



Connecticut DOT

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Bureau of Engineering and Construction
Bureau of Policy and Planning

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Air Quality Conformance Determination Coordination and Communication

Goals

1. Provide flexibility in the funding mechanisms for projects delivered in the Department’s Capital Program.
2. Improve cross Bureau communication by providing consistent information between project originating and development units to and from the Travel Demand – Air Quality (TD/AQ) unit for project scope and modifications that affect the Air Quality Conformity (AQC) process.
3. Provide one document that provides information on the entire AQC process. Extra **emphasis** has been provided throughout the document to highlight Designer responsibilities.

Resources

1. [Process Map](#)
2. [Air Quality Conformity Determination Reports](#)
3. [Air Quality Conformity Interagency Consultation Process](#)

Air Quality Analysis

The TD/AQ modeling unit performs three types of Air Quality Analysis on CTDOT projects; Regional Transportation Conformity; Project Level Conformity including Mobile Source Air Toxics (MSAT) analysis; and air quality emissions reduction analysis on all Congestion Mitigation and Air Quality (CMAQ) funded projects. A project could require one, multiple or no air quality analysis. **A designer within Engineering & Construction shall look at the project’s completed [Environmental Review Form](#) from the Office of Environmental Planning’s Cultural Resources/Environmental Documents Unit to determine which process or processes will need to be accomplished.**

The Process for each level of Air Quality Analysis is documented in the Table, below.

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	<u>When is the analysis needed?</u>	<u>Air Quality Analysis Process</u>
1) Regional Conformity	<ul style="list-style-type: none"> ○ Has Federal fund participation (i.e. FHWA, FTA, including Projects of Division Involvement) ○ Has 100% State Funds and meets the definition of regionally significant (see definition below). State-Funded projects will be reviewed when project lists are transmitted to the TD/AQ unit. ○ When a Statewide Transportation Improvement Program (STIP) or Metropolitan Transportation Plan (MTP) is developed ○ When a STIP or MTP is amended with a non-exempt project 	<ul style="list-style-type: none"> ● STIP/TIP AQ Process ● MTP Process
2) Project Level Conformity	<ul style="list-style-type: none"> ○ Funding State and/or Federal Participation, ○ New or expanded highway projects that have a significant number or increase in the number of vehicles ○ Projects affecting intersections that have an existing Level-of-Service (LOS) D, E, or F or will change to a LOS D, E, or F in the future build year. ○ New or expanded bus and rail terminals and transfer points that have a significant number of vehicles congregating at a single location ○ Projects in or affecting locations as sites of violation or possible violation. 	Engineering & Construction: Environmental Review Request Process
3) CMAQ Analysis	Only if project receives CMAQ funding	<ul style="list-style-type: none"> ● Engineering & Construction: – through STIP/TIP process ● Public Transit: sends email directly to AQ Unit or through the STIP/TIP process. ● MPOs COG CMAQ process via COG Solicitation

Note: * Regionally significant project means a transportation project (other than projects that may be grouped in the TIP and/or STIP or exempt projects as defined in EPA's transportation conformity regulations (40 CFR part 93, subpart A)) that is on a facility that serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.

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Regional Conformity

Transportation conformity is a Clean Air Act (CAA) requirement that serves as a bridge to connect air quality and transportation planning activities. Transportation conformity is required under the CAA section 176(c) (42.U.S.C.7506(c)) to ensure that highway and transit project activities receiving federal funds are consistent with (“conform to”) the purpose of the State Implementation Plan (SIP). Regional Conformity for a project is attained through the TIP STIP AQ Process and or the Metropolitan Transportation Plan Process. The specific steps required to obtain this designation are included in the [Air Quality Process Map](#) and the [Air Quality Conformity Interagency Consultation Process Document \(See Figure 2\)](#).

If the project is included in the applicable Metropolitan Planning Organization’s (MPO’s) current conforming Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP) and the current conforming Statewide Transportation Improvement Program (STIP), the project is in Regional Conformity. **Designers shall access the following links that documents what projects have received conformity and are in the MTP for each MPO:**

- [State Transportation Improvement Program \(ct.gov\)](#)
- [Air Quality Conformity \(ct.gov\)](#)

A project is listed in the STIP as a study or Preliminary Design (PD) phase. The project shall be evaluated for AQC determination once a Final Design is determined and may require Regional Conformity.

The Air Quality Code for a project is the authoritative information on what level of Regional Conformity is required for a project based on the scope of the project at the time it was reviewed by the TD/AQ unit.

The TD/AQ Unit relies on Project Scope Language to determine the applicable Air Quality Code for projects. **Project Designers shall provide adequate project scope language in Compass and Request for Project Modification (RPM), so that it may be updated in CORE by Finance & Administration, to assist in this determination.** The project scope should clearly identify if the project effects the State’s infrastructure in one of the ways listed in Table 1. If a project receives Regional Conformity in the PD Phase, additional analysis is required for Final Design to ensure scopes have not changed. The project may require additional approval through the TIP/STIP AQ Process and a new Air Quality Code needs to be re-entered into CORE when the scope changes. At no time, shall an Air Quality Code in CORE be modified other than by the staff in the TD/AQ unit. Table 1 outlines “typical” project scopes that will require regional conformity. Table 2 are scope changes to a project that will not affect the Air Quality Code as they are considered exempt from regional conformity based on 40CFR 93.126, as outlined in the Communicating Scope Changes Section, below. Based upon the communication outlined below, the TD/AQ unit will compile & analyze for the next Regional Conformity Run which will run on an annual basis per the Project Schedule Impacts section, below.

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The anticipated **Construction Completion Date for projects is a required piece of information to complete the modelling requirements** in accordance with the [Air Quality Conformity Interagency Consultation Process](#).

The Regional Conformity process is a very lengthy process and involves regional, state, and federal participation. A typical regional conformity process can take 6-8 months to complete as outlined in the Project Schedule Impacts section, below.

Table 1	
Project Scope Changes that affect Project Air Quality Code	
Engineering & Construction	Public Transit
<ul style="list-style-type: none"> ▪ Capacity – <ul style="list-style-type: none"> ○ Adding ○ Downsizing ▪ Additional travel lane ▪ Changing turning movements ▪ Changes to traffic pattern ▪ Addition/reduction of exit/entrance ramps ▪ Changing access to travel patterns – ex. termination of roadway by eliminating bridge 	<ul style="list-style-type: none"> • Adding Service • Changing Service • Adding Hours <ul style="list-style-type: none"> ○ Replace single occupancy vehicles/vehicle trips • Need to provide project manager • Need to qualify/identify projects other than by 170-XXX

Regional Conformity Schedule

The TD/AQ Unit shall perform an annual regional conformity analysis according to a schedule that is published on or near August of each year. An example of a schedule (for the 2021 – 2024 Amended STIP) is included below and entitled **Example Schedule: Statewide Transportation Improvement Plan Amendments Air Quality Transportation Conformity Analysis/Determination**. The annual schedule will include a drop-dead date for submittal of projects for consideration in the analysis.

Project Level Conformity

Project level conformity may be required for individual projects. This project level conformity must show that the individual project is consistent with the regional conformity determination and that potential localized emission impacts are addressed and are consistent with the goals for air quality. This is a relatively short process and is identified through the [Environmental Review](#) process for the Bureau of Engineering & Construction.

Information concerning the scope of the project, within the [Environmental Review Request](#) (ERR),

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is important to determine if the project is exempt or requires additional analysis. **The Scope information listed under Table 1 shall be provided in the ERR documents submitted.**

The completed Environmental Review Form, transmitted to the Designer by the Assistant Director of Environmental Planning, shall provide project level information to be included in the project's NEPA/CEPA determination (i.e., Automatic/Programmatic Categorical Exclusion [CatEx], Individual Cat Ex, etc.).

The Environmental Review (ER) Form is also the opportunity for the TD/AQ group to:

- Confirm that projects were included in the STIP, Bridge Report, or Safety Report
- Review project level information scopes to assess if further modelling efforts are required, such as:

<u>Additional Modelling Effort</u>	<u>What does language mean to the designer?</u>
Regionally Significant	Project requires Regional Conformity determination through the Interagency Consultation Process and Schedule.
Project Level Qualitative Hot Spot	<ul style="list-style-type: none"> • An intersection level of service (LOS) analysis is required to determine project level conformity. For projects affecting signalized intersections that are currently LOS D, E, or F, or • those that will change to LOS D, E, or F because of increased traffic volumes related to the project
Mobile Source Air Toxics (MSAT)	<ul style="list-style-type: none"> • Project's ER form indicates that 'This project has potential MSAT effects and an MSAT qualitative or quantitative analysis may be required.' Generally, this applies to signal projects and interchange/intersection reconfigurations. • If the project does not qualify for a CATEX project manager will need to request an MSAT analysis be conducted. MSAT analysis can be quantitative or qualitative.

Communicating Scope Changes

Once an Environmental Review Form has been transmitted back to the Designer, if there are major project scope changes that will now include activities outlined in table 1 or are not included in Table 2, then they shall be communicated back to the TD/AQ Unit and Finance & Administration as via an e-mail as indicated below:

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Project Funding	Scope Changes must be sent to:
Non-Federally funded projects	TD/AQ Unit via DOT.AQUnit@ct.gov
Federally funded projects	Financial via dot.finmgmt-hwys@ct.gov Which will process through the TD/AQ unit through the TIP/STIP Process

These projects may be on hold to go forward if the original project considered exempt and the scope change is now requiring conformity. This project shall be resubmitted for the next conformity analysis. Located within Table 2 (below) is a List of Scope items that don't need to come back down to the AQ group when the project scope changes. This scope change process with the TD/AQ Unit, does not negate the need for a TIP/STIP scope change process and backup documentation.

[The results and/or decisions of the Bridge Rehabilitation Study Report process must be communicated through a Report of Meeting that documents the final agreed upon alternative to the TD/AQ \(DOT.AQUnit@ct.gov\) and Capital Planning Highways \(dot.finmgmt-hwys@ct.gov\) in Finance & Administration.](#)

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Table 2	
Safety	
<ul style="list-style-type: none"> ○ Shoulder improvements. ○ Traffic control devices and operating assistance other than signalization projects. ○ Skid treatments. ○ Fencing. ○ Emergency truck pullovers. 	<ul style="list-style-type: none"> ○ Railroad/highway crossing warning devices. ○ Pavement marking (no changes to existing configuration) ○ Lighting improvements (Illumination, not traffic signals) ○ ITS – CCTV
Mass Transit	
<ul style="list-style-type: none"> ○ Purchase of support vehicles. ○ Rehabilitation of transit vehicles¹. ○ Purchase of office, shop, and operating equipment for existing facilities. ○ Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.). ○ Construction or renovation of power, signal, and communications systems. ○ Construction of small passenger shelters and information kiosks at existing facilities (no new stop) 	<ul style="list-style-type: none"> ○ Reconstruction or renovation of existing (not adding a new transit point) transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures). ○ Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way. ○ Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet¹.
Air Quality	
<ul style="list-style-type: none"> ● Continuation of ride-sharing and van-pooling promotion activities at current levels. 	
Other	
<ul style="list-style-type: none"> ○ Grants for training and research programs. ○ Noise attenuation. ○ Acquisition of scenic easements. ○ Plantings, landscaping, etc. 	<ul style="list-style-type: none"> ○ Directional and informational signs (District-wide sign replacement projects) ○ Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

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CMAQ analysis

Any project using CMAQ funds shall be analyzed for emission benefits. Specific criteria must be met to be eligible for CMAQ funds. The Designer shall provide the required information in Section 14 of the following document: [CMAQ-application---fillable20201203_Final.pdf \(ct.gov\)](#) to the TD/AQ Unit. This information will be used to perform an emission benefit analysis. **Once the emissions benefit analysis and summary are completed and returned to the project manager, it is the designer's responsibility to submit the project scope and emission benefit report to FHWA for approval.**

For Region initiated projects, a separate air quality emissions report shall be prepared for each project and submitted to the COG Coordination Unit for processing, and distribution to FHWA.

A project scheduled for CMAQ funds cannot be added to the STIP until this process is complete.

**Example Schedule: Statewide Transportation Improvement Plan Amendments
Air Quality Transportation Conformity Analysis/ Determination**

