ENTRY FORM

DVASE
2018 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under $5M		Buildings Over $100M	
Buildings $5M - $15M	x	Other Structures Under $1M	
Buildings $15M - $40M		Other Structures Over $1M	
Buildings $40M - $100M		Single Family Home	

Approximate construction cost of facility submitted:	$5 million
Name of Project:	Robbins House Addition and Renovation
Location of Project:	Philadelphia, PA
Date construction was completed (M/Y):	April/2017
Structural Design Firm:	CVM
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	Studio Joseph
General Contractor:	P. Agnes, Inc.

Company Logo (insert .jpg in box below)

Important Notes:

- Please .pdf your completed entry form and email to bsagusti@barrhorstman.com.
- Please also email separately 2-3 of the best .jpg images of your project, for the slide presentation at the May dinner and for the DVASE website. Include a brief (approx. 4 sentences) summary of the project for the DVASE Awards Presentation with this separate email.

- Provide a concise project description in the following box (one page maximum). Include the significant aspects of the project and their relationship to the judging criteria.

Located on the historic Locust Walk on the campus of the University of Pennsylvania, the renovation and addition to the Robbins House provides a cohesive home for the Penn Engineering and Wharton School's joint Jerome Fisher Program in Management and Technology. While retaining the historic 1910 Academic Gothic façade along Locust Walk, the design integrates a contemporary addition that utilized visual transparency to expand the square footage of this long, narrow plan configuration.

The Robbins House is a former three story above grade with basement residential home built in 1910 that shares a brick masonry party wall with the adjacent Sweeten Alumni House to the east, which was constructed after the Robbins House. The plan for the renovation and addition retained the original brick façade along the south and a portion of the west elevations, but all existing floor framing was to be removed and replaced with new wood floor framing due to its poor condition. To facilitate removal of the existing floor framing a substantial temporary party wall and façade bracing operation was needed for the project.

The adjacent Sweeten Alumni House was constructed tight to the party wall of the Robbins House with the floor and roof framing supported by steel angle columns braced by the brick masonry party wall. A combination of threaded rod with plate washers in adhesive and threaded rods with plate washers and beam clamps were used to brace the existing party wall back to the existing brick masonry cross walls and steel angle columns in the Alumni House. Work could not occur in the Alumni House, so pockets were made through the existing party wall to facilitate connection of the threaded rods with plate washers and beam clamps to the existing steel angles. Once the connection was made, the pockets were infilled solid with brick masonry. A flat steel channel and angle bracing system located just below the existing floor framing was utilized to brace the existing façade walls to remain.

Once the temporary party wall and façade bracing systems were in place, the existing floor framing could be removed. This allowed the contractor to demolish all levels of existing floor and roof framing, leaving the tight site clear for the rebuilding operation and to accommodate the fast-paced construction schedule.

The addition consisted of reinforced CMU shear walls at the perimeter with a CMU wall built tight to the existing brick party wall to support the new floor and roof framing on. The floors and roof were framed with a system of steel beams and TJI wood joists to clear span the 21' – 0" width of the building, while maintaining a shallow floor sandwich thicknesses of less than 16". A similar floor and roof framing system was utilized in the existing portion of the building; however, the steel beams were spliced at the third point to facilitate the beams being able to pocket into an existing brick masonry wall on both sides.

The CMU shear walls were supported on reinforced concrete foundation walls and wall footings at the north and a portion of the west elevations. The remaining portion of the west elevation wall footing and east elevation wall footing at the new CMU wall adjacent to the existing party wall required underpinning due to the adjacent building directly to the east and west.

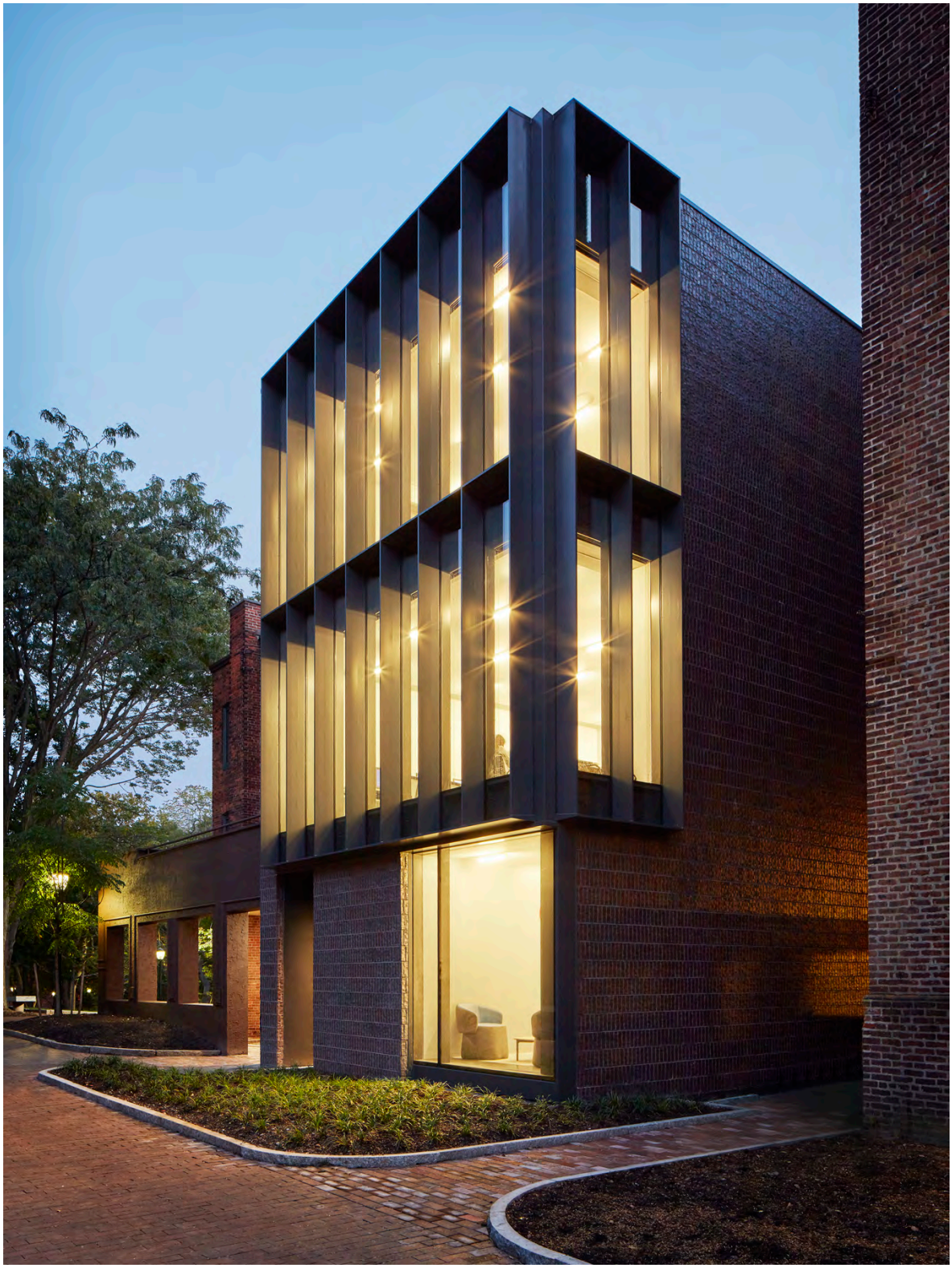
One of the highlights of the building was the north wall, which features a two-story glass curtain wall system that wraps the northwest corner and is supported by second floor framing. Architecturally, a column in the northwest corner was not desired, so cantilevered steel floor framing was used at the third floor, which also laterally braced the curtain wall system. At the completion of the new floor and roof framing installation, the temporary façade bracing steel was cut and removed, while the party wall bracing remained in place.

- The following 5 pages (maximum) can be used to portray your project to the awards committee through photos, renderings, sketches, plans, etc…

Existing party wall bracing connection to existing column

Existing party wall bracing adhesive anchor connection

Existing party wall after demo of existing buiilding



Northwest corner with clear corner

North elevation

South Elevation Along Locust Walk (salvaged historic facade)

By signing, signatory agrees to the following and represents that he or she is authorized to sign for the structural design firm of record.

All entries become the property of DVASE and will not be returned. By entering, the entrant grants a royalty-free license to DVASE to use any copyrighted material submitted.

If selected as an award winner, you may be offered the opportunity to present your project at a DVASE breakfast seminar. Would you be willing to present to your colleagues? ☐ *YES* ☒ *NO*

Submitted by:

Print name:	Signature:	Date:
Dan Donnachie		April 2, 2018

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