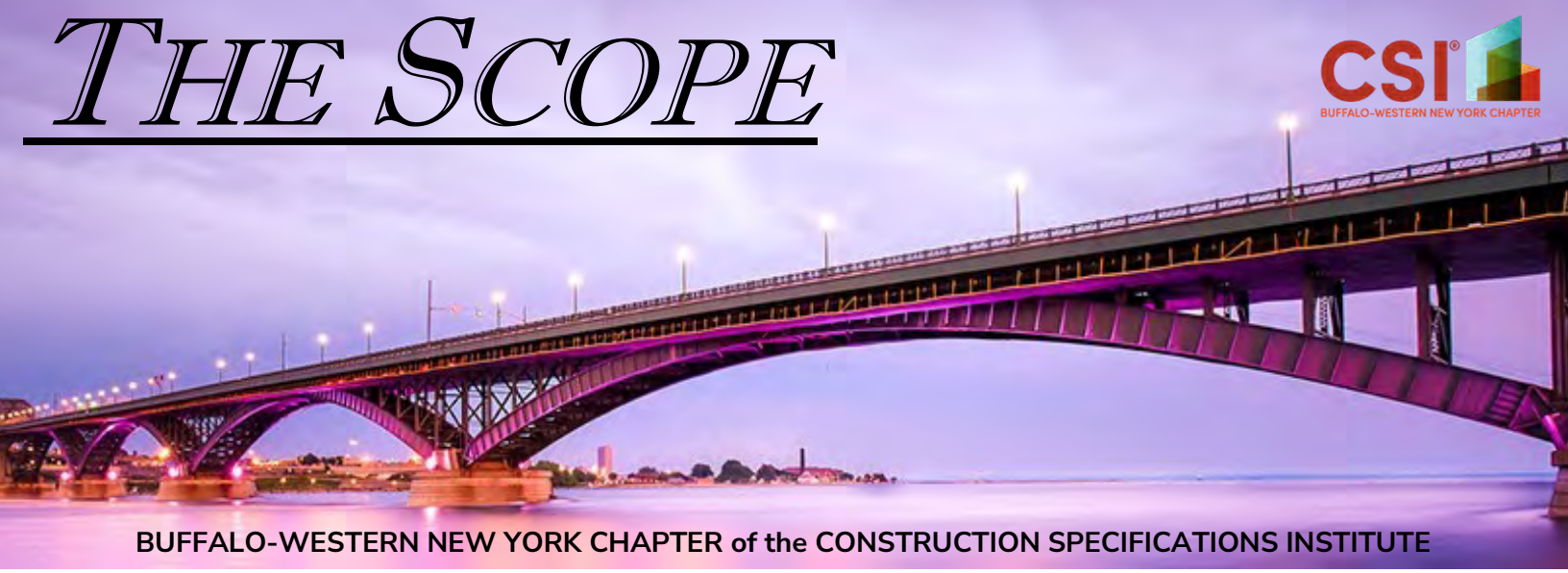
# THE SCOPE



BUFFALO-WESTERN NEW YORK CHAPTER of the CONSTRUCTION SPECIFICATIONS INSTITUTE

**Construction Specifications Institute, Inc.:** www.csiresources.org
**Northeast Region CSI:** www.nercsi.com
**Buffalo/WNY Chapter:** www.csibwny.com

*November 2026*

## Upcoming Events

### Tour of New FeedMore WNY Facility

**Tour of FeedMore WNY New Facility**

***Event Type***: Tour

***Date and Time***: Thursday, November 5, 2026, 4:30 - 6:30 pm

***Location***: FeedMore WNY, 4832 Camp Road, Hamburg, NY 14075. Site map indicating parking area and entrance is available on the event web-site, provided below.

***Accreditation***: 1.5 AIA LUs anticipated

***Description***: Hosted by AIA Buffalo/WNY, this event is a 1.5-hour tour of the brand new Feed-More WNY facility, as profiled in detail in the April 2025 issue of *The Scope*. CSI Buffalo board member Bob Rumpl, AIA was the project manager for the project's lead design professional, Tra-utman Associates. Additional information on the event is available on the webpage linked below.

***Cost***: $15 per person ($5 for AIA and COTE mem-bers)

***To Make Reservations***: aiabuffalowny.org/event/construction-tour-feedmore-wny-a-regional-headquarters-and-centralized-campus-hamburg-ny/

### CSI Buffalo-WNY Chapter Holiday Dinner

**Event Type:** Holiday dinner (no presentation)

**Date and Time:** December 3 or 10, 2026, (final date and time TBA).

**Location**: Alternatives in Hamburg, Orchard Park, and Lackawanna are being considered.

**Description**: More information is forthcoming.

**Cost**: TBD

**For Additional Information Contact**: Bob Rumpl, rrumpl@trautmanassoc.com.

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## Chapter Board

### Chapter Officers:

*President:* David Rood, CSI, Commercial Sales, Weatherpanel, Inc, Dave.Rood@srsdistribution.com

*Vice-President:* (available)

*Secretary:* Robert Rumpl, AIA, CSI, Trautman Associates rrumpl@trautmanassoc.com

*Treasurer:* Robert Kimmel, Pella, Trade & Commercial Sales KIMMELRD@Pellabuffalo.com

*Immediate Past President:* Devin Filipiak, CSI, CIT Filipiak Construction Consulting & Management, LLC. devin@filipiakccm.com

*Region Director*: Jim Bourgeois, CSI, Architectural Sales Representative, MarinoWare, jbourgeois@marinoware.com

### Committee Chairs:

*Programming/Special Events*: Deborah Siener, RA, CSI, CDT, LEED, APBD+C, Project Architect, Azar Design Co, DSiener@azardzn.com

*Awards*: (vacant)

*Certification*: Kevin O'Beirne, PE, FCSI, CCS, CCCA, CDT, National Manager of Engineering Specifications at a large design firm, Kevin.obeirne@hdrinc.com

*Communications/Marketing*: Vacant

*Membership*: Brad Vaillancourt, AIA, CSI, LEED, APBD+C, Trautman Associates, bvaillancourt@trautmanassociates.com

*Newsletter Editor*: Kevin O'Beirne

### Directors:

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Websites:

**CSI Buffalo-Western New York Chapter**: www.csiwbny.com

**CSI Northeast Region**: www.nercsi.com

**CSI-National**: www.csiresources.org

**Your ad could be here!**

**Contact the CSI-WNY board for more info.**

### *The Scope*

**Newsletter of CSI's Buffalo-Western New York Chapter**

The Scope is published approximately seven times per year, typically in September, October, December, January, February, April, and June, on or around the first day of the month. Submittals of articles and information of general interest to CSI's members and the design and construction community of Western New York, is always welcome. Submittals for this newsletter are due by the 15th of the previous month (approximately two weeks before publication). Please submit articles, information, and requests to the Editor:

Kevin O'Beirne

Kevin.obeirne@hdrinc.com

716-207-0396

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**Advertise in *The Scope***

Each issue of *The Scope* reaches approximately 650 people in the Buffalo-Western New York design and construction community, across a variety of disciplinary areas. An ad costs $100 per year. Contact the Editor for additional information.

## Editorial

# Whose CSI is it Anyway?

By Kevin O'Beirne

The Construction Specifications Institute represents design professionals, product representatives, project owners, contractors, and others, but to whom does CSI really belong? As a non-profit organization, that question is, when you think about it, perhaps a little more complicated than it might first appear.

Ultimately, CSI belongs to its members. It may perhaps be easy to think that you pay dues and get certain benefits, whether local networking opportunities, access to certain resources (such as this fantastic newsletter), and discounted pricing for certain CSI publications, but CSI is supposed to be more than just a transactional relationship with its members. Each dues-paying member and, we would argue, the entire design and construction industry as a whole, has a stake in CSI. All you have to do is recognize it and step forward to take ownership of your stake.




At the national level, CSI has engendered considerable discussion and controversy since March 2026, related to the rollout of "The Dynamic Standards", philosophical differences of opinion regarding who is and is not eligible to serve on CSI's national board, the future of CSI's certification programs, and other matters. Do any of these topics matter to you? If so, let CSI's national board know your thoughts. Actively contact them and share your viewpoints and suggestions for improvements. Similarly contact CSI's paid staff. Do ***not*** just sit back and complain privately if there is something you do not like or, even worse, remain silent. Let your voice be heard and actively participate. The future of CSI as a whole may well depend on ideas you may have to offer. No, that's not an exaggeration.

At the national level, CSI offers various working committee volunteer opportunities as well as its online forums. Any CSI member can participate in the CSI forums, where one may even learn something useful from fellow members. For example, during the week of October 26, 2026, CSI's Specifications Community saw a very interesting discussion concerning contract language for addressing contractors' use of artificial intelligence for evaluating construction documents for apparent errors, conflicts, and ambiguities, and for change proposal opportunities.

Fifteen or twenty years ago, many CSI members, including a number of Buffalo Chapter board members, questioned the purpose and existence of CSI's regions. In those days, it was often unclear to many at the chapter level whether or not the regions served a practical, useful purpose. Today, we would argue that the regions have become increasingly relevant and useful. As CSI's national membership numbers have shrunk, regions offer greater opportunities than those available at the chapter level for networking and pooling of resources. As just one obvious, reasonably local example, Buffalo Chapter members actively participate in presenting and administering the Northeast Region's CDT exam prep course. Like most of the other chapters in the Northeast Region, the Buffalo Chapter's resources for presenting its own CDT exam prep course on an annual basis are relatively limited. Fortunately, the region offers the opportunity for several experienced CDT prep course volunteer instructors and administrators to band together to offer an annual CDT exam prep course that is probably one of the best in the country.

The regions offer other examples of resources that would likely be beyond the reach of many of their constituent chapters. For example, the Northeast Region is empowered to accredit educational programs for AIA continuing education, whereas the Buffalo Chapter is not. The Northeast Region provided important guidance to the Buffalo Chapter in planning and executing the regional conference, held in Buffalo in May 2026. Therefore, the Northeast Region is an appropriate location for Buffalo Chapter members to volunteer and participate, rather than relying solely on the members of other chapters to do all the heavy lifting at the region

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## Editorial

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level.

Perhaps the most obvious way of amplifying your voice with CSI is more-active participation in the Buffalo Chapter. Opportunities are available and there are currently open positions on the chapter's board of directors; please see page 2 of each issue of this newsletter for indication of open positions and where an existing board member occupies more than one position. Although the Buffalo Chapter has exhibited continuous vitality for over 65 years, more minds, hands, bodies, and viewpoints are necessary for the chapter to continue to be vital into the future.

As just one of the Buffalo Chapter's board, this writer can assert from personal experience that involvement in the Buffalo Chapter has provided many valued friendships, professional contacts, educational improvement, and opportunities for leadership, all of which are extremely valuable on both the personal and professional levels. These days, when everyone's lives seem to be exceedingly busy, it is easy to follow the herd and not get involved. After all, who has extra time on their hands? We counter this idea by asserting that what the Buffalo Chapter, and the Northeast Region, and the national organization have to offer are important. Speak up and get involved.

## NEWS AND EVENTS

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### *Architect's Ski Day 2027*

***Event Type***: Skiing/networking/supplier exhibits

***Date and Time***: February 5, 2027, 8:00 am—4:00 pm.

***Location***: Holiday Valley Ski Resort, Holiday Valley Lodge (Main Lodge, second floor), 6657 Holiday Valley Road, Ellicottville NY 14731

***Accreditation:*** none

***Description***: See the registration flyer at the end of this issue.

***Cost***: Members: $40 (ski or non-ski). Non-members: early registration rate—$90 for ski, $50 for non-ski; late registration rate—(12/11-1/8/2027), $115 for ski, $65 for non-ski. Prices




include food.

***To Make Reservations***: Click Here Early registration (reduced rates) will close December 11, 2026. Last day to register is anticipated to be January 8, 2027.

***For Additional Information Contact***: Brad Vaillancourt, membership@csibwny.com or Dave Rood at architectskiday@csibwny.com

### SPECtaCLE 2027

**Fourth Annual SPECtaCLE Event**

***Event Type***: Exhibition and Educational Programs

***Date and Time***: April 9, 2027

***Location***: Cleveland, Ohio

***Accreditation***: AIA LUs, quantity not yet available

***Description***: Take a drive west on I-90 to attend this worthwhile event, hosted by CSI's North Coast Chapter in Northern Ohio. This event is a large construction products trade show with educational presentations, allowing architects, engineers, specifiers, contractors, and manufacturers to network. Sponsorship opportunities are available. Additional information on the 2027 event will be posted at the website linked below.

***Cost***: TBA

***Reservations Due By***: TBA

## NEWS AND EVENTS

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***To Make Reservations***: csi-clevelandchapter.memberplanet.com/Programs.html

# Report on Tour of Michigan Street Baptist Church




On September 22, 2026, approximately 20 members and guests of CSI's Buffalo-Western New York Chapter toured the recently restored, historic Michigan Street Baptist Church, at 511 Michigan Street, Buffalo NY. The tour was led by Gwen A. Howard, AIA, of Azar Design. CSI Buffalo-WNY Chapter board member and past president Deb Seiner, RA, of Azar Design, was also present and served as the architect's project manager for the most recent, and most critical, phase of a multi-year restoration project.

Built between 1845 and 1849 by Buffalo's African American community, the Michigan Street Baptist Church served as a key Underground Railroad stop and became a center for abolition, civil rights, and Black community life in Buffalo. A number of mid-Nineteenth Century buildings in Western New York have claim to be part of the Underground Railroad, but the Michigan Street Baptist Church is among the much smaller number of buildings whose Underground Railroad providence is well-documented.

The church remained in active use for more than a century and still has a congregation. However, by the mid-twentieth century, the structure had experienced considerable aging, weather-related damage, and deterioration. By the early twenty-first century, structural systems supporting the roof were degraded and temporary scaffolding was erected inside the church, preventing a catastrophic structural failure. The sagging roof cause damage and renovation challenges as the building's walls bowed outward. Azar Design, formerly Foit-Albert Associates, was retained by the building's owner, Buffalo Niagara Freedom Station Coalition, to design a series of rehabilitation and stabilization projects over a period of almost 20 years, as funds became available. The last of these projects was completed only recently.



This important landmark and the process that the design team used throughout the restoration and stabilization projects were discussed in detail during the tour. Among the design team's challenges were a very spatially constrained site and New York State Historic Preservation office requirements that the restoration be as accurate as possible for the period 1849-1949. Participants heard about the building's history and significance both nationally and within the Western New York Community, and the challenges and successes related to the preservation of this fragile national land-



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mark.

Following the tour, attendees relocated to Riverworks for drinks and informal dinner, as well as considerable camaraderie and conviviality. The drinks and dinner at Riverworks were sponsored by Imetco.

## Letter to the Editor

I wanted to share how continually impressed I am with the Buffalo-Western New York Chapter's newsletter, *The Scope*. From the writing, layout and graphics, the newsletter is consistently a very high quality and informative piece of work!

Treasurer: Robert Kimmel, Architectural Representative, Pella Windows and Doors of WNY KimmelRD@Pellabuffalo.com

## Northeast Region's 2027 CDT Prep Course

Expand your professional knowledge and value through CSI's certification programs. The basic, and most popular of these is the Construction Documents Technologist (CDT) certification, which addresses all phases of implementing a capital project. The CDT requires practical, useful knowledge of project team roles and responsibilities, project conception and delivery methods, design, construction documents preparation, procurement, construction, and facility life cycle activities.

To assist members and friends of CSI's Buffalo-Western New York Chapter preparing for the spring 2027 CDT exam, an online, live, instructor-led CDT prep course is available through CSI's Northeast Region (NER). The NER will again offer a CDT prep course at a cost per person of $100 for members and $200 for non-members, starting on February 16, 2027, with an emphasis on architect led "vertical" construction. Additional information is available at nercsi.com/cdt-preparation-class/. The course features weekly, pre-recorded webinars, presented using official CSI materials, with professional video editing. Each webinar can be viewed at a time convenient to the participant,




and may be watched in multiple sessions if desired. The course also includes a live, one-hour session each week, where participants can interact with the instructors, ask questions and receive answers, where the instructors will provide additional insight into the content of a different module of the course each week, present real-life examples to support CSI's concepts, and review sample questions similar to those that may be expected on the CDT exam. The course also includes distribution to participants of various bonus materials which augment the course's official source materials. Bonus materials are not essential for preparing for the exam and may be saved in a file for later reference, if desired.

To successfully learn the course material, especially for those who will register for and take CSI's CDT certification exam, participants must: (a) obtain the source materials at their own expense, including *CSI's Project Delivery Practice Guide, Third Edition* (textbook) and either AIA A201—2017 or EJCDC C-700—2018 Standard General Conditions; (b) view each of the prerecorded webinars and participate in the associated live session; and (c) invest typically 40 to 60 hours of self-study of the source materials. The practical knowledge you will obtain through this program, which you will use and apply each day in your career, will be well worth it.

Buffalo-Western New York Chapter members are actively involved in presenting the NER CDT course. For 2027, the NER certification committee will be led by our own Jim Bourgeois, who will also host the live sessions. Kevin O'Beirne will again be one of the three instructors, together with Tom Scarlata of the Boston Chapter and Paul Fogarty of the Metro New York Chapter. Each of the instructors typically participates in each of the live sessions.

In addition to the CDT, CSI also offers the following advanced certifications: Certified Construction

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Specifier (CCS); Certified Construction Contract Administrator (CCCA); and Certified Construction Product Representative (CCPR).

For more information on the CSI NER CDT course, including how to sign up, contact the CSI Buffalo-WNY Chapter's certification chair, Kevin O'Beirne, PE, FCSI, CDT, CCS, CCCA, kevin.obeirne@hdrinc.com, cell: (716) 207-0396. Pass enough CSI certification exams and you, too, can have more letters in the acronyms after your name than are in your name itself.

## CSI Northeast Region Fall Meeting Summary

Submitted by Jim Bourgeois, CSI Buffalo-WNY Chapter Regional Director

CSI's Northeast Region held its autumn board meeting on October 24, 2026, in Saratoga Springs NY, with most of the board attending. Presented below is a summary of the meeting.

New Members – ideas on how to attract younger professionals

- Educate on how CSI is a resource, and different from AIA
  - Push certifications that will help their career
  - Reverse Mentoring – meet with younger professionals and ask them what they are looking for and what their needs are.
  - Publicize winners of NER scholarships and encourage them to join a chapter
  - CDT participants – CSI Portland Oregon Chapter rebates the cost of the exam if CDT course participants join a chapter and volunteer for a committee.
  - Join a technical committee to get students from programs like BOCES, Tech Schools, and tech high schools

Programing:

- NER Chapter programming committee chairs should communicate with other chapter programming committee chairs for assistance and ideas that have been successful.
- Chapter programming committee chairs should start to copy NER president Oliver Wilhelm, to keep the NER president advised of chapter progress and request assistance when needed.

Next NER conference will be hosted by Metro NY, New Jersey and Long Island. Location is TBD. Jim Bourgeois will chair the committee, because of his recent experience chairing the successful 2026 NER Conference in Buffalo. The conference is scheduled for early May 2028.

Social Media committee – Chaired by Kevin Phillips (Syracuse) and Erin Spadavecchia (Metro NYC)

- NER was asked to communicate to NER chapters that CSI members should access their chapters social media site, as well as NER's social media sites for information about events across the NER. When members access chapter and NER social media site, the organization's visibility will be elevated on that social media platform, such as LinkedIn and others.

Chapter Summaries –

- Reviewed all chapter reports.
- Information on chapter events should be emailed to the region for posting on the NER's LinkedIn page and other social media sites.

New Business:

Potential amalgamation of selected chapters

- Discussed combining New Jersey and Long Island chapters. The New Jersey Chapter reportedly intends to request authorization for a merger.
- Syracuse and Rochester Chapters – Discussion of potential merger in the coming years, because event attendance has been declining, and low support for each chapter as separate entities.

## NEWS AND EVENTS

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# Trautman Associates & Buffalo Construction Consultants Team on $71M Expansion for Niagara Power Transformer

Submitted by Robert H. Rumpl, AIA, CSI

CHEEKTOWAGA, N.Y. — Trautman Associates, lead architect for a design build team that includes Buffalo Construction Consultants, recently celebrated Niagara Power Transformer's landmark $71-million-plus expansion at their manufacturing campus in Cheektowaga. The major development, known as the Niagara Power 50 Initiative, officially broke ground on October 22, 2026, and represents the largest capital investment in the manufacturer's history.

Trautman Associates designed a comprehensive expansion tailored to meet NPT's stringent plan requirements to increase production capability, capacity, and efficiency and accommodate specialized transformer manufacturing and production equipment. The project's architectural scope encompasses 96,000 square feet of new and renovated space across the campus, featuring: a new winding production area, assembly areas, a welding and fabrication facility, expanded storage and logistics space, and utility and infrastructure upgrades.

The expansion directly addresses nationwide supply chain bottlenecks for critical electrical grid equipment. Once complete, the project will increase Niagara Power Transformer's manufacturing capacity by 50 percent, helping meet surging national demand driven by industrial growth, renewable energy integration, and grid modernization.

Beyond architectural innovation, the project will generate substantial local economic impact in Western New York including:

- 146 existing local jobs and creation of 73 new full-time positions
- Reinforces partnerships with more than 160 suppliers across New York State.
- Relative to public-private investment, the project is supported by state and regional development initiatives, including the New York Power Authority's Western New York Power Proceeds program, the Excelsior Jobs Program, the New York State Brownfield Cleanup Program, and the Erie County Industrial Development Agency.

Originally founded in 1924, Niagara Power Transformer continues to be a cornerstone of Western New York's industrial ecosystem.

***[End]***






**Landmark Structures**

# Buffalo's Outer Harbor

By Kevin O'Beirne with a lot of help from "Staff Writer AI"

Buffalo owes its existence to its location at the east end of Lake Erie and the western terminus of the Erie Canal. Buffalo is a maritime town that depends on its harbor. However, as anyone who has lived in Western New York for at least one year knows, Lake Erie can become quite angry in the second half of autumn and during the winter. Indeed, as Gordon Lighfoot wrote in, "The Wreck of the Edmund Fitzgerald, his song about the November 10, 1975 sinking of a 729-foot cargo ship on Lake Superior during a terrible storm, "The lake it is said never gives up her dead / When the skies of November turn gloomy", and, "The good ship and true was a bone to be chewed / When the gales of November came early". Buffalo's Outer Harbor helps to protect the city and the Erie Canal Commercial Slip from the lake's anger during the gloomy skies of November through April.




Readers may, at this point, be thinking, "how is the Outer Harbor a landmark structure? It is not, but it includes a number of landmark structures, most particularly the breakwater. It seemed appropriate to devote this month's article to the Outer Harbor and its breakwater, especially because they are expensive and extensive facilities to which most western New Yorkers probably devote little if any consideration.

Buffalo's Outer Harbor is a largely man-made embayment, created through approximately 160 years of federal harbor improvements that transformed Buffalo from a river port into one of North America's principal inland shipping centers. The Outer Harbor differs fundamentally from Buffalo's Inner Harbor in both origin and function. The Inner Harbor developed around the mouth of the Buffalo River and the Erie Basin, where sheltered waters, docks, grain elevators, and canal facilities served vessels entering from the Erie Canal system and the city's industrial waterfront. The Outer Harbor, by contrast, is the open-water harbor area lying lakeward of the shoreline, bounded on its lake side by an extensive, offshore breakwater system. The inner and outer harbors are physically and operationally connected, yet they are distinct hydrographic and navigational areas. Historically, the transition between the inner and outer harbors has been considered the line extending across the protected harbor near the Buffalo River entrance and Erie Basin, where the older harbor facilities give way to the broader protected waters enclosed by the offshore breakwater system. The distinction reflects both geography and purpose: the Inner Harbor is an industrial and canal-era basin, while the Outer Harbor is a federally engineered harbor of refuge and navigation area.

The Outer Harbor occupies approximately six to

seven square miles, with the exact area varying depending on the boundary selected and prevailing lake levels. The harbor was formed by constructing the breakwater system parallel to the shoreline and then supplementing that system with piers, revetments, slips, and reclaimed land. U.S. federal government navigation documents indicate approximate water depths in the Outer Harbor ranging from 23 to 27 feet, with deeper, adjacent entrance channels. The bottom topography is relatively gentle compared with natural Lake Erie depths farther offshore. Much of the harbor floor consists of dredged navigation areas surrounded by shallower shelves and constructed embankments. Sedimentation from the Buffalo River historically required periodic dredging, resulting in a bathymetry characterized by engineered channels, ship turning areas, and navigation basins rather than a naturally varying lake bottom.




The defining feature of the Outer Harbor is the Buffalo Harbor Breakwater System. By the 1830s, the need for an outer harbor was recognized as Buffalo's shipping activity rapidly outgrew the protection afforded by the original harbor at the mouth of the Buffalo River. By the 1860s, annual vessel traffic had increased dramatically, and federal planners concluded that meaningful economic expansion could occur only if an offshore barrier could reduce the force of Lake Erie waves. Construction of the first major offshore breakwater began in 1868 and was completed in 1872. The initial structure extended approximately 2,400 feet southward from the vicinity of the Buffalo River entrance. It consisted largely of timber cribs or box-like structures filled with stone and protected on the lake side with sloping stone armor to absorb and dissipate wave energy.

During the 1870s and 1880s, the breakwater was

extended repeatedly until its length exceeded 7,600 feet. Engineering methods evolved during this period. Later sections incorporated timber cribs surmounted by concrete, while many of the original timber components above water were rebuilt in concrete. The construction of the North Breakwater, approximately 2,200 feet long, was completed by 1901. Additional extensions southward toward Stony Point, near the boundary of the City of Buffalo and City of Lackawanna, were completed by 1903. By that date, virtually the entire waterfront from Buffalo southward toward Lackawanna enjoyed protection provided by the newly completed harbor works. The protected harbor was a significant factor in attracting the Lackawanna Steel Company (later, the Bethlehem Steel Company) to relocate major operations to the Buffalo area.



The current federal breakwater system exceeds 22,000 feet in length, or more than 4.5 miles. The largest single component, the South Breakwater, is approximately 10,200 feet long and extends toward Stony Point. Additional breakwater segments, entrance structures, and connecting protective works complete the system. The breakwater's alignment is not arbitrary. Federal engineers sought a balance between maximizing the protected water area and minimizing construction costs, while maintaining navigable entrances. The final configuration encloses sufficient harbor area for commercial navigation and harbor refuge while allowing hydraulic circulation and access from Lake Erie. Extending the structure farther into the lake would have yielded diminishing operational benefits while substantially increasing construction and maintenance costs.

Several generations of federal engineers participated in planning and constructing the Outer Harbor. During the nineteenth and early twentieth centuries, harbor improvements were designed and supervised by engineers of the United States Army Corps of Engineers, often working through the Buffalo District and its predecessor organizations under authority granted through numerous Rivers and Harbors Acts. Modern rehabilitation projects continue to be led by engineers of the Army Corps of Engineers, Buffalo District, frequently with technical support from the Corps' coastal engineering and research organizations.

Today, the breakwater consists predominantly of rubble-mound and concrete-capped structures built upon foundations of earlier crib construction. Width varies substantially depending upon location and successive repairs, but crest widths are between 15 and 30 feet, while the overall base width beneath the water may exceed 100 feet. Along

many sections, the crest stands roughly 8 to 15 feet above typical lake levels, although elevations vary. Modern analyses undertaken for rehabilitation projects have evaluated storm water levels approaching 10 feet above the lake's Low Water Datum and significant wave heights exceeding 12 feet, with some design scenarios considering wave heights of approximately 13.6 feet and peak periods between waves of around 10 seconds. These values illustrate the severity of storm conditions expected within eastern Lake Erie, and demonstrate that the current breakwater is intended to absorb considerable hammering under those gloomy November skies.

The breakwater system must withstand a combination of environmental loads unique to the Great Lakes. Unlike ocean structures that primarily contend with waves and tides, Buffalo's breakwaters experience wave attack, fluctuating lake levels, dynamic ice loads, freeze-thaw deterioration, and severe storms during the autumn and winter. Modern Army Corps of Engineers documents specifically identify wave action, ice action, high-water events, and increasingly severe storms as principal causes of deterioration. Consequently, contemporary repair projects often involve placing massive armor stone weighing several tons each. Recent work has incorporated stones exceeding 14 tons in weight to restore damaged sections of the South Breakwater.

The breakwaters are components of the federally authorized Buffalo Harbor navigation project and are owned and maintained by the U.S. Army Corps of Engineers. Maintenance projects have been implemented continuously for over a century, although funding levels have varied. Major rehabilitation campaigns occurred periodically throughout the twentieth century as original timber and concrete components deteriorated. Significant modern projects were undertaken during the 2010s and 2020s, including repairs initiated in 2019 and completed in 2020 on badly degraded sections of the South Breakwater. Additional emergency and restoration projects followed damage caused by severe winters in 2022 and 2023. Corps of Engineers reports indicate that more than $17 million was invested in South Breakwater repairs during 2016-2026.



The Outer Harbor breakwater system is distinct from the structures associated with the Black Rock Canal. The canal, constructed along the Niagara River side of Buffalo, has its own riverward protective walls, piers, and shoreline works. Although both facilities are elements of the broader federal

navigation network serving Buffalo and the Niagara frontier, the Outer Harbor breakwaters do not physically continue into the river side of the Black Rock Canal. Rather, they function as separate but complementary navigation structures. Together they help create a system linking Lake Erie, Buffalo Harbor, the Buffalo River, the Niagara River,



*US Army Corps of Engineers contractor repairing a breach in Buffalo's North Breakwater in May 2021. (Photo by Andrew Kornacki)*

and connecting Great Lakes routes.

Landward of the breakwater, extensive seawalls, revetments, bulkheads, and sheetpile structures define much of the shoreline. These facilities have evolved with changing industrial and recreational uses. Earlier timber and masonry seawalls were supplemented and often replaced by steel sheet piling, concrete caps, stone revetments, and reinforced wharf structures. Along former industrial slips, steel sheetpile bulkheads support filled land and former shipping facilities. Elsewhere, particularly near parks and public access points, shoreline protection has been integrated with promenades, fishing areas, trails, and habitat restoration projects. Although less visually dramatic than the offshore breakwater, these structures are essential for retaining reclaimed land and protecting infrastructure from erosion and wave attack.

Modern visitors often experience the Outer Harbor primarily as a recreational landscape. Areas such as Buffalo Harbor State Park, Gallagher Beach, Wilkeson Pointe, Bell Slip, Times Beach Nature Preserve, and the network of trails along Fuhrmann Boulevard occupy lands once dominated by shipping and industry. The protected waters behind the breakwater support marinas, sailing, kayaking, fishing, and seasonal boating activities. The Small Boat Harbor remains one of the region's principal recreational boating centers. Even as industrial shipping continues to use portions of the harbor, extensive redevelopment has shifted much of the waterfront toward public access and recreation.

Among the harbor's most distinctive infrastructure features is the City of Buffalo water intake known as the Roundhouse, constructed in 1913. Located offshore within Lake Erie, the circular masonry and concrete structure houses facilities associated with the City of Buffalo's municipal water supply system. The Roundhouse protects intake conduits drawing "raw water" from the lake at an appropriate distance from potential contamination at and near the shore. The Roundhouse is noteworthy both for its engineering significance and architectural character and has been recognized by the American Society of Civil Engineers as a historic civil engineering landmark. Though modest in scale compared with the breakwater, it remains one of the most recognizable engineering structures on Buffalo's waterfront.

Numerous historical events have demonstrated the importance of the Outer Harbor and its breakwater system. Severe storms repeatedly tested the

harbor's defenses, prompting reconstruction and breakwater strengthening. Maritime accidents, vessel groundings, and storm-related damage occurred periodically before and after construction, underscoring the need for a protected maritime refuge. The creation of the harbor itself altered the economic history of Buffalo by facilitating grain handling, steelmaking, manufacturing, and Great Lakes commerce on a scale that would have been impossible within the confines of the original river harbor. More recently, high lake levels and winter storms have damaged sections of the breakwater, leading to emergency federal repair programs intended to preserve both navigation and public shoreline assets.

In summary, Buffalo's Outer Harbor is an engineered maritime landscape whose defining characteristic is the federally constructed breakwater system separating a broad protected harbor from the open waters of Lake Erie. Created beginning in 1868 and expanded through the early twentieth century, the breakwater transformed Buffalo from a constrained river harbor into one of the Great Lakes' premier ports. Today the system continues to protect commercial navigation, recreational boating, shoreline infrastructure, parks, and environmental restoration areas. Although its appearance reflects many generations of reconstruction, the breakwater remains the essential feature that defines the Outer Harbor and gives the area its enduring economic, engineering, and civic significance.

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***[End]***



**Feature Article**

# Random Capitalization

## *A Risk of Misinterpretation*

By Kevin O'Beirne

Design professionals and specifiers often practice what this writer thinks of as "random capitalization", in which certain words in construction documents, correspondence, and other documents are written with seemingly-random capitalization of initial letters.

An example of random capitalization is, "In accordance with the **c**ontract, the **c**ontractor shall **P**rovide **S**pare **P**arts for **R**everse-**O**smosis **M**embrane **E**quipment as follows:". In this example, all the words with initial capitals ***should*** use lower-case letters, and terms that are probably defined elsewhere in the construction contract, such as "Contract" and "Contractor", use lower-case letters when they should probably have initial capitals.




Random capitalization has strong potential to result in possibly-unintended interpretations of the contract's meaning. In English class, high school and college students are often advised to write for their audience. Specifiers and design professionals should heed this because among the most-important potential audiences of their writing are attorneys, sureties, judges, juries, and arbitrators, and the contract drafter probably does not want them applying an interpretation different from what the drafter intended.

Attorneys and sureties tend to interpret contract language very literally. Upon their arguments and the resulting decisions of judges, juries, and arbitrators turn decisions that may be valued in millions of dollars, together with the design professional's and specifier's reputation and professional liability insurance premiums. It is probably unwise to hang all that on random capitalization.

In contract documents, initial capitals typically indicate either a proper noun or a formally-defined term. Consistent use of defined terms is vital for achieving the intended interpretation of the contract documents. Widely-used standard general conditions present defined terms as follows;

**American Institute of Architects**: AIA A201—2017, *Standard General Conditions of the Contract for Construction,* consistently uses its defined terms, which are indicated with initial capitals. A201 establishes its defined terms throughout the document, distributed among various provisions.

**Engineers Joint Contract Documents Committee**: EJCDC C-700—2018, *Standard General Conditions of the Construction Contract,* as well as the upcoming 2026 edition of C-700, con-

sistently uses defined terms. C-700 establishes all of its defined terms in Paragraph 1.01, using initial capitals, and further establishes in Paragraph 1.02 selected "terminology" that is assigned certain meaning without using initial capital letters.

**Design-Build Institute of America**: DBIA 535—2022, *Standard Form of General Conditions of Contract between Owner and Design-Builder,* includes a list of basic, defined terms in Section 1.2 with initial capitals. DBIA documents also use initial capitals for other, selected terms that are not defined in Section 1.2 of DBIA 535.

Outside of Division 00—Procurement and Contracting Requirements, defined terms may also be set forth at certain, appropriate locations in the specifications. In particular, CSI *MasterFormat* assigns "01 42 16 – Definitions", which may be used for presenting additional defined terms applicable throughout the construction documents, especially when such defined terms are used in multiple sections of the specifications. When such a listing of additional defined terms Is needed in the specifications, but a Section 01 42 16 is not part of the construction documents, defined terms may be included in a higher-level Section 01 42 00 – References. Where defined terms are indicated in 01 42 ##, such defined terms should be used consistently in the construction documents. In its "References" article in "Part 1 – General", CSI *SectionFormat*—2007 allocates an optional provision for "Definitions", for indicating defined terms unique to the specific section that are not defined elsewhere in the contract documents. Regardless of whether additional defined terms are established in Section 01 42 ## or in the "References" article of a particular sections, the listing should be proceeded by language such as the following: "The following defined terms, indicated in [the Contract Documents] [this section] with initial capital letters, have the meaning assigned below, which apply to the singular and plural thereof:"

Defined terms should be consistently indicated using initial capitals. For consistent interpretations, all the construction documents, related correspondence, meeting minutes, and other project documents should consistently use the contract's defined terms, indicated with initial capitals, as well as terminology established in the construction contract but not indicated with initial capital letters.

Personnel preparing construction documents sometimes substitute alternative terms in lieu of the defined terms, which is also an undesirable specifying practice. Two examples are presented below:



Using “plans” instead of the defined term “Drawings”.

The term “Supplier” is defined in EJCDC C-700, and the defined term should be used instead of alternatives such as “vendor”, “materialman”, or “supplier” (the latter without an initial capital).

Sometimes, defined terms are better than commonly used alternatives. For example, while many construction documents employ the words, “Drawings and Specifications”, often, the defined term, “Contract Documents”, is preferable because it is more encompassing and is typically more appropriate.

Thus, it is important that specifiers be familiar with the defined terms set forth in the General Conditions and, perhaps, in other construction documents. Specifications should not be written independent of the provisions of the owner-contractor agreement, general conditions, supplementary conditions, and Division 01 specifications.

Document titles, such as “Instructions to Bidders”, “Agreement”, “General Conditions”, and others, are proper nouns and should be indicated using initial capitals. Other types of proper nouns are relatively rare in construction documents but, when they occur, should be indicated with initial capitals, such as the names of buildings, facilities, streets, and the like. Identification of facility assets, such as “air handling unit no. 2”, “classroom 305”, “east stairwell”, “control room”, and “decant tank no. 4” should ***not*** have initial capitals. Generic identification of materials or equipment, such as “concrete masonry units”, “vinyl windows”, “medium-voltage switchgear”, and the like, are ***not*** proper nouns and typically should ***not*** have initial capitals.

Words that are neither formally defined in the contract documents nor proper nouns should, of course, ***not*** have initial capitals.

Another reasonably common practice is using all-capitals for certain terms, such as “CONTRACTOR”, “OWNER”, and “ARCHITECT”. Whereas, in the past, certain widely-used standard general conditions used all-capitals for certain terms, today all widely-used standard general conditions use only initial capitals. Thus, using all-capitals for certain defined terms should typically be avoided unless the associated construction documents explicitly address using language such as, “*The terms ‘Contractor’ and ‘CONTRACTOR’ have the same meaning*.”

The danger associated with inconsistently using capitalization and defined terms is that, while a defined term is assigned a specific meaning (for example, “Contractor” typically means “The entity so indicated in the Agreement”), such terms ***without*** initial capitals may have an entirely different meaning. For instance, “**c**ontractor” (without an initial capital) would likely be interpreted as any third-party entity performing other work at the site, rather than as “***the*** **C**ontractor”. As another example, the term, “**D**rawings”, typically means the graphical portion of the contract documents prepared, sealed, and signed by the design professional in responsible charge. In contrast, “**d**rawings” (without initial capitals) could refer to any type of graphical instrument that is ***not*** part of the contract documents, including contractor-prepared layout drawings, coordination drawings, shop drawings (which is, itself, normally a defined term indicated with initial capital letters), or any drawing prepared by anybody else involved in the project. Judges, juries, arbitrators, and sureties tend to interpret such matters very literally under the premise that the document’s writer meant each provision ***exactly*** as written. Outcomes of substantial claims and disputes have turned on such apparently trivial matters of writing.

Random capitalization is not a big problem for most specifiers and design professionals because most projects do not wind up in a courtroom, in front of an arbitrator, or in the hands of a surety. However, any project, even a well-designed, clearly written, and well-administered one, can be referred to a courtroom, arbitrator, or surety for interpretation, despite the design professional’s best intentions. Therefore, it is wise to write for one’s potential audience by, among other things, properly and consistently using defined terms, and avoiding random capitalization.

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The author of this article is not an attorney and nothing in this article constitutes legal advice. Readers in need of legal advice should consult with a qualified attorney.

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