

# QUALIFICATIONS SUBMITTAL

## Formwork & Curved Framing

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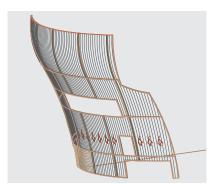
## **OVERVIEW**

With decades of experience and tens of thousands of successfully completed projects, Radius Track Corporation pioneered pre-curved cold-formed steel (CFS) framing solutions. Our expertise stems from breakthrough non-structural and structural framing technology that frees architects to design and contractors to execute curved and complex surfaces with efficiency and precision.

Since the first patented invention, Radius Track® expanded manufacturing capabilities to join a custom-designed Computer Numeric Controlled Bending (CNCB) system with large machines to automatically fabricate custom formed framing profiles. Much more than a manufacturer of precision CFS framing, Radius Track® understands architecture, interior design, BIM, and framing. Our design team works with architects, engineers, construction managers, and contractors to translate design intent into constructible framing solutions through 3D modeling, data management, coordination, and CNC fabrication. Our solutions are grouped into four categories:

- Design Assist BIM/3D Modeling
- Curved-Right® Custom Framing
- Unitized Framing Solutions

Radius Track is a privately owned and operated corporation dedicated to providing constructible solutions for innovative designs using teamwork, coordination, technology, and experience. Whether we are working with you to design framing for a doubly curved feature wall, a grand dome with inset windows, a truncated conical unitized façade supporting an oculus, or furring for a curved wall, our goal is to provide a framing solution to meet the design intent and project specifications on time, within budget.







## **Formwork & Curved Framing**



## **Turkish American Community Center**

Lanham, MD • Architect: Fentress Architects



### **Fulton Transit Center**

New York, NY • Architect: Grimshaw Architects

#### **Awards**

- 2012 Annual Excellence Award Walls and Ceilings Magazine\*\*
- 2014 Project of the Year Award NYS Society of Professional Engineers\*
- 2014 Brunel Award Commendation recognizing excellence in Architecture & Design: Railway\*



### Kauffman Center for the Performing Arts: Helzberg Hall

Kansas City, MO • Architect: Moshe Safdie of Safdie Architects

#### Awards

• 2011 Annual Excellence Award – Walls and Ceilings Magazine\*\*



### New World Center: Atrium, Rehearsal Rooms & Offices

Miami Beach, FL • Architect: Frank Gehry Partners

#### **Awards**

 2010 CISCA Construction Excellence Awards, Gold Award Winner, Interior Finishes\*\*



### **Experimental Media and Performing Arts Center**

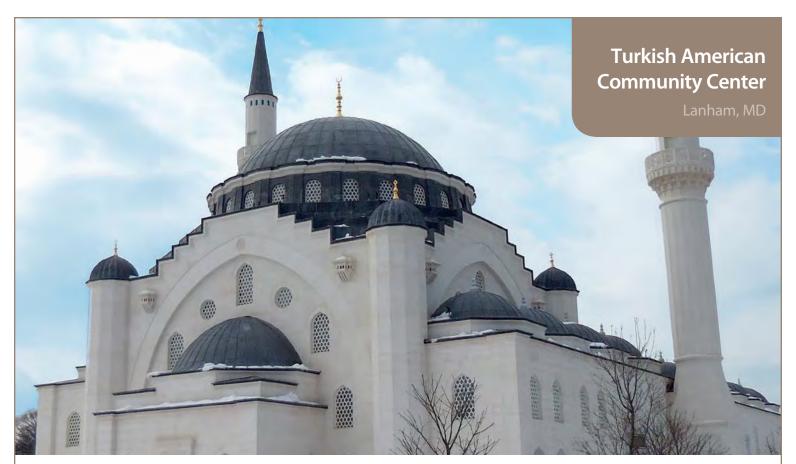
Rensselaer Polytechnic Institute, Troy, NY • Architects: Architectural Woodwork Industries, Davis Brody and Nicholas Grimshaw & Partners

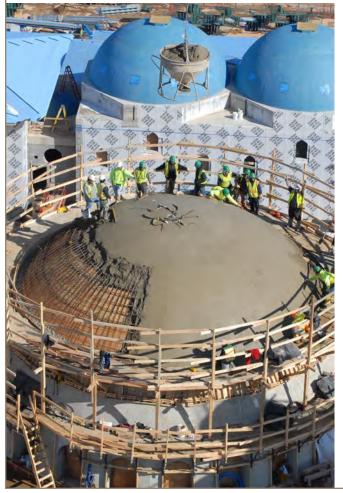
#### Awards

 2008 Western Red Cedar Lumber Association Architectural Design Award, Grimshaw Architects\*

\* Project Awards, \*\* Radius Track Awards







## CFS Framing Assemblies Used as Concrete Formwork for Three Large Domes

Architect: Fentress Architects General Contractor: Balfour Beatty

Concrete Subcontractor: Facchina Construction Corporation, Inc. Curved Dome Formwork Solution Provider: Radius Track Corporation

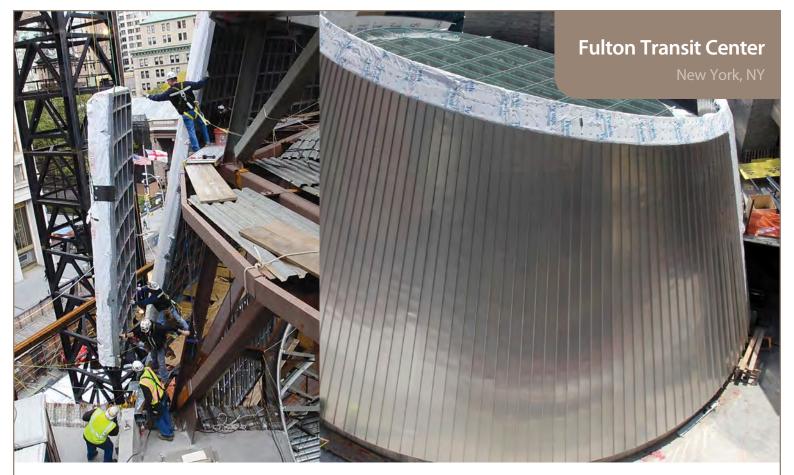
Considered the crowning achievement of the Turkish American Community Center, the mosque has a main dome 50'-0" above the floor. The poured concrete dome soars more than 72' in the sky and spans just over 44' from one side to the other.



Forming this lofty dome with a light weight Curved-Right® Dome Formwork assembly made short, safe, work of the job. The Radius Track Team designed and fabricated cold-formed steel (CFS) framing for the large mosque dome and the 2 bathhouse domes.



The light weight of the CFS framed dome formwork assembly allowed them to build the 3 forms on the ground and hoist each into place with a crane. The concrete subcontractor estimated this saved almost one month of schedule.





## Lower Manhattan's Fulton Street Transit Entrance

**Architect: Grimshaw Architects** 

General Contractor: Plaza-Schiavone Construction Joint Venture

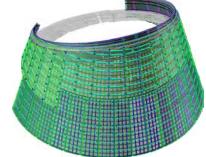
Sub Contractor: Donaldson Organization

Unitized & Curved Framing Solution Provider: Radius Track Corporation

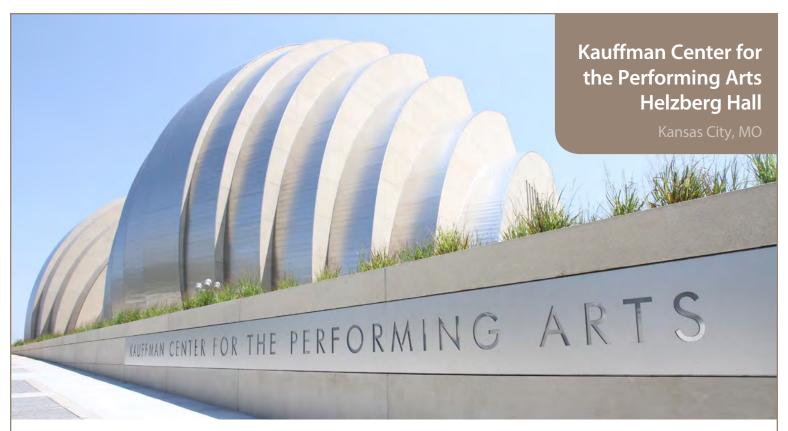
Designed by Grimshaw Architects, Fulton Center's entry space offers views to the sky through a 60 foot tall conical oculus with a base diameter of 90 feet.

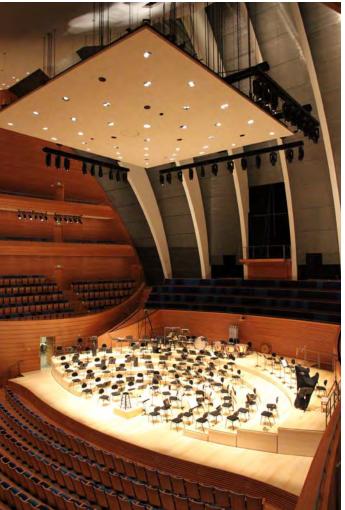


Unitized CFS panels, single sourced by Radius Track® from sub-frame up to finished surface, were used to cost effectively construct this complex feature in the tight urban site.



Designed and modeled in 3D prior to fabrication, the unitized panels and adjacent systems were analyzed for clash detection and fit.





## Hidden Convex Curves Deliver Sound to Concertgoers at Helzberg Hall

Architect: Moshe Safdie of Safdie Architects
General Contractor: Performance Contracting Inc.

Curved Framing Solution Provider: Radius Track Corporation

The gentle curves of the 100-foot high ceiling, 50-foot high orchestra reflector, and acoustically transparent metal mesh between tall ribs behind the orchestra floor are only part of the acoustic story at Helzberg Hall.

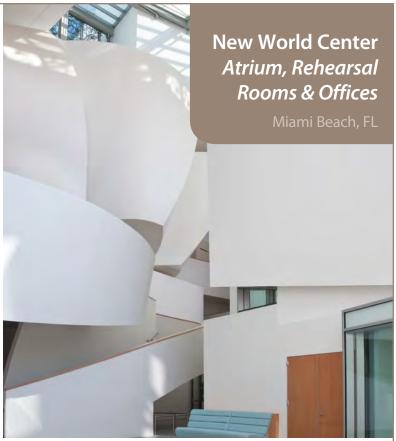


Behind the acoustically transparent metal mesh, convex reflective surfaces in 3 sizes, small medium and large, prevent acoustic focus and provide diffusion of sound to all seats in the audience.



Radius Track® used 3D modeling to design the curved CFS framing solution for each size of the convex shape, fabricated the pieces needed, labeled them, and shipped them to the site ready to be installed.





## Curved Acoustic Mass Walls Isolate Rehearsal and Office Spaces

Architect: Frank Gehry Partners
General Contractor: Facchina Construction of Florida

Curved Framing Solution Provider: Radius Track Corporation

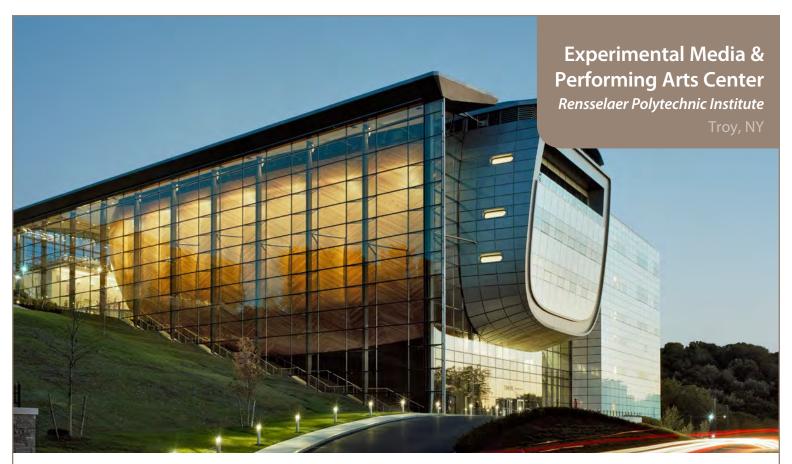
Winner of a CISCA Construction Excellence 2010 Gold Award, New World Center's Atrium space is filled with geometrically unique shapes floating overhead. Much more than ornament, each of the shapes holds an office or rehearsal space acoustically separated from each other and the atrium.



Radius Track Corporation designed each unique framing assembly for the office and rehearsal spaces where Ninety-four percent of the curved framing members fabricated are one-of-a-kind including the knife edges.



Visually interesting, the mass of each curved surface isolates each space acoustically. Curved-Right® framing elements help support 3" shot crete, 1 layer of varnished MDF, and 2 layers of gypsum wall board.





## *Is It Any Wonder Why It's Called a Performing Arts Center?*

Architects: Architectural Woodwork Industries, Davis Brody, and Nicholas Grimshaw & Partners

General Contractor: AM Contracting and Eastern Exterior Wall Systems Curved Framing Solution Provider: Radius Track Corporation

Resembling a giant ancient ship, the complicated structure presented many architectural and design challenges. Radius Track® worked with Ron Evans of Architectural Woodwork Industries and other project architects to avoid conflicts not only by creating mock-ups of the giant curved surface, but also by then translating a substantial amount of data to custom fabricate the precise steel studs needed for the project.



The walls of the hull were curved in both vertical and horizontal dimensions.
Curved-Right® studs were pre-curved to the exact radius specified.



The Radius Track Design Team used Rhino 3D modeling software to design the 218 unique pairs of steel stud and track panels for the framing of the hull's exterior surface.