

# ENTRY FORM



## DVASE 2016 Excellence in Structural Engineering Awards Program

### PROJECT CATEGORY (check one):

Buildings under \$2M		Buildings Over \$100M	X
Buildings \$2M-\$10M		Other Structures Under \$5M	
Buildings \$10M - \$30M		Other Structures Over \$5M	
Buildings \$30M - \$100M		Single Family Home	

Approximate construction cost of facility submitted:	\$110 MILLION
Entry Fee:	<b>FREE</b>
Name of Project:	3601 Market
Location of Project:	36 <sup>th</sup> & Market Street Philadelphia PA 19104
Date construction was completed (M/Y):	September 2015
Structural Design Firm:	The Harman Group
Affiliation:	<b>All entries must be submitted by DVASE member firms or members.</b>
Architect:	BLT Architects
General Contractor:	INTECH Construction

Company Logo (insert .jpg in box below)



### Important Notes:

- Please .pdf your completed entry form and email to [bkoroncai@barrpino.com](mailto:bkoroncai@barrpino.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.

3601 Market is a 434,000 sf, 29-story mixed-use residential apartment building on Philadelphia's University City Science Center campus at the corner of 36th & Market Streets.

The building includes 364 two-bedroom, one-bedroom and studio apartments. To activate the street level, over 15,000 sf of retail and restaurant space is provided. There are 201 above-grade garage parking spaces provided. Amenities for the tenants include a fitness room, a yoga studio, study rooms, a communal living room and an outdoor pool deck.

The tower is a cast-in-place, two-way flat plate structure with a shear wall – frame interactive system for lateral stability. Shear walls around the core are located in the southern third of the building's length with an east-west oriented shear wall in the northern third of the building to help minimize building twist under lateral loads, in addition to resisting lateral loads. Shear walls resist approximately 85% of the total lateral loads with frame action resisting the balance of the lateral load and helping to minimize building drift. The tower structure is supported on drilled piers at the columns, with a drilled pier supported grade beam and mat foundation at the shear walls.

The primary tower footprint is a rectangular form that has been skewed on the short side by pushing the northwest corner south such that the tower ends are parallel to both Market and Filbert Streets, with the east and west faces of the tower skewed to 36<sup>th</sup> Street.

Sloped columns were provided between parking level 4A and residential / amenity level 6 to optimize the column layout for both the parking and residential levels, without the use of transfer girders.

An architectural feature, the "eyebrow", along the east elevation and returning along a portion of the north and south elevations to vertical fins the full height of the building, is supported by a galvanized tube (HSS) frame cantilevered from concrete columns cantilevered above the main roof level.

The retail level is a single steel-framed structure with a slab on metal deck roof level designed for future occupancy as an assembly usage. The retail portion of the building occupies the triangular area between the east face of the tower and 36<sup>th</sup> Street and is laterally braced by the tower.

The building is designed to achieve LEED NC-Silver certification. The Harman Group provided both structural engineering and parking consulting for the project.

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

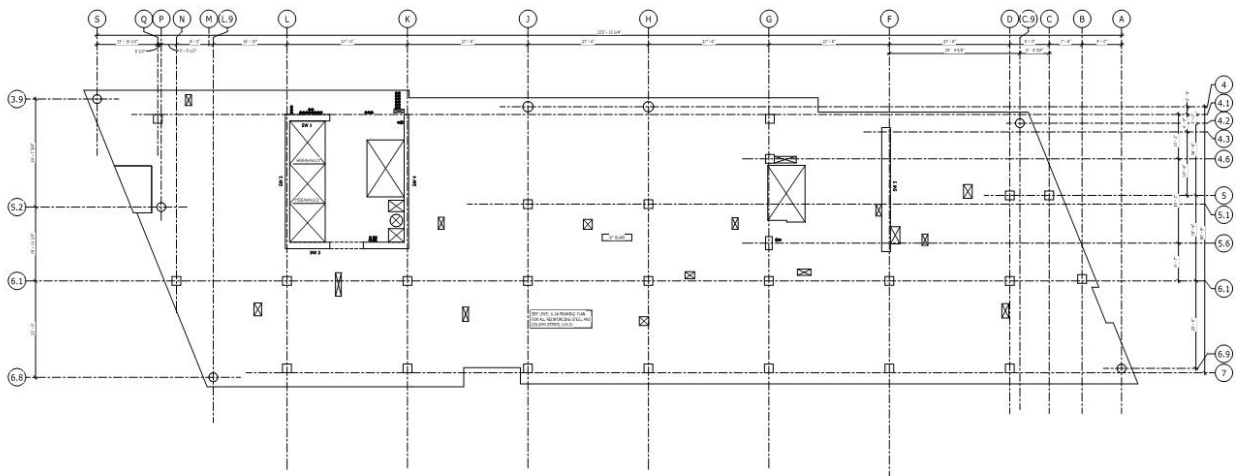


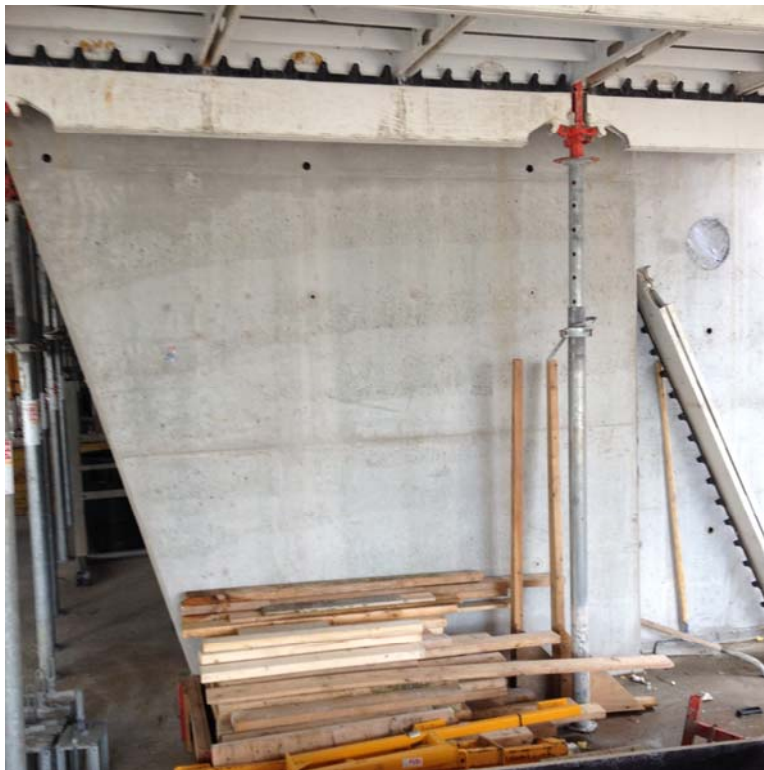
Figure 1 - TYPICAL FLOOR PLATE



Figure 2 – RENDERING LOOKING NORTH FROM 36<sup>th</sup> & MARKET



Photograph 1 – LOOKING EAST-SOUTHEAST TOWARD CORE



Photograph 2 – SLOPED OFFSET COLUMN INTEGRATED WITH SHEAR WALL



Photograph 3 – SLOPED COLUMNS BETWEEN PARKING LEVEL 4A AND LEVEL 6



Photograph 4 – LOOKING NORTHEAST FROM 38<sup>th</sup> & CHESTNUT



Photograph 5 – EXTERIOR ELEVATION 1



Photograph 6 – EXTERIOR ELEVATION 2



Photograph 7 – COMPLETED BUILDING

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 is granted to DVASE to use any copyrighted material submitted.*

Submitted by:

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