		NA	- Lengths based on traffic analysis for each approach (Synchro) - Height = 0 - Mixing Zone with = approach width (number of lanes x 12') - At-grade - Volumes from Traffic forecasts/counts (AM peak or PM peak) - MOVES emissions factor (g/veh-hr) - Average cycle length, red time, clearance time, and saturation flow rate from traffic analysis (Synchro) - Signal type = Actuated with average progression	Design file imagery and EPA guidance used to develop inputs for free-flow links.
Receptors	Locations	Placed per EPA Guidance		NA	Outside of the mixing zone but in the public rights-of-way (sidewalks and parking lots). Receptors are not placed on crosswalks per EPA guidance.
	Height	1.8 m	EPA Modeling Guidance	NA	
Ambient CO	1-hr design value (background) concentration	2.45 ppm	DEQ	Coordinate/confirm with DEQ	
	8-hr design value (background) concentration	1.42 ppm	DEQ	Coordinate/confirm with DEQ.	
	Persistence Factor	0.58 ppm	DEQ	Coordinate/confirm with DEQ	Used to convert 1-hr concentration to 8-hr.

\* Guideline for Modeling CO from Roadway Intersections (EPA-454/R-92-005)

\*\* Using MOVES in Project-Level CO Analyses (EPA-420-B-10-041)