

CONCRETE INNOVATIONS PERSON OF THE YEAR

CELEBRATING SUCCESS

Highlights of the Concrete Innovations Awards Program

Lionel Lemay, NRMCA

CONCRETE INNOVATIONS

 **NRMCA**

 **AMERICAN SOCIETY OF CONCRETE CONTRACTORS**
Enhancing the Capabilities of Those Who Build with Concrete

2023 AWARDS

INNOVATIVE PERSON OR TEAM

INNOVATIVE PRODUCT OR SERVICE

INNOVATIVE PROJECT

INNOVATIVE COMPANY

www.concreteinnovations.com/awards

CATEGORY: INNOVATIVE PROJECT

21 NOMINEES

| | | |
|--|--|--|
| ASU Interdisciplinary Science & Technology Building | Intuit Dome Project | PHNX1/Palos Residence |
| Boston University Center for Computing & Data Sciences | Iowa Highway 3 Accelerated Concrete Overlay | RBC Gateway |
| Casa Adelante - Mar Structural Design | Meta Data Center | Remy Wines Carbon Sequestering Concrete Slab |
| Calgary Cancer Centre | Metropolitan Park Phase 7 and 8 | S & W Ready Mix (Titan America) |
| Cinepolis Theater | New Jacobsen Headquarters | Sales Force Tower |
| Connecticut DEEP Western Headquarters, Black Rock State Park | Otsego Ready Mix's New Plant | Seattle Aquarium Ocean Pavilion |
| Indiana University Ferguson International Center | Partnership in Sustainability, Amazon Web Services (AWS) | Snapdragon Stadium |

NOMINEE

Nominee Name

ASU Interdisciplinary Science & Technology building 7 (ISTB-7)

Martin Marietta

Category
Innovative Project



NOMINEE

Nominee Name

**Boston University
Center for
Computing & Data
Sciences**

Holcim

Category
Innovative Project



NOMINEE

Nominee Name

**Calgary Cancer
Centre**

Lafarge Canada

Category
Innovative Project



NOMINEE

Nominee Name

Casa Adelante - Mar Structural Design

Central Concrete Supply,
a Vulcan Materials Company

Category

Innovative Project



Casa Adelante
San Francisco

**100% Affordable
Senior Housing**

**25% of Units for
Formerly Homeless**

Developers:
Chinatown Community Development Center &
Mission Economic Development Agency

Architect: Herman Colliver Locus



NOMINEE

Nominee Name

Cinepolis Theater

Fox Blocks

Category

Innovative Project



NOMINEE

Nominee Name

**Connecticut DEEP
Western
Headquarters,
Black Rock
State Park**

O&G Industries

Category

Innovative Project



NOMINEE

Nominee Name

**Indiana University
Ferguson
International
Center**

Irving Materials Inc

Category

Innovative Project



NOMINEE

Nominee Name

Intuit Dome Project

Catalina Pacific Concrete,
Largo Concrete, Walter P
Moore

Category

Innovative Project



NOMINEE

Nominee Name

Iowa Highway 3 Accelerated Concrete Overlay

Croell, Inc.

Category

Innovative Project



NOMINEE

Nominee Name

Meta Data Center

Ozinga

Category

Innovative Project



NOMINEE

Nominee Name

Metropolitan Park Phase 7 and 8

Miller & Long

Category

Innovative Project



NOMINEE

Nominee Name

New Jacobsen Headquarters

Staker Parsons,
a CRH Company

Category
Innovative Project



NOMINEE

Nominee Name

Otsego Ready Mix's New Plant

Otsego Ready Mix

Category
Innovative Project



NOMINEE

Nominee Name

**PHNX1/Palos
Residence - First
Type II Non-
Combustible, Net-
Zero Home in the US**

Fox Blocks

Category
Innovative Project



NOMINEE

Nominee Name

**Partnership in
Sustainability,
Amazon Web
Services (AWS)**

American Rock Products,
a CRH Company

Category
Innovative Project



NOMINEE

Nominee Name

RBC Gateway

Cemstone Product Company

Category

Innovative Project



NOMINEE

Nominee Name

Remy Wines Carbon Sequestering Concrete Slab

Wilsonville Concrete

Category

Innovative Project



NOMINEE

Nominee Name

Residential Project with Low Carbon Concrete

S & W Ready Mix,
a Titan America company

Category

Innovative Project



NOMINEE

Nominee Name

Sales Force Tower

Prairie Materials

Category

Innovative Project



NOMINEE

Nominee Name

**Seattle
Aquarium Ocean
Pavilion (SAOP)**

Stoneway

Category

Innovative Project



NOMINEE

Nominee Name

**Snapdragon
Stadium**

Cemex

Category

Innovative Project



CATEGORY: INNOVATIVE PROJECT

5 WINNERS

WINNER: BOSTON UNIVERSITY CENTER FOR COMPUTING & DATA SCIENCES



WINNER: BOSTON UNIVERSITY CENTER FOR COMPUTING & DATA SCIENCES

- **19 stories, 350,000 sq ft**
- **Net zero energy**
- **Low Carbon Concrete**
 - **Mat Foundation - 70% SCM**
 - **Core Walls - 35% SCM (10 ksi)**
 - **Foundation Walls - 50% SCM**
 - **Columns - 35% SCM (8 ksi)**
- **100% fossil fuel free**
- **Geothermal wells, solar and wind**
- **LEED Platinum**
- **Most sustainable building on campus**

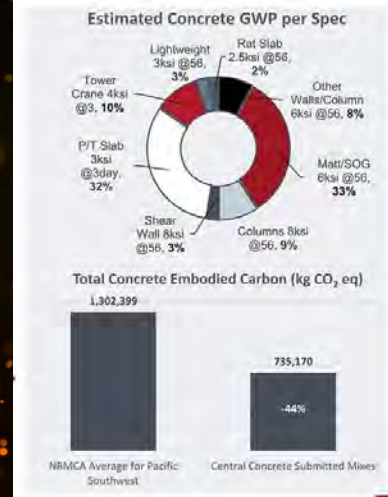


WINNER: CASA ADELANTE - MAR STRUCTURAL DESIGN



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- **Affordable housing**
- **20% units for homeless**
- **Shelter-in-place seismic system**
- **A near-zero cost premium**
- **U.S. Resiliency Council Gold Rating**
- **Zero days to recovery**
- **Concrete 44% reduction from NRMCA Benchmarks**



WINNER: CONNECTICUT DEEP WESTERN HEADQUARTERS, BLACK ROCK STATE PARK



WINNER: CONNECTICUT DEEP WESTERN HEADQUARTERS, BLACK ROCK STATE PARK

- **First net-zero and LEED Platinum building in CT**
- **Consolidates staff, saves energy, and money**
- **Thermal mass walls**
 - **Trombe wall**
 - **Passive cooling in summer**
 - **Passive heating in winter**
- **Earth shelter, photovoltaics, geothermal, radiant heated polished slabs**
- **Concrete had 40% replacement with ground glass pozzolan**

SUMMER DESIGN DAY

DAYTIME (COOLING MODE)



SUMMER NIGHT

MECHANICAL NIGHT-FLUSH



WINNER: REMY WINES CARBON SEQUESTERING CONCRETE SLAB



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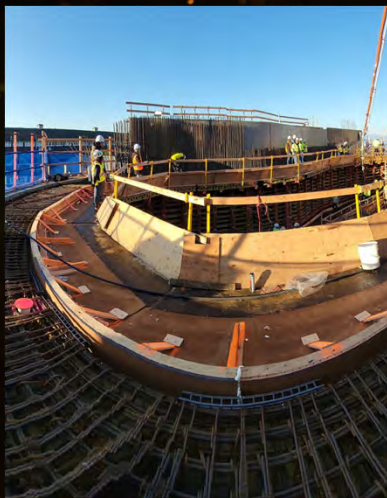
- **Biochar concrete**
- **Locks CO2 from biomass into usable form**
- **Wilsonville Concrete tested concrete**
 - **Strength**
 - **Freeze-thaw**
 - **Abrasion**
 - **Air**
 - **Slump**
 - **Finishability (mock-ups with contractor)**
- **50 kg CO2 sequestered in slab**
- **140 kg avoided from mix optimization**

Project Summary

- **Client/Project:** Remy Wines Winery
- **Location:** Dayton, OR (June 1, 2022)
- **Project:** Adaptive Reuse Conversion of Ag Barn into Production Winery
- **Concrete:** 5,000 square foot slab dosed at 100lbs per yard
- **Sequestration:** 10,230lbs of CO2 Equivalent locked into concrete

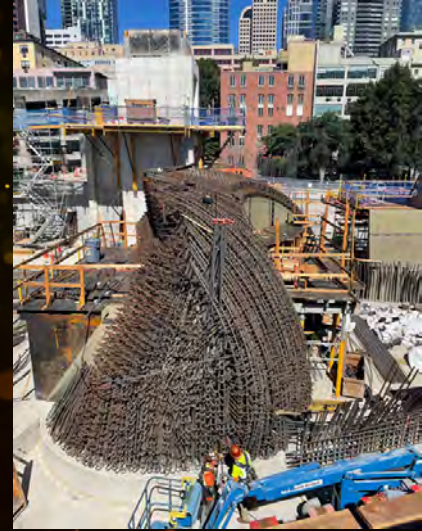


WINNER: SEATTLE AQUARIUM OCEAN PAVILION



WINNER: SEATTLE AQUARIUM OCEAN PAVILION

- **Many challenges**
 - **Unique shape**
 - **Structural design**
 - **Extremely dense reinforcement**
 - **No cold joints**
 - **Corrosion resistant**
- **High strength concrete with high flowability**
- **Use of three mock-ups**
- **10,000 psi grout mix**
 - **38% reduction in CO2 from NRMCA benchmark**
 - **50% slag mix**
 - **Eliminated epoxy coating on reinforcement**



2024 AWARDS

- **Eligibility**
 - Building or infrastructure project
 - Built in U.S. in the last five
 - **An NRMCA member company must have been involved**
 - Anyone can submit a nomination
- **Areas of Excellence**
 - Advanced quality control, innovative cements, supplementary cementitious materials, admixtures, aggregates, recycling methods, carbon capture and sequestration technologies, measurement tools or innovative designs
- **Judging Criteria**
 - Demonstrate improvements in performance and carbon footprint
- **Deadline**
 - January 31, 2024

