

**CITY OF PHILADELPHIA**  
**Department of Public Health**  
**Public Health Services**  
**Air Management Services**

**AMS Review of Air Quality Impact Statement (AQIS) Memorandum for (CHOP) – Grays Ferry Parking Garage**

**To:** File

**From:** Saeed Langroodi

**Date of Review:** September 18, 2025

**IP25-000238**

**Facility:** Children’s Hospital of Philadelphia (CHOP) – Grays Ferry Parking Garage

**Location:** 3000 Grays Ferry Avenue #B, Philadelphia, PA

**1. Background**

Air Management Services (AMS) reviewed the Air Quality Impact Statement (AQIS) prepared by Trinity Consultants on behalf of the Children’s Hospital of Philadelphia (CHOP) for the proposed Grays Ferry Parking Garage located at 3000 Grays Ferry Avenue #B, Philadelphia, PA (Figure 1). The AQIS was submitted to AMS on June 11, 2025, for review in accordance with Air Management Regulation X (AMR X).



**Figure 1. Location of the Proposed CHOP Grays Ferry Parking Garage.**

AMS’s review was conducted based on the information, data, and plans provided in the AQIS. The review was performed in accordance with applicable AMS Guidelines and AMR X requirements to evaluate whether the information submitted demonstrates compliance with applicable air quality regulations. Based on the information provided, AMS determined that the projected emissions associated with the proposed plan are below applicable regulatory thresholds.

AMS completed its review of the AQIS and approved it on September 18, 2025, following the Streets Department’s approval of the Traffic Impact Study (TIS) on September 10, 2025. A summary of the AQIS review status is provided in Table 1 below.

**Table 1. AQIS Review Status**

<b>Installation Permit No.</b>	<b>Facility Address</b>	<b>Project</b>	<b>AQIS Status</b>
IP25-000238	3000 Grays Ferry Avenue #B, Philadelphia, PA	CHOP Grays Ferry Parking Garage (Complex Source)	Approved 9/18/2025

## **2. AQIS Review Summary**

### **2.1. Project Description**

According to the AQIS submitted by the applicant, CHOP is proposing the construction of a new employee-only parking garage at 3000 Grays Ferry Avenue #B in Philadelphia. The project site is bounded by Grays Ferry Avenue to the north, South 30th Street to the east, Titan Street to the south, and South 31st Street to the west.

As described in the AQIS, the proposed parking garage will provide 1,012 employee-only parking spaces and will replace 513 employee-only parking spaces previously located at the Warfield Street surface parking lot. Construction of the parking garage is anticipated to begin in 2025 and conclude in 2026. The AQIS evaluates opening year conditions for 2026.

Based on the information provided, the proposed project meets the definition of a Complex Source and a Parking Facility under AMR X and requires a Complex Source Permit. Emissions associated with the project are limited to secondary or adjunctive activities from motor vehicles traveling to, from, and within the parking garage.

### **2.2. Emissions and Traffic Analysis Summary**

#### **2.2.1. Trip Generation**

Based on information provided in the AQIS, vehicle activity associated with the CHOP Grays Ferry Parking Garage occurs throughout the day, with peak activity during the morning and late afternoon periods. The AQIS reports the following peak-hour site activity:

- Average AM Peak Period (7:45 a.m. – 8:45 a.m.):  
83 total vehicles (67 entering / 16 exiting)

- Average PM Peak Period (3:30 p.m. – 4:30 p.m.):  
219 total vehicles (12 entering / 207 exiting)

According to the AQIS, the parking garage is assumed to operate at full capacity upon opening. Based on 1,012 parking spaces and two trips per vehicle (one inbound and one outbound), the AQIS reports an estimated maximum daily total of 2,024 vehicle trips.

### 2.2.2. Vehicle Miles Traveled

According to the AQIS, total vehicle miles traveled (VMT) were estimated based on the average distance a vehicle travels within the parking garage. The AQIS assumes an average travel distance of 0.80 miles per vehicle within the facility. This distance reflects a conservative scenario in which vehicles travel directly to the furthest parking space. Actual travel distances may be shorter or longer depending on the location of available spaces and the need to circulate through aisles. Vehicles are assumed to enter and exit the parking garage via the Grays Ferry Avenue entrance and exit.

### 2.2.3. Vehicle Types and Modeling Assumptions

The AQIS indicates that vehicle activity associated with the parking garage consists of typical passenger vehicles and passenger trucks. Heavy-duty vehicles, trucks, and buses are not assumed to utilize the parking garage. Vehicles are assumed to operate on gasoline, diesel, electric, and ethanol fuels.

The AQIS further assumes that the vehicle fleet using the parking garage reflects the vehicle type distribution for Philadelphia County. Based on MOVES5 outputs provided in the AQIS, the assumed vehicle fleet composition is summarized in Table 2.

**Table 2. Assumed Vehicle Fleet Composition by Type and Fuel**

Vehicle Category	Fuel Type	Percentage (%)
Passenger Cars	Gasoline	37.08
Passenger Cars	Diesel	0.18
Passenger Cars	Electric	2.1
Passenger Cars	Ethanol	0.03
Passenger Trucks	Gasoline	56.74
Passenger Trucks	Diesel	1.48
Passenger Trucks	Electric	2.22
Passenger Trucks	Ethanol	0.17

For emissions modeling purposes, the AQIS assumes a fleet year of 2026, corresponding to the proposed opening year of the parking garage, and applies conservative opening-year emission factors. The AQIS also assumes no idling emissions associated with garage operations; therefore, idling duration was assumed to be 0.00 hours. Emissions were calculated based on vehicle operation using the assumed internal travel distance.

The U.S. Environmental Protection Agency’s MOVES5 model was used to generate emission factors for Philadelphia County. Emissions include vehicle operation (running exhaust based on grams per vehicle mile traveled).

**2.2.4. Emissions Summary**

Based on information provided in the AQIS and assuming maximum utilization of the parking garage, estimated annual emissions are shown in Table 3.

**Table 3. Emissions Comparison to Facility-Wide De Minimis Increases<sup>1</sup>**

<b>Pollutant</b>	<b>Total emission-garage maximum utilization (tpy)</b>	<b>Facility-Wide De Minimis Increases under 25 Pa Code §127.449(d) (tpy)</b>
CO	2.13	20
NOx	0.11	5
VOC	0.05	5
PM10	0.018	3
PM2.5	0.006	3

<sup>1</sup> SO<sub>2</sub> emissions are assumed to be de minimis, based on an estimated 94% gasoline vehicles using the garage. Gasoline has a minimal sulfur content compared to other fuels such as diesel.

Based on the emission estimates and analyses provided in the AQIS, projected emissions from the proposed parking garage are below the facility-wide de minimis thresholds established under 25 Pa. Code §127.449(d).

**2.2.5. Traffic Delay Consideration**

Based on information provided in the TIS and supporting materials submitted by the applicant, the Children’s Hospital of Philadelphia (CHOP), the proposed Grays Ferry Parking Garage is not expected to result in average traffic delays of 55 seconds or greater at any intersection within the project area.

**3. Conclusion**

Based on AMS’s review of the information, data, and analyses provided in the AQIS submitted by the applicant, the Children’s Hospital of Philadelphia (CHOP), the proposed Grays Ferry Parking Garage, as described in the AQIS, demonstrates compliance with applicable air quality requirements. AMS’s determination is based solely on the proposed plan provided by the applicant and reflects an evaluation of whether the submitted information satisfies the applicable regulatory criteria under Air Management Regulation X and 25 Pa. Code Chapter 127.