Arizona Department of Transportation

Environmental Planning

Draft Project-Level Particulate Matter (PM_{10}) Consultation Document

US 95, Imperial Dam Road to Aberdeen Road

095-B(219)T
095 YU 44 F0605 01C

July 22, 2024

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. 327 and a Memorandum of Understanding dated June 25, 2024 and executed by FHWA and ADOT.

ADOT Environmental Planning

Project-Level Particulate Matter Interagency Consultation

Project Setting and Description

The Arizona Department of Transportation (ADOT) has initiated a project in Yuma County, Arizona, to widen US 95 from a two-lane undivided roadway to a four-lane divided highway from about Milepost (MP) 43.5 to MP 48.1 (about 4.6 miles).

The project would be constructed on existing ADOT ROW, lands owned by Yuma Proving Grounds (YPG), and private land. The project is located about 17 miles northeast of the City of Yuma, and about 60 miles south of Interstate 10 (I-10) in Yuma County, Arizona (**Figure 1** and Figure **2**).

As the major north-south route north of Yuma, US 95 provides access to employers, economic generators, and regional connectivity to Phoenix and other parts of Arizona. The existing two-lane rural highway has insufficient capacity for current traffic volumes and travelers frequently experience delays. US 95 serves as an important north-south link between Interstate 8 (I-8) and I-10 and provides access to YPG. The existing highway has insufficient capacity for the current level of heavy truck traffic and large recreational vehicles. The purpose of the project is to increase traffic capacity and improve operational efficiency and safety.

A draft Environmental Assessment (EA) for US 95, Avenue 9E to Aberdeen Road was prepared in June 2004 and a Finding of No Significant Impact (FONSI) was issued in October 2006. An EA Re-Evaluation is being prepared for this project.

Major elements of the project important to air quality considerations include:

- Widen the US 95 roadway to two lanes in each direction between MP 43.5 and MP 45.9, for four total through lanes. This will require:
    - Constructing two new 12-foot-wide southbound lanes with a 10-foot-wide outside shoulder and a 4-foot-wide inside shoulder east of US 95 from MP 45.8 to MP 48.1.
    - Reconstructing the existing US 95 roadway to two new northbound lands with 10-foot-wide outside shoulder and a 4-foot wide inside shoulder from MP 45.8 to MP 48.1.
    - Constructing two new 12-foot-wide northbound lanes with a 10-foot-wide outside shoulder and a 4-foot-wide inside shoulder west of US 95 from MP 43.5 to MP 45.8.
    - Reconstructing the existing US 95 roadway to two new southbound lanes with 10-foot-wide outside shoulder and a 4-foot-wide inside shoulder from MP 43.5 to MP 45.8.
- Reconstructing the intersections at Aberdeen Road, Martinez Lake Road, and Imperial Dam Road. The existing intersections are stop-controlled on the intersecting minor road with free-flow through traffic on US 95. Aberdeen Road and

Imperial Dam Road would be reconstructed as roundabouts (**Figure 3** and **Figure 4**), and the Martinez Lake Road intersection would be reconstructed as an unsignalized Green T (**Figure 5**).

- Relocating the existing at-grade military tank crossing and modifying it to a grade separated northbound and southbound tank crossing.
- Reconstructing pavement at crossroads & turnouts.
- Installing new 5-foot-tall, barbed wire game fence along ADOT ROW from MP 43.5 to MP 55.0.
- Seeding disturbed areas, as needed.

The proposed project is in Yuma County currently designated as a nonattainment area for the National Ambient Air Quality Standards (NAAQS) for, eight-hour ozone, and particulate matter less than or equal to ten microns in diameter (PM_{10}).

The primary sources of PM_{10} in the nonattainment area include dust from unpaved roads, construction dust, windblown dust, dust from unpaved farm roads, and cross border emissions from Mexico (https://azdeq.gov/yuma-particulate-matter-pm-10-nonattainment-area, accessed April 19, 2024).

The project is included in the Yuma Metropolitan Planning Organization 2022 – 2045 Long-Range Transportation Plan Update [ID-26, US 95 Widening: Welton-Mohawk Canal to Aberdeen Road] (YMPO, 2021). This specific project, US-95: Imperial Dam Road to Aberdeen Road is included in the Fiscal Year 2024-2028 Yuma Metropolitan Planning Organization Transportation Improvement Program [DOT-23-04D, Widen Road – Design] (YMPO, 2023).

On August 30, 2021, FHWA issued a Finding of Conformity for the FY 2022-2045 YMPO Long Range Regional Transportation Plan (LRTP) and FY 2022-2026 Transportation Improvement Program (TIP). Since that conformity determination, the EPA rescinded its previously issued clean data determination (CDD) for the 1987 24-hour PM_{10} NAAQS (effective June 17, 2022).

An "Air Quality Conformity Determination for the 2022-2045 LRTP Amendment #1" was completed in February 2024, and concluded that the projected PM_{10} emission levels based on projects included in the 2022-2045 LRTP Update Amendment #1 (including the US 95: Imperial Road to Aberdeen Road project) met the applicable conformity tests.

A formal request for a finding of transportation conformity was submitted to FHWA by the YMPO on April 8, 2024.

Figure 1. Project Location Map

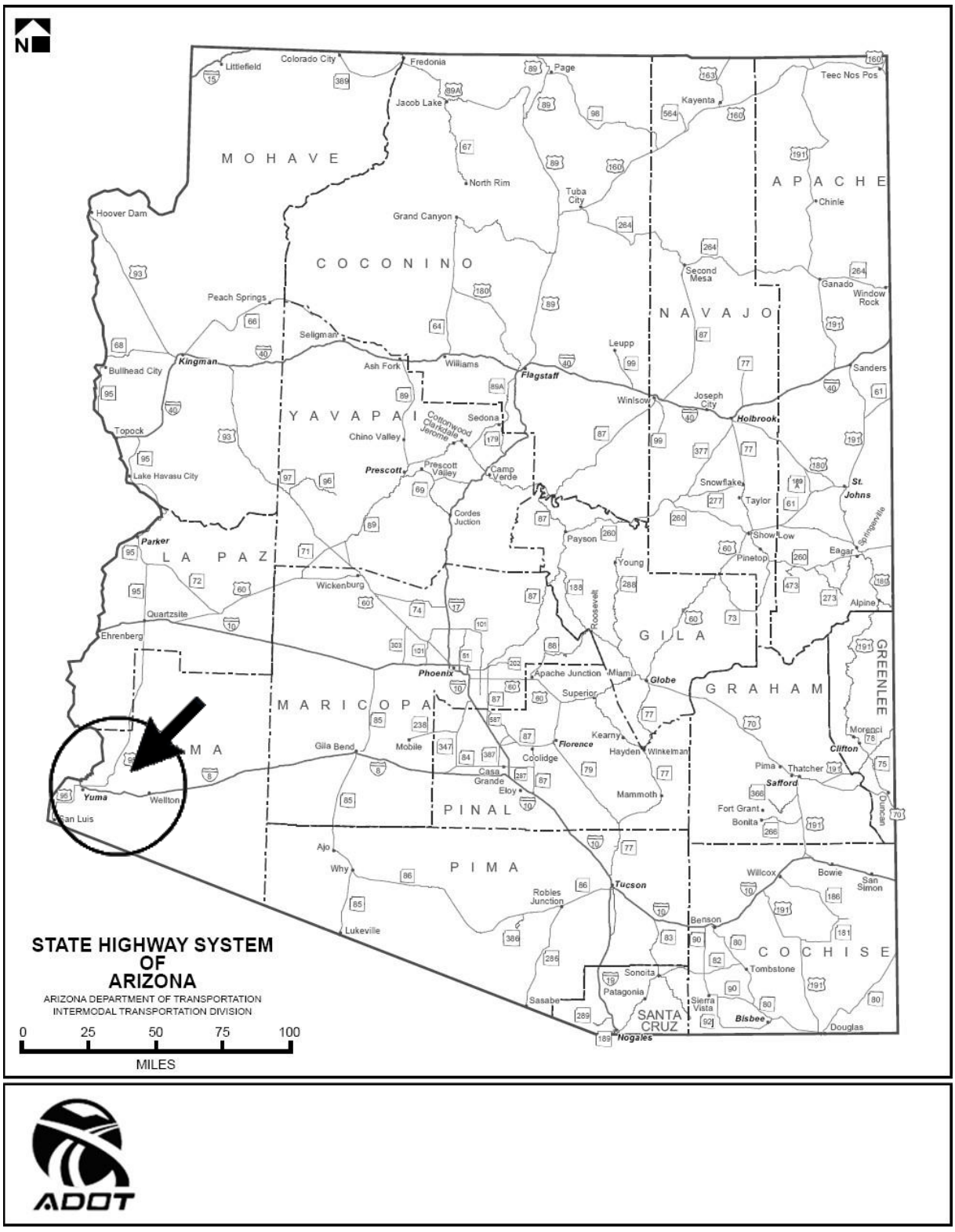


Figure 2. Project Study Area

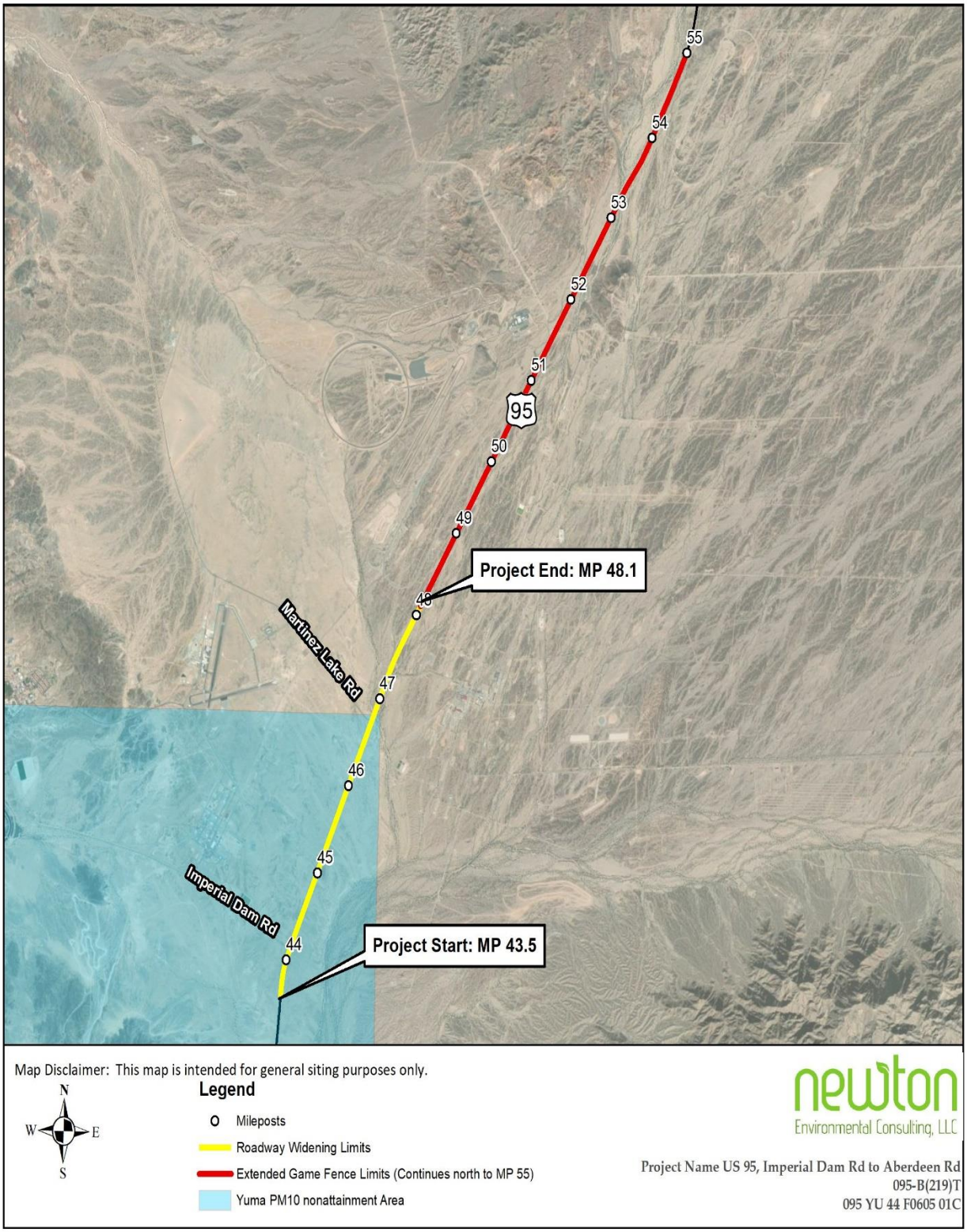
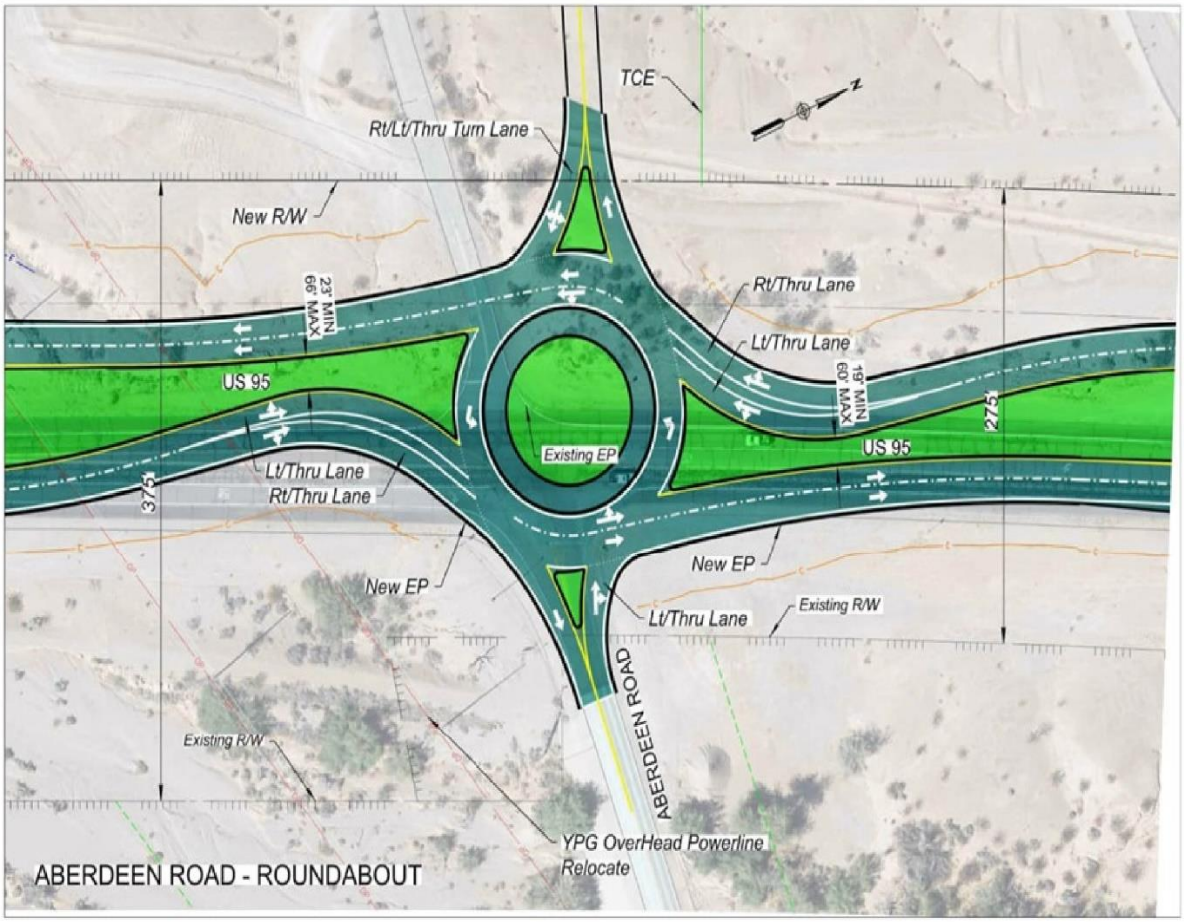


Figure 3. Aberdeen Road Roundabout (Conceptual Design)



Map Disclaimer: This map is intended for general siting purposes only.

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Figure 4. Imperial Dam Road Roundabout (Conceptual Design)

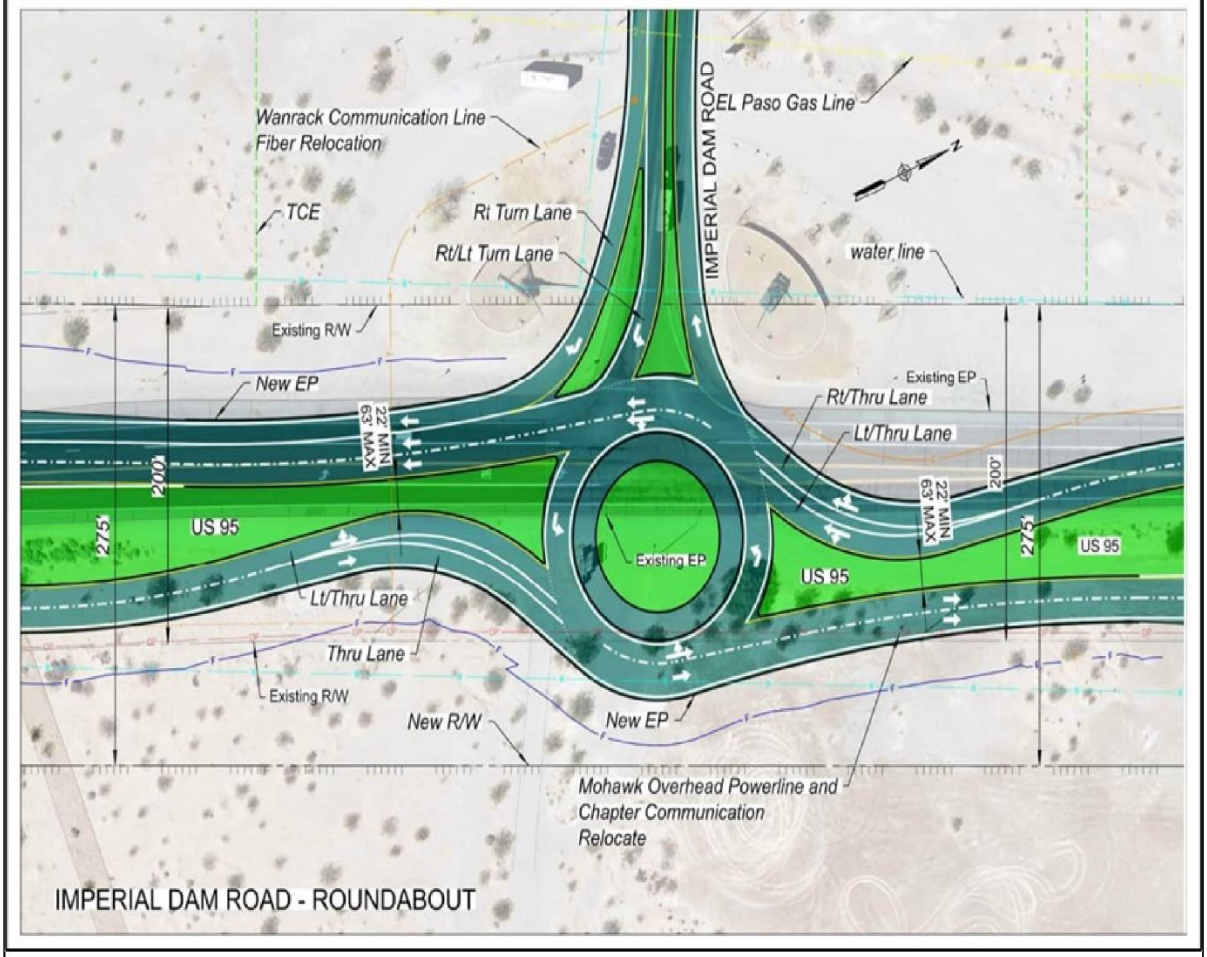

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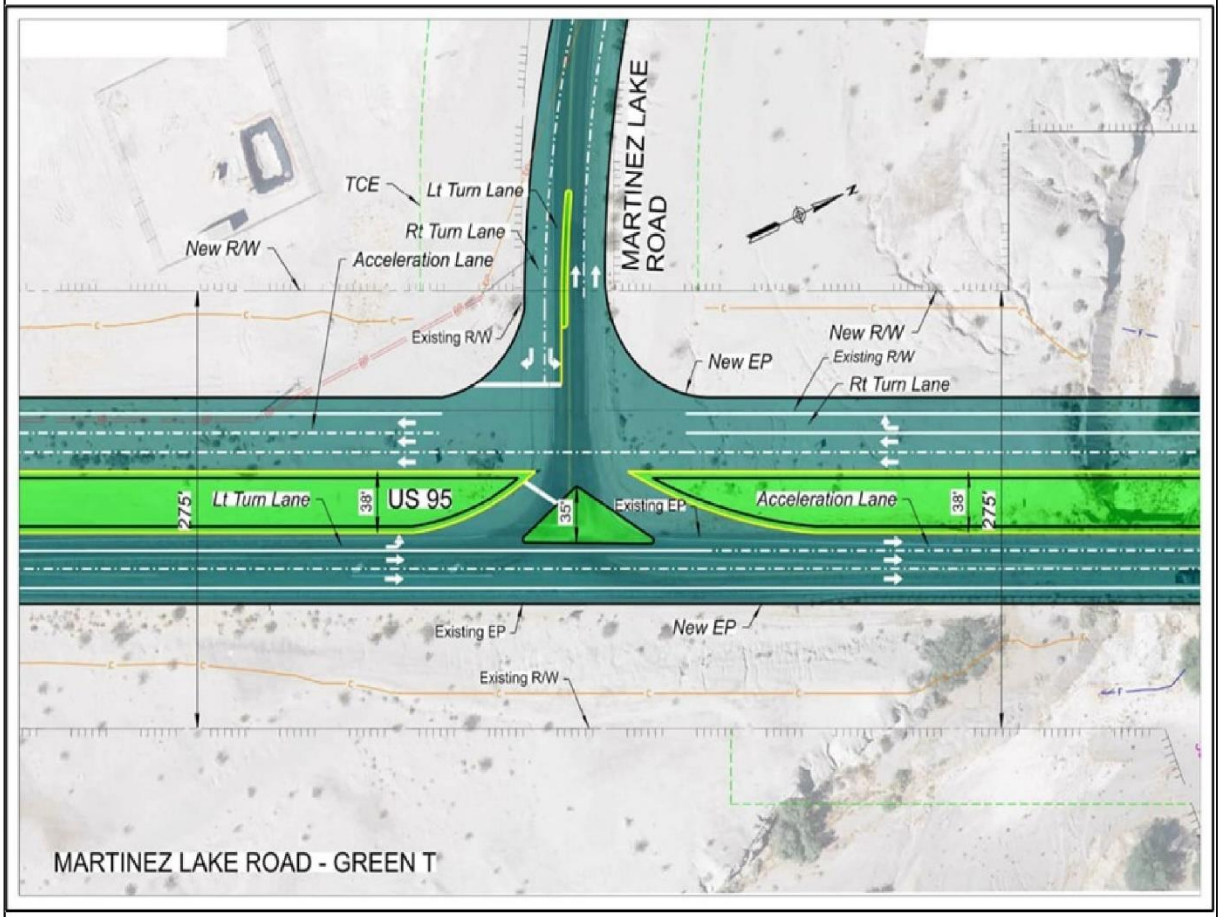
Figure 5. Martinez Lake Road Green T Intersection (Conceptual Design)



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Project Level PM_{10} Consultation Project of Air Quality Concern

PM10 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 nonattainment 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 PM_{10} or $PM_{2.5}$ 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 with 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 of 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 *PM2.5 and PM10 Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New PM2.5 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;" While these examples were provided in the rulemaking, interagency consultation will be used to determine if a project is a of air quality concern.

New Highway Capacity

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

NO - The proposed project is not a new highway project.

Expanded Highway Capacity

Is this an expanded highway projects that have a significant increase in the number of diesel vehicles?

NO – The proposed project is not an expanded highway capacity project that has a significant increase in the number of diesel-fueled vehicles related to the project. As shown in Table 1, under 2023 Existing Conditions the average daily traffic (ADT) volumes on US 95 are less than 6,000 vehicles per day (vpd). Under the 2045 Build Alternative, ADT volumes range are less than 10.000 vpd.

Compared to the 2023 Existing Conditions, the total truck ADT increases by less than 500 trucks per day as a result of the project. In addition, the total truck volumes shown in Table 1 include both medium- and heavy-duty trucks, not all of which would be diesel-fueled. The combined medium- and heavy-duty truck ADT represents a worst-case condition when considering if the increase in truck volumes represents a significant increase in the number of diesel-fueled vehicles resulting from the project.

Table 1. Average Daily Traffic and Truck Volumes

	2023 Existing				2045 No-Build[1]				2045 Build[1]				Total Truck ADT Difference (Build - Existing)
Roadway Segment	**ADT**	**Total Truck ADT**	**MT Volume**	**HT Volume**	**ADT**	**Total Truck ADT**	**MT Volume**	**HT Volume**	**ADT**	**Total Truck ADT**	**MT Volume**	**HT Volume**	
US 95, south of Imperial Dam Rd	5,911	768	423	346	9,460	1,230	677	554	9,460	1,230	676	554	462
US 95, north of Imperial Dam Rd	2,235	291	161	131	3,580	465	256	210	3,580	500	275	210	209

[1] Traffic volumes were projected to Year 2045 for both a No-Build and Build Scenario. In the US 95 corridor there are no planned changes to land uses or socioeconomic conditions; therefore, the 2045 No-Build and 2045 Build volumes are the same. Existing traffic volumes were projected to the 2045 horizon year based on the ADOT State Routes Traffic Report volume projections.

Source: Traffic volumes provided by AECOM, derived from data and analysis documented in *US 95, Imperial Dam Road to Aberdeen Road, Final Conceptual Alternatives Analysis Draft Report*, (AECOM, June 2024).

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 an increase in traffic volumes from a significant number of diesel trucks related to the project?

NO – This is not a project that affects a congested intersection at LOS D or that will change to LOS D (or greater) because of a significant increase in the number of diesel-fueled trucks resulting from the project.

As shown in Table 2, all intersections in the US 95 corridor that would be improved as a result of the project operate at LOS A or LOS B under both 2023 Existing Conditions and the 2045 Build Alternative with the recommended intersection geometry.

Total truck volumes at all intersections increase by less than 100 trucks per hour in both the AM and PM peak hours compared to 2023 Existing Conditions.

The total truck volumes at both intersections are not deemed to constitute a significant number of diesel-fueled vehicles or represent a significant increase in the volume of diesel-fueled vehicles related to the project.

Table 2. US 95 Intersection Level of Service and Peak-Hour Volumes									
Intersection	**2023 Existing Conditions**				**2045 Build (Recommended Geometry)**				
	LOS[1] (delay, sec.)	**Volumes (vph)**	**Medium Truck Volumes (vph)**	**Heavy Truck Volumes (vph)**	**LOS (delay, sec.)**	**Volumes (vph)**	**Medium Truck Volumes (vph)**	**Heavy Truck Volumes (vph)**	**Total Truck Volume Difference (Build - Existing, vph)[5]**
US 95 / Aberdeen Rd[2]	AM: A (3) PM: A (6)	AM: 510 PM: 557	AM: 37 PM: 40	AM:30 PM: 33	AM: A (6) PM: B (13)	AM: 860 PM: 920	AM: 62 PM: 66	AM: 51 PM: 54	AM: 46 PM: 47
US 95 / Imperial Dam Rd[3]	AM: A (8) PM: A (6)	AM: 959 PM: 1,042	AM: 69 PM: 75	AM: 57 PM: 61	AM: A (9) PM: A (4)	AM: 1,570 PM: 1,690	AM: 113 PM: 121	AM: 92 PM: 99	AM: 79 PM: 84
US 95 / Martinez Lake Rd[4]	AM: A (5) PM: A (5)	AM: 587 PM: 672	AM: 42 PM: 48	AM: 35 PM: 70	AM: A (5) PM: A (4)	AM: 970 PM: 1,100	AM: 70 PM: 79	AM: 57 PM: 65	AM: 50 PM: 26

[1] Stop-Controlled delay on intersecting minor street under 2023 Existing Conditions.
[2] Recommended roundabout in the 2045 Build Alternative (Figure 3).
[3] Recommended roundabout in the 2045 Build Alternative (Figure 4).
[4] Recommended unsignalized Green T intersection in the 2045 Build Alternative (Figure 5).
[5] Truck Volume Difference includes both MT and HT
MT – Medium Trucks (vehicles with 2 axles & 6 wheels; gross vehicle weight – 10,000 to 26,400 pounds)
HT – Heavy Trucks (vehicles with 3 or more axles; gross vehicle weight greater than 26,400 pounds)

Source: Traffic volumes provided by AECOM, derived from data and analysis documented in *US 95, Imperial Dam Road to Aberdeen Road, Final Conceptual Alternatives Analysis Draft Report*, (AECOM, June 2024).

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 – The proposed project does not involve construction of new bus or rail terminals.

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 – The proposed project does not involve an existing bus or intermodal terminal.

Project of Air Quality Concern Determination

Under the 2050 Build Alternative, traffic volumes on US 95 are less than 10,000 ADT. The increase in diesel-fueled truck volumes due to the project are also low; less than 500 ADT compared to 2023 Existing Conditions and include both medium- and heavy-duty trucks, not all of which are diesel-fueled (that is, the truck volumes represent a worst-case condition and likely overstate the number of diesel-fueled trucks in the project area). While overall traffic volumes are expected to increase, the project does not significantly increase diesel-fueled total truck volumes.

The March 2006 final rule also provided examples of projects that would not be covered by 40 CFR 93.123(b)(1) and would not require a PM2.5 or PM10 hot-spot analysis (71 FR 12491). This project clearly fits as "any new or expanded highway project that primarily services gasoline vehicle traffic (i.e., does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at Level-of-Service D, E, or F." Therefore, the proposed improvements on US 95 from Imperial Dam Road to Aberdeen Dam are NOT of Air Quality Concern and will not require a PM hot-spot analysis.