

AIA Best Practice

Wells is a registered provider with The American Institute of Architects Continuing Education Systems. Credits earned on completion of this program will be reported to CES Records for AIA members. Certificates of Completion for non-AIA members are available on request.

This program is registered with the AIA/CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentations.





Design Tips and
Maintenance Best Practices for

Prefabricated Food Processing



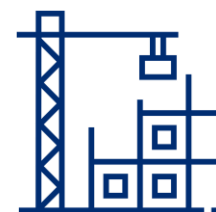
Wells CEU Webinar
11/16/23



70+
years



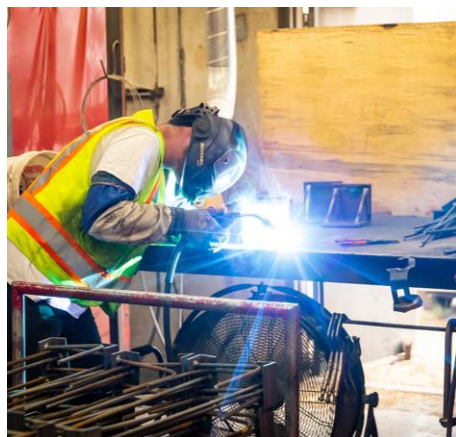
1100+
employees



750+
annual projects



80+
NPS



Manufacturing locations and reach.

Wells has the capabilities to support projects of all scales.

Manufacturing Locations

Albany, MN

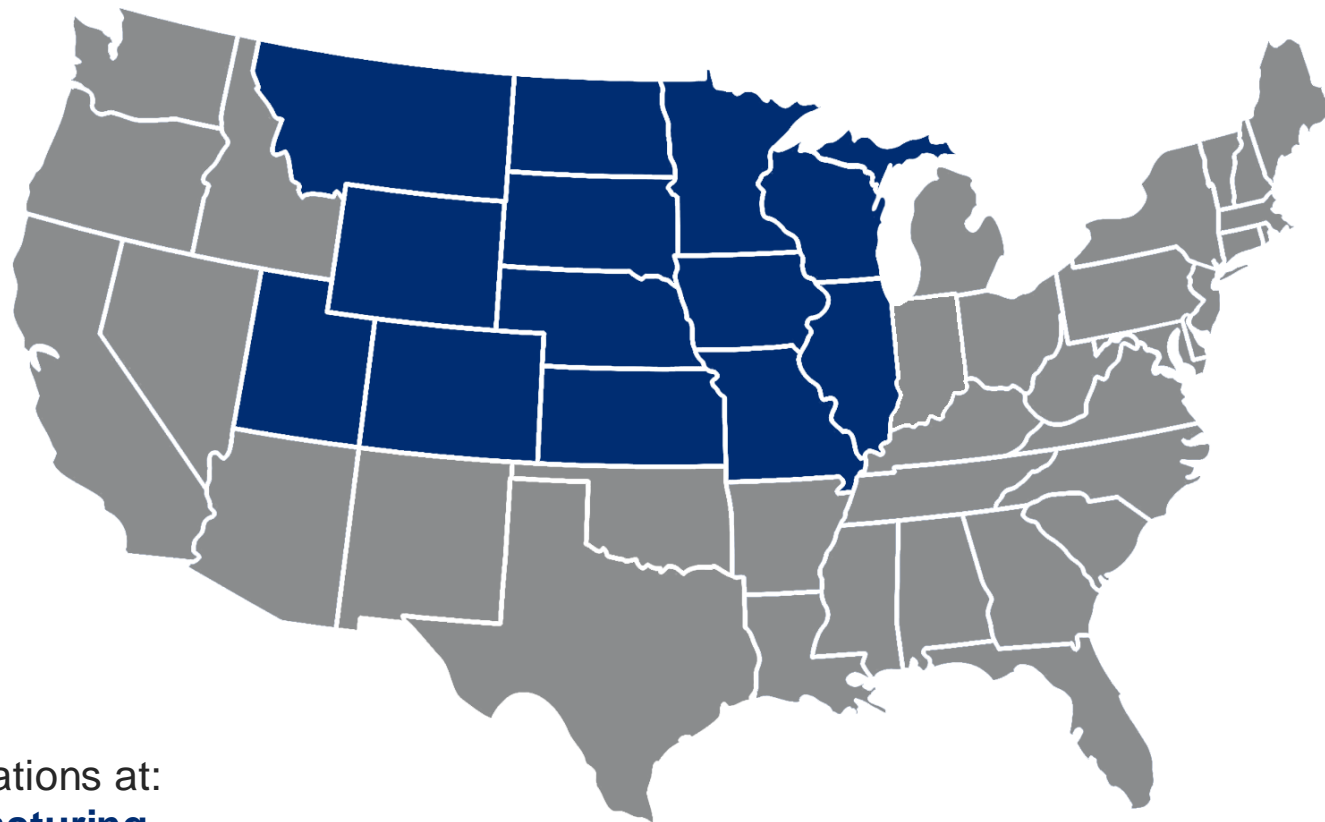
Brighton, CO

Crystal Lake, IL

Rosemount, MN

Wells, MN

Valders, WI



Learn about our manufacturing locations at:
wellsconcrete.com/video-manufacturing



A catalyst for change.

The values that our teams live by influence project success.

SAFE



Our safety program ensures a safe work environment for our people and partners.

DRIVEN



We work tirelessly to exceed industry expectations.

INVENTIVE



We find creative ways to solve problems and inspire architecture.

COLLABORATIVE



We collaborate with our partners from project start to finish.

Transforming the way you create.

Committed to our partners' success – from vision through construction and beyond.



**Preconstruction
and Design**



**Prefabricated
Building Systems**



**Erection
and Installation**



**Sealants
and Restoration**

Wells Market Sectors



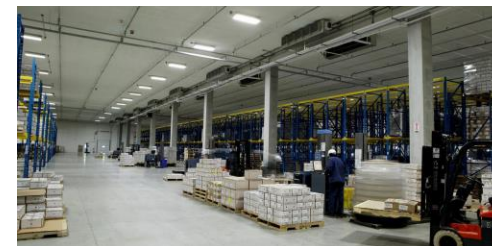
Civic & Community



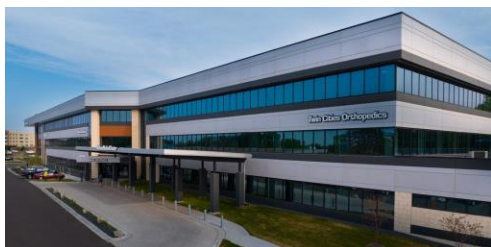
Data Centers



Education



Food Processing



Healthcare



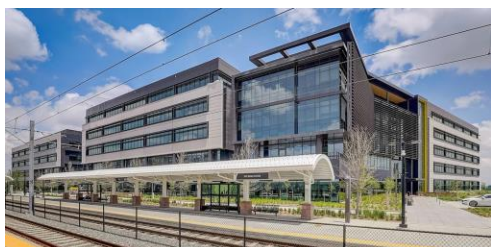
Industrial & Warehouse



Manufacturing



Multi-Family



Office




Parking



Sports & Entertainment



Transportation & Infrastructure



Learning Objectives

1. Discuss the performance of food processing facilities beyond typical service requirements.
2. Identify the constraints present in food processing facilities related to material selection.
3. Plan how owners and designers can produce successful outcomes on food processing projects.
4. Learn how to use resources available to aid in determining appropriate solutions for food processing.



Cleanliness & Durability

Premium Concrete Surface

- Void free USDA Grade A finish
- Covered connections or stainless steel if exposed
- Works integrally with and is accepting of many different coatings systems
- Holds up to sanitization protocols
- Reinforcement protection with cover and coatings



Prefabricated Components

- Insulated Walls (architectural exterior or interior coolers and freezers)
- Solid Walls (interior partitions)
- Double Tees
- Pocket Rectangular Beams
- Flat Slabs
- Transfer Beams
- Columns
- All produced and stored off site to assemble quickly once site is ready



Joint Sealants and Coatings

Joint Sealants

USDA Accepted

- Master Builders Solutions NP150
- Manus ManusBond 75 AMC
- Tremco Dymonic FC (With Letter) - Inferior Movement

Coatings

- Tnemec Stranlok
- Standard Epoxy Paint/Coating
- Floor coatings
- Waterproofing



Expansion Joints

Building Expansion Joints (Greater than 1.5")

Examples

- Precompressed Material or Winged Joints including installation of cover plates



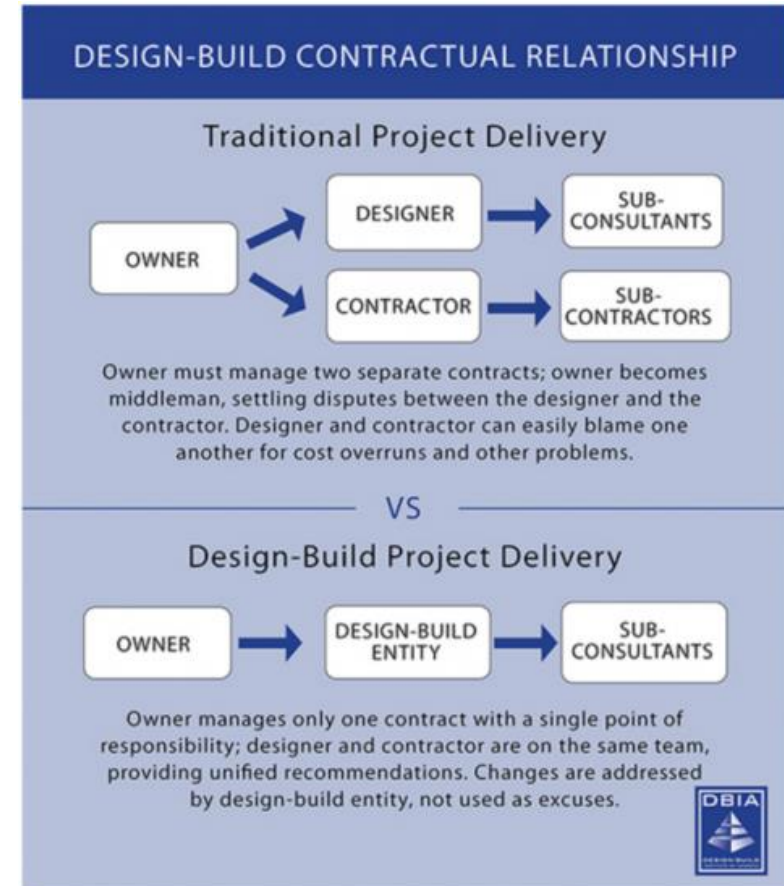


Preconstruction & Design Integration



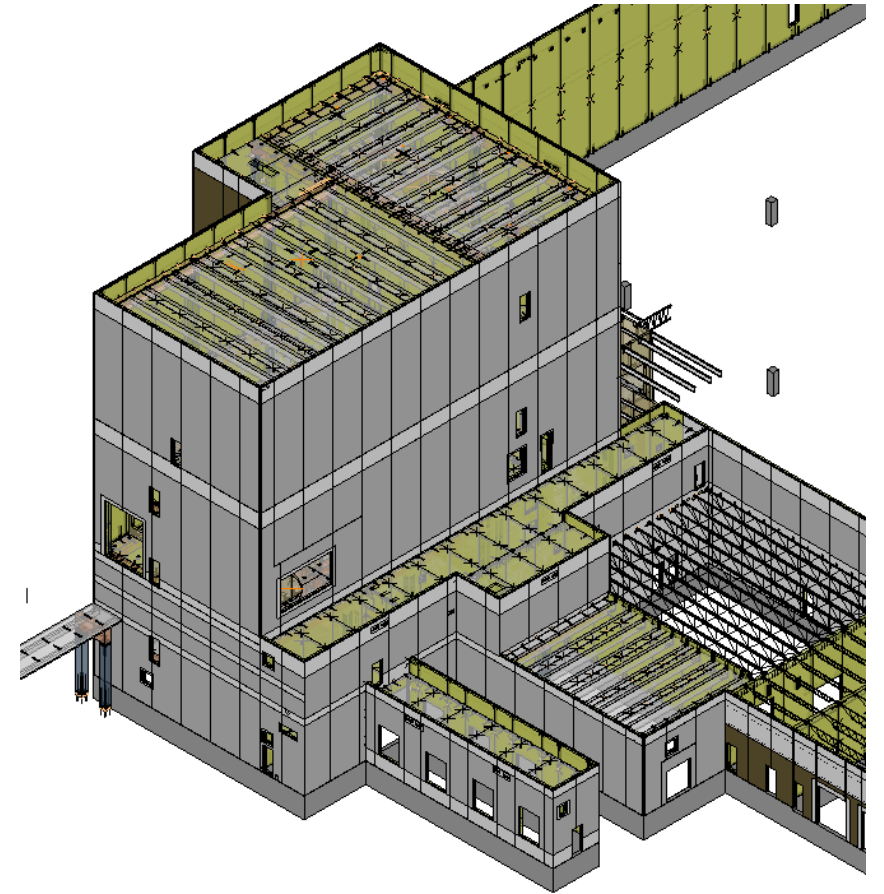
Continuous Preconstruction Support

- Design-Build nature
- Budget tracking
- Schedule surety
- Specification simplification



One Team Design Approach

- Side by side drawing development through 3D model sharing
- All project stakeholders involved
- Defined system for collaboration
- Benefits:
 - No redundant drawing
 - Streamlined design schedule
 - Digital copies for future use



Downstream Impacts

- Transparent design process helps head off constructability issues
- Vertical super structure all at once
- Concurrent equipment installation during building erection
- Critical path support





Process & Equipment Focused

Process Friendly

- Ledge free
- Cavity avoidance
- Minimal maintenance components on structure
- Design loading methods
- Inherent fire rating



Equipment Oriented Solutions

- Building purpose influences framing products
- Thermal and sound considerations
- Vapor protection for freezers
- Maintenance programming
- Unique framing load paths easier accomplished
- Proprietary equipment leads to one-of-a-kind building

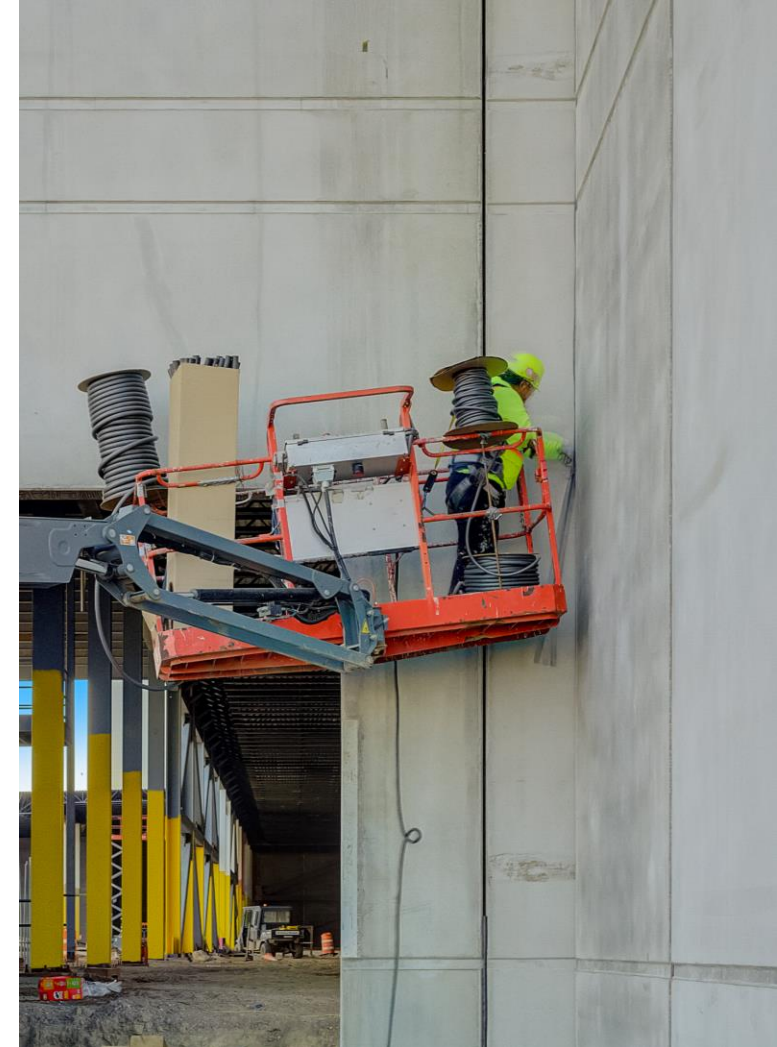


Material Selection

Joint Sealants

Joint Sealants

- USDA Accepted?
- FDA Requirements?
- Compatibility with other materials
- Compatibility with Chemicals used
- Pick Proof/Tamper Proof Sealants
- Material Lead Time



Fire-Rated Areas

Fire Rated Areas in Precast

- Accommodate sensitive areas if needed
- Fire Containment Areas
- Fire Retardant Areas
- Up to a 4-hour rating (UL)



A photograph of a modern, multi-story building with large glass windows and a flat roof. The building is set against a clear blue sky. The image is overlaid with a semi-transparent blue filter. Two horizontal yellow lines are positioned above and below the text.

Expansion & Modifications

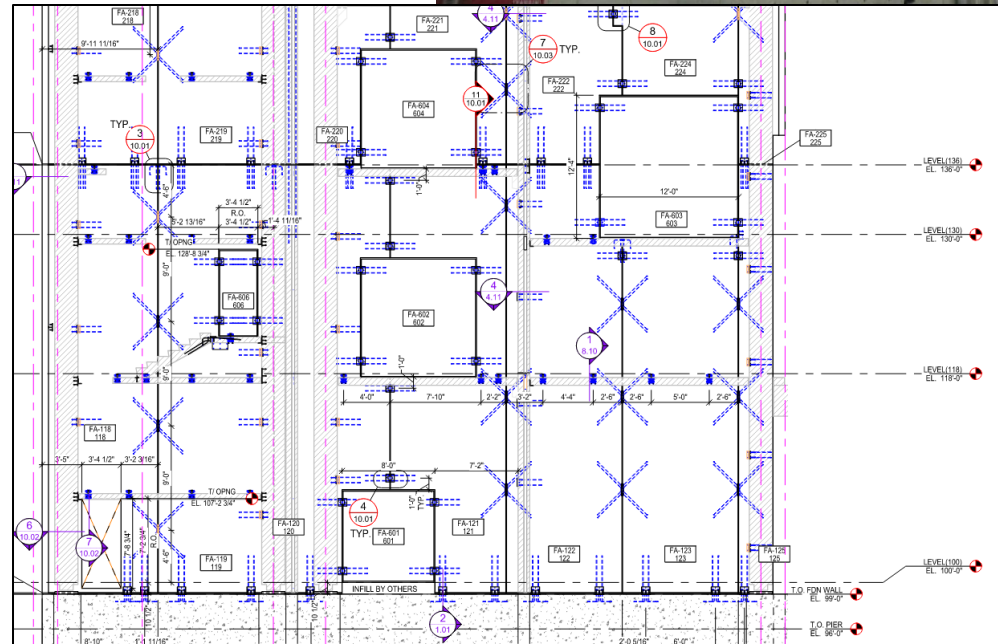
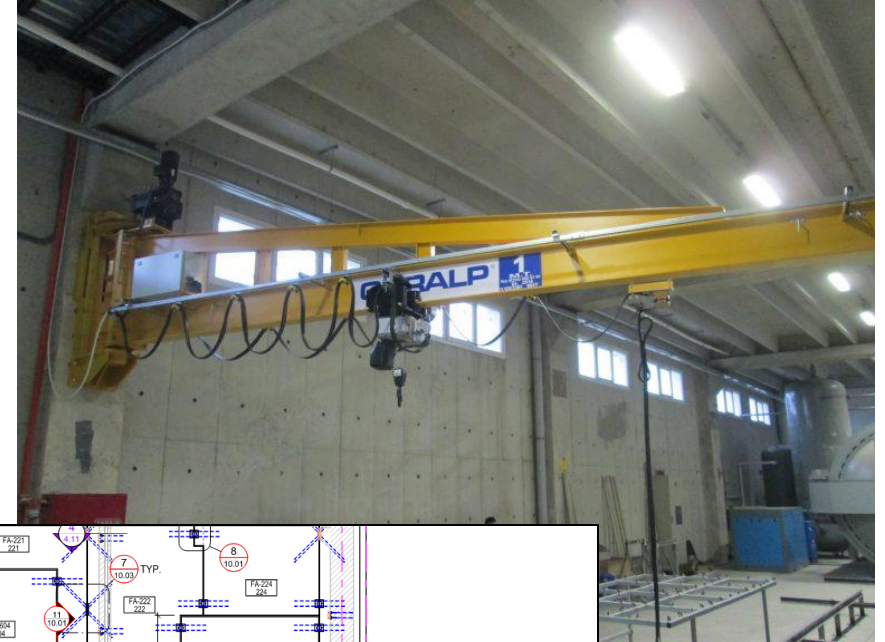
Future Buildings

- Ideal to account for in initial design
- Remove and replace existing panels for additions
- Consistent campus theme
- Known expectations



Change in Use

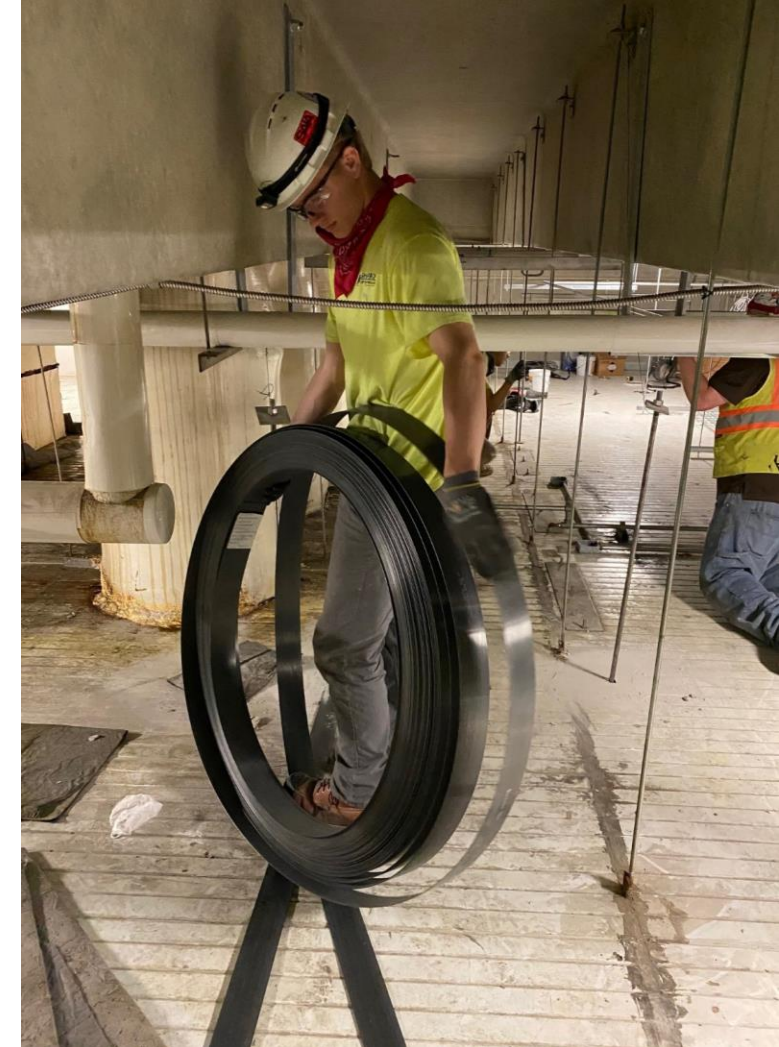
- Equipment swaps
- Knockout panels
- Safe drill zones
- Saw cutting
- Technical support years, or even decades, after construction



Structural Strengthening

Design and installation of carbon fiber structural strengthening for increased designed loads.

- Clear-Span Strengthening
- Beam Repair/Strengthening
- Column Repair/Strengthening
- Carbon Fiber Wraps
- Carbon Fiber Strips





Maintenance & Restoration Programs

Facility Reviews/Maintenance

Review facility to establish an understanding of current joint sealants, waterproofing and restoration needs.

- Annual/semi-annual walk through
- Detailed report explaining deficiencies
- Budget annually
- Plan for regularly scheduled shutdowns



Maintenance Services

- Re-Caulking
- Concrete Repairs – Spalls, Cracks, Chips
- Concrete Sealers
- Coatings – Traffic, pedestrian, Epoxy
- Sweeping/Cleaning



Concrete Restoration

Services

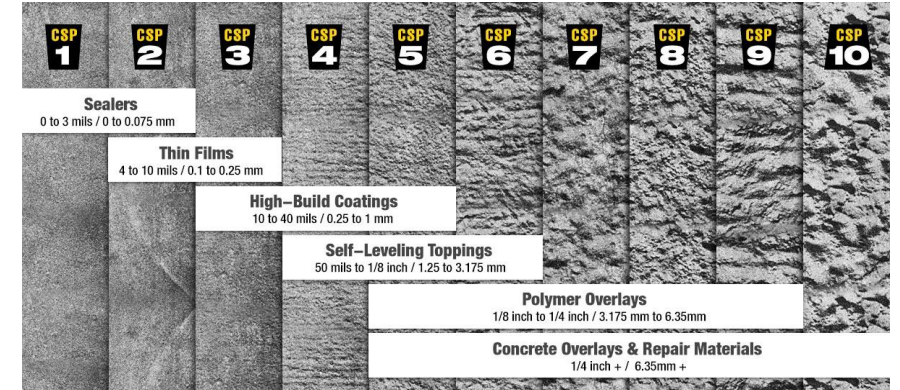
- Concrete Crack Repair
- Impact Repair
- Spalls/Chip Repair
- Architectural Concrete Repair
- Blending/Toning





Emerging Trends

Prepared Surfaces for Coatings

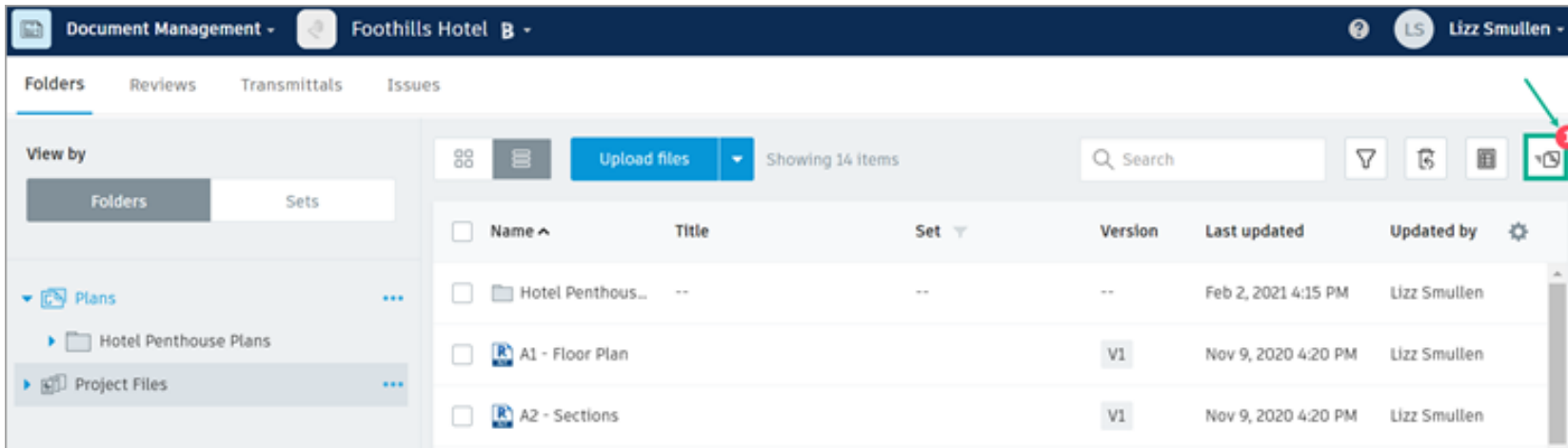


- Schedule compression through plant prepared surfaces for certain coatings
- Concrete Surface Profile (CSP) Rating specification
- Compatibility considerations for preparation method



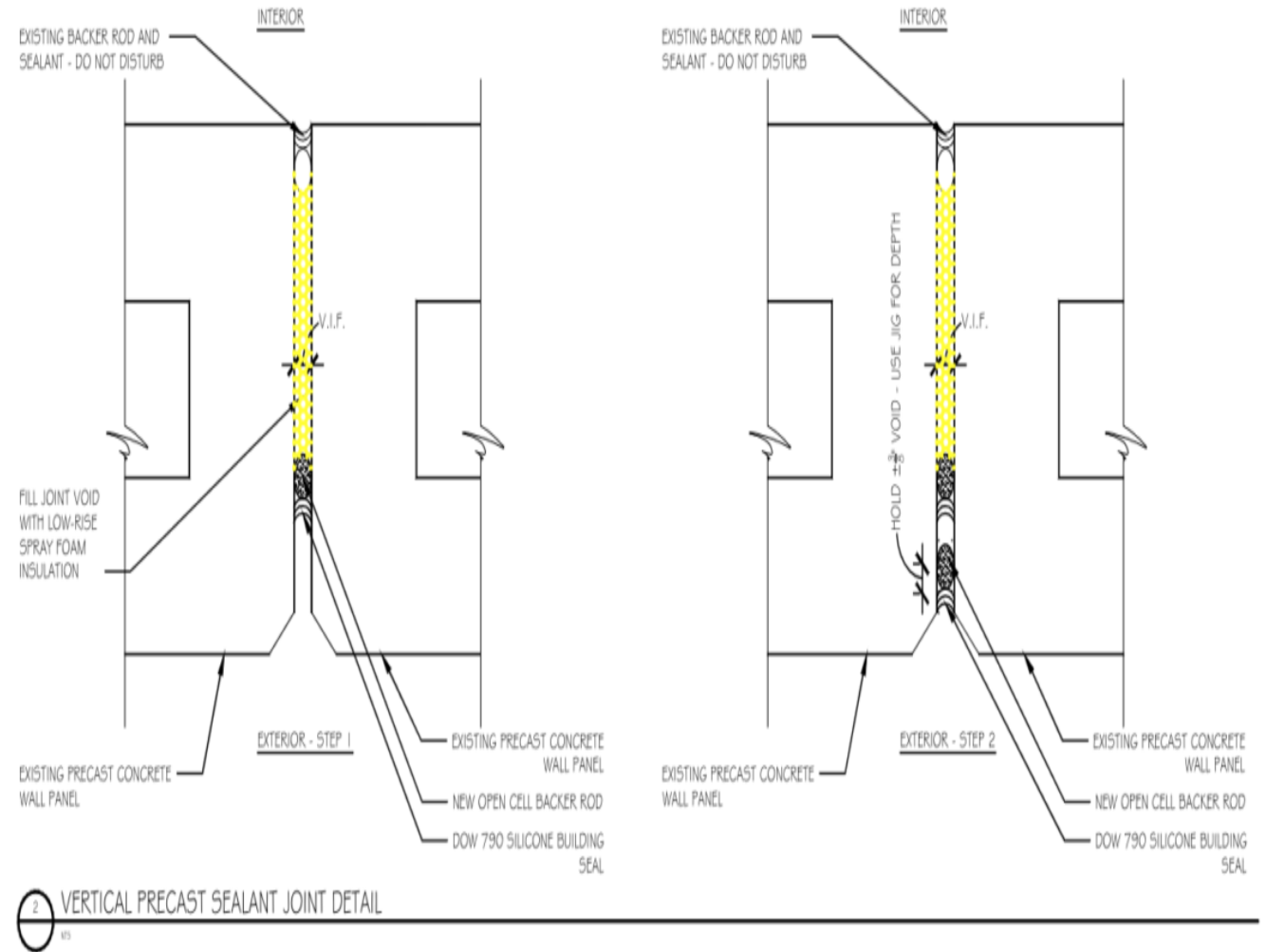
Digital Drawing Documentation

- Utilizing digital documentation for necessary approvals
- No more waiting for PDFs to move back and forth
- For internal team only – municipalities still requiring PDFs



New Joint Trends

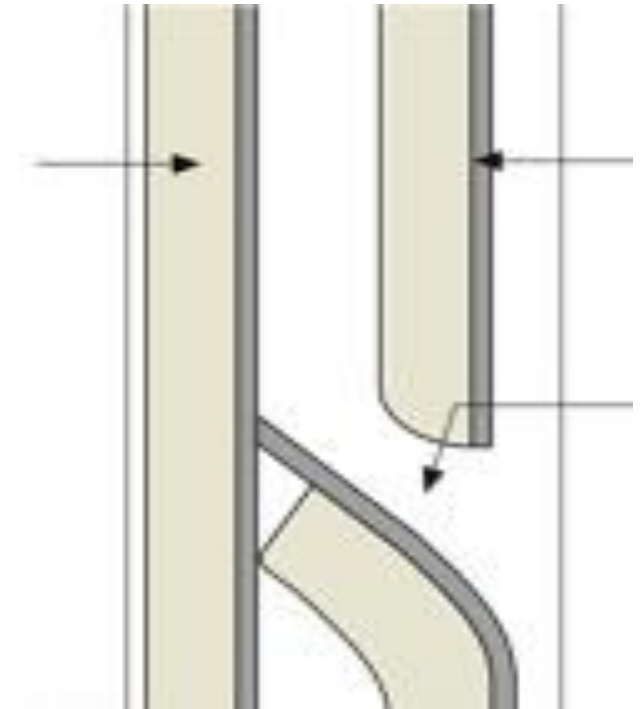
- Insulated Joints
 - R Rating at exterior
 - Void-Fill for USDA
 - Batts
 - Closed Cell Spray
 - Flexible Fillers (Extruded Foam)



Dual-Phase Sealant System

Double Exterior Sealant Beads with airspace and Weep

- Contains space for weep to allow moisture to exit
- "Belt and Suspenders" System
- BEC Driven



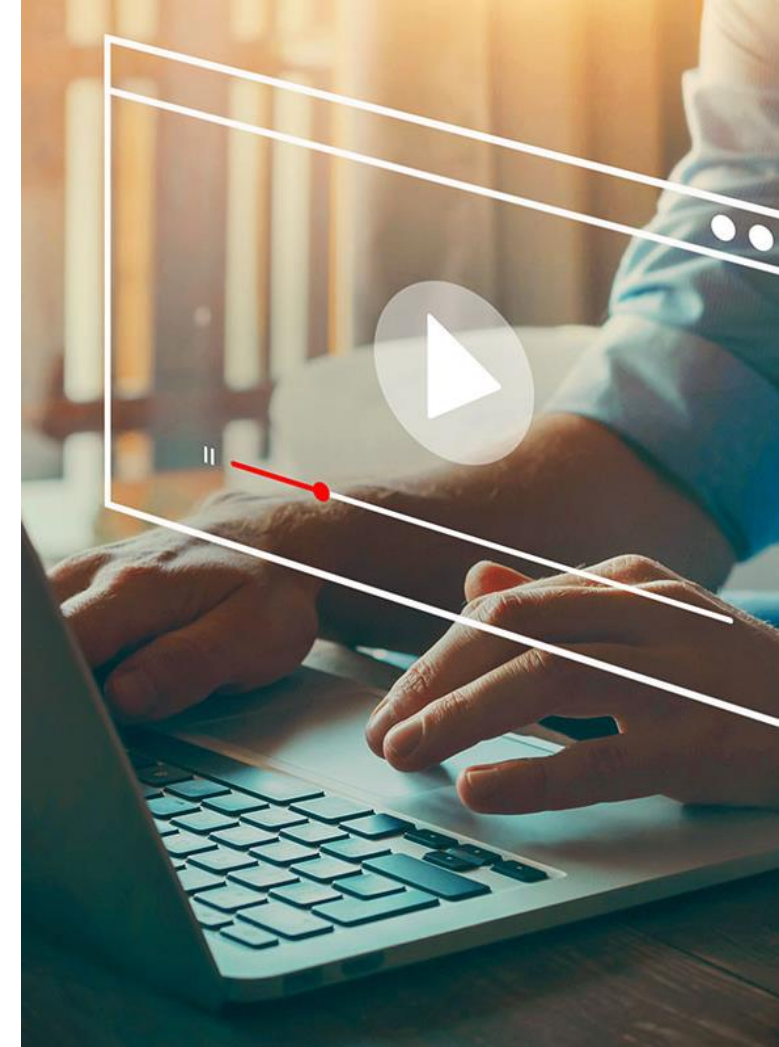
Watch Wells Webinars On Demand

10 Topics Available including:

1. The Parking Structure Challenge
2. Understanding Total Precast Structures
3. How to Create High Performing Building Envelopes
4. Prefabrication in Multi-Family Developments
5. Starting your Prefabricated Project

AIA accredited | 1 LU/PDH

wellsconcrete.com/webinars





Q&A

Questions? Please contact:

mike.troje@wellsconcrete.com

chase.radue@wellsconcrete.com

Certificates of Completion:

megan.nesius@wellsconcrete.com