



December 24, 2014

Fr. Andrew Scordalakis, Proistamenos
St. Spyridon Greek Orthodox Church
3655 Park Blvd.
San Diego, CA 92103

Reference: Church Reuse and Expansion

Dear Father Andrew:

As part of the Vision Master Plans question of the re-use of the existing Church and Temple which include:

- 1) Transformation of the existing Church and Temple to meet parish needs and the standards of ecclesiastical orthodox design.
- 2) Other potential states of utilization of the existing Church and Temple.
- 3) Evaluation of the existing conditions of the Church and Temple.

We conducted a site visit to review the existing conditions from a technical and structural standpoint.

Site Visit Team Members: CJK Design – Christ Kamages, the Leffler group Structural Engineers – Russ Leffler, Gill Company – David Mouck.

Places and Facilities Visited: Existing St Spyridon Church Temple in San Diego.

Date(s) of Site Visit: 12/18/14 - 12/19/14.

Reason for Visit: To review the existing structures and look at ways the building could be reused and identify potential issues.

Site documentation/reports/plans gathered: Original Plans (copies) were provided by Art Balouris. The original set dated 11/6/1950 and numbered 14 pages. These were reviewed and verified on site by the site visit team.

We started by identifying Key existing systems discussion points:

- 1) What is the existing system?
- 2) What is its current condition?
- 3) What would its preferred condition?
- 4) What is its required condition by code?

In reviewing the Structure with Russ Leffler we found the following during the structural Review:

Foundation

1. Existing system is concrete spread footings.
2. Current condition assumed to be good, however undersized for current codes.
3. Appropriately sized footings, or underpinning/reinforcing of existing footings is required.
4. Does not meet current code.

Main Floor

1. Existing system is concrete slab on ground.
2. Current condition appears to be good. Assumed NON-STRUCTURAL except at moment frame ties.
3. Appropriate as-is.
4. Appropriate as-is.

Loft Floor

1. Existing system is wood framing with 2x wood floor joists supporting 1x diagonal floor sheathing.
2. Current condition appears to be good, however floor diaphragm (for seismic) undersized for current codes; missing diaphragm ties and connections to bearing walls, beams, etc.
3. Diaphragm replacement and/or reinforcing is required. Framing likely acceptable.
4. Does not meet current code.

Walls

1. Existing system is 2x wood wall studs with 1x diagonal wood sheathing.
2. Current condition is good, however wall sheathing diaphragm (for seismic) undersized for current codes; missing diaphragm ties and connections to wall studs, foundations, beams, structural frames, etc.
 - O Termites: No evidence seen, however, we do not specialize in identification of termites or their damage. Qualified professional should be contacted to assess.
3. Diaphragm replacement and/or reinforcing is required. Framing likely acceptable.
4. Does not meet current code.

Roof Structure

1. Existing system is steel purlins supporting 2x wood roof joists supporting 1x diagonal roof sheathing.
2. Current condition appears to be good, however roof diaphragm (for seismic) undersized for current codes; missing diaphragm ties and connections to bearing walls, beams, frames, etc.
3. Diaphragm replacement and/or reinforcing is required. Framing likely acceptable.
4. Does not meet current code.

Lateral System (Horizontal Seismic)

1. Original building: Gabled Moment frames of wide-flange steel in north-south direction with X-braced frames of ¼" thick steel strap for east-west direction at the west end of the building only (beneath tower)
 - Wood framed walls with 1x sheathing and stucco likely contribute to the stiffness of the building; interior plaster on lath may as well.
2. Based upon review of plaster and stucco systems, the lateral system appears to be sufficient for loading experienced to date. Very few cracks observed in brittle finishes for a building this old. However the lateral system is undersized for current codes.
3. Appropriately sized moment frames through replacement or reinforcing, more frames in the east-west direction; diaphragm reinforcing or replacement (discussed above); diaphragm connection to frames for complete load path; frame and diaphragm connection to foundations; larger or reinforced foundations.
4. Does not meet current code.

Items for Follow up: A series of determinations were made regarding the existing Church Temple which inform the ways it can be reused or not. We must determine the way we would like to proceed keeping in mind our initial questions and findings.

- 1) What is the existing system?
- 2) What is its current condition?
- 3) What would its preferred condition?
- 4) What is its required condition by code?

This is the range of possible 'States' of the existing Church Temple to define a context – the master plan vision charge was an apples to apples comparison for the development of options for moving forward with the development of the existing St Spyridon Church Temple. Any renovated scenario would strive to be on a par with a new option of today's functional, technical, and ecclesiastical performance.

Actions as Church Temple Function - We have determined there are five (5) options for moving forward to development St Spyridon:

- 1) Do Nothing
Risk accessibility code violations
- 2) Paint up/ fix up- minimal work no expansion of capacity
"How low can we go" what are the minimum standards that will not trigger major expensesthis all wants to fly legally under the radar without requiring permits.
This option could trigger costs by virtue of HVAC, then Title 24, ADA, etc. – may be greater than we can anticipate
- 3) Repurpose as a Chapel and Faith Heritage Museum Library
What are the structural and code implications of creating this new use and what would be regulatory restrictions and constraints, and the cost?
Find a way to walk the line-partitioning and use the by splitting and reducing the capacity of the facilities (from Church to Chapel– Museum) Good Value
- 4) Major Renovation to meet functional requirements, increase capacity, comply with code and regulatory issues in regards to seismic and accessibility in meeting standards of today's construction in the State of California and of Orthodox Church Temples.....being able to make a list of all the improvements that would have to occur and all that cost on the exterior in the interior. Also to look at the logistics and staging of the various solutions of options that would create the desired results....from removal of iconography, stained glass....decoration and its replacement and /or recreation.
Structural/Seismic, ADA, Energy to meet code, major investment /effort, Major Cost
- 5) Demolition of existing Church Temple, with site available for other uses including a new Church Temple
The cost benefits evaluation of renovation vs. New.....

The five options above are included in the table below with additional notes for each option:

OPTION 1	ISSUE	SOLUTION	COST	NOTES
Do nothing				Potential for accessibility code violations and always being in the 'Gray Zone'
TOTAL COST			\$ -	

OPTION 2	ISSUE	SOLUTION	COST	NOTES
Minimum work, no expansion of facilities				These option will trigger costs by virtue of HVAC, Title 24, and other work probably greater than we can anticipate
	Insufficient Heating/cooling	Update HVAC		
	No insulation	Add Insulation		
		New Paint		
		New Exterior Stucco Patching		
		Update Bathrooms		Accessible path of travel required from exterior to the new bathrooms, possibly more
		Update Electrical System*		Discretionary Comply with ADA requirements
		New Carpeting		
TOTAL COST				

OPTION 3	ISSUE	SOLUTION	COST	NOTES
Repurposed as a Chapel and Faith Heritage Museum Library				
		Build divider wall between chapel and museum		Find a way to walk the line partitioning and use by splitting and reducing the capacity of the facilities (from Church to Chapel–Museum) Good Value however renovation May trigger need for structural upgrades, fire sprinklers,
		New Flooring		
		Update HVAC		
		Update Electrical System		
		New Paint		
		New Exterior Stucco		

		Patching		Title 24, and ADA
		New Bathrooms		
		Key Card Access Doors		
		Add Insulation		
		New Furnishings		Tables, chairs, etc.
TOTAL RENOVATION COST				
		New Temple		See Concept Budget Package for breakdown
TOTAL COST				

OPTION 4	ISSUE	SOLUTION	COST	NOTES
Major renovation and expansion to meet current functional requirements.				Structural/Seismic, ADA, Title 24/ Energy to meet code. Definite Sprinkler system, major investment /effort, Major Cost
		4,333 S.F. of new construction		
		New Dome		
		Seismic Retrofitting		
		Upgrade HVAC system		
		Adult Baptistry		
		New Elevator		
		New Iconography		
		New Paint		
		New Flooring		
		New Roofing		
		Add Insulation		
		New Lighting		
	New Windows			

		New Doors		
		Expanded Bathrooms		
		New Tower		
		Additional Seating		
TOTAL EXPANSION COST				See Concept Budget Package for breakdown
		New Chapel		See Concept Budget Package for breakdown
TOTAL COST W/ NEW CHAPEL				

OPTION 5	ISSUE	SOLUTION	COST	NOTES
Demolition of existing church to be replaced with a new Temple and or Chapel				
		Demo existing		
		New Temple		See Concept Budget Package for breakdown
		New Chapel		See Concept Budget Package for breakdown
TOTAL COST W/ NEW CHAPEL				

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Page 8

We stand ready to provide any assistance you require to facilitate your efforts in determining the next steps to bring your vision of the Church to fruition.

If you have any questions, please give me a call.

Sincerely,

A handwritten signature in black ink that reads "Christ J. Kamages". The signature is fluid and cursive, with the first name "Christ" being particularly prominent.

Christ J. Kamages, AIA
CJK DESIGN GROUP

Encl: Structural Review of Existing Church

DRAFT