ENTRY FORM

DVASE
2018 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

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

Approximate construction cost of facility submitted:	Race Course & Welcome Center: $30 million
Name of Project:	Speed Vegas Clubhouse
Location of Project:	Las Vegas, NV
Date construction was completed (M/Y):	September, 2016
Structural Design Firm:	Pennoni Associates, Inc.
Affiliation:	**All entries must be submitted by DVASE member firms or members.**
Architect:	The Gruskin Group
General Contractor:	

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.

The first icon that visitors to Las Vegas often see is the famous, "Welcome to Las Vegas" sign along Interstate 15. That was until September 2016, when Speed Vegas opened its doors. The 100-acre site features a 1.5-mile racecourse and includes an elevation rise of 60 feet, a half-mile straight, and 12 super-elevated or "banked" corners. To observe and rest after laps around this course, Pennoni Associates, Inc. (Pennoni) was tasked to design the structure for the Trackside Clubhouse and event space.

Pennoni worked with Gruskin Group Architects of Springfield, NJ, to design a special Vegas experience that exceeded visitors' expectations. The Clubhouse needed to house both large groups easily, necessitating column-free floorplans. With backing from Clark County Commissioners, Pennoni and Gruskin knew that the finished project needed to attract visitors to Las Vegas.

The two-story clubhouse structure consists of composite open web steel joists and wide flange steel girders, curved roof beams, a long span three-inch deep acoustical metal roof deck, and conventional shallow concrete foundations. The pre-engineered metal building consists of a fabric roof covering, supported by non-prismatic built up wide flange steel beam bents designed by the manufacturer, but supported on conventional shallow concrete foundations designed by Pennoni.

The curved fabric roof was supported via large rectangular HSS beams atop two HSS columns with a clear span of almost 40'-0". Cantilevered over the outdoor deck to provide shade, the curved roof HSS were designed to balance the front and aft eaves. The entire roof structure uses only three HSS purlins to span between each HSS roof beam. Transverse column spacing was maximized to 20' O.C. limiting visual obstruction from the second-floor observation deck to the course below. The ground floor level is open to the roof above with space for the curved structural stair landing. This required 2 cantilevered W beams on the second floor to accommodate the stair. Additionally, the second level cantilevers over a portion of the pit lane with cantilevered connections over the lobby area below.

Pennoni closely coordinated with Gruskin Group, Clark County, and the manufacturer of the attached pre-fabricated garage structure. Pennoni relied upon a steel-framed structure, value engineering, and its internal expertise to accomplish this project within budget and on-time. The result is a stunning entryway to Las Vegas and the home course of the hit television show, Top Gear USA.

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

Exhibit A (Above): *Exterior view of the completed race course clubhouse showing the rear of the fabric roof, Speed Vegas sign, and the leading edge of the curved eave (right background).*
Exhibit B (Below): *Overhead 3D rendering of the parking lot, entrance drive aisle, clubhouse, garage and sheltered motorsports rest area. Rendering courtesy of the Gruskin Group.*

Exhibit C (Above): *View of the clubhouse building from the pit lane highlighting the curved roof, cantilever deck and garage-style windows facing the course. Rendering courtesy of the Gruskin Group.*

Exhibit D (Below): *View of the completed interior space with pre-fabricated metal stair showing the cantilvered W beam supporting the second level above off the HSS column (top left corner).*

Exhibit E (Above): *Arrangement of second level showing the column-free space, arc of the HSS beam supporting the roof. Note that the second level opens to the ground-level below.*

Exhibit F (Below): *Contractors work on the interior fit-out during the final phases of construction. Note the curved HSS beams at the top of the photo and clear space to below.*

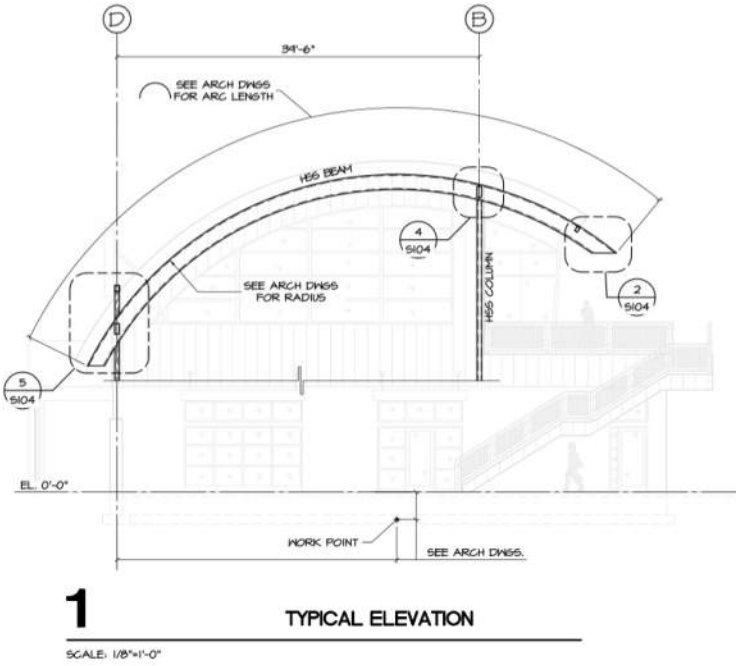

Exhibit G (Left): *Cross-section showing the curved HSS beam and spacing of two HSS columns supporting both cantilevered eaves.*

Exhibit H (Below): *Contractors work on the interior fit-out during the final phases of construction. Note the curved HSS beams at the top of the photo and clear space to below.*

Exhibit I (Above): *Ironworkers erect one of the purlins supporting the roof. The frame showing the steel walls of the garage and the large clear span of the ground-level space (lower right).*
Exhibit J (Below): *Contractors finalize the exterior siding after pouring the second level slab and installing the roof panels in preparation for the fabric covering.*

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:

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