CIVIL ENGINEERING / SURVEYING / UTILITIES

April 5, 2023

Re: Google Fiber PHX HUT 114 – Parking Study
2024 E University Dr
Mesa, AZ 85213

Engineer/ Applicant

BHC
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Hut Owner/ Operator

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Project Narrative

This project is for the construction of a fiberoptic utility compound site to house an unmanned equipment building that supports Google Fiber's construction of a fiber network to offer high speed internet service to the City of Mesa. The site is proposed to be constructed in the vacant Northeast corner of the existing Grace United Methodist Church at 2024 E University Drive. During the initial review of the project submittal **PRS23-00047**, it was discovered that the property had an existing Substantial Conformance Improvement Permit (SCIP) from 2009, **ZA09-029**, that granted the existing church campus 4 years to install phased improvements to the site including the installation of a new parking lot in the location of the proposed facility. As the site is not in conformance with the conditions of the SCIP, a modification of the SCIP will be required. This parking study, in addition to the GF PHX HUT 114 Site Improvement Plans, are intended to supersede the improvements proposed in SCIP ZA09-029 while still making meaningful upgrades to the property in the form of landscaping for the existing northwestern parking lot and Right-of-way of Gilbert Rd.

SCIP ZA09-029

This SCIP was requested in 2009 to permit the phased redevelopment of the Grace United Methodist Church in response to the Gilbert/University intersection improvements. These improvements included street widening and the addition of a bus stop, which resulted in approximately 40% loss in church parking. This loss in parking was proposed to be recouped by the addition of a new North Parking Lot containing an

additional 86 parking spaces, which would bring the total property parking to 208. These spaces exceed the calculated required parking of 186 spaces, as shown in the Project Data on Sheet 1, Revised Site Plan in the SCIP submittal, and listed below.

Parking Requirement

Sanctuary:	10335/75 = 138 SP
F.H.:	3600/75 = 48 SP
Total Req'd	186 SP

City of Mesa Ordinance

Per the current Mesa Code of Ordinances this site falls within the Parking Space Category of Public Assembly and Schools > Places of Worship which requires a minimum of 1 space per 75 sqft used for public assembly.

The following values represent each building on the property square footage of public assembly space. Values are based off of floor plans where available otherwise building footprint areas were used in this calculation.

Sanctuary:	7500 / 75 = 100 SP
Fellowship Hall:	3600 / 75 = 48 SP
Classroom 1:	2300 / 75 = 31 SP
Classroom 2:	4000 / 75 = 53 SP
Classroom 3:	4000 / 75 = 53 SP
Total Required:	= 285 SP

Parking Study

Using parking data collected on site and statistical data through the Institute of Transportation Engineers (ITE) and the Parking Generation Manual, 5th Edition, it is evident that the existing parking provided for this property exceeds the current Peak Period of Parking Demand, and also meets statistical minimums for the current Land Use.

<u>On-Site Data</u>

Data was collected two separate Sunday mornings during peak hours of church services. These two days constitute the typical peak attendance numbers of weekly church services.

<u>February 12th</u>

Southern Parking Lot:	31 Used Spaces / 66 Spaces Provided
Northwest Parking Lot:	28 Used Spaces / 61 Spaces Provided
Total:	59 Used Spaces / 127 Spaces Provided
	46.5% of spaces occupied.

February 19th

Southern Parking Lot:	33 Used Spaces / 66 Spaces Provided
Northwest Parking Lot:	30 Used Spaces / 61 Spaces Provided
Total:	63 Used Spaces / 127 Spaces Provided
	49.6% of spaces occupied.

The data shows that the current provided parking exceeds the demand of the parking used during peak parking periods. Anecdotally, it should be noted that the landowners and congregation of Grace United Methodist Church state that meeting parking demand has not been an issue in the 14 years since the approval of the SCIP.

ITE Parking Generation Data

Per the ITE Parking Generation Manual, 5th Edition, this property falls into the Land Use: 560 Church with the following definition:

> *A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary; it may also house meeting rooms, classrooms, and, occasionally, dining, catering, or party facilities.*

Using the ITEParkGen Web-based App, two Data Plot graphs were created using for this property, and are shown in **Appendix A**.

> The first plot is based off of number of seats in the church. Grace United Methodist Sanctuary has an Occupant Load of 486 people. This correlates to a peak Period Parking Demand (P) of **107** Parked Vehicles.
>
> The second plot is based off gross floor area (GFA) of the church. Grace United Methodist Sanctuary is 10,335 sqft (GFA) which correlates to a peak Period Parking Demand (P) of **98** Parked Vehicles. In this study only the church space was used as it represents the only building in use during a peak parking period. The other buildings on the property are not used during this time period.

Both values fall under the existing provided 127 parking spaces.

> The final plot uses combined square footage of all buildings on the property which totals 21,400 sqft. To meet the corresponding demand a total of 202 parking spaces would need to be provided.

As noted above, the additional buildings are not used during church services and therefore would not contribute to peak parking demand. The primary uses of the additional buildings serve the church in various small functions such as bible study, citizenship classes, music practice, and other general gatherings. None generate a higher parking demand or coincide with church services.

Google Fiber Hut Site Addition

The addition of the Google Fiber Hut site will not pose an impact to the peak hour traffic generation. This unmanned utility structure generates a maximum of one additional trip per week in the form of a utility technician or maintenance worker, which is not typically scheduled on weekends. In addition, any technician or maintenance staff member will utilize the site-specific drive and provided parking within the compound, which will not impact available church parking.

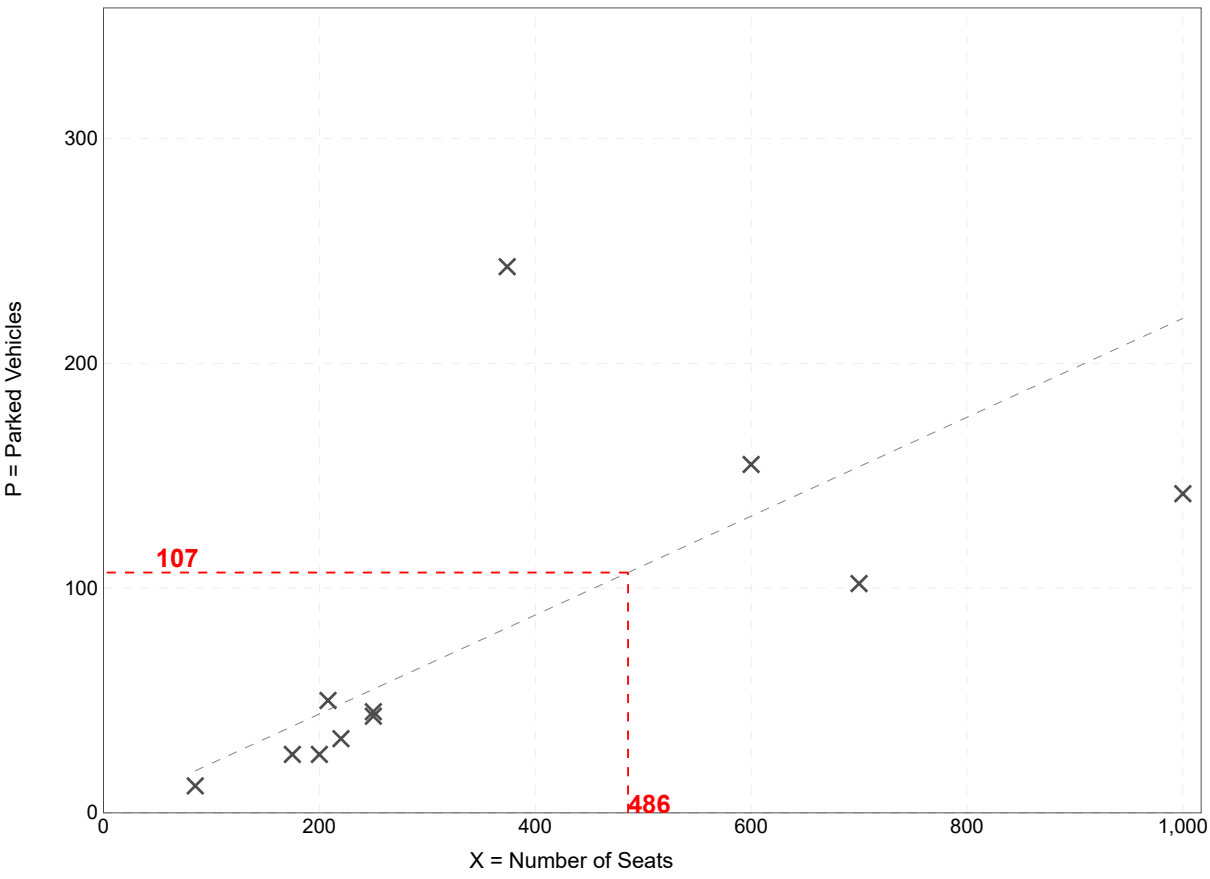
Church
(560)

Peak Period Parking Demand vs: **Seats**
On a: **Sunday**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **9:00 a.m. - 1:00 p.m.**
Number of Studies: 11
Avg. Num. of Seats: 369

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.22	0.13 - 0.65	0.15 / 0.34	***	0.15 (68%)

Data Plot and Equation



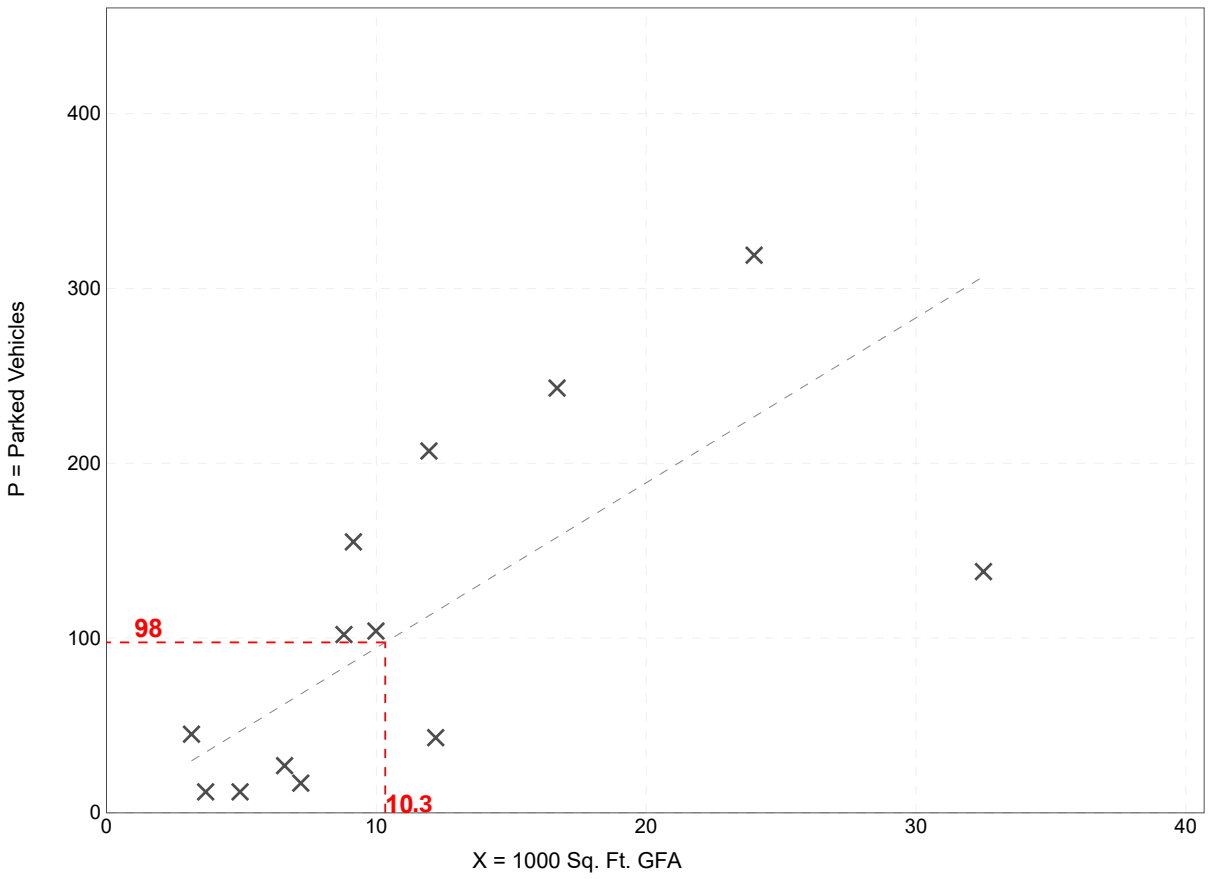
Church
(560)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Sunday**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **9:00 a.m. - 1:00 p.m.**
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 12

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
9.44	2.36 - 17.32	3.88 / 16.70	***	5.63 (60%)

Data Plot and Equation



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