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**Sent:** Friday, July 23, 2021 10:17 AM  
**To:** Barrett, Jon <[JBarrett@a2gov.org](mailto:JBarrett@a2gov.org)>; Cheng, Christopher <[CCheng@a2gov.org](mailto:CCheng@a2gov.org)>  
**Cc:** Kahan, Jeffrey <[JKahan@a2gov.org](mailto:JKahan@a2gov.org)>  
**Subject:** Question re: ZBA21-016 St. Francis of Assisi

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Hello, John and Chris -

My name is Carlene Colvin-Garcia. I currently serve as the vice-chair of the Energy Commission, and I am one of the co-authors of the EV Readiness Ordinance (EVRO). I became aware of the St. Francis of Assisi project at 2150 Frieze Ave. because it falls within the requirements of the EVRO and I've been watching its progress. I reached out to Jeff Kahan for information about the ZBA21-016 application (Jeff and I had worked on the final edits of the EVRO) and he gave me your contact information.

The EVRO was passed in February of this year. Application ZBA21-016 is one of the first variance requests that directly applies to this ordinance. I would like to provide perspective, as one of its co-authors, to the Zoning Board of Appeals. My hope is to help the ZBA come to a determination that both serves the applicant and upholds the ordinance. My comments about this variance request are in the attached document.

I would be happy answer any questions you might have about EVSE installation.

Best regards,  
-Carlene

Carlene Colvin-Garcia  
734-709-3620

The information and comments below pertain to the ZBA21-016 application: St. Francis of Assisi EV Zoning Variance Request.

**Topics covered in this document:**

[Analysis of the variance request](#)

[Comparison of the variance request with the requirement of EV charging infrastructure installation in the UDC Sections 5.19.1 and 5.19.10, Tables 5.19-1 and 5.19-3, and Article VIII](#)

[Suggestion to consider the UDC 5.19.10.C as part of the variance considerations](#)

[Suggestion to obtain details of the reported maintenance cost of the EV charging stations prior to making a final decision on the variance request](#)

[Comments regarding the applicant's concern about access by people attempting to use the charging stations during non-school hours, or when church events are not in progress](#)

**Important reference number:**

**Total number of parking spaces = 277 (p. C-3.0 of Site Plan #5)**

**Analysis of the variance request**

The required number EV-I/R/C parking spaces listed below are based on a total of 277 parking spaces per page C-3.0 of Site Plan Set #5.

UDC Table 15.9-1 requires the following percentages of EV parking spaces for the property use type of:

**Religious Assembly.**

EV-I 10% = 28 of the 277 spaces

EV-R 10% = 28 spaces

EV-C 15% = 42 spaces

Total required EV parking spaces based on this formula: 98.

Required percentages of EV parking spaces for property use type: **Private School**

EV-I 10% = 28 spaces

EV-R 15% = 42 spaces

EV-C 25% = 70 spaces

Total EV required parking spaces based on this formula: 140.

The ZBA21-016 applicant is requesting a variance for 91 EV parking spaces.

EV-I 26 spaces = 9%

EV-R 26 spaces = 9%

EV-C 39 spaces = 14%

Total number of EV parking spaces: 91

The number of spaces and corresponding percentages that the applicant is requesting a variance from do not correspond to the required EV parking spaces in UDC Table 5.19-1 for neither 'Religious Assembly,' nor for 'Private School.'

How did the applicant come up with their numbers for EV parking spaces?

**Comparison of the variance request with the requirement of EV charging infrastructure installation in the UDC Sections 5.19.10 and 5.19.10, Tables 5.19-1 and 5.19-3, and Article VIII**

The number of EV charging stations that the applicant is proposing to install is shown in the Panelboard inset on the ELECTRICAL SITE PLAN E-400 in the ZBA21-016 application.

EV-I 13 charging stations = serving 5% of total parking spaces

EV-R 16 dedicated 20 amp circuits = serving 6% of total parking spaces

EV-C 34 spaces in the electrical panel boxes = serving 12% of total parking spaces

Proposed number of EV parking spaces as compared to the Required number of EV Parking spaces:

	PROPOSED		REQUIRED: property use type		REQUIRED: property use type	
	in ZBA21-016, E-400		RELIGIOUS ASSEMBLY		PRIVATE SCHOOL	
	# spaces	%	# spaces	%	# spaces	%
EV-I	13	5%	28	10%	28	10%
EV-R	16	6%	28	10%	42	15%
EV-C	34	12%	42	15%	70	25%
<b>TOTAL</b>	<b>63</b>	<b>23%</b>	<b>98</b>	<b>35%</b>	<b>140</b>	<b>50%</b>

Let's assume the correct property use type is for calculating EV charging spaces is **Religious Assembly**.

Total number of Required EV parking spaces is 98.

Total number of Proposed EV parking spaces is 63.

Difference: 35 total EV parking spaces.

The applicant is proposing to install 35 fewer EV parking spaces than required by the ordinance. This is 36% less than the legal requirement.

Barrier Free requirement:

Of the EV-Installed parking spaces, *Table 5.19-3 Accessible EVCS EV-I Charging Stations* requires 1 standard accessible and 1 van accessible EV parking space. The ELECTRICAL SITE PLAN E-400 in ZBA21-016 does not indicate that any of the ADA parking spaces are provided access to an EV charging station. If the applicant complies with this requirement, their total EV parking spaces will increase to 65, leaving 33 that still would need to be added.

#### **Suggestion to consider the UDC 5.19.10.C as part of the variance considerations**

UDC 5.19.10-C states: "Where Parking Lots or Parking Structures are separated into distinct areas, separate garages or levels, EV Parking Spaces shall be evenly distributed among all separate areas, garages, or levels by their required percentages."

The 277 parking spaces are distributed amongst several parking lots on the applicant's property. UDC 5.19.10-C would impose added difficulty and cost to the overall project. It might be worth considering by the members of the Zoning Board of Appeals to offer an exception on this section of the EV Readiness Ordinance.

Clustering the charging stations in the parking lots closest to an electrical supply will help keep the make-ready costs as low as possible.

#### **Suggestion to obtain details of the reported maintenance cost of the EV charging stations prior to making a final decision on the variance request**

ZBA21-169 reports that the cost for annual maintenance of the EV charging equipment will be \$2,400 per station. The applicant uses this data point as a primary reason for requesting a variance. Prior to making a final decision on this variance request, it could be worth learning the details of this cost. This can add to the ZBA's knowledge and familiarity of EV charging installation projects as it faces future variance requests.

Here is a general break-down of costs for Commercial Level 2 EV charging station projects:

A - Installation Project Costs:

1. Make-ready infrastructure – This is the most expensive part of the project. It includes bringing in the necessary electrical service for the total EV charging system, installing the panel(s), wiring for the parking spaces, parking lot excavation and finish work.
2. Station Installation – Includes building/preparing station pedestal or wall mounts, wiring the stations, installing and commissioning the stations, and installing perimeter protection (e.g. bollards, wheel bumpers).

3. Procuring EV charging stations – Commercial Level 2 EV charging stations cost \$3,500 - \$8,000 per dual port charger.

**B – Operational Costs:**

Costs include electric utility charges, EV charging equipment insurance, smart charging data plan fees, network communications fees, extended warranty service fees (optional). Most providers offer 3-year warranties on equipment integrity and performance. Maintenance programs are typically not necessary because the exterior of the charging stations are quite simple, have few parts that can fail or be damaged, and are designed to withstand outdoor weather conditions, including resistance to moisture and particulate matter, as well as temperature extremes. They are easy to use. Non-warranted costs for repairs are typically handled on an as-needed basis.

**Possible reasons for the \$2,400/station/year cost could be:**

- applicant received a price quote from a vendor that is including unnecessary and inflated costs
- applicant mis-read or mis-interpreted the price quote
- applicant is mis-reporting the cost
- the price quote is for a different type of charging station than a 32-amp Level 2 charger
- or something else

It would be good to learn the details of the cost that the applicant is using for this variance request.

**Comments regarding the applicant's concern about access by drivers attempting to use the charging stations during non-school hours, or when church events are not in progress:**

- Smart charging enables the EV charging site host to control access to charging. At any time the site host chooses, charging functionality for any station can be turned off.
- The site host specifies which users can charge. Users who have an authorized RFID card, or who have the app and appropriate permissions, can use the charging equipment.
- Authorized users can be required to pay for the charging service. The site host can allow access to users who sign up for pay-to-use.
- Requiring payment for use of charging service is a way for the site host to recoup charging installation and operation costs.
- The property owner has the right to tow vehicles that are parked on the property without authorization, or that are in violation of the parking rules.