
Project Level PM Quantitative Hot-Spot Analysis

Project of Air Quality Concern Questionnaire

Project Setting and Description

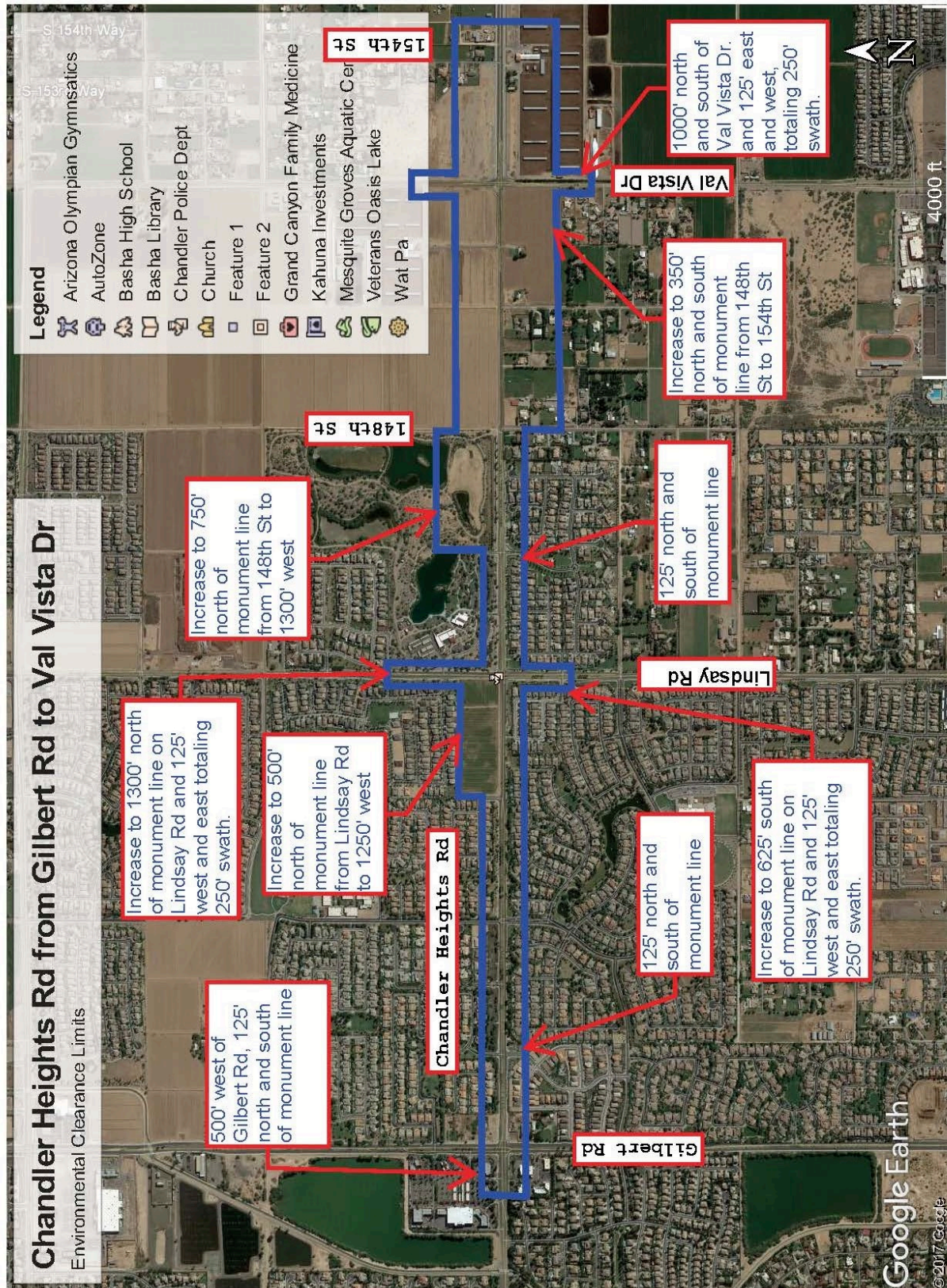
The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, carried out by ADOT pursuant to 23 U.S.C. 326 and a Memorandum of Understanding dated January 3, 2018, and executed by Federal Highway Administration (FHWA) and ADOT. The City of Chandler (City), in coordination with the Arizona Department of Transportation (ADOT), proposes to improve Chandler Heights Road from Gilbert Road to Val Vista Drive. The project is located within the City of Chandler, Maricopa County, Arizona.

This project, approximately 2 miles in length, will widen Chandler Heights Road to accommodate two thru lanes in each direction, bike lanes, a raised median island, curb, gutter, and sidewalks. Other improvements include:

- Reconstructing driveways and sidewalk ramps to meet Americans with Disabilities Act (ADA) requirements;
- Constructing drainage improvements such as scuppers, inlets, retention basins and storm drain;
- Removing signs and providing new signing;
- Obliterating pavement striping and replacing striping as needed;
- Replacing the traffic signal at Chandler Heights Road/Lindsay Road intersection;
- Relocating Roosevelt Water Conservation District (RWCD) and private irrigation facilities;
- Improving signal interconnect and street light improvements and converting all existing high-pressure sodium (HPS) street lights to light-emitting diode (LED) street lights;
- Installing and/or restoring landscaping and irrigation;
- Installing and/or rehabilitating public water, sanitary sewer, and reclaimed water systems;
- Relocating overhead electric and underground electric, gas, fiber optic, telephone and cable television (TV);
- Installing, replacing or rehabilitating waterline and sewer manhole improvements;
- Adjacent property owner improvements such as replacing fencing, walls, and driveways;
- Geotechnical and potholing investigations; and
- Obtaining new right-of-way (ROW), public utility easements (PUE), drainage easements (DEs), RWCD irrigation easements, and temporary construction easements (TCEs).

Design and right-of-way acquisition will be locally funded by the City of Chandler. Construction is federally-funded with the Surface Transportation Block Grant Program (STBGP-MAG (2023)) funds for FY 2023 with a local City of Chandler match for the remaining construction costs. This project is listed in the State of Arizona's current five-year (2017-2021) State Transportation Improvement Program (STIP). It is located in the Maricopa County PM10 nonattainment area. The location of the project is shown in Figure 1.

Figure 1



Project Assessment

The following questionnaire is used to compare the proposed project to a list of project types in 40 CFR 93.123(b) requiring a quantitative analysis of local particulate emissions (Hot-spots) in non-attainment or maintenance areas, which include:

- i) 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;
- ii) Projects affecting intersections that are at 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 an increase in traffic volumes from a significant number of diesel vehicles related to the project;
- iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
- v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

If the project matches one of the listed project types in 40 CFR 123(b)(1) above, it is considered a project of local air quality concern and the hot-spot demonstration must be based on quantitative analysis methods in accordance to 40 CFR 93.116(a) and the consultation requirements of 40 CFR 93.105(c)(1)(i). If the project does not require a PM hot-spot analysis, a qualitative assessment will be developed that demonstrates that the project will not contribute to any new localized violations, increase the frequency or severity of any existing violations, or delay the timely attainment of any NAAQS or any required emission reductions or milestones in any nonattainment or maintenance area.

On March 10, 2006, EPA published *PM_{2.5} and PM₁₀ Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New PM_{2.5} and Existing PM₁₀ National Ambient Air Quality Standards; Final Rule* describing the types of projects that would be considered a project of air quality concern and that require a hot-spot analysis (71 FR 12468-12511). Specifically on page 12491, EPA provides the following clarification: “Some examples of *projects of air quality concern* that would be covered by § 93.123(b)(1)(i) and (ii) are: A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic;” ..” Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks;” These examples will be used as the baseline for determining if the project is a project of air quality concern.

New Highway Capacity

Is this a New highway project that has a significant number of diesel vehicles?

Example: total traffic volumes $\geq 125,000$ annual average daily traffic (AADT) and truck volumes $\geq 10,000$ diesel trucks per day (8% of total traffic).

NO – This is not a new highway project that has a significant number of diesel vehicles.

Expanded Highway Capacity

Is this an expanded highway project that has a significant increase in the number of diesel vehicles? *Example: the build scenario of the expanded highway or expressway causes a significant increase in the number of diesel trucks compared with the no-build scenario, truck volumes $> 8\%$ of the total traffic.*

NO – This is not an expanded highway project that would have a significant increase in the number of diesel vehicles. Table 1 summarizes the average daily traffic and truck traffic data which was provided by the Maricopa Association of Governments (MAG). This project will add a maximum of 136 additional trucks in the project corridor and the percentage of trucks will be less than 2% at all locations.

Table 1. Traffic Projections for Chandler Heights Road

	2018	2040	2040	Difference No-Build/Build
	Base	No-Build	Build	
Gilbert Road to Lindsay Road				
ADT	16,930	16,682	17,818	1,136
Truck ADT	249	224	234	10
Truck %	1.47%	1.34%	1.31%	0.89%
Lindsay Road to Val Vista Drive				
ADT	8,938	9,871	17,047	7,176
Truck ADT	137	130	266	136
Truck %	1.53%	1.32%	1.56%	1.90%

Projects with Congested Intersections

Is this a project that affects a congested intersection (LOS D or greater) that has a significant number of diesel trucks, OR will change LOS to D or greater because of increase traffic volumes for significant number of diesel trucks related to the project?

NO – As shown in Table 2, the 2040 Build condition for this project will not affect a congested intersection (LOS D or greater) that has a significant number of diesel trucks, nor will this project change the LOS to D or greater at any intersection because of a significant increase in diesel truck traffic volumes. This project improves the LOS at Lindsay Road from LOS D to C.

Table 2. LOS for Chandler Heights Road Intersections

	2018		2040		2040	
	Base		No-Build		Build	
	AM	PM	AM	PM	AM	PM
LOS at Gilbert Road	C	C	C	C	C	C
LOS at Lindsay Road	C	D	C	D	C	C
LOS at Val Vista Drive	C	C	C	C	C	C

New Bus and Rail Terminals

Does the project involve construction of a new bus or intermodal terminal that accommodates a significant number of diesel vehicles?

NO – This project does not involve new bus or rail terminals; therefore, project types (iii) and (iv) are not addressed in the project assessment.

Expanded Bus and Rail Terminals

Does the project involve an existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses (or trains) increases by 50% or more, as measured by arrivals?

NO – This project does not involve new bus or rail terminals; therefore, project types (iii) and (iv) are not addressed in the project assessment.

Projects Affecting PM Sites of Violation or Possible Violation

Does the project affect locations, areas or categories of sites that are identified in the PM₁₀ or PM_{2.5} applicable plan or implementation plan submissions, as appropriate, as sites of violation or potential violation?

NO – The PM₁₀ State Implementation Plans (SIPs) did not identify any specific sites or potential sites of violation. Therefore, no specific sites or potential sites of violation are identified.

POAQC Determination

The proposed project complies with and will not interfere with the implementation of any control measures included in the ADOT 2017-2021 Statewide Transportation Improvement Program (STIP) or the MAG 2018-2022 Transportation Improvement Program (TIP). The project is not anticipated to create LOS D conditions or worsen such conditions at intersections with a significant number of diesel vehicles, and the project would not significantly increase the number of diesel vehicles in the 2040 design year.

Therefore, ADOT is presenting this project for interagency consultation in accordance with 40 CFR 93.105 as a Project that is NOT of Air Quality Concern and thereby will not require a PM hot-spot analysis.

Interagency Consultation Results

On February 21, 2019 ADOT provided a copy of this questionnaire, to the following consultation parties, EPA, MAG, Arizona Department of Environmental Quality (ADEQ), and Maricopa County Air Quality Department as the local air agencies in Maricopa County. There were no objections to the project determination and on March 7, 2019 ADOT concluded Interagency Consultation by notifying interested parties that this project will proceed as a project that does not require a quantitative PM10 hot-spot analysis under 40CFR 93.123(b).



Beverly Chenausky <bchenausky@azdot.gov>

Re: Interagency Consultation: Chandler Heights Road: Gilbert Road to Val Vista Drive T0203

1 message

Beverly Chenausky <bchenausky@azdot.gov>

Thu, Mar 7, 2019 at 3:29 PM

To: Lindy Bauer <LBauer@azmag.gov>, ADEQ Conformity <Transportationconformity@azdeq.gov>, Jerry Wamsley <Wamsley.Jerry@epa.gov>, Johanna Kuspert - AQDX <JKuspert@mail.maricopa.gov>

Cc: Clifton Meek <meek.clifton@epa.gov>, Karina O'Conner <Oconnor.Karina@epa.gov>, ADOTAirNoise <AdotAirNoise@azdot.gov>, Eric Prosnier <EProsnier@azdot.gov>, Dean Giles <DGiles@azmag.gov>, Farhana Jesmin <FJesmin@azdot.gov>, "Kimberly.Moon@chandleraz.gov" <Kimberly.Moon@chandleraz.gov>

As there are no objections to the project determination presented, interagency consultation is complete with the project identified as a project that does not require a quantitative hot-spot analysis as listed under 40 CFR 93.123(b).

Thank you,
Beverly

Beverly T. Chenausky
Air & Noise Program Manager
MD EM02, Room 41
1611 W. Jackson St.
Phoenix, AZ 85007
602.712.6269
azdot.gov



On Thu, Feb 21, 2019 at 10:08 AM Beverly Chenausky <BChenausky@azdot.gov> wrote:

To Interested Parties:

ADOT is presenting the following project, **Chandler Heights Road: Gilbert Road to Val Vista Drive**, for interagency consultation per 40 CFR 93.105 as a potential project that is not a project of Air Quality Concern and thereby will not require a PM10 hot-spot analysis. If through interagency consultation it is determined that this project will not require a hot-spot analysis, other conformity provisions apply and will be addressed in the air quality section of the environmental clearance. ADOT is requesting responses to the attached questionnaire within **10 business days**; a non-response will be interpreted as concurrence that the project is not a project of air quality concern and does not require a hot-spot analysis. If any consulted party believes this project should be treated as a project of air quality concern that requires a Quantitative PM hot-spot analysis, please document the appropriate section under 40 CFR 93.123 (b) that applies to the project and describe why the project should be treated as a project of air quality concern.

Beverly T. Chenausky
Air & Noise Program Manager

MD EM02, Room 41

1611 W. Jackson St.

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Environmental Planning

*The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, **carried out by ADOT pursuant to 23 U.S.C. 326** and a Memorandum of Understanding dated [January 3, 2018](#), and executed by FHWA and ADOT.*



Beverly Chenausky <bchenausky@azdot.gov>

RE: Interagency Consultation: Chandler Heights Road: Gilbert Road to Val Vista Drive T0203

1 message

Wamsley, Jerry <Wamsley.Jerry@epa.gov>

Wed, Mar 6, 2019 at 6:39 PM

To: Beverly Chenausky <BChenausky@azdot.gov>

Cc: "Lee, Anita" <Lee.Anita@epa.gov>, "meek, clifton" <meek.clifton@epa.gov>, "OConnor, Karina" <OConnor.Karina@epa.gov>

Hello Beverly,

Thank you for the opportunity to review the Arizona Department of Transportation's (ADOT) Project of Air Quality Concern (POAQC) Questionnaire for the Chandler Heights Road widening and improvement project within the city of Chandler, dated February 21, 2019.

We concur that this project is not a project of air quality concern and does not require a particulate matter hot-spot analysis.

Sincerely,

Jerry Wamsley

From: Beverly Chenausky <BChenausky@azdot.gov>

Sent: Thursday, February 21, 2019 9:09 AM

To: Lindy Bauer <LBauer@azmag.gov>; ADEQ Conformity <Transportationconformity@azdeq.gov>; Wamsley, Jerry <Wamsley.Jerry@epa.gov>; 'Johanna Kuspert - AQDX' <JKuspert@mail.maricopa.gov>

Cc: meek, clifton <meek.clifton@epa.gov>; OConnor, Karina <OConnor.Karina@epa.gov>; ADOTAirNoise <AdotAirNoise@azdot.gov>; Eric Prosnier <EProsnier@azdot.gov>; Dean Giles <DGiles@azmag.gov>; Farhana Jesmin <FJesmin@azdot.gov>; 'Kimberly.Moon@chandleraz.gov' <Kimberly.Moon@chandleraz.gov>

Subject: Interagency Consultation: Chandler Heights Road: Gilbert Road to Val Vista Drive T0203

To Interested Parties:

ADOT is presenting the following project, **Chandler Heights Road: Gilbert Road to Val Vista Drive**, for interagency consultation per 40 CFR 93.105 as a potential project that is not a project of Air Quality Concern and thereby will not require a PM10 hot-spot analysis. If through interagency consultation it is determined that this project will not require a hot-spot analysis, other conformity provisions apply and will be addressed in the air quality section of the environmental clearance. ADOT is requesting responses to the attached questionnaire within **10 business days**; a non-response will be interpreted as concurrence that the project is not a project of air quality concern and does not require a hot-spot analysis. If any consulted party believes this project should be treated as a project of air quality concern that requires a Quantitative PM hot-spot analysis, please document the appropriate section under 40 CFR 93.123 (b) that applies to the project and describe why the project should be treated as a project of air quality concern.