



BOARD BOOK APRIL 11, 2023 11:00 A.M.

JB PRITZKER, GOVERNOR

CAPITAL DEVELOPMENT BOARD

WEBEX MEETING DUE TO

COVID-19 EMERGENCY

LOGIN: https://illinois.webex.com

MEETING (access code): 2457-325-5819

PASSWORD: CDB411

BOARD MEMBERS

Eileen Rhodes, Chair

Pam McDonough, Vice Chair

Saul Morse

Beverly Potts

Glyn Ramage

Hipolito (Paul) Roldan

David Sidney

Jim Underwood, Executive Director



CAPITAL DEVELOPMENT BOARD

April 11, 2023

The meeting of the Capital Development Board is being held by WebEx due to the COVID-19 crisis.

LOGIN: https://illinois.webex.com/

Call: 312-535-8110 ACCESS CODE: 2457-325-5819 PASSWORD: CDB411

Public questions for the Board can be submitted through WebEx at the time for Public Comment or submitted by email to Sally.Finney@illinois.gov

Staff Contacts: Sally Finney 217-782-8726 and Heather Parks 217-782-8729

CALL TO ORDER

19.

Public Comment

- 1. Roll Call of Members
- 2. Confirmation of a Quorum

PRELIMINARY ITEMS

პ.	Adoption of Agenda	
4.	Approval of March 14, 2023, Minutes	1-4
BOA	ARD ACTION	
	Region 1 – Tim Patrick	
5.	Change Order – BHE – University of Illinois, Chicago	5-7
6.	Modification – BHE – University of Illinois, Chicago	8-11
7.	Proceed Order – BHE – University of Illinois, Chicago	12-14
8.	Proceed Order – DHS – Chicago Read Mental Health Center	15-18
9.	Proceed Order – BHE – Chicago State University	19-21
	Region 2 – James Cockrell	
10.	Change Order – BHE – Western Illinois University	22-25
11.	Proceed Order – DOC – Logan County Correctional Center	26-29
	Region 3 – Tim Patrick	
12.	Change Order – CMS – Regional Office Building	30-32
13.	Architecture/Engineering Selection Recommendation from PSB 298	33-34
14.	Illinois Energy Conservation Code Rules (71 IAC 700)	35-77
15.	Public Comment for Illinois Energy Code Rules	
INF	ORMATIONAL ITEMS	
16.	Change Order for Board Authorized Proceed Order	78
17.		
18.	Construction Update	

EXECUTIVE SESSION

20. Pending and Probable Litigation (5 ILCS 120/2(c)(11)

Capital Development Board

SUBJECT: Meeting minutes from March 4, 2023

The meeting of the Capital Development Board was held in person in Springfield and Chicago and by WebEx due to COVID-19 crisis.

The following Board members were present via WebEx:

Eileen Rhodes, Chair Beverly Potts Saul Morse David Sidney

The following were present in Springfield:

Amy Romano, CDB
David Ealey, CDB
Mark Hendricks, CDB
Jerry Burlington, CPO
Pete Jerszynski, CDB
Jim Underwood, CDB
Josh Hansel, CDB
Tim Patrick, CDB

The following were present in Chicago:

Andrea Bauer, CDB Brent Lance, CDB

Lisa Hennigh, CDB

The meeting was called to order at 11:00 a.m.

Sally Finney took roll call. Chair Rhodes and members, Saul Morse, Beverly Potts and David Sidney were present.

Saul Morse moved, and David Sidney seconded a motion to approve the agenda. Chair Rhodes called for a vote and the motion was approved unanimously.

Beverly Potts moved, and David Sidney seconded a motion to approve the February 14, 2023, minutes. Chair Rhodes called for a vote, and the motion was approved unanimously.

Saul Morse moved, and Beverly Potts seconded a motion to approve the February 14, 2023, Executive minutes. Chair Rhodes called for a vote, and the motion was approved unanimously.

Ms. Bauer, presented the following Single Bid:

Single Bid - BHE - Northeastern Illinois University

CDB Project No. 817-010-083
Repairs and Upgrades to the HVAC Systems – Lech Walesa Hall Ideal Heating Company

Single Bid......\$2,093,222 Saul Morse moved, and Beverly Potts seconded a motion to approve the Single Bid. Chair Rhodes called for a vote, and the motion was approved unanimously. Mr. Cockrell presented the following Change Order: Change Order - DOC - Logan County Correctional Center CDB Project No. 120-040-025 Rehabilitate Hot Water Distribution System Mechanical Inc. Change Order.....\$249,454.17 Saul Morse moved, and David Sidney seconded a motion to approve the Change Order. Chair Rhodes called for a vote, and the motion was approved unanimously. Mr. Cockrell presented the following Modifications: Modification – DOC – Logan County Correctional Center CDB Project No.120-135-070 Upgrade Ash Handling Middough Inc. Modification.....\$141,651 Saul Morse moved, and David Sidney seconded a motion to approve the Modification. Chair Rhodes called for a vote, and the motion was approved unanimously. Modification - BHE - Western Illinois University CDB Project No. 818-010-103 Repair and Replace Roofs Architechnics, Inc. Modification......\$235,300 David Sidney moved, and Saul Morse seconded a motion to approve the Modification. Chair Rhodes called for a vote, and the motion was approved unanimously. Mr. Cockrell presented the following Single Bid: Single Bid – DNR – Galena State Historical Site CDB Project No. 104-000-010 Replace/Repair Roofing Systems Sterling Commercial Roofing Single Bid......\$954,680

David Sidney moved, and Saul Morse seconded a motion to approve the Single Bid. Chair Rhodes called for a vote, and the motion was approved unanimously.

Mr. Ealey presented the following Change Order:

Change Order – IDA – Illinois State Fairgrounds

CDB Project No. 039-150-189 Repair Multi-Purpose Arena R.D. Lawrence

Change Order.....\$132,481.11

Saul Morse moved, and Beverly Potts seconded a motion to approve the Change Order. Chair Rhodes called for a vote, and the motion was approved unanimously.

Modification – DHS – Chester Mental Health

CDB Project No. 321-087-048 Upgrade HVAC System Nest Builders

Modification.....\$100,500

David Sidney moved, and Saul Morse seconded a motion to approve the Modification. Chair Rhodes called for a vote and the motion was approved unanimously.

Mr. Lance presented the following A/E Selections from PSB 297:

1.	040-050-032	Department of Veterans' Affairs Replace Roofing Systems Illinois Veterans' Home at LaSalle 1. Design Mavens Architecture PLLC 2. John Shafer & Associates, Inc. 3. Doyle & Associates Architects and Interior	Appropriation: \$2,445,100 Project Cost: \$2,445,100
2.	120-245-082	Department of Corrections Plan and Begin Upgrade of Water Treatment Plant Vienna Correctional Center 1. Horner & Shifrin, Inc.	Appropriation: \$4,500,000 Project Cost: \$4,500,000
3.	546-385-063	Department of Military Affairs Construct Entry Control Panel Marseilles Readiness Center 1. Charles Joseph Pell Architects Incorporated 2. Graef – USA Inc. 3. JP Architects, Ltd.	Appropriation: \$4,087,500 Project Cost: \$4,087,500

Saul Morse moved, and Beverly Potts seconded a motion to approve the previous recommendations from PSB 297. Chair Rhodes called for a vote, and the motion was approved unanimously.

Mr. Patrick gave an update on Change Order for Board Authorized Proceed Orders.

Mr. Lance gave an update on Best Interest of the State Selection/Information Items.

Mr. Patrick gave an update on the Old State Capitol.

Mr. Martinez gave an update of FEP.

Saul Morse moved, and Beverly Potts seconded a motion to adjourn. Chair Rhodes called for a vote, and the motion was approved unanimously.

The meeting was adjourned at 1:02 p.m.

Project Number: 830-030-162

Change Order G-12 - Undiscovered Condition (105)

Description: Construct A Computer Design Research and

Learning Center (CDRLC) University of Illinois - Chicago

850 W. Taylor Street Chicago, Cook County, IL

Using Agency: University of Illinois - Chicago

Architect/Engineer: Booth Hansen

333 South Desplaines Street, Suite 100

Chicago, IL, 60661

 Total Project Budget:
 \$ 104,500,000.00

 Unobligated Funds:
 \$ 8,656,756.22

 Total Spent to Date:
 \$ 44,620,370.97

Percent Complete: 50.64%

Project Manager: Blanca Rivera



Project History: The new 135,000 GFS Computer Design Research Learning Center (CDRLC) building provides the vitally needed space to accommodate the rapid growth of the Computer Science program, allows the department to consolidate a growing student body, and provides community spaces that can foster a social life within the computer design community and enrich connectivity to the broader community. The five-story structure will be the home of the Computer Science Department housing 16 classrooms, 100 faculty and staff offices, 35 labs, with collaborative, and tutoring space.

Existing field conditions did not correlate to the as-built drawings for the Science and Engineering Laboratory West (SELW) water service. A water line that was indicated as a secondary service line must be demolished to allow for the construction of the new CDRLC building. Further investigation found that this service line is not a secondary line but is actually the main line for SELW South. A new 6" water service line will need be installed to act as the SELW permanent water service and the existing secondary 4" water service from SELW North shall remain for redundancy.

Description of RFP Change: This change order will allow the contractor to shift and extend the circuit to the existing control panel for the chilled water meter as required to install the new 6" water line. Additionally, the existing 4" service from SELW North which currently runs through the tunnel to SELW South will remain and the new 6" domestic water line to serve SELW shall be installed directly above it.

Requested Action: We are requesting board approval of Change Order G-12 in the amount of \$164,149.21 to add a new 6" water service line to SELW South.

Contractor	Trade	Change Order Amount	Original Contract	% Change
W.E. O'Neil Construction Company	General	\$ 164,149.21	\$ 78,813,058.00	.21%
Total All Change Orders		\$ 164,149.21	\$ 78,813,058.00	.21%





JB PRITZKER, GOVERNOR
JIM UNDERWOOD, EXECUTIVE DIRECTOR
BOARD MEMBERS

BOARD MEMBERS
Eileen Rhodes, Chair
Pam McDonough, Vice Chair
Saul Morse
Beverly Potts
Glyn M. Ramage
Paul Roldan
David Sidney

MEMORANDUM

TO: Andrea Bauer, Regional Manager

FROM: Blanca Rivera, Senior Project Manager

DATE: March 10, 2023

RE: RFPCO G-12 Add a 6" Water Service Line

830-030-162 Construct Computer Design Research & Learning Center

University of Illinois Chicago, Cook County

Dear Andrea,

Existing field conditions did not correlate to as-built drawings for SELW water service. As-builts indicate that an existing water line serves as a secondary service line; however, this existing water line must be demolished to make way for the new CDRLC building. It was later determined that the existing water line to be demolished was the main line serving SELW South building.

This change order adds a new 6" water service line to serve as the SELW permanent water service. The existing secondary 4" water service from SELW North shall remain for redundancy. Additional ACM abatement is required to install the 6" line but is not included in this RFPCO; the abatement is included in PO G-48.

G-12 directs the Contractor to shift and extend existing circuit to existing control panel for chilled water meter as required to install new 6" water line as indicated on Sheet E300. Sheets P20U, P100 and P200 reflect the following changes: The existing 4" service from SELW North which currently runs through the tunnel to SELW South is to remain and a new 6" domestic water line to serve SELW shall be installed directly above it. The addition of the new 6" water service line ensures that SELW South can meet the demand of its occupants without affecting SELW North's existing water service and maintain 4" service line redundancy for both buildings.

Requested Action: We are requesting board approval of RFPCO G-12 in the amount of \$164,149.21 to add a new 6" water service line to SELW South.

Regards,

Blanca Rivera Senior Project Manager

CC: Amber Dooley

State of Illinois CAPITAL DEVELOPMENT BOARD

REQUEST FOR PROPOSAL & CHANGE ORDER

Date	e: 3/7/2022 RFP Number: G-12		
1.	(Contractor's Name, Address, Telephone, Fax & Attention) W.E. O'Neil Construction Co. 1245 W. Washington Blvd. Chicago, IL 60607 (773)755-1611 Fax () - Attn: Chris Catino e-mail: ccatino@weoneil.com	CDB Project #: 830-030-162 CDB Project Name: UIC CDRLC & Location: 850 W. Taylor Street, Chicago, Cook Cour CDB Contract #: 21058241 Contract Work: General	nty, Illinois
2.	REQUEST for change by: AE		
3.4.5.	CDB contemplates making certain changes, additions and deletions indicated in the description of change, accompanying drawings and The Contractor is required to submit within 14 calendar days from the proposal shall be submitted in accordance with CDB's format and the REASON for change: Existing field conditions did not correlate to as-built drawings for SE line, must be demolished for the new CDRLC building, but was later installed to act as the SELW permanent water service and the exist DESCRIPTION of change including reference to drawings and specifit and extend existing circuit to existing control panel for chilled we E300. Sheets P20U, P100 and P200 reflect the following changes: tunnel to SELW South is to remain and a new 6" domestic water line for the 6" line is not included in this RFPCO, but is included in PO COTHER CONTRACTS affected by this change. List Contractor's nework, RFP number and amount.	specifications, all work required shall conform to the contract do ne date herein a proposal and a detailed breakdown for this channe General Conditions. ELW water service. A water line, that was indicated as a secondar round to be the main line for SELW South. A 6" water service liring secondary 4" water service from SELW N shall remain for redictifications revised, new drawings and specifications issued. Water meter as required to install new 6" water line as indicated of the existing 4" service from SELW North which currently runs the to serve SELW shall be installed directly above it. ACM abatem 3-48. ame, contract IMPORTANT NOTICE Disclosure of this information is mar in accordance with the Standard Doof for Construction. Failure to complete	ry service ne will be dundancy. on Sheet rough the nent required indatory cuments e this will
	Rig. 2-23	prevent payment for work completed be a material breach of contract.	and/or
6.	CONSIDERATION: Work to be accomplished in Calendar Days from Approval of RFPCO. NOTE: Unless specifically indicated above, this does not extend the contract time.	The Contract Sum is INCREASED/DECREASED by the total sum of\$	164,149.21
7.	The change described above and on accompanying drawings and sincorporated by reference and made a part hereof. Having reviewe undersigned:		
	RECOMMEND issuance of a change order A/E Firm Name Booth Hanten (2/14/22	APPROVE as to form and content: USING AGENCY name	1/4/2023
	BY (Mull) signature	BY Ment theeff	signature
	COORDINATING CONTRACTOR OF CONSTRUCT. MANAGER BY MANAGER BY MANAGER AND MANAGER BY MANAGER	CDB/PM APPROVE	signature
	CONTRACTOR DATE 12/14/22	CDB APPROVE change order DATE	
	BY Chris Catino print name	BY	print name
	Chris Catino signature Project Manager title		signature title
8.	FOR CDB Type of Change % Assess Package N USE ONLY	o. CO Date CO No. CO AMOUNT ad	d (deduct)

State of Illinois Capital Development Board

Project Number: 830-030-162

Description: Construct A Computer Design Research and

Learning Center (CDRLC) University of Illinois - Chicago

850 W. Taylor Street Chicago, Cook County, IL

Using Agency: University of Illinois - Chicago

Architect/Engineer: Mortenson

300 Park Boulevard, Suite 100

Itasca, IL 53314

 Total Project Budget:
 \$ 104,500,000.00

 Unobligated Funds:
 \$ 8,656,756.22

 Total Spent to Date:
 \$ 44,620,370.97

Percent Complete: 50.64%

Project Manager: Blanca Rivera



Project History: The new 135,000 GFS Computer Design Research Learning Center (CDRLC) building provides the vitally needed space to accommodate the rapid growth of the Computer Science program, allows the department to consolidate a growing student body, and provides community spaces that can foster a social life within the computer design community and enrich connectivity to the broader community. The five-story structure will be the home of the Computer Science Department housing 16 classrooms, 100 faculty and staff offices, 35 labs, with collaborative, and tutoring space.

The basic services fee in the construction manager agreement is based on a March 15, 2023 substantial completion date, with a service reduction starting on March 31, 2023 and a contract end date of June 30, 2023. Because the construction manager agreement ends on June 30, 2023, Mortenson must reduce services provided to the project as of March 31, 2023 and begin demobilizing from the CDRLC project site on April 30, 2023 unless modification 02 is approved as follows:

- 1. Extended CDRLC Bid Phase Impact on Construction Manager (CM) Basic Services: The original CDRLC preconstruction bid phase period was December 2020 to March 2021. Issue for bid occurred on February 24, 2021, four (4) bid addenda were issued subsequently, and the bid phase extended from March 31, 2021 to the July 27, 2021 authorization to proceed (ATP) issuance. The combined impact of the extended bid phase, the delayed ATP issuance, and the delayed start of the construction phase is one-hundred twenty (120) calendar days. The delayed ATP pushed substantial completion out two (2) months from March 15, 2023 to May 13, 2023. The delayed May 13, 2023 substantial completion pushed the 90-day final completion and acceptance phase out an additional three (3) months, from May 15, 2023 to August 15, 2023. Final acceptance is delayed until September 30, 2023, extending CM services an additional three (3) months, July-August-September 2023. The extended CDRLC bid phase impact on CM Services and Contract Administration Fee (CAF) is \$ 429,824.
- Extended and Accelerated CDRLC construction phase impacts associated with proceed Order G-43: An extended
 construction phase with an October 3, 2023 substantial completion date requires additional, acceleration
 observation services and extends CM basic services an additional six (6) months from June 30, 2023 to December
 31, 2023. The extended construction phase impact on additional CM services and CAF is \$ 486,629.

PURPOSE OF THIS AGREEMENT MODIFICATION: We are requesting board approval of this modification in the amount of \$916,453 to extend the construction manager services due to the extended construction phase. It will also grant formal permission to utilize the existing, unused general/laborer reimbursable expense line-item amount.

SUBJECT AGREEMENT AMENDED AS FOLLOWS:

Fee Description	Total Obligation per Original Agreement	Total Amount of Previous Modifications	Total Obligation Prior to this Modification	Total Amount of this Modification	Total Agreement Obligation including this Modification
Basic Services Fee	\$5,776,277.00	\$.00	\$5,776,277.00	\$889,760.00	\$6,666,037.00
Builders Risk for CM	\$256,683.00	-\$154,471.00	\$102,212.00	\$.00	\$102,212.00
Contract Administration Fee	\$173,200.00	\$.00	\$173,200.00	\$26,693.00	\$199,893.00
Construction Testing	\$240,000.00	\$263,869.00	\$503,869.00	\$.00	\$503,869.00
General/Laborer	\$915,170.00	\$29,670.00	\$944,840.00	\$.00	\$944,840.00
General Liability Insurance	\$87,080.00	\$.00	\$87,080.00	\$.00	\$87,080.00
General Conditions	\$115,000.00	\$47,721.00	\$162,721.00	\$.00	\$162,721.00
Job Site Office Equipment/Supplies	\$177,700.00	-\$12,860.00	\$164,840.00	\$.00	\$164,840.00
Site Survey	\$30,000.00	\$66,500.00	\$96,500.00	\$.00	\$96,500.00
Temporary Protection	\$230,000.00	-\$160,000.00	\$70,000.00	\$.00	\$70,000.00
Temporary Utilities	\$249,260.00	-\$222,759.00	\$26,501.00	\$.00	\$26,501.00
Testing and Balancing	\$160,000.00	\$320,000.00	\$480,000.00	\$.00	\$480,000.00
Travel Expenses	\$5,000.00	\$18,000.00	\$23,000.00	\$.00	\$23,000.00
Winterization CM	\$336,200.00	-\$189,670.00	\$146,530.00	\$.00	\$146,530.00
TOTALS	\$8,757,570.00	\$.00	\$8,757,570.00	\$916,453.00	\$9,674,023.00



50 YEARS JB PRITZKER, GOVERNOR JIM UNDERWOOD, EXECUTIVE DIRECTOR

BOARD MEMBERS Eileen Rhodes, Chair Pam McDonough, Vice Chair Saul Morse Beverly Potts Glyn M. Ramage Paul Roldan David Sidney

MEMORANDUM

TO: Andrea Bauer, Regional Manager

FROM: Blanca Rivera, Senior Project Manager

DATE: March 20, 2023

RE: Construction Manager Modification Number 2

830-030-162 Construct Computer Design Research & Learning Center

University of Illinois Chicago, Cook County

Dear Andrea,

1. Extended CDRLC Bid Phase Impact on CM Basic Services: April-May-June-July 2021.

The original CDRLC Preconstruction Bid Phase period was December 2020 to March 2021. Issue for Bid occurred 24 February 2021, four (4) Bid Addenda were issued subsequently, and the Bid Phase extended from 31 March 2021 to the 27 July 2021 ATP issuance. The combined impact of the extended Bid Phase, the delayed ATP issuance and the delayed start of the Construction Phase is one-hundred twenty (120) calendar days. Delayed ATP pushed Substantial Completion out two (2) months from 15 March to 13 May 2023, or 655 calendar days post ATP per Specification 01 32 00. A delayed 13 May 2023 Substantial Completion pushed the 90-day Final Completion and Acceptance Phase (spec 01 32 00) out an additional three (3) months, from 15 May to 15 August 2023. Final Acceptance is delayed until 30 September 2023, extending CM services an additional three (3) months, July-August-September 2023. The extended CDRLC Bid Phase impact on CM Services and CAF is \$ 429,824.

2. Extended & Accelerated CDRLC Construction Phase Impacts Associated with Proceed Order G-43:

An extended Construction Phase with a 03 October Substantial Completion date requires additional, acceleration observation services and extends CM Basic Services an additional six (6) months from 30 June to 31 December 2023. The extended Construction Phase impact on additional CM Services and CAF is \$ 486,629.

Requested Action: We are requesting Board approval of CM Modification Number 2 in the amount of \$ 916,453 to extend Construction Manager Services.

Regards,

Blanca Rivera Senior Project Manager

CC: Amber Dooley

MODIFICATION

State of Illinois





Professional Services Agreement

Modification Number: **2**Project Number: **830-030-162**

Date: March 22, 2023

Firm Name, Address Mortenson Construction 300 Park Blvd., Suite 100 Itasca, IL 60143 Project Information Construct A Computer Design Research and Learning Center

University of Illinois - Chicago, Cook County

Total Amount

Total Agreement

Chicago, Cook County, Illinois

This Modification Changes the Scope of the Contract

Agreement Date: 2021-01-12 Contract: 21020810

Scope/Purpose of this agreement modification: Provide additional Construction Management Services Fees due to extended project duration caused by delays in the Bidding Phase, Contractor ATP, and length of Construction. The Basic Services fees provide for the Construction Management Services necessary to accomplish the scope of work defined for this project, which shall be paid on a monthly basis based on CM Schedule of Values approved by CDB. Also, update Project Schedule Dates for Substantial Completion and Final Acceptance, and Extend Contract Completion Date from 06/30/2023 to 12/31/2024. The Standard Business Terms and Conditions, dated July 2016, and the Standard Certifications, dated August 2015, are hereby incorporated into the contract.

Total Obligation

Subject agreement amended as follows: Replace Appendix A - M1 with Appendix A - M2

Total Obligation

AGREEMENT SUMMARY

Fee Description	Per Original Agreement	of Previous Modifications	prior to this Modification	of this Modification	Obligation including this Modification
Basic Services Fee	\$5,776,277.00	\$.00	\$5,776,277.00	\$889,760.00	\$6,666,037.00
Builders Risk for CM	\$256,683.00	-\$154,471.00	\$102,212.00	\$.00	\$102,212.00
Contract Administration Fee,	\$173,200.00	\$.00	\$173,200.00	\$26,693.00	\$199,893.00
Construction Testing	\$240,000.00	\$263,869.00	\$503,869.00	\$.00	\$503,869.00
General/Laborer	\$915,170.00	\$29,670.00	\$944,840.00	\$.00	\$944,840.00
General Liability Insurance	\$87,080.00	\$.00	\$87,080.00	\$.00	\$87,080.00
General Conditions	\$115,000.00	\$47,721.00	\$162,721.00	\$.00	\$162,721.00
Job Site Office Eqpt./Supplies	\$177,700.00	-\$12,860.00	\$164,840.00	\$.00	\$164,840.00
Site Survey	\$30,000.00	\$66,500.00	\$96,500.00	\$.00	\$96,500.00
Temporary Protection	\$230,000.00	-\$160,000.00	\$70,000.00	\$.00	\$70,000.00
Temporary Utilities	\$249,260.00	-\$222,759.00	\$26,501.00	\$.00	\$26,501.00
Testing and Balancing	\$160,000.00	\$320,000.00	\$480,000.00	\$.00	\$480,000.00
Travel Expenses	\$5,000.00	\$18,000.00	\$23,000.00	\$.00	\$23,000.00
Winterization CM	\$336,200.00	-\$189,670.00	\$146,530.00	\$.00	\$146,530.00
TOTALS	\$8,757,570.00	\$.00	\$8,757,570.00	\$916,453.00	\$9,674,023.00

Total Amount

Prepared by:	Blanca Rivera	3/23/2023 Date	Ву:	Using Agency approval	Date
CM Firm name:	Mortenson Construction	Magn 3.22-2	3 Reviewed:		
Print CM name, Title:	CM's Authorizing Representative	Date		Contract Executive	Date
Approved by:			By:		
	Regional Manager	Date	· -	Fiscal	Date
Approved by:			Final CDB authorization		
	Legal	Date	Print_name_title		Date

Project Number: 830-030-162

Proceed Order G-58 – Architect/Engineer Error (101)

Description: Construct A Computer Design Research and

Learning Center (CDRLC) University of Illinois - Chicago

850 W. Taylor Street Chicago, Cook County, IL

Using Agency: University of Illinois - Chicago

Architect/Engineer: Booth Hansen

333 South Desplaines Street, Suite 100

Chicago, IL, 60661

 Total Project Budget:
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 Unobligated Funds:
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 Total Spent to Date:
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Percent Complete: 50.64%

Project Manager: Blanca Rivera



Project History: The new 135,000 GFS Computer Design Research Learning Center (CDRLC) building provides the vitally needed space to accommodate the rapid growth of the Computer Science program, allows the department to consolidate a growing student body, and provides community spaces that can foster a social life within the computer design community and enrich connectivity to the broader community. The five-story structure will be the home of the Computer Science Department housing 16 classrooms, 100 faculty and staff offices, 35 labs, with collaborative, and tutoring space.

A formal Engineering Judgement was provided by the fire safing manufacturer, Hilti, for a rated fire-stop design where the floor slab meets the exterior precast curtain wall. Their design revised the slab edge detail.

Description of RFP Change: This proceed order will allow the contractor to make the following changes to the scope of work:

- 1. Where the slab edge is at a precast cavity: delete the spray foam insulation and gypsum board on the outside face of the precast backpan, install mineral wool on the inside face, and add mineral wool at the vertical joint between backpans.
- 2. Where the slab edge is at a spandrel window: delete the smoke sealant, install continuous angle and seal with firestop joint spray, delete spray foam from spandrel window backpan, and install mineral wool on inside face.
- 3. At the precast below the slab edge: delete the backpan, spray foam and gypsum board, and add thermal barrier to exposed spray foam.

Requested Action: We are requesting board approval of proceed order G-58 in the amount of \$328,204.00 to proceed with revising the slab edge details and materials to comply with the fire-rated engineering judgement.

Contractor	Trade	Proceed Order Amount	Original Contract	% Change
W.E. O'Neil Construction Company	General	\$328,204.00	\$ 78,813,058.00	.42%
Total All Proceed Orders		\$328,204.00	\$ 78,813,058.00	.42%





JB PRITZKER, GOVERNOR
JIM UNDERWOOD, EXECUTIVE DIRECTOR
BOARD MEMBERS

BOARD MEMBERS Eileen Rhodes, Chair Pam McDonough, Vice Chair Saul Morse Beverly Potts Glyn M. Ramage Paul Roldan David Sidney

MEMORANDUM

TO: Andrea Bauer, Regional Manager

FROM: Blanca Rivera, Senior Project Manager

DATE: March 27, 2023

RE: RFPCO G-58 Firesafing at Slab Edge

830-030-162 Construct Computer Design Research & Learning Center

University of Illinois Chicago, Cook County

Dear Andrea,

Due to the uniqueness of the exterior precast curtain wall on the CDRLC project, an Engineering Judgment was needed to provide a fire-rated firestop design where the floor slab meets the exterior wall. An Engineering Judgement is typically proprietary to the firestop manufacturer, therefore the AE Team worked with the contractor-selected firestop manufacturer, Hilti, post-bid. Hilti provided a formal Engineering Judgement at the (2) typical conditions: where the floor slab meets a precast cavity, and where it meets a spandrel window. The Engineering Judgement revised some of the materials that were shown at these conditions in the Contract Documents.

Where the slab edge is at a precast cavity, the spray foam insulation and gypsum board on the outside face of the precast backpan are to be removed; mineral wool must be installed on the inside face of the backpan and at the vertical joints between backpans.

Where the slab edge is at a spandrel window, the smoke sealant at the floor slab is to be removed; a continuous metal angle is to be installed and sealed with a firestop joint spray. At the spandrel window backpan, the spray foam on the outside face of the backpan is to be removed, and mineral wool installed on the inside face. At the precast cavity below, the backpan, spray foam, and gypsum board are removed and a thermal barrier applied to the exposed spray foam.

These revisions simplify the details the installation at these conditions by eliminating labor-intensive gypsum board and spray foam details that would have been installed from the exterior from a lift.

Approval of these revisions are necessary to comply with the fire-stopping manufacturer's Engineering Judgement.

Requested Action: We are requesting board approval of PO G-58 in the amount of is \$328,204.00 to proceed with revising the slab edge details and materials to comply with the fire-rated Engineering Judgement.

Regards,

Blanca Rivera Senior Project Manager

CC: Amber Dooley

State of Illinois Capital Development Board

PROCEED ORDER

PO No.: G-58
Date: 03/27/2023

Associated RFP No. G-58

1. Contractor: (Name and Address) W.E. O'Neil Construction Co. 1245 W. Washington Blvd. Chicago, IL. 60607 773-755-1611 Project No.: 830-030-162
Project Name and Location:
University of Illinois Chicago

Construct Computer Design Research Learning Center

850 W. Taylor Ave. Chicago, Cook County, IL.

Contract No.: 21058241 Contract Work: General

- 2. Request for Change by: AE
- 3. Reason for Change and Justification for the Proceed Order:

A formal Engineering Judgement was provided by the Firesafing Manufacturer, Hilti, for a rated fire-stop design where the slab edge meets the exterior precast curtain wall. Their design revised the slab edge detail.

4. Description Of Change In Work:

Where slab edge is at a precast cavity: delete spray foam insululation and gypsum board on outside face of precast backpan; install mineral wool on inside face; add mineral wool at vertical joint between backpans. Where slab edge is at a spandrel window: delete smoke sealant; install continuous angle and seal with firestop joint spray. Delete spray foam from spandrel window backpan; install mineral wool on inside face. At the precast below the slab edge, delete backpan, spray foam and gypsum board; add thermal barrier to exposed spray foam. ASK094A, B, C are issued.

5. Total Value Of This Order Not To Exceed:

\$ 328,204.00

6. Other Associated Proceed Orders (Number and Amount): None

Costs for work involved and change in Sum and Time (if any) will be submitted for inclusion in a RFP/CO adjusting the Contract Sum and/or Contract Time subject to the CDB procedures for processing contract changes as outlined in the Capital Development Board's <u>Standard Documents for Construction</u>. Approval and issuance of this document does not eliminate the requirement for the subsequent RFP/CO to be reviewed and approved by CDB to determine it to be fair and reasonable.

7. Authorization to Proceed by:

My review of this change order has determined that: the circumstances which have necessitated this change order were not reasonably foreseeable at the time the contract was signed, or the change is germane to the original contract as signed, or the change order is in the best interest of the State and authorized by law, as described. (Applicable only to a change order or a series of change orders increasing or decreasing the contract amount more than \$10,000.00 or the contract time by more than 30 days.)

	Chris Catino	3/27/23	
<u>Initial</u>	Contractor Representative	Date	
(Up to \$9,999)	Jul-Lis	3/27/2023	101
	Project Manager	Date	Probable Classification
(Up to \$24,999)			
	Regional Manager	Date	
(Up to \$49,999)			
	Construction Administrator	Date	
(Up to \$74,999)			
	Deputy Director - Construction	Date	
(Up to \$100,000)			
	Executive Director	Date	
If Board Level insert Agenda Item No.	and Board Meeting Date		

Project Number: 321-030-153

Proceed Order G-9R – Using Agency Request (103)

Description: Upgrade Fire Alarm System and Replace HVAC

Chicago Read Mental Health Center

Chicago, Cook County, IL

Using Agency: Department of Human Services (DHS)

Architect/Engineer: Primera Engineers

100 S Wacker Dr Chicago, IL, 60606

Total Project Budget: \$ 30,936,300.00 **Unobligated Funds:** \$ 643,925.79 **Total Spent to Date:** \$ 9,016,911.52

Percent Complete: 30%

Project Manager: Emilija Zgonjanin

Project History: The Chicago Read Mental Health Center is a 314,410 square foot, 13-building facility established in 1965.

The scope of work for this project provides for replacing the fire alarm systems throughout the entire campus and interface with the HVAC systems. Modifications will be made to the site along with door installations in accordance with the Americans with Disabilities Act (ADA). Work also includes the installation of new boilers, new air handling units (AHUs) with economizers, variable frequency drives (VFDs), and direct digital controls. Additionally, the scope provides for removing and replacing an outdated absorption chiller with a new water-cooled centrifugal chiller or other appropriate replacement; along with all piping modifications, controls, and electrical upgrades as necessary for the installation of the new chiller, and the architectural modifications required for boiler installation and fuel tank storage.

Description of RFP Change: This proceed order provides for the replacement of 76 existing isolation valves. The current isolation valves for the hydronic systems necessary to isolate the system and do the phasing work are leaking and need to be replaced.

These valves are 60 years old. Over time, they have corroded and calcification has built up inside the pipe and valve, causing uneven surfaces inside the valve that prevent a tight seal; as such, the valves are unable to shut/hold back the water pressure. The valve packing has also degraded and become brittle; this causes water to leak from the stem of the valve.

The using agency is requesting that these valves be replaced. There are 32 hot water valves, 38 chilled water valves, and 6 chilled water valves with pipe freeze. Work also includes abatement and new insulation.

Requested Action: We are requesting board approval of proceed order G-9R in the amount of \$210,505.38. This includes a previously approved proceed order G-9 in the amount of \$46,069.44 plus an additional \$164,435.94 to allow for the purchase of the new valves, abatement, and new insulation.

Contractor	Trade	Proceed Order Amount	Original Contract	% Change
Kroeschell Engineering	General	\$210,505.38	\$27,958,102.00	.75%
Total All Proceed Orders		\$210,505.38	\$27,958,102.00	.75%

STATE OF ILLINOIS

JB PRITZKER, GOVERNOR



Jim Underwood, Executive Director

MEMORANDUM

TO: Andrea Bauer, Regional Manager **BOARD MEMBERS**

Eileen Rhodes FROM: Emilija Zgonjanin, Senior Project Manager Chair

March 20th 2023 DATE: Glyn M. Ramage

Request for PO G-9R Approval RE:

321-030-153 Upgrade Fire Alarm System and Replace HVAC

Chicago-Read Mental Health Facility, Cook County

Martesha Brown

David Arenas

Pam McDonough

Beverly Potts

Wm. G. Stratton Building 401 South Spring Street Third Floor Springfield, Illinois 62706-4050

James R. Thompson Center 100 West Randolph Street Suite 14-600 Chicago, Illinois 60601-3283

Dunn-Richmond Economic Development Center 1740 Innovation Drive Suite 258 Carbondale, II 62903-6102

IDOT District 3 Headquarters 700 Fast Norris Drive Second Floor Ottawa, Illinois 61350-0697

East St. Louis **Community College Center** 601 James R. Thompson Blvd. Building B., Suite 1025 E. St. Louis. Illinois 62201-1129

217.782.2864 217.524.0565 FAX 217.524.4449 TDD www.illinois.gov/cdb The project team is requesting that the PO G-9R requested by Using Agency (UA) in the amount of \$210,505.38 is approved. This PO G-9R is the revision to previously approved PO G-9 in the amount of \$46,069.44 and additional \$164,435.94 is Totaling the PO G-9R to be not to exceed \$210,505.38

PO G-9 addressing 6 chilled water leaking valves was approved prior to the rest of the leaking valves due to their location being close to food storage and possibility of leaking out to the storage area creating health issues and possible built of mold. Valve replacement was not in the original scope of work due to budget issues. At the time we were not aware that the valves are leaking.

Isolation valves for the hydronic systems needed to isolate the system and do the phasing work are leaking and need to be replaced. They are 60yrs old. Over time, the existing gate valves have corroded, and calcification has built up in the pipe and valve, causing uneven surfaces inside the valve which prevents a tight seal, so the valve(s) are unable to shut/hold back the water pressure. The valve packing also degrades and becomes brittle, which causes water to leak from the stem of the valve. Using Agency is requesting the valves to be replaced. There are 32 hot water valves, 38 chilled water valves and 6 chilled water valves + pipe freeze covered in PO G-9 previously approved. The work includes abatement and new insulation.

This PO is to replace 76 total existing leaking valves. It is beneficial for the UA to use the existing Contractor at the site since they are already working in the area and are familiar with the facility. AE recomends to replace chiled water valves now (38 valves), as the heating season is ending and the cooling season will start soon. Curently the pipes are not filled with chilled water but soon, this system will need to be filled and operational to provide all the buildings with cooling. For hot water valves (32 valves) AE recomends proceeding with this work when

the heating season has ended, when the weather remains above approximately 50°F, and the hot water system is not needed. This will allow the heating system to be drained so the work can be done without pipe freezes. The abatement of the pipe insulation can be coordinated to be done immediately, or as soon as possible, prior to the valve replacement to minimize down time.

State of Illinois Capital Development Board

PROCEED ORDER

PO No.:

G-9R

Date:

3/15/2023

Associated RFP No.

RFP/CO G9R

1. Contractor: (Name and Address) Kroeshell Engineering Co. 3222 N Kenicott Ave Arlington Heights, 1L 60004

Project No.: 321-030-153
Project Name and Location:

Fire Alarm replacement and HVAC Upgrade

Contract No.: 22055081 Contract Work: General

2. Request for Change by: UA

3. Reason for Change and Justification for the Proceed Order:

Isolation valves for the hydronic systems needed to isolate the system and do the phasing work are leaking and need to be replaced. They are 60yrs old. Over time, the existing gate valves have corroded, and calcification has built up in the pipe and valve, causing uneven surfaces inside the valve which prevents a tight seal, so the valve(s) are unable to shut/hold back the water pressure. The valve packing also degrades and becomes brittle, which causes water to leak from the stem of the valve. Using Agency is requesting the valves to be replaced. There are 32 hot water valves, 38 chilled water valves and 6 chilled water valves + pipe freeze covered in PO G-9 previously approved. The work includes

4. Description Of Change In Work:

This PO is to replace existing leaking valves. It is beneficial for the UA to use the existing Contractor at the site since they are already working in the area and are familiar with the facility. AE recomends to replace chiled water valves now, as the heating season is ending and the cooling season will start soon. Curently the pipes are not filled with chilled water but soon, this system will need to be filled and operational to provide all the buildings with cooling. For hot water valves AE recomends proceeding with this work when the heating season has ended, when the weather remains above approximately 50°F, and the hot water system is not needed. This will allow the heating system to be drained so the work can be done without pipe freezes. The abatement of the pipe insulation can be coordinated to be done immediately, or as soon as possible, prior to the valve replacement to minimize down time.

5. Total Value Of This Order Not To Exceed:

S 210,505.38

6. Other Associated Proceed Orders (Number and Amount): PO G-9 (\$46,069.44) ,additionalPO \$164,435.94

Costs for work involved and change in Sum and Time (if any) will be submitted for inclusion in a RFP/CO adjusting the Contract Sum and/or Contract Time subject to the CDB procedures for processing contract changes as outlined in the Capital Development Board's <u>Standard Documents for Construction</u>. Approval and issuance of this document does not eliminate the requirement for the subsequent RFP/CO to be reviewed and approved by CDB to determine it to be fair and reasonable.

7. Authorization to Proceed by:

My review of this change order has determined that: the circumstances which have necessitated this change order were not reasonably foreseeable at the time the contract was signed, or the change is germane to the original contract as signed, or the change order is in the best interest of the State and authorized by law, as described. (Applicable only to a change order or a series of change orders increasing or decreasing the contract amount more than \$10,000.00 or the contract time by more than 30 days.)

<u>Initial</u>	Contractor Representative	$\frac{3/16/23}{Date}$	
(Up to \$9,999)	milija Zgonjanin Project Manager	3/20/2023	103
(Up to \$24,999)	Ander Barr	Date 3/24/2023	Probable Classification
(Up to \$49,999)	Regional Manager	Date	
(Op to 345,777)	Construction Administrator	Date	
(Up to \$74,999)	Deputy Director - Construction	Date	
(Up to \$100,000)		Date	
	Executive Director	Date	
If Board Level insert Agenda Item N	No and Board Meeting Date		

Project Number: 814-010-083

Proceed Order G-10 - Undiscovered Condition (105)

Description: Repair HVAC and Pool- Jacoby Dickens Center

Chicago State University

Chicago, Cook, IL

Using Agency: Chicago State University

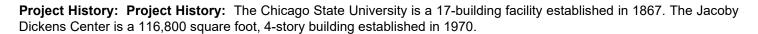
Architect/Engineer: Williams Associates Architects. LTD.

500 Park Blvd, #800 Itasca, IL, 60143

Total Project Budget: \$13,120,143.00 **Unobligated Funds:** \$ 5,230,510.61 **Total Spent to Date:** \$ 5,445,837.27

Percent Complete: 65%

Project Manager: Mark Jones



The scope of work for this project provides for replacing the roof and HVAC system for the Jacoby Dickens Center building, including the HVAC and dehumidification system related to the pool area. The work also includes a complete analysis of the pool and the pool systems with recommendations for replacing and repairing all systems and components of the pool.

Demolition has revealed severe corrosion to the existing steel columns, beams, and joist bearing seats buried in the exterior masonry walls. Williams Architects has employed Johnson Wilbur Adams as consulting structural engineer. After inspection, Johnson Wilbur Adams has advised that the existing natatorium structural steel frame does not meet the required factor of safety for the code prescribed loads. The existing natatorium is not suitable for public occupancy in its current condition. Emergency remediation is required. The original scope of work will need to be expanded to include the remediation of the existing deficiencies.

Description of RFP Change: This change order will allow for the repair and/or replacement of the existing steel columns and beams, repair of the joist bearing seats for steel bearing, and a new non-load bearing exterior wall.

Requested Action: We are requesting board approval of proceed order number G-10 in the amount of \$11,000,000.00 to expand the scope of work to remediate the deficiencies in the structure of the building.

Contractor	Trade	Proceed Order Amount	Original Contract	% Change
Stuckey Construction Company, Inc.	General	\$11,000,000.00	\$ 3,696,969.00	297.54%
Total All Proceed Orders		\$11,000,000.00	\$ 3,696,969.00	297.54%





JIM UNDERWOOD, EXECUTIVE DIRECTOR



50 YEARS

BOARD MEMBERS
Eileen Rhodes, Chair
Pam McDonough, Vice Chair
Saul Morse
Beverly Potts
Glyn M. Ramage
Paul Roldan
David Sidney

MEMORANDUM

TO: Andrea Bauer

FROM: Mark Jones

DATE: 3/21/2023

RE: 814-010-083 Proceed Order G-10

The original scope of work for the repair HVAC & Pool project included the replacement of the existing Natatorium HVAC Systems, the renovation of the swimming pools, replacement of the existing swimming pool equipment, and replacement of the roof. In May 2022, the contractor Stuckey Construction, began demolition of the hose bibs within the walls of the swimming pool deck. This demolition was part of the base-bid scope of work and revealed severe corrosion to existing steel columns of the Natatorium. Upon being notified of this condition by Stuckey Construction, Williams Architects employed Johnson Wilbur Adams as Consulting Structural Engineer. In June 2022 temporary shoring was installed for the building and Stuckey Construction performed additional demolition to further expose the existing steel columns, beams, joist bearing seats and structural steel components concealed within the exterior masonry walls.

On June 16, 2022, Williams Architects and Structural Engineer Johnson Wilbur Adams were on site at the Jacoby Dickens Center to perform a re-inspection of the exposed structural components. During this re-inspection, steel column bases were observed at the hose bib locations on Columns BB1, BB16, and EE10. A steel joist bearing seat was observed approximately 6'-8" feet north of Column CC16. The top flange of a joist support girder between Column BB16 and Column CC16 was observed at the exposed joist bearing seat.

The existing condition of the structure was brought to CDB upper management's attention in a report dated 6/16/2022. It was within this report that Johnson Wilbur Adams advised CDB that the existing Natatorium structural steel frame does not meet the required factor of safety for the code prescribed loads and that the existing Natatorium was not suitable for public occupancy in its current condition. This was determined from Wilbur Adams' inspection of the structural components. Wilbur Adams further advised CDB that emergency remediation is required. CDB upper management requested a design and estimated value from Williams Architects. In November 2022, Williams Architects presented 75% Construction Documents to Stuckey Construction for pricing. Stuckey was hesitant to provide preliminary pricing based upon the 75% Construction Documents and preferred to wait to provide final pricing until Construction Documents for the structural remediation were complete. Williams Architects provided Stuckey with 100% Construction Documents in December 2022. Stuckey Construction provided pricing in February 2023.

cc: Andrea Bauer Amber Dooley

State of Illinois Capital Development Board

PROCEED ORDER

PO No.: G-10 Date: 3/21/2023

Associated RFP No. G-10

1. Contractor: (Name and Address) Stuckey Construction Company, Inc. 2020 N. Lewis Ave

2020 N. Lewis Ave Waukegan, IL 60087 Project No.: 814-010-083
Project Name and Location:

Repair HVAC and Pool-Jacoby Dickens Center, Chicago State

University

Contract No.: 22053181 Contract Work: General Trade

2. Request for Change by: CDB Project Manager

3. Reason for Change and Justification for the Proceed Order:

Unforseen Condition

4. Description Of Change In Work:

Demolition included within the base bid work has revealed severe corrosion to existing steel columns, beams, and joist bearing seats buried in the exterior masonry walls. Williams Architects has employed Johnson Wilbur Adams as consulting structural engineer. After inspection, Johnson Wilbur Adams has advised that the existing natatorium structural steel frame does not meet the required factor of safety for the code prescribed loads. The existing natatorium is not suitable for public occupancy in its current condition. Emergency remediation is required. The original scope of work will need to be expanded to include the remediation of the existing deficiencies.

5. Total Value Of This Order Not To Exceed:

\$ 11,000,000.00

6. Other Associated Proceed Orders (Number and Amount): None

Costs for work involved and change in Sum and Time (if any) will be submitted for inclusion in a RFP/CO adjusting the Contract Sum and/or Contract Time subject to the CDB procedures for processing contract changes as outlined in the Capital Development Board's <u>Standard Documents for Construction</u>. Approval and issuance of this document does not eliminate the requirement for the subsequent RFP/CO to be reviewed and approved by CDB to determine it to be fair and reasonable.

7. Authorization to Proceed by:

My review of this change order has determined that: the circumstances which have necessitated this change order were not reasonably foreseeable at the time the contract was signed, or the change is germane to the original contract as signed, or the change order is in the best interest of the State and authorized by law, as described. (Applicable only to a change order or a series of change orders increasing or decreasing the contract amount more than \$10,000.00 or the contract time by more than 30 days.)

<u>Initial</u>	Contractor Representative	Date	_
(Up to \$9,999)			
	Project Manager	Date	Probable Classification
(Up to \$24,999)			<u></u>
	Regional Manager	Date	
(Up to \$49,999)			<u> </u>
	Construction Administrator	Date	
(Up to \$74,999)			<u> </u>
	Deputy Director - Construction	Date	
(Up to \$100,000)			<u> </u>
	Executive Director	Date	
If Board Level insert Agenda Item No.	and Board Meeting Date		

Project Number: 818-010-096

Change Order G-012 – Undiscovered Condition (205)

Description: Construct Performing Arts Center

Western Illinois University
Macomb, McDonough County

Using Agency: Western Illinois University

Architect/Engineer: Cannon Design

225 North Michigan Avenue, Suite 1100

Chicago, IL 60601

Total Project Budget: \$118,156,125.67 **Unobligated Funds:** \$ 5,870,361.00 **Total Spent to Date:** \$ 21,827,490.65

Percent Complete: 28%

Project Manager: Heather Oxley

Project History: Western Illinois University is a 110-building campus established in 1899.

The scope of work for this project provides for the construction of an approximately 100,000 square foot Performing Arts Center with a 900-seat performance auditorium and convocation center for recitals, lectures, graduation ceremonies, and local art and civic functions

The contract documents indicate that the caissons should be drilled to 81.4 feet. Field-testing has indicated that the soils at this depth do not meet minimum unconfined compression strength for caisson-type foundations. Therefore, the caissons will need to be drilled to a depth significantly deeper than what is identified in the contract documents.

Description of RFP Change. This change order will allow for additional excavation necessary to reach depths that will provide the proper bearing compacity for the caissons.

Requested Action: We are requesting board approval of change order G-012 in the amount of \$126,841.28 to allow the contractor to perform the additional excavation necessary to ensure proper bearing capacity.

Contractor	Trade	Change Order Amount	Original Contract	% Change
River City Construction	General	\$ 126,841.28	\$ 103,603,000.00	1.22%
Total All Change Orders		\$ 126,841.28	\$ 103,603,000.00	1.22%





STATE OF ILLINOIS

JB PRITZKER, GOVERNOR

JIM UNDERWOOD, EXECUTIVE DIRECTOR

BOARD MEMBERS Eileen Rhodes, Chair Pam McDonough, Vice Chair Saul Morse Beverly Potts Glyn M. Ramage Paul Roldan David Sidney

March 15, 2023

To: James Cockrell, Regional Manager CDB Region Two

From: Heather Oxley, CDB Project Manager

Project: 818-010-096

Description/Location: Construct Center for Performing Arts

Western Illinois University

Macomb, McDonough County, Illinois

RE: RFPCO G012 Boring Depths

Per Cannon Design and CDB Project Manager:

On November 30, 2022, River City Construction (RCC) alerted CannonDesign to the field-testing findings of IMEG Corp. Per email, dated 11/30/2022.

RCC noted that the caissons needed to be drilled to elevations significantly deeper than the 81'.4 elevations in Contract documents. Additional depths of 14'.3 to 20' were noted. This issue was caused by soils not meeting minimum unconfined compressive strength for caisson type foundations.

Following December 2, 2022 testing was performed by Terracon Consultants Inc (Construction Testing Agency). They concluded subsequent caisson locations required additional excavation. RCC Excavation Log noted each caisson location requiring additional excavation, depth required, cost per cubic foot associate with each. Based on this log, \$93,474.68 had been expended to date.

On December 13, 2022, Supplemental Instruction 009 was issued following discussions between CannonDesign, Thornton Tomasetti (Structural Engineer), Terracon and Engineering Consulting Services (Geotech Engineer).

Supplemental Instruction 009 provides clarification by Engineering Consulting Services. **The bearing capacity values of 10,000 psf** indicated in the Contract Documents and the Geotechnical Report **are accurate.** However, **the criteria for determining competent soils for each type of foundation** is to be based on **minimum unconfined compressive strengths**, **as documented in the Geotechnical Report.**

Based on RCC Excavation Log, Supplemental Instruction 009 clarification, additional excavation depths were required. A Proceed Order was requested. However, by the time a true Not to Exceed number could be confirmed, the caisson work would be done under current schedule.

Project Manager requested permission from CPO Office to begin work immediately to stay on schedule and not incur excessive demobilization – remobilization costs. Due to unknowns with future drilling and foundation work still to be excavated, Project Team felt landing on a correct Not to Exceed number would be difficult and cause delays. The CPO's office agreed and issued correspondence to approve immediate work under a Proceed Order. During further discussions with CPO office after work completion, it was decided issuing an RFPCO would be more appropriate as work was complete and all costs were known.

Respectfully,

Region Two Project Manager Capital Development Board

State of Illinois CAPITAL DEVELOPMENT BOARD

REQUEST FOR PROPOSAL & CHANGE ORDER

11/30/22 Date: RFP Number: G-012 1. (Contractor's Name, Address, Telephone, Fax & Attention) CDB Project #: 818-010-096 CDB Project Name: Western Illinois University Center for Performing Arts River City Construction & Location: Macomb, IL 101 Hoffer Lane East Peoria, IL 61611 CDB Contract #: 23041741 (309)694-3120 Fax (Contract Work: Attn: Warren Moody e-mail: wmoody@rccllc.com 2. REQUEST for change by: Illinois Capital Development Board, CDB CDB contemplates making certain changes, additions and deletions to the work to be performed under the subject Contract. Unless otherwise indicated in the description of change, accompanying drawings and specifications, all work required shall conform to the contract documents. The Contractor is required to submit within 14 calendar days from the date herein a proposal and a detailed breakdown for this change. The proposal shall be submitted in accordance with CDB's format and the General Conditions. REASON for change: 3 Due to excavation required for caissons beyond what was expected (based on information provided in Section 003131 Report of Subsurface Exploration and Engineering Service, and the subsequently designed foundations), this RFP is for additional excavation required to reach the bearing capacity noted in the Contract Documents. Refer to email from River City sent on 11/30, and Testing Agency reports. 4 DESCRIPTION of change including reference to drawings and specifications revised, new drawings and specifications issued. Provide pricing for excavation beyond what is required for anticipated bearing depths shown on the Contract Documents. Determinations for additional excavations to be made by Testing Agency on site. OTHER CONTRACTS affected by this change. List Contractor's name, contract **IMPORTANT NOTICE** 5. Disclosure of this information is mandatory work, RFP number and amount. N/A in accordance with the Standard Documents for Construction. Failure to complete this will prevent payment for work completed and/or be a material breach of contract. CONSIDERATION: 6. Work to be accomplished in Calendar Days from Approval The Contract Sum is NCREASED/DECREASED of RFPCO. by the total sum of......\$ \$126.841. NOTE: Unless specifically indicated above, this does not extend the contract time. The change described above and on accompanying drawings and specifications and the Contractor's proposal (if applicable) are hereby incorporated by reference and made a part hereof. Having reviewed the above and determining the amount to be fair and proper the undersigned: RECOMMEND issuance of a change order APPROVE as to form and content: USING AGENCY A/E Firm Name 3/6/2023 signature COORDINATING CONTRACTOR or CONSTRUCT. MANAGER BY signature signature DATE 02/28/2023 CONTRACTOR CDB APPROVE change order DATE Warren Moody print name print name signature signature title title Project Manager 8. Package No. CO Date CO No. CO AMOUNT add (deduct) Type of Change % Assess

FOR CDB USE ONLY **Project Number:** 120-135-069

Proceed Order G007 - Undiscovered Condition (205)

Description: Renovate Shower Rooms

Logan Correctional Center Lincoln, Logan County

Using Agency: Logan County Correctional Center

Architect/Engineer: Reifsteck Reid & Company Architects

909 Arrow Road Champaign IL 61821

Total Project Budget: \$2,315,330.00 **Unobligated Funds:** \$ 55,170.00 **Total Spent to Date:** \$ 797,412.20

Percent Complete: 40%

Project Manager: Heather Oxley

Project History: The Logan Correctional Center is a 69-building facility established in 1930.

The scope of work for this project provides for replacing the ventilation, plumbing fixtures, and controls in the inmate shower rooms, along with renovating the floors and walls. Due to costs associated with changes to the plumbing code, the project team decided to focus on Building 9.

Existing plumbing and steam condensate piping and their support hangers were found to be in very poor condition after all hazardous material abatement work was completed in the crawlspaces and basement. Replacement of several plumbing lines and necessary plumbing line hangers are required to provide a safe functional system. In addition, structural repairs are necessary due to excessive corrosion of the floor system for solid substrate for pipe hangers. Deteriorated electrical conduit, wiring, and boxes need replacement for safety.

Description of RFP Change. This proceed order will provide for the additional work necessary to replace existing plumbing, condensate lines, and hangers where needed. It will also allow for the replacement of deteriorated electrical conduit and wiring, open junction boxes containing live wiring, and other life-safety electrical items.

Requested Action: We are requesting board approval of proceed order G-007 in the amount of \$1,999,260.00 for the additional plumbing work.

Contractor	Trade	Proceed Order Amount	Original Contract	% Change
PJ Hoerr	General	\$1,999,260.00	\$1,925,000.00	103.85%
Total all Proceed Orders		\$1,999,260.00	\$1,925,000.00	103.85%





50 YEARS STATE OF ILLINOIS

JB PRITZKER, GOVERNOR

JIM UNDERWOOD, EXECUTIVE DIRECTOR

BOARD MEMBERS Eileen Rhodes, Chair Pam McDonough, Vice Chair Saul Morse Beverly Potts Glyn M. Ramage Paul Roldan David Sidney

March 20, 2023

To: James Cockrell, Regional Manager CDB Region Two

From: Heather Oxley, CDB Project Manager

Project: 120-135-069

Description/Location: Renovate Shower Rooms

Logan County Correctional Center Lincoln, Logan County, Illinois

RE: Proceed Order G007 Additional Plumbing Work

Per Reifsteck Reid and CDB Project Manager:

The original scope of work when the design work for this project as awarded was to replace plumbing fixtures, finishes, and ventilation in the restrooms of multiple buildings at Logan Correctional Center. It was determined during design that there were several other issues that required immediate attention, including extensive hazardous materials remediation and structural corrections in the basements and crawlspaces. The direction provided by CDB to the AE team at that time was to limit the scope of work required to include only the areas directly around the restrooms being renovated, and the number of buildings being renovated was reduced to meet the budget. Building #9 was identified as the building in most need of renovation so the scope was limited to focusing on it in the Base Bid.

Prior to and during the design phases, the existing steam and plumbing piping was covered with asbestos insulation and concealed the existing condition of the piping. There were also multiple ongoing extensive leaks in the existing crawlspace piping making it difficult to navigate and investigate, and in addition there was a substantial amount of deteriorated and discarded asbestos-containing pipe insulation throughout the crawlspace left exposed. These conditions made investigative work unsafe without proper equipment and made it impossible to conduct an accurate detailed survey of the existing conditions at that time. Only after the contractor completed the abatement work, erected temporary shoring, and installed temporary construction lighting has anyone been able to perform any type of investigative work in these areas.

After reviewing the existing conditions more closely, the contractors on site made us aware of concerns they had of mechanical, plumbing, electrical, and structural nature outside of the project's current scope of work. Because of the extended period that the building was in disrepair much of the existing steam piping, plumbing piping, electrical conduit and wiring, and concrete floor assembly has deteriorated beyond their useful life, and in many cases pose life safety concerns. It was at this point that all parties agreed to put work on pause while possible solutions were discussed.

Reifsteck Reid's engineers have coordinated with the contractors on site and with CDB to provide additional services for construction drawings and specifications to alleviate the following issues but also attempt to limit the scope to only what is considered absolutely necessary. Reifsteck Reid's team did not have plans created for the rest of these crawl spaces because they were outside the initial scope of work, so there was a fair

amount of field work and drawing work to create new plans and details because there are no existing record documents of these areas:

- Replace domestic water and sanitary waste piping (the existing sanitary venting is toremain).
 Existing piping in areas other than shower areas already included in the renovation will be connected to at the first floor.
- Replace steam and condensate piping. This will include replacement of steam piping backto existing isolation valves at the building's steam control valve near the tunnel entrance.
- Replacement of all existing active steam and condensate piping mains in the basement and crawl space areas; connecting to existing connected/active steam and condensate piping at/near penetrations through first floor; and identifying isolation valves to allow first floor areas to be isolated for maintenance or replacement of piping, etc.
- Design structure reinforcement for new hanger and piping connections. There are multiple areas that require beam and slab reinforcement affected by the piping and hanger replacement.
- Replace corroded electrical conduit, frayed electrical wiring, open junction boxes with live wiring, and
 relocate conduit and/or open air cabling as required based on the structural concrete repairs being
 undertaken as a result of the items listed above.

NOT included in this additional work is replacement of any piping upstream of the building control valve. Replacement of abandoned unit heater in the basement; replacement of any piping and/or equipment on the first floor; any replacement of piping beyond that indicated in the paragraphs above.

Respectfully,

Region Two Project Manager Capital Development Board

State of Illinois Capital Development Board

PROCEED ORDER

PO No.: 01
Date: 03/18/23

Associated RFP No. G-07

1. Contractor: (Name and Address)
P.J. Hoerr, Inc.
107 N. Commerce Place

107 N. Commerce Place Peoria, IL 61604 Project No.: 120-135-069
Project Name and Location:

Renovate Shower Rooms Logan Correctional Center

Contract No.: 19004710 Contract Work: General

2. Request for Change by: UA

3. Reason for Change and Justification for the Proceed Order:

Existing plumbing and steam condensate piping and their support hangers were found to be in very poor condition after all hazardous material abatement work was completed in the crawlspaces and basement. Replacement of several lines and hangers is required to provide a safe functional system. In addition, structural repairs are necessary due to excessive corrosion of the floor system to provide solid substrate for piping hangers. Deteriorated electrical conduit, wiring, and boxes need replacement.

4. Description Of Change In Work:

Provide additional work Provide additional work needed to replace existing plumbing, condensate lines, hangers where needed and also in conformance with attached specification sections 22 0529 and 23 2110.

Replace deteriorated electrical conduit and wiring, open junction boxes containing live wiring, and other life-safety electrical items that are germane to the basement and crawlspace work.

5. Total Value Of This Order Not To Exceed:

1,999,260

6. Other Associated Proceed Orders (Number and Amount): N/A

Costs for work involved and change in Sum and Time (if any) will be submitted for inclusion in a RFP/CO adjusting the Contract Sum and/or Contract Time subject to the CDB procedures for processing contract changes as outlined in the Capital Development Board's <u>Standard Documents for Construction</u>. Approval and issuance of this document does not eliminate the requirement for the subsequent RFP/CO to be reviewed and approved by CDB to determine it to be fair and reasonable.

7. Authorization to Proceed by:

My review of this change order has determined that: the circumstances which have necessitated this change order were not reasonably foreseeable at the time the contract was signed, or the change is germane to the original contract as signed, or the change order is in the best interest of the State and authorized by law, as described. (Applicable only to a change order or a series of change orders increasing or decreasing the contract amount more than \$10,000.00 or the contract time by more than 30 days.)

	Me Me	03/18/23	
<u>Initial</u>	Contractor Representative	Date	
Hox (Up to \$9,999)	year och	3.20.23	205
JC (Up to \$24,999)	Project Manager	Date 3/21/23	Probable Classification
\ 1	Regional Manager	Date	
(Up to \$49,999)			
(Up to \$74,999)	Construction Administrator	Date	
	Deputy Director - Construction	Date	
(Up to \$100,000)			
If Board Level insert Agenda Item	Executive Director a No. and Board Meeting Date	Date	

Project Number: 250-041-012

Change Order G-02 – Undiscovered Condition (205)

Description: Replace HVAC System and Lighting

Springfield Regional Office Building

Department of Central Management Services

Springfield, Sangamon County, IL

Using Agency: Department of Central Management Services (CMS)

Architect/Engineer: Delta Engineering Group, LLC (31186)

111 W Jackson Blvd., #910 Chicago, Illinois, 60604

Total Project Budget: \$3,824,000.00 **Unobligated Funds:** \$ 375,794.54 **Total Spent to Date:** \$ 344,869.58

Percent Complete: 18%

Project Manager: Robert Stowell

Project History: The Springfield Regional Office Building is located at 4500 South 6th Street in Springfield, Illinois.

The scope of work for this project provides for renovating the HVAC system and installing a new temperature control and energy management system. It also provides for removing and replacing vinyl composition tiles (VCT) on the floor, removing and replacing ceiling grid and tiles, and removing and replacing windows. Work also includes providing a new revolving door at the main entrance, in addition to providing new light fixtures and breach circuits.

This project had included funding for abatement of asbestos-containing materials; however, during the demolition phase, some areas were found to have additional asbestos that was not discovered during the design phase because they were concealed by ceiling drywall and floor carpet. Once the additional areas were discovered, a meeting was called with the contractor and his abatement sub-contractor, the architect/engineer, the CMS building contact, the CDB project manager, and the CDB abatement reviewer, Greg Swanson. The outcome of the meeting, determined by both CDB representatives, is a recommendation to submit a change order for the undiscovered condition.

Description of RFP Change: This change order will provide for the additional removal of asbestos-containing material (ACM) in the mechanical penthouse, and for removal of the ACM floor tile and mastic in various other rooms.

Requested Action: We are requesting board approval of change order G-02 in the amount of \$113,708.03 for the abatement of the additional material discovered during demolition.

Contractor	Trade	Change Order Amount	Original Contract	% Change
Schwartz Construction Group	General	\$ 113,708.03	\$ 3,824,000.00	2.97%
Total All Change Orders		\$ 113,708.03	\$ 3,824,000.00	2.97%





Robert Stowell

Project Manager Region 3

3rd floor, William G. Stratton
Building

401 South Spring Street Springfield, Illinois 62706

Office Phone: 217-782-8562 Cell Phone: 217-720-4250 Robert.Stowell@illinois.gov

Project # 250-041-012
Replace HVAC System and Lighting Springfield Regional Office Building
Change Order Request for Board Approval

03/28/2023

Project # 250-041-012 The CMS building located at 4500 S. 6th Street in Springfield, IL started construction in October of 2022, the building was occupied with 4 agencies. The contractor Schwartz Construction had started the Demo portion of the unoccupied areas and learned there was additional abatement required after ceiling tiles and drywall was removed to set the new HVAC ductwork. When the discovery was made of the additional abatement a meeting was called included were Schwartz Construction and his abatement contractor Midwest, the AE- Delta Eng. and abatement sub Mode Architects, the using agency contacts, and from CDB Myself the PM, and Greg Swanson the abatement reviewer. The outcome of the meeting was a Unanimous result that a RPF-CO would be submitted for review and approval.

To reiterate, the additional abatement we found during the demo is an undiscovered condition that was revealed and the necessity to add additional abatement work to complete this project Requires the RFP-CO G-02 to be approved. I ask the Board to Please consider the approval for this change order.

Thank You! Robert Stowell

State of Illinois CAPITAL DEVELOPMENT BOARD

REQUEST FOR PROPOSAL & CHANGE ORDER

Date	e: 01/05/2023 RFP Number: G-02	2
1.	(Contractor's Name, Address, Telephone, Fax & Attention) Schwartz Construction Group. 7023 Willow Springs Road #103 Countryside, Il 60525 (708)639-4145 Fax () - Attn: Joe Marko e-mail: jjoe@schwartzconstructiongroup.com	CDB Project #: 250-041-012 CDB Project Name: Replace HVAC System and Lighting & Location: ISpringfield Regional Office Building CDB Contract #: 23041081 Contract Work: General
2.	REQUEST for change by: Schwartz Construction Group.	
 3. 4. 	indicated in the description of change, accompanying drawings at The Contractor is required to submit within 14 calendar days from proposal shall be submitted in accordance with CDB's format and REASON for change: The general, mechanical and electrical work in the Mechanical Pesteel structure, therefore the ACM Fireproofing must be removed, also been found in rooms 132, 134, 143, 144, 145, 211, 214, and DESCRIPTION of change including reference to drawings and sp Item 1. Add the removal of the ACM Fireproofing Material in the Mechanical in the M	enthouse cannot be done without disturbing existing ACM fireproofing on the and new non ACM fireproofing to be installed. Additional ACM Flooring has 220 and must be abated in order for the new tile to be installed. Decifications revised, new drawings and specifications issued.
5.	OTHER CONTRACTS affected by this change. List Contractor's work, RFP number and amount. None	name, contract IMPORTANT NOTICE Disclosure of this information is mandatory in accordance with the Standard Documents for Construction. Failure to complete this will prevent payment for work completed and/or be a material breach of contract.
6.	CONSIDERATION: Work to be accomplished in 90 Calendar Days from Approval of RFPCO. NOTE: Unless specifically indicated above, this does not extend the contract time.	The Contract Sum is INCREASED by the total sum of
7.		d specifications and the Contractor's proposal (if applicable) are hereby wed the above and determining the amount to be fair and proper the
	RECOMMEND issuance of a change order A/E Firm Name Delta Engineering Group, LLC BY Management Signature	APPROVE as to form and content: USING AGENCY name CMS BY signature
•	COORDINATING CONTRACTOR or CONSTRUCT. MANAGER BY signature	CDB/PM APPROVE revised 3/16/23 Robert Stavell signature
	CONTRACTOR DATE 3/9/2023 BY Joe Marko print nam Signature Title	print name signature title
8.	FOR CDB Type of Change % Assess Package USE ONLY	No. CO Date CO No. CO AMOUNT add (deduct)

SUBJECT: Staff Recommendations for Board Selection of Architect/Engineers

Project Number	Firm/Job Description	Estimated Total Project Cost
830-081-001	Renovation of the UIS Innovation Center Illinois Board of Higher Education University of Illinois - Downtown Springfield, Sangamon County, Sangamon	\$13,300,000
	RECOMMENDED FIRMS IN ALPHA ORDER:	
	Cordogan, Clark & Assoc., Inc. Farnsworth Group, Inc. Solomon, Cordwell. Buenz & Associates, Inc.	

A/E SELECTION COMMITTEE RECOMMENDATIONS 4/11/2023

CDB PROJECT NO: 830-081-001

PROJECT DESCRIPTION: Renovation of the UIS Innovation Center

PROJECT LOCATION: Illinois Board of Higher Education

University of Illinois - Downtown Springfield, Sangamon County

APPROPRIATION AMOUNT: \$13,300,000 **ESTIMATED TOTAL PROJECT COST:** \$13,300,000

PROJECT SCOPE OF WORK:

A part of the Illinois Innovation Network (IIN) and the new home to Innovate Springfield, a regional social innovation and business incubator, the UIS Innovation Center will help drive innovation, economic growth, and workforce development across the State of Illinois. Activities within the Center will attract a robust human capital and innovation pipeline through the expansion of existing programs and the creation of new initiatives in business incubation and acceleration, technology commercialization, public policy research, and graduate and professional education.

The scope of work provides for a full rehabilitation of an approximately 26,000 square foot, existing 3-story building with close to a 7,700 square feet basement, located off the University of Illinois, Springfield (UIS) campus at 401 East Washington Street in Springfield, Illinois. The existing building will be repurposed to provide collaborative coworking spaces, and experiential learning labs, which will include a maker space/prototyping lab, technology-rich classrooms, informal meeting spaces, conference rooms, a flexible multi-use technology-rich conference/community room, and offices for corporate, industry and community partners, and university administrators. The project will include site work, not limited to utility, drainage, parking, and landscaping.

Components of the building, including but not limited to, HVAC, plumbing, lighting, electrical, IT, fire protection, and building envelope will be fully evaluated for repairs to increase the building's energy efficiency. The A/E will help identify eligible energy/utility programs, grants, and rebates for the project and prepare and submit applications and necessary documents for those that qualify.

This building, with portions built in the mid-1800s, is a local landmark, the Illinois Hotel, which is listed on the City of Springfield's historic preservation website (https://www.springfield.il.us/Departments/OPED/Preservation.aspx). The selected team will be required to work with the City of Springfield to deliver the requirements set forth by the city.

Hazardous materials may be encountered.

A minimum of LEED Silver certification will be required for the building. The A/E will be responsible for commissioning services related to LEED certification.

A/E's are encouraged to include independent cost estimators on their teams to verify estimates are in line with current market conditions to avoid project bids that exceed the available funding for the project. A/E estimates should be updated and verified at each stage of the project in accordance with the Design and Construction Manual. Designers are reminded that their Professional Services Agreements make them responsible for providing a design that is within budget and they can be held responsible for redesigning the project should bids received exceed project funding.

Multiple design presentations to seek approvals required by appropriate parties of both the Capital Development Board and the University of Illinois will be made by the A/E. The University will require a minimum of four presentations.

Documents produced during the Conceptualization and Schematic Design phases will be used for fundraising efforts.

A tour of the building were conducted on March 17, 2023.

A combined MBE/WBE goal of 20 percent is applicable to the A/E team. Some level of participation from both MBE and WBE firms is required to satisfy this goal (this requires including one or more MBE AND one or more WBE firms on the team).

A VBE/PBE goal of 3 percent is applicable to the A/E team.

PROFESSIONAL SERVICES BULLETIN VOLUME: 298





STATE OF ILLINOIS

JB PRITZKER, GOVERNOR
JIM UNDERWOOD, EXECUTIVE DIRECTOR

BOARD MEMBERS
Eileen Rhodes, Chair
Pam McDonough, Vice Chair
Saul Morse
Beverly Potts
Glyn M. Ramage
Paul Roldan
David Sidney

MEMORANDUM

TO: Capital Development Board

FROM: Lisa Hennigh, P.E., Deputy Director of Construction

DATE: March 27, 2023

RE: Illinois Energy Conservation Code Rules (71 IAC 600)

The Capital Development Board ("CDB") is proposing amended administrative rules. Pursuant to 2 Ill. Adm. Code 1650.410, CDB is requesting Board approval for the revised rules summarized below:

Per the Energy Efficient Building Act (20 ILCS 3125/), CDB is required to adopt an energy conservation code for the state based on the International Energy Conservation Code (IECC) for both commercial and residential buildings and may appropriately adapt the IECC to apply to the particular economy, population distribution, geography, and climate of the State and construction therein. Energy standards were first instituted in 2003 for State buildings, 2004 for commercial buildings and 2009 for residential buildings.

These rules were presented to the Board in May 2022. They were retracted from the Joint Committee on Administrative Rules process in January of 2023 and revised to align with Governor Pritzker's climate change initiatives and statewide energy conservation goals. The rules are still written to update the Illinois Energy Conservation Code from the 2018 IECC to the 2021 IECC but were amended so that the State of Illinois will adopt the 2021 International Energy Conservation Code (IECC), without energy efficiency-reducing amendments. All amendments to the Illinois Code past, current, and proposed were reviewed by the Pacific Northwest National Laboratory (PNNL). Based on their analysis, any amendments found to be less stringent than the 2021 IECC were removed. This change impacts building energy codes for residential and commercial buildings, and all State construction.

The rules also include adding five new members to the Illinois Energy Conservation Advisory Council based on Public Act 102-662. Some sections were also rearranged or reworded to make the rules more consistent with statue and the 2021 IECC.

CDB is requesting that the Board approve this rulemaking to be published in the Illinois Register for public notice.

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

TITLE 71: PUBLIC BUILDINGS, FACILITIES, AND REAL PROPERTY CHAPTER I: CAPITAL DEVELOPMENT BOARD SUBCHAPTER d: ENERGY CODES

PART 600 ILLINOIS ENERGY CONSERVATION CODE

SUBPART A: GENERAL

Section	
600.100	Definitions
600.110	Adoption and Modification of the Code
600.120	Illinois Energy Conservation Advisory Council
600.130	Revisions to the Code
	SUBPART B: STATE FUNDED FACILITIES
a .:	
Section	
600.200	Standards for State Funded Facilities
600.210	Exemptions
600.220	Compliance
	SUBPART C: PRIVATELY FUNDED COMMERCIAL FACILITIES
Section	
600.300	Standards for Privately Funded Commercial Facilities
600.310	Exemptions
600.320	Local Jurisdiction
600.330	Compliance.
600.340	Application to Home Rule Units
	GUDDA DE D. DEGIDENELA I. DIVI DINIGG
	SUBPART D: RESIDENTIAL BUILDINGS
Section	
600.400	Standards for Residential Buildings
600.410	Exemptions
600.420	Local Jurisdiction
600.430	Compliance
600.440	Application to Home Rule Units
	rr

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

600.APPENDIX A Supplanted and Additional <u>2021</u>2018 International Energy Conservation Code Sections

AUTHORITY: Implementing and authorized by the Capital Development Board Act [20 ILCS 3105] and the Energy Efficient Building Act [20 ILCS 3125].

SUBPART A: GENERAL

Section 600.100 Definitions

Definitions of terms in the International Energy Conservation Code, incorporated by reference in Subpart C of this Part, apply, as do the following definitions:

"Act" means the Capital Development Board Act [20 ILCS 3105].

"Authority Having Jurisdiction" or "AHJ" means the organization, office or individual responsible for approving equipment, materials, an installation or procedure.

"CDB" or "Board" means the Illinois Capital Development Board.

"Commercial Facility" means any building except a building that is elassified as a residential building as defined in the EEB Act. [20 ILCS 3125/10]

CAPITAL DEVELOPMENT BOARD

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"Council" means the Illinois Energy Conservation Advisory Council appointed under Subpart B of this Part and whose purpose it is to recommend modifications to the *Illinois Energy Conservation Code*.

"EEB Act" means the Energy Efficient Building Act [20 ILCS 3125].

"IECC" means the International Energy Conservation Code.

"Illinois Energy Conservation Code" or "Code" means:

With respect to the State facilities covered by Subpart B:

This Part, all additional requirements incorporated within Subpart B (including the 20212018 International Energy Conservation Code that encompasses ASHRAE 90.1, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB;

With respect to the privately funded commercial facilities covered by Subpart C:

This Part, all additional requirements incorporated within Subpart C (including the 20212018 International Energy Conservation Code that encompasses ASHRAE 90.1, including all published errata but excluding published supplements, and any statutorily authorized adaptations to the incorporated standards adopted by CDB; and

With respect to the residential buildings covered by Subpart D:

This Part, all additional requirements incorporated within Subpart D (including the 20212018 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB.

"Municipality" means any city, village or incorporated town. [20 ILCS 3125/10]

CAPITAL DEVELOPMENT BOARD

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"Residential Building" means a detached one-family or 2-family dwelling or any building that is 3 stories or less in height above grade that contains multiple dwelling units, in which the occupants reside on a primarily permanent basis, such as a townhouse, a row house, an apartment house, a convent, a monastery, a rectory, a fraternity or sorority house, a dormitory, and a rooming house; provided, however, that when applied to a building located within the boundaries of a municipality having a population of 1,000,000 or more, the term "residential building" means a building containing one or more dwelling units, not exceeding 4 stories above grade, where occupants are primarily permanent. [20 ILCS 3125/10]

"State Funded Building" means and includes buildings under the jurisdiction of each officer, department, board, commission, institution and body politic and corporate of the State, including the Illinois Building Authority, and any other person expending or encumbering State or federal funds by virtue of an appropriation or other authorization by the General Assembly or federal authorization or grant. This includes State funded *housing*, *hospitals*, *penitentiaries*, *laboratories*, *educational facilities*, *administrative facilities*, *recreational facilities*, *environmental equipment and parking facilities* [20 ILCS 3105/4.01].

(Source:	Amended	l at 46 II	II. Reg.	, effective	

Section 600.110 Adoption and Modification of the Code

- a) The purpose of the Illinois Energy Conservation Code is to implement Section 15 of the Energy Efficient Building Act [20 ILCS 3125] that requires CDB to officially adopt, as a minimum requirement for State and commercial structures and as a minimum and maximum requirement for residential buildings, the 20212018-International Energy Conservation Code, including all published errata but excluding any published supplements, to apply that Code to all commercial and residential structures in Illinois, and to assist local code officials with enforcing the requirements of the Code. The 20212018 Illinois Energy Conservation Code will become effective on adoption of this rulemaking. July 1, 2019.
- b) This Code as described in Subpart B (State facilities) is effective July 26, 2004. This Code as described in Subpart C (privately-funded commercial facilities) is

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

effective April 8, 2007. The Code as described in Subpart D (residential buildings) is effective January 29, 2010.

- c) Application of the Code
 - 1) State Facilities. The Code as described in Subpart B of this Part applies to all State facilities for which money has been appropriated or authorized by the General Assembly.
 - 2) Privately Funded Commercial Facilities and Residential Buildings. The Code as described in Subparts C and D of this Part applies *to any new building or structure in this State for which a building permit application is received by a municipality or county.* [20 ILCS 3125/20]
 - A) Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of the Code as they relate to new construction without requiring the unaltered portion of the existing building or building system to comply with the Code. [20 ILCS 3125/20(c)]
 - B) All exceptions listed in the Code related to additions, alterations, renovations or repairs to an existing building are acceptable provided the energy use of the building is not increased.
- d) This Code, together with the standards incorporated by reference in this Part, has the force of a building code and is administrative law applicable in the State of Illinois.

(Source: Amended at 46 Ill. Reg, effective	(Source:	Amended at 46	Ill. Reg.	, effective
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Section 600.120 Illinois Energy Conservation Advisory Council

a) The Executive Director of the Capital Development Board shall appoint an Advisory Council. The Council shall be composed of the Executive Director or his or her authorized representative, who shall serve as Chairman ex-officio, and 1611 additional members appointed by the Executive Director. The appointed members shall consist of 1 person representing the Illinois Environmental Protection Agency; 2 persons representing the residential construction contracting industry; 2 licensed architects; 1 licensed mechanical engineer; 1 licensed

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

electrical engineer; 2 persons representing local code officials; and 2 persons representing the construction contracting industry; 1 representative from a group that represents environmental justice; 1 representative of a nonprofit or professional association advocating for the environment; 1 energy-efficiency advocate with technical expertise in single-family residential buildings; 1 energy-efficiency advocate with technical expertise in commercial buildings; and 1 energy-efficiency advocate with technical expertise in multifamily buildings, such as an affordable housing developer. Members of the Council shall be appointed for 4 year terms. The members appointed by the Executive Director shall serve for the term of their appointments and may be reappointed upon expiration of the term. Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his or her predecessor was appointed shall be appointed for a full term.

- b) <u>Nine Seven</u> members of the Council shall constitute a quorum. The Chairman shall only vote to break a tie or when necessary to establish a quorum.
- c) The purpose of the Council shall be to recommend modifications to the Illinois Energy Conservation Code.
- d) Members of the Council shall serve without compensation but shall be reimbursed for reasonable travel expenses necessarily incurred in the performance of their duties.

(Source: Amended at 46 Ill. Reg. _____, effective _____)

SUBPART B: STATE FUNDED FACILITIES

Section 600.200 Standards for State Funded Facilities

a) The 20212018 IECC, including published errata but excluding published supplements, available from the International Code Council at 500 New Jersey Avenue NW, 6th Floor, Washington DC 20001, phone: 1-888-ICC-SAFE (422-7233), www.iccsafe.org, is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to State funded facilities, with the modifications outlined in subsection (c).

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) Modifications to IECC Under Section 15 of the EEB Act, when applying the Code to State funded facilities, CDB may modify the incorporated standards to respond to the unique economy, population distribution, geography and climate of Illinois, as long as the objectives of the EEB Act are maintained. Modifications, additions or omissions to IECC are specified in Appendix A and are rules of the CDB and are not

(Source: Amended at 46 Ill. Reg. _____, effective _____)

SUBPART C: PRIVATELY FUNDED COMMERCIAL FACILITIES

Section 600.300 Standards for Privately Funded Commercial Facilities

requirements of the IECC.

- a) The 20212018 IECC, including published errata but excluding published supplements, available from the International Code Council at 500 New Jersey Avenue NW, 6th Floor, Washington DC 20001, phone: 1-888-ICC-SAFE (422-7233), www.iccsafe.org, is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to privately funded commercial facilities, with the modifications outlined in subsection (c).
- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) Modifications to IECC Under Section 15 of the EEB Act, when applying the Code to privately funded commercial facilities, CDB may modify the incorporated standards to respond to the unique economy, population distribution, geography and climate of Illinois, as long as the objectives of the EEB Act are maintained. Modifications, additions or omissions to IECC are specified in Appendix A and are rules of the CDB and are not requirements of the IECC.

(Source: Amended at 46 Ill. Reg. _____, effective _____)

CAPITAL DEVELOPMENT BOARD

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Section 600.340 Application to Home Rule Units

This Section is a denial and limitation of home rule powers and functions under subsection (i) of Section 6 of Article VII of the Illinois Constitution on the concurrent exercise by home rule units of powers and functions exercised by the State. Nothing in this Section, however, prevents a unit of local government from adopting an energy efficiency code or standards for commercial buildings that are more stringent than the Code under this Act. [20 ILCS 3125/45(d)]

No unit of local government, including any home rule unit, may apply energy efficient building standards to privately funded commercial facilities in a manner that is less stringent than the Code as described in this Subpart C. However, nothing in the EEB Act or this Subpart prevents a unit of local government from adopting an energy efficiency code or standards for commercial buildings that are more stringent than this Code. [20 ILCS 3125/45(a)]

	(Source:	Amended at 46 Ill. Reg.	, effective	•
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SUBPART D: RESIDENTIAL BUILDINGS

Section 600.400 Standards for Residential Buildings

- a) The 20212018 IECC, including published errata but excluding published supplements, available from the International Code Council at 500 New Jersey Avenue NW, 6th Floor, Washington DC 20001, phone: 1-888-ICC-SAFE (422-7233), www.iccsafe.org, is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to residential buildings, with the modifications outlined in subsection (c).
- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) Modifications to IECC Under Section 15 of the EEB Act, when applying the Code to residential buildings, CDB may modify the incorporated standards to respond to the unique economy, population distribution, geography and climate of Illinois, as long as the objectives of the Act are maintained pursuant to that statutory authority. Modifications, additions or omissions to IECC are specified in Appendix A and are rules of the CDB and are not requirements of the IECC.

CAPITAL DEVELOPMENT BOARD

NOTICE OF PROPOSED AMENDMENTS

(Source: Amended at 46 Ill. Reg	, effective)
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Section 600.420 Local Jurisdiction

- a) Construction projects involving residential buildings and for which a municipality or county requires a building permit must comply with the Illinois Energy Conservation Code if the project involves new construction, addition, alteration, renovation or repair. *In the case of any addition, alteration, renovation or repair to an existing residential* [...] *structure, the Code* as described by this Subpart D *applies only to the portions of that structure that are being added, altered, renovated or repaired.* [20 ILCS 3125/20(a)]
- b) The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Code.
- c) A unit of local government that does not regulate energy efficient building standards is not required to adopt, enforce or administer the Code; however, any energy efficient building standards adopted by a unit of local government must comply with the Act. If a unit of local government does not regulate energy efficient building standards, any construction, renovation or addition to buildings or structures is still subject to the provisions contained in the Act. [20 ILCS 3125/20(d)].

(Source:	Amended at 46 Ill. Reg.	. effective	`

Section 600.440 Application to Home Rule Units

- a) No unit of local government, including any home rule unit, may regulate energy efficient building standards for residential buildings in a manner that is either less or more stringent than the standards established in this Subpart D.
- b) The following entities may regulate energy efficient building standards for residential buildings in a manner that is more stringent than the provisions contained in this Subpart D:
 - 1) a unit of local government, including a home rule unit, that has, on or before May 15, 2009, adopted or incorporated by reference energy

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efficient building standards for residential buildings that are equivalent to or more stringent than the 2006 IECC;

- a unit of local government, including a home rule unit, that has, on or before May 15, 2009, provided to the Capital Development Board, as required by Section 10.18 of the Capital Development Board Act [20 ILCS 3105], an identification of an energy efficient building code or amendment that is equivalent to or more stringent than the 2006 IECC; [.....]-and
- 3) a municipality with a population of 1,000,000 or more. [20 ILCS 3125/45(b)]
- c) No unit of local government, including any home rule unit or unit of local government that is subject to State regulation under the Code as provided in Section 15 of the EEB may enact any annexation ordinance or resolution, or require or enter into any annexation agreement, that imposes energy efficient building standards for residential buildings that are either less or more stringent than the energy efficiency standards in effect, at the time of construction, throughout the unit of local government.... [20 ILCS 3125/45(c)]

(Source:	Amended	l at 46 Ill. R	leg	, effective)
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Section 600.APPENDIX A Supplanted and Additional <u>2021</u>2018 International Energy Conservation Code Sections

The following Code sections shall be referenced in place of the corresponding 20212018 IECC sections.

CHAPTER 1 [CE] SCOPE AND ADMINISTRATION

SECTION C101 SCOPE AND GENERAL REQUIREMENTS

C101.1 Title. This Code shall be known as the Illinois Energy Conservation Code or Code and shall mean:

With respect to the State facilities covered by 71 Ill. Adm. Code 600.Subpart B:

This Part, all additional requirements incorporated within Subpart B (including the 20212018-International Energy Conservation Code, including all published errata but excluding published supplements that encompass ASHRAE 90.1-20192016), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective upon adoption July 1, 2019.

With respect to the privately funded commercial facilities covered by 71 Ill. Adm. Code 600.Subpart C:

This Part, all additional requirements incorporated within Subpart C (including the 20212018 International Energy Conservation Code, including all published errata and excluding published supplements that encompass ASHRAE 90.1-20192016), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective upon adoption July 1, 2019.

C101.1.2 Adoption. The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.

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C101.1.3 Adaptation. The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population distribution, geography and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.

C101.5 Compliance. Commercial buildings shall meet the provisions of the Illinois Energy Conservation Code covered by 71 Ill. Adm. Code 600.Subpart C. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:

- 1. Compliance forms published in the ASHRAE 90.1 User's Manual; or
- 2. Compliance Certificates generated by the U.S. Department of Energy's COMcheckTM Code compliance tool; or
- 3. Other comparable compliance materials that meet or exceed, as determined by the AHJ,the compliance forms published in the ASHRAE 90.1 User's Manual or the U.S. Department of Energy's COMcheckTM code compliance tool; or
- 4. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325].

C102.1.1 Above Code Programs. No unit of local government, including any home rule unit, may apply energy efficient building standards to privately funded commercial facilities in a manner that is less stringent than this Code as described in 71 III. Adm. Code 600.Subpart C. However, nothing in the EEB Act or Subpart C prevents a unit of local government from adopting an energy efficiency code or standards that are more stringent than this Code. The requirements identified as "mandatory" in Table C407.2 shall be met. Chapter 4 shall be met.

SECTION <u>C110</u>C109 BOARD OF APPEALS

<u>C110.1</u>C109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this Code, there may be created a board of appeals. The code official shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board

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shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

C109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training.

CHAPTER 2 [CE] DEFINITIONS

SECTION C202 GENERAL DEFINITIONS

Authority Having Jurisdiction or **AHJ** – means the organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

Board – means the Illinois Capital Development Board.

Council – means the Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the Illinois Energy Conservation Code.

Demand Response Signal - means a signal that indicates a price or a request to modify electricity consumption for a limited time period.

<u>Demand Responsive Control</u> – means a control capable of receiving and automatically responding to a demand response signal.

EEB Act – means the Energy Efficient Building Act [20 ILCS 3125].

Photosynthetic Photon Efficacy (PPE) – means a photosynthetic photon flux divided by input electric power in units of micromoles per second per watt, or micromoles per joule as defined by ANSI/ASABE S640.

Roof Membrane Peel and Replacement When an existing weather resisting roof membrane alone is removed, exposing insulation or sheathing and only a new weather resisting roof membrane is installed.

CHAPTER 4 [CE]

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COMMERCIAL ENERGY EFFICIENCY

SECTION C402 BUILDING ENVELOPE REQUIREMENTS

C402.4.1.3 Fenestration Orientation

The vertical fenestration shall comply with equation either (a) or (b) a. $AW \le (AT)/4$ and $AE \le (AT)/4$ b. $AW \times SHGCW \le (AT \times SHGCC)/5$ and $AE \times SHGCE \le (AT \times SHGCC)/5$

where

<u>Aw = west-oriented vertical fenestration area</u> (oriented within 45 degrees of true west to the south and within 22.5 degrees of true west to the north in the northern hemisphere)

<u>Ae</u> = east-oriented <u>vertical fenestration area</u> (oriented within 45 degrees of true east to the south and within 22.5 degrees of true east to the north in the northern hemisphere)

AT = total vertical fenestration area

SHGCC = SHGC criteria in Table C402.4

<u>SHGCE = SHGC</u> for east-oriented *fenestration*

<u>SHGCW = SHGC</u> for west-oriented *fenestration*

Exceptions:

- 1. Buildings with shade on 75% of the east- and west-oriented vertical fenestration areas from permanent projections, existing buildings, existing permanent infrastructure, or topography at 9 a.m. and 3 p.m., respectively, on the summer solstice (June 21).
- 2. *Alterations* and additions with no increase in *vertical fenestration area*.
- 3. Buildings where the west-oriented and east-oriented vertical fenestration area does not exceed 20% of the gross wall area for each of those façades, and SHGC on those facades is no greater than 90% of the criteria in Table C402.4.

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C402.5.1 Air Barriers. A continuous air barrier shall be provided throughout the building thermal envelope. The air barriers shall be permitted to be located on the inside or outside of the building envelope, located within the assemblies composing the envelope, or any combination thereof. The air barrier shall comply with Sections C402.5.1.1 and C402.5.1.2. For roof air barriers on existing buildings, refer to Section C503.1 or C504.2.

Exception: Air barriers are not required in buildings located in Climate Zone 2B.

C402.5.1.1 Air Barrier Construction. The continuous air barrier shall be constructed to comply with the following:

- 1. The air barrier shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
- 2. Air barrier joints and seams shall be sealed, including sealing transitions at joints between dissimilar materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
- 3. Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Sealings shall allow for expansion, contraction and mechanical vibration. Paths for air leakage from the building to the space between the roof deck and roof covering used air barrier shall be caulked, gasketed or otherwise covered with a moisture vapor-permeable material. Joints and seams associated with penetrations shall be sealed in the same manner or taped. Sealing materials shall be securely installed around the penetration so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.
- 4. Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed that penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.

SECTION C405 ELECTRICAL POWER AND LIGHTING SYSTEMS

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C405.1 General (Mandatory). This section covers lighting system controls, the maximum lighting power for interior and exterior applications and electrical energy consumption.

No less than 90% of the permanently installed lighting serving dwelling units shall be provided by lamps with an efficacy of not less than 65 lm/W or light fixtures with an efficacy of not less than 55 lm/W, or with Sections C405.2.4 and C405.3. Sleeping units shall comply with Section C405.2.4 and Section R404.1 or C405.3. Lighting installed in walk-in coolers, walk in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with the lighting requirements of Section C403.10.1 or C403.10.2.

C405.4 Lighting for plant growth and maintenance. All permanently installed luminaires used for plant growth and maintenance shall have a *photosynthetic photon efficacy* as defined in accordance with ANSI/ASABE S640 of not less than 1.7 μmol/J for *greenhouses* and not less than 2.2 μmol/J for all other indoor growing spaces.

Exception: The following buildings are exempt:

- 1. Buildings with no more than 40kW of aggregate horticultural lighting load.
- Cannabis facilities subject to 410 ILCS 705/10-45- the Cannabis Regulation and Tax Act.

SECTION C406 ADDITIONAL EFFICIENCY REQUIREMENTS

C406.1 Additional energy efficiency credit requirements. New buildings shall achieve a total of 10 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building and from credit calculations as specified in relevant subsections of Section C406. Where a building contains multiple-use groups, credits from each use group shall be weighted by floor area of each group to determine the weighted average building credit. Credits from the tables or calculation shall be achieved where a building complies with one or more of the following:

- 1. More efficient HVAC performance in accordance with Section C406.2.
- 2. Reduced lighting power in accordance with Section C406.3.
- 3. Enhanced lighting controls in accordance with Section C406.4.

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- 4. On-site supply of renewable energy in accordance with Section C406.5.
- <u>5. Provision of a dedicated outdoor air system for certain HVAC equipment in accordance with Section C406.6.</u>
- <u>6. High-efficiency service water heating in accordance with Section C406.7.</u>
- 7. Enhanced envelope performance in accordance with Section C406.8.
- 8. Reduced air infiltration in accordance with Section C406.9
- 9. Where not required by Section C405.12, include an energy monitoring system in accordance with Section C406.10.
- 10. Where not required by Section C403.2.3, include a fault detection and diagnostics (FDD) system in accordance with Section C406.11.
- 11. Efficient kitchen equipment in accordance with Section C406.12.
- 12. HVAC demand responsive controls and more efficient HVAC performance in accordance with Section C406.2 and Section C406.13.
- 13. Water heating demand responsive controls and high-efficiency service water heating in accordance with Section C406.7 and Section C406.14.

Modify Table C406.1(1) as follows:

Table C406.1(1) Additional Energy Efficiency Credits for Group B Occupants

Climate Zone:	4A	5A
C406.13 HVAC		
demand responsive		
<u>controls</u>	2	2
C406.14 Water		
heating demand		
responsive controls	1	1

Modify Table C406.1(2) as follows:

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<u>Table C406.1(2) Additional Energy Efficiency Credits for Group R and I</u> <u>Occupancies</u>

Climate Zone:	4A	5 A
C406.13 HVAC		
demand responsive		
<u>controls</u>	4	3
C406.14 Water		
heating demand		
responsive controls	1	1

Modify Table C406.1(3) as follows:

Table C406.1(3) Additional Energy Efficiency Credits for Group E Occupancies

Climate Zone:	4A	<u>5A</u>
C406.13 HVAC		
demand responsive		
<u>controls</u>	4	4
C406.14 Water		
heating demand		
responsive controls	<u>1</u>	1

Modify Table C406.1(4) as follows:

Table C406.1(4) Additional Energy Efficiency Credits for Group M Occupancies

Climate Zone:	4A	5A
C406.13 HVAC		
demand responsive		
<u>controls</u>	4	3
C406.14 Water		
heating demand		
responsive controls	<u>X</u>	X

Modify Table C406.1(5) as follows:

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Table C406.1(5) Additional Energy Efficiency Credits for Other* Occupancies

Climate Zone:	4A	<u>5A</u>
C406.13 HVAC		
demand responsive		
<u>controls</u>	3	<u>3</u>
C406.14 Water		
heating demand		
responsive controls	2	2

C406.1.1 Tenant spaces. Tenant spaces shall comply with sufficient options from Tables C406.1(1) through C406.1(5) to achieve a minimum number of 5 credits, where credits are selected from Section C406.2, C406.3, C406.4, C406.6, C406.7 or C406.10. Where the entire building complies using credits from Section C406.5, C406.8, C406.9, or C406.13 tenant spaces shall be deemed to comply with this section.

<u>C406.13 HVAC demand responsive controls.</u> Buildings shall be provided with demand responsive controls capable of executing the following actions in response to a demand response signal:

- 1. Automatically increasing the zone operating cooling set point by the following values: $1^{\circ}F(0.5^{\circ}C)$, $2^{\circ}F(1^{\circ}C)$, $3^{\circ}F(1.5^{\circ}C)$, and $4^{\circ}F(2^{\circ}C)$.
- 2. Automatically decreasing the zone operating heating set point by the following values: 1°F (0.5°C), 2°F (1°C), 3°F (1.5°C), and 4°F (2°C).

Where a demand response signal is not available the heating and cooling system controls shall be capable of performing all other functions. Where thermostats are controlled by direct digital control including, but not limited to, an energy management system, the system shall be capable of demand responsive control and capable of adjusting all thermal setpoints to comply. The demand responsive controls shall comply with either Section C406.13.1 or Section C406.13.2

C406.13.1Air conditioners and heat pumps with two or more stages of control and cooling capacity of less than 65,000 Btu/h. Thermostats for air conditioners and heat pumps with two or more stages of control and a cooling capacity less than 65,000 Btu/h (19 kW) shall be provided with a demand responsive control that complies with the communication and performance requirements of AHRI 1380.

<u>C406.13.2 All other HVAC systems.</u> Thermostats for HVAC systems shall be provided with a demand responsive control that complies with one of the following:

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- 1. Certified OpenADR 2.0a VEN, as specified under Clause 11, Conformance
- 2. Certified OpenADR 2.0b VEN, as specified under Clause 11, Conformance
- 3. Certified by the manufacturer as being capable of responding to a demand response signal from a certified OpenADR 2.0b VEN by automatically implementing the control functions requested by the VEN for the equipment it controls
- 4. IEC 62746-10-1
- 5. The communication protocol required by a controlling entity, such as a utility or service provider, to participate in an automated demand response program
- 6. The physical configuration and communication protocol of CTA 2045-A or CTA 2045-B.

C406.14 Water heating demand responsive controls. Electric storage water heaters with a rated water storage volume of 40 gallons (150L) to 120 gallons (450L) and a nameplate input rating equal to or less than 12kW shall be provided with demand responsive controls in accordance with Table C406.14 or another equivalent approved standard.

TABLE C406.14
DEMAND RESPONSIVE CONTROLS FOR WATER HEATING

Equipment Type	<u>Controls</u>			
Electric storage water	Manufactured before	Manufactured on or after		
<u>heaters</u>	<u>7/1/2025</u>	<u>7/1/2025</u>		
	ANSI/CTA-2045-B Level	ANSI/CTA-2045-B Level 2,		
	1 and also capable of except "Price Stream			
	initiating water heating to	Communication" functionality		
	meet the temperature set	as defined in the		
	point in response to a	standard.		
	demand response signal.			

SECTION C407 TOTAL BUILDING PERFORMANCE

Modify Table C407.2 as follows:

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TABLE C407.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE

<u>SECTION^a</u>	TITLE						
Envelope							
C402.4.1.3 Fenestration Orientation							

Modify Table C407.4.1(1) as follows:

TABLE C407.4.1(1)

SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

DI ECHI ICHI I ON ID I O	It THE STITIONED RELEASE TO THE			
Vertical fenestration other than opaque doors	Area 1. The proposed vertical fenestration area; where the proposed vertical fenestration area is less than 40 percent of the above- grade wall area. 2. 40 percent of above grade wall area; where the proposed vertical fenestration area is 40 percent or more of the above grade wall area 3. Fenestration orientation shall comply with C402.4.1.3	As proposed		
	<u>U-factor: as specified in Table C402.4</u>	As proposed		
	1. SHGC: as specified in Table C402.4 except that for climates with no requirement (NR) SHGC = 0.40 shall be used. 2. Fenestration SHGC shall comply with C402.4.1.3	As proposed		
	External shading and PF: none	As proposed		

CHAPTER 5 [CE] EXISTING BUILDINGS

> SECTION C503 ALTERATIONS

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C503.1 General. Alterations to any building or structure shall comply with the requirements of this Code for new construction. Alterations shall be such that the existing building or structure is no less conforming to the provisions of this Code than the existing building or structure was prior to the alteration. Alterations to an existing building, building system or portion thereof shall conform to the provisions of this Code as those provisions relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this Code. Alterations shall not create an unsafe or hazardous condition or overload existing building systems.

Alterations complying with ANSI/ASHRAE/IESNA 90.1 need not comply with Sections C402, C403, C404 and C405.

Exceptions: The following alterations need not comply with the requirements for new construction, provided the energy use of the building is not increased:

- 1. Storm windows installed over existing fenestration.
- Surface applied window film installed on existing single-pane fenestration assemblies
 reducing solar heat gain, provided the Code does not require the glazing or fenestration to
 be replaced.
- Existing ceiling, wall or floor cavities exposed during construction, provided that these
 cavities are filled with insulation.
- 4. Construction in which the existing roof, wall or floor cavity is not exposed.
- Roof recover.
- 6. Roof membrane peel and replacement.
- 7. Air barriers shall not be required for roof recover and roof replacement when the alterations or renovations to the building do not include alterations, renovations or repairs to the remainder of the building envelope.
- 8. Roof replacements for roof systems 2:12 slope or less shall comply with the low slope roof insulation requirements unless the installation of insulation above the structural roof deck, and necessary to achieve the code required *R* value, is deemed infeasible by the code official to accommodate the added thickness of insulation above the roof deck.

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Conditions of infeasibility due to flashing height limitations presented by existing rooftop conditions include, but are not limited to, HVAC or skylight curb, low door or glazing, parapet, weep holes, drainage patterns, or cricket or saddle construction. These conditions are subject to manufacturer's specifications, manufacturer's installation instructions, and code official approval.

<u>Chapter 6 [CE]</u> <u>Referenced Standards</u>

ASME	ASME Total Park Assessed
ADIVIL	Two Park Avenue New York, NY 10016-5990
BPVC	Boiler and Pressure Vessel Code
ATIDI	Air-Conditioning, Heating, & Refrigeration Institute
<u>AHRI</u>	2111 Wilson Blvd, Suite 500
	Arlington, VA 22201
1380-2019	Demand Response through Variable Capacity HVAC Systems in
	Residential and Small Commercial Applications
ANICT	American National Standards Institute
ANSI	25 West 43rd Street, 4th Floor
	New York, NY 10036
ANSI/CTA-2045-A-201	8 Modular Communications Interface for Energy Management
ANSI/CTA-2045-B-201	9 <u>Modular Communications Interface for Energy Management</u>
CTA	Consumer Technology Association
CIA	1919 S. Eads Street
	Arlington, VA 22202
ANSI/CTA-2045-B	Modular Communications Interface for Energy Management
	<u>C404.11</u>
IEC	IEC Regional Centre for North America
	IEC International Electrotechnical Commission
	446 Main Street 16th Floor
	Worcester, MA 016808
<u>IEC 62746-10-1 - 2018</u>	Systems interface between customer energy management system and the
	power management system – Part 10-1: Open automated demand response

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CHAPTER 1 [RE] SCOPE AND ADMINISTRATION

SECTION R101 SCOPE AND GENERAL REQUIREMENTS

R101.1 Title. This Code shall be known as the Illinois Energy Conservation Code or this Code, and shall mean:

With respect to the residential buildings covered by 71 Ill. Adm. Code 600.Subpart D:

This Part, all additional requirements incorporated within Subpart D (including the 20212018 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB are effective upon adoption July 1, 2019.

- **R101.1.2 Adoption.** The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.
- **R101.1.3 Adaptation.** The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population distribution, geography and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.
- **R101.5** Compliance. Residential buildings shall meet the provisions of the Illinois Energy Conservation Code covered by 71 Ill. Adm. Code 600.Subpart D. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:
- 1. Compliance Certificates generated by the U.S. Department of Energy's REScheckTM Code compliance tool; or

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- 2. Other comparable compliance materials that meet or exceed, as determined by the AHJ, U.S. Department of Energy's REScheckTM Code compliance tool; or
- 3. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325].

SECTION R102 ALTERNATIVE MATERIALS DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

R102.1.1 Above Code Programs. No unit of local government, including any home rule unit, may regulate energy efficient building standards for residential building in a manner that is either less or more stringent than the standards established pursuant to this Code. Buildings shall be considered to be in compliance with this code where such buildings also meet the The requirements identified in Table R405.2 and the building thermal envelope is greater than or equal to levels of efficiency and solar heat gain coefficients (SHGC) in Tables 402.1.1 and 402.1.3 of the 2009 International Energy Conservation Code.as "mandatory" in Chapter 4 shall be met.

However, the following entities may regulate energy efficient building standards for residential buildings in a manner that is more stringent than the provisions contained in this Code:

- i) A unit of local government, including a home rule unit, that has, on or before May 15, 2009, adopted or incorporated by reference energy efficient building standards for residential buildings that are equivalent to or more stringent than the 2006 International Energy Conservation Code;
- ii) A unit of local government, including a home rule unit, that has, on or before May 15, 2009, provided to the Capital Development Board, as required by Section 10.18 of the Capital Development Board Act, an identification of an energy efficient building code or amendment that is equivalent to or more stringent than the 2006 International Energy Conservation Code; and
- iii) A municipality with a population of 1,000,000 or more.

SECTION R110R109 MEANS BOARD OF APPEALS

CAPITAL DEVELOPMENT BOARD

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R110.1R109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this Code, there may be created a board of appeals. The code official shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

<u>R110.3R109.3</u> Qualifications. The board of appeals shall consist of members who are qualified by experience and training.

CHAPTER 2 [RE] DEFINITIONS

SECTION R202 GENERAL DEFINITIONS

Authority Having Jurisdiction or **AHJ** – means the organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

Board – means the Illinois Capital Development Board.

Council – means the Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the Illinois Energy Conservation Code.

EEB Act – means the Energy Efficient Building Act [20 ILCS 3125].

High-Efficacy Lamps — means compact fluorescent lamps, light-emitting diode (LED) lamps, T-8 or smaller diameter linear fluorescent lamps, or other lamps with an efficacy of not less than 65 lm/W or light fixtures of not less than 55 lm/W.

Local Exhaust – means an exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.

Residential Building – means a detached one-family or 2-family dwelling or any building that is 3 stories or less in height above grade that contains multiple dwelling units, in which the occupants reside on a primarily permanent basis, such as a townhouse, a row house, an apartment house, a convent, a monastery, a rectory, a fraternity or sorority house, a dormitory and a

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NOTICE OF PROPOSED AMENDMENTS

rooming house; provided, however, that when applied to a building located within the boundaries of a municipality having a population of 1,000,000 or more, the term "residential building" means a building containing one or more dwelling units, not exceeding 4 stories above grade, where occupants are primarily permanent.

Roof Membrane Peel and Replacement <u>means</u> When an existing weather resisting roof membrane alone is removed, exposing insulation or sheathing, and only a new weather resisting roof membrane is installed.

Whole House Mechanical Ventilation System – means an exhaust system, supply system or combination thereof that is designed in accordance with Section R403.6 to mechanically exchange indoor air with outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole house ventilation rates. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY

SECTION R401 GENERAL

R401.2 Application. Residential buildings shall comply with Section R401.2.6 and either Sections R401.2.1, R401.2.2, R401.2.3, R401.2.4 or R401.2.5.

Exception: Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

<u>R401.2.5</u> <u>Phius Alternative Compliance Option.</u> The Phius Alternative Compliance Option requires compliance with Section R409.

R401.2.6 Additional energy efficiency. This section establishes additional requirements applicable to all compliance approaches to achieve additional energy efficiency.

- 1. For buildings complying with Section R401.2.1, one of the additional efficiency package options shall be installed according to Section R408.2.
- 2. For buildings complying with Section R401.2.2, the building shall meet one of the following:

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- 2.1. One of the additional efficiency package options in Section R408.2 shall be installed without including such measures in the proposed design under Section R405; or 2.2. The proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.
- 3. For buildings complying with the Energy Rating Index alternative Section R401.2.3, the Energy Rating Index value shall be at least 5 percent less than the Energy Rating Index target specified in Table R406.5.

The option selected for compliance shall be identified in the certificate required by Section R401.3.

SECTION R402 BUILDING THERMAL ENVELOPE

TABLE R402.1.2

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[®]

CLIM ATE	FENES- TRATI ON U- FACTO		GLAZ ED FENES - TRATI ON SHGC ^{b,}		WOOD FRAME WALL R-	MASS WALL R-	FLOO R R-	BASEME NT ^e WALL R-	SLAB ^d R VALUE	CRAW L SPACE ^e WALL R-
ZONE	R ^b	FACTOR	•	VALUE	VALUE	VALUE ⁱ	VALUE	VALUE	DEPTH	VALUE
4	NR	0.75	0.25	30	13	3/4	13	Θ	0	0
2	0.40	0.65	0.25	38	13	4/6	13	θ	0	θ
3	0.32	0.55	0.25	38	20 or 13+5 ^h	8/13	19	5/13 ^f	0	5/13
4 except	0.32	0.55	0.40	49	20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13

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5 and Marin e 4	0.30	0.55	NR	49	20 or 13+5 ^h	13/17	30 €	10/13	10, 2 ft	15/19
6	0.30	0.55	NR	49	20+5 or 13+10 ^h	15/20	30 €	15/19	10, 4 ft	15/19
7 and 8	0.30	0.55	NR	49	20+5 or 13+10 ^h	19/21	38 ^g	15/19	10, 4 ft	15/19

NR = Not Required
For SI: 1 foot = 304.8 mm

- ** R-values are minimums. U factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: In Climate Zones 1 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements, provided that the SHGC for skylights does not exceed 0.30.
- e—"10/13" means *R*-10 continuous insulation on the interior or exterior of the home or *R*-13 cavity insulation on the interior of the basement wall. "15/19" means *R*-15 continuous insulation on the interior or exterior of the home or *R*-19 cavity insulation at the interior of the basement wall. Alternatively, compliance with "15/19" shall be *R*-13 cavity insulation on the interior of the basement wall plus *R*-5 continuous insulation on the interior or exterior of the home.
- ^d *R*-5 shall be provided under the full slab area of a heated slab in addition to the required slab edge *R*-value for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.

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- ^e There are no SHGC requirements in the Marine Zone.
- Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1 (of the IECC).
- E Alternatively, insulation sufficient to fill the framing cavity and providing not less than an *R*-value of *R*-19.
- ^h The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "13+5" means *R*-13 cavity insulation plus *R*-5 continuous insulation.
- * Mass walls shall be in accordance with Section R402.2.5. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

Modify Table R402.1.2 as follows:

TABLE R402.1.4 EOUIVALENT U-FACTORS

CLIMA TE ZONE	FENES- TRATIO N U- FACTOR	SKYLIG HT U- FACTO R	CEILIN G U- FACTO R	FRAME WALL U- FACTO R	MASS WALL <i>U</i> - FACTO R	FLOOR U- FACTO R	BASEM ENT WALL U- FACTO R	CRAW Ł SPACE WALL U- FACTO R
5 and Marine 4	0.30	0.55	0.026	0.060	0.082	0.033	0.059	0.055

R402.2.1 Roof/Ceilings with attic spaces. Where Section R402.1.3 requires R-49 insulation in the ceiling or attic, installing R-38 over 100 percent of the ceiling or attic area requiring insulation shall satisfy the requirement for R-49 insulation wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. Where Section R402.1.3 requires R-60 insulation in the ceiling, installing R-49 over 100 percent of the ceiling

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area requiring insulation shall satisfy the requirement for R-60 insulation wherever the full height of uncompressed R-49 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the insulation and fenestration criteria in Section R402.1.2 and the Total UA alternative in Section R402.1.5.

R402.2.2 Roof/Ceilings Without Attic Spaces. When Section R402.1.32 requires insulation *R*-values greater than *R*-30 in the interstitial space above a ceiling and below the structural roof deck, and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation *R*-value for those roof/ceiling assemblies shall be *R*-30. Insulation shall extend over the top of the wall plate to the outer edge of the plate and shall not be compressed. This reduction of insulation from the requirements of Section R402.1.32 shall be limited to 500 square feet (46 m²) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the *U*-factor alternative approach in Section R402.1.4 and the Total UA alternative in Section R402.1.5.

Exception: For roofs on existing buildings with slope less than 2 units vertical in 12 units horizontal, refer to Section R503.1.1.

R402.2.9 Basement Walls. Walls associated with conditioned basements shall be insulated from the top of the basement wall down to 10 feet (3048 mm) below grade or to within 6 inches (152 mm) of the basement floor, whichever is less. Walls associated with unconditioned basements shall comply with this requirement except when the floor overhead is insulated in accordance with Sections R402.1.2 and R402.2.2.8.

<u>R402.2.8.1</u> <u>Basement wall insulation installation.</u> Where basement walls are insulated, the insulation shall be installed from the top of the basement wall down to 10 feet (3048 mm) below grade or to within 6 inches (152 mm) of the basement floor, whichever is less.

Exception: Walls associated with conditioned basements may be insulated from the top of the basement wall down to 4 feet (1219 mm) below grade when the basement wall *R*-value is at least 15/19, (basement wall *U*-Factor of 0.050).

R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 4 air changes per hour (ACH) in Climate Zones 4 and 5. The building or dwelling unit shall be provided with a whole house mechanical ventilation system as designed in accordance with Section R403.6. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g.

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(50 Pascals). When required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test, indicating the ACH, shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after all penetrations of the building thermal envelope have been sealed.

Exceptions:

- 1. For additions, alterations, renovations or repairs to existing buildings, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. When required by the code official, an approved third party independent from the installer shall inspect both air barrier and insulation installation criteria.
- 2. For heated attached private garages and heated detached private garages accessory to 1—and 2-family dwellings and townhouses not more than 3 stories above grade plane in height, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. When required by the code official, an approved third party independent from the installer shall inspect both air barrier and insulation installation criteria. Heated attached private garage space and heated detached private garage space shall be thermally isolated from all other habitable, conditioned spaces.
- 3. For low rise multifamily buildings, dwelling units shall be tested and verified as having a leakage rate of not exceeding 0.25 cubic feet per minute (CFM) per square foot of enclosure area (all 6 sides of the dwelling unit) in Climate Zones 1 through 8. Testing shall be conducted with an unguarded blower door at a pressure of 0.2 inches w.g. (50 Pascal). If guarded blower door testing (a test with one or more adjacent units pressurized that should eliminate any leakage between units) is being performed, this exception is not allowed and the standard testing requirement of Section 402.4.1.2 apply. When required by the code official, testing shall be conducted by an approved third party. For buildings with more than 7 units, a sampling protocol is allowed by an approved third party. The sampling protocol requires the first 7 units to be tested without any failures. Upon successful testing of those initial 7 units, remaining units can be sampled at a rate of 1 in 7. If any sampled unit fails compliance with the maximum allowable air leakage rate, 2 additional units in the same sample set must be tested. If additional failures occur, all units in the sample set must be tested. In addition, all units in the next sample set must be tested for compliance before sampling of further units can be continued.

During testing:

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- 1. Exterior windows and doors and fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
- 2. Dampers, including exhaust, intake, makeup air, backdraft and flue dampers, shall be closed, but not sealed beyond intended infiltration control measures.
- 3. Interior doors, if installed at the time of the test, shall be open.
- 4. Exterior or interior terminations for continuous ventilation systems shall be closed and sealed.
- 5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
 - 6. Supply and return registers, if installed at the time of the test, shall be fully open.

R402.4.4 Rooms Containing Fuel-burning Appliances. This section has been deleted. It is not required in Illinois.

SECTION R403 SYSTEMS

R403.3 Ducts. Ducts and air handlers shall be insulated, sealed, tested and installed in accordance with Sections R403.3.1 through R403.3.7. When required by the code official, duct testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

R403.3.53 Duct testing (Mandatory).

Ducts shall be pressure tested in accordance with ANSI/RESNET/ICC 380 or ASTM E1554 to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. Registers shall be taped or otherwise sealed during the test.

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2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

- 1. A duct air-leakage test shall not be required when the ducts and air handlers are located entirely within the building thermal envelope.
- 2. A duct air-leakage test shall not be required for ducts serving heat or energy recovery ventilators that are not integrated with ducts serving heating or cooling systems.

Exception: A duct air-leakage test shall not be required for ducts serving ventilation systems that are not integrated with ducts serving heating or cooling systems.

R403.3.6 Duct Leakage.

The total leakage of the ducts, where measured in accordance with Section R403.3.5, shall be as follows:

- 1. Rough-in test: The total leakage shall be less than or equal to 4.0 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area where the air handler is installed at the time of the test. Where the air handler is not installed at the time of the test, the total leakage shall be less than or equal to 3.0 cubic feet per minute (85 L/min) per 100 square feet (9.29 m²) of conditioned floor area.
 - Exception: If the HVAC duct system is serving less than or equal to 1,500 square feet of conditioned floor area, the allowable duct leakage with the air-handler installed shall be 60 cubic feet per minute or less.
- 2. Postconstruction test: Total leakage shall be less than or equal to 4.0 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area.
 - **Exception**: If the HVAC duct system is serving less than or equal to 1,500 square feet of conditioned floor area, the allowable duct leakage shall be 60 cubic feet per minute or less.
- 3. Test for ducts within thermal envelope: Where all ducts and air handlers are located entirely within the building thermal envelope, total leakage shall be less than or equal to 8.0 cubic feet per minute (226.6 L/min) per 100 square feet (9.29 m²) of conditioned floor area.

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Exception: If the HVAC duct system is serving less than or equal to 750 square feet of conditioned floor area, the allowable duct leakage with the air-handler installed shall be 60 cubic feet per minute or less.

R403.6 Mechanical Ventilation (Mandatory). The building or dwelling unit complying with Section R402.4.1 shall be provided with ventilation that complies with the requirements of this section or the International Mechanical Code, as applicable, or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

R403.6.42 Recirculation of Air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or circulated to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms, toilet rooms and kitchens shall not discharge into an attic, crawl space or other areas inside the building. This section shall not prohibit the installation of ductless range hoods in accordance with the exception to Section R403.6.5

R403.6.53 Exhaust equipment. Exhaust <u>fans and whole-house ventilation fans equipment</u> serving single dwelling units shall be listed and labeled as providing the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.

R403.6.64 Whole-house Mechanical Ventilation System. Whole-house mechanical ventilation systems shall be designed in accordance with Sections R403.6.64.1 through R403.6.64.4.

R403.6.64.1 System Design. The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply ventilation.

R403.6.64.2 System Controls. The whole-house mechanical ventilation system shall be provided with controls that enable manual override. <u>Controls shall include text or a symbol indicating their function.</u>

R403.6.<u>6</u>4.3 Mechanical Ventilation Rate. The whole house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table R403.6.<u>6</u>4.3(1) or Equation 4-<u>0</u>4.

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Ventilation rate in cubic feet per minute = (0.01 x total square foot area of house) + [7.5 x (number of bedrooms +1)] Equation 4-0

Exceptions:

- 1. Ventilation rate credit. The minimum mechanical ventilation rate determined in accordance with Table R403.6.6.3(1) or Equation 4-0 shall be reduced by 30 percent, provided that both of the following conditions apply:
 - 1.1 A ducted system supplies ventilation air directly to each bedroom and to one or more of the following rooms:
 - 1.1.1. Living room.
 - 1.1.2 Dining room.
 - 1.1.3 Kitchen.
 - 1.2 The whole-house ventilation system is a balanced ventilation system.
- 2. Programmed intermittent operation. The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate in Table R403.6.6.3(1), by Equation 4-0 or by Exception 1 is multiplied by the factor determined in accordance with Table R403.6.6.3(2)
- 1. The whole house mechanical ventilation system is permitted to operate intermittently when the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table R403.6.4.3(1) is multiplied by the factor determined in accordance with Table R403.6.4.3(2).
- 2. The total required outdoor air ventilation rate (Q_{tot}) shall be as specified in Table 403.6.4.3(1) or calculated in accordance with Equation 4-1.

Equation 4-1:

CFMtotal = 0.01CFA + 7.5(Nbr + 1)

Where:

CFMtotal = total required ventilation rate, (cfm)

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CFA = conditioned floor area of residence, (ft²)

Nbr = number of bedrooms (not to be less than 1)

R403.6.64.3.1 Different Occupant Density. Table R403.6.64.3(1) assumes 2 persons in a dwelling unit and an additional person for each additional bedroom. When higher occupant densities are known, the airflow rate shall be increased by 7.5 cfm (3.5 L/s) for each additional person. When approved by the authority having jurisdiction, lower occupant densities may be used.

R403.6.64.3.2 Airflow Measurement. The airflow rate required is the quantity of outdoor ventilation air supplied and/or indoor air exhausted by the whole-house mechanical ventilation system installed, and shall be measured using a flow hood, flow grid, or other airflow measuring device. Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to meet Section R403.6.64.3. When required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test, indicating the verified airflow rate, shall be signed by the party conducting the test and provided to the *code official*.

R403.6.<u>6</u>4.4 Local Exhaust Rates. Local exhaust systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table R403.6.<u>6</u>4.4.

TABLE R403.6.64.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT	NUMBER OF BEDROOMS				
FLOOR AREA	0 - 1	2 - 3	4 - 5	6 - 7	> 7
(square feet)	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m^2 , 1 cubic foot per minute = $0.0004719 \text{ m}^3/\text{s}$.

TABLE R403.6.64.3(2)

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INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a, b}

RUN-TIME PERCENTAGE IN	25%	33%	50%	66%	75%	100%
EACH 4-HOUR SEGMENT						
Factor ^a	4	3	2	1.5	1.3	1.0

- For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.
- b Extrapolation beyond the table is prohibited.

TABLE R403.6.64.4 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS

AREA TO BE EXHAUSTED	EXHAUST RATES ^a
Kitchens	100 cfm intermittent or 25 cfm continuous
Bathrooms-Toilet Rooms	Mechanical exhaust capacity of 50 cfm
	intermittent or 20 cfm continuous

For SI: 1 cubic foot per minute = $0.0004719 \text{ m}^3/\text{s}$.

a. The listed exhaust rate for bathrooms-toilet rooms shall equal or exceed the exhaust rate at a minimum static pressure of 0.25 inch water column in accordance with Section R403.6.5.

SECTION R405 SIMULATED PERFORMANCE ALTERNATIVE (PERFORMANCE)

TABLE R405.5.2(1)
SPECIFICATIONS FOR THE STANDARD
REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
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	The air leakage rate at a pressure of 0.2 inch	The measured air
	w.g. (50 Pa) shall be	exchange rate. ^a
		The mechanical
	Climate Zone 4 and 5: 4 air changes per hour	ventilation rate ^b shall be
		in addition to the air
	The mechanical ventilation rate shall be in	leakage rate and shall be
	addition to the air leakage rate and shall be the	as proposed.
	same as in the proposed design, but no greater	
Air Exchange Rate	than $0.01 \times CFA + 7.5 \times (N_{br} + 1)$	
	where:	
	CFA = conditioned floor area, ft ²	
	$N_{br} = \text{number of bedrooms}$	
	Energy recovery shall not be assumed for	
	mechanical ventilation.	

SECTION R409 PHIUS ALTERNATIVE COMPLIANCE OPTION

R409.1 Scope. This section establishes criteria for compliance via the Phius 2021 Standard.

R409.2 Phius Standard compliance. Compliance based on the Phius 2021 Standard will include its United States Department of Energy (USDOE) Energy Star and Zero Energy Ready Home co-requisites, and either performance calculations by Phius-approved software or through the use of the Phius 2021 Prescriptive Path.

R409.2.1 Phius documentation. Prior to the issuance of a building permit, the following items must be provided to the code official:

- 1. A list of compliance features.
- 2. A Phius precertification letter.

<u>R409.2.2</u> Project certificate. Prior to the issuance of a certificate of occupancy, the following item must be provided to the code official:

1. A Phius 2021 (or later) project certificate.

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CHAPTER 5 [RE] EXISTING BUILDINGS

SECTION R502 ADDITIONS

R502.1.1.2 Heating and Cooling Systems. New heating, cooling and duct systems that are part of the addition shall comply with Section 403.

Exception: When ducts from an existing heating and cooling system are extended to an addition, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. New duct systems shall be sealed in accordance with Section R403.3.2.

SECTION R503 ALTERATIONS

R503.1.1 Building Envelope. Building envelope assemblies that are part of the alteration shall comply with Section R402.1.3 or R402.1.4, Sections R402.2.1 through R402.2.1.3, R402.3.1, R402.3.2, R402.4.3 and R402.4.5.

Exception: The following alterations are not required to comply with the requirements for new construction provided the energy use of the building is not increased:

- Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
 Construction in which the existing roof, wall or floor cavity is not exposed.
- 5. Roof membrane peel and replacement.

Roof recover.

1. Storm windows installed over existing fenestration.

6.

6. Roofs without insulation in the cavity and when the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.

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- 7. For roof replacement on existing buildings with a roof slope of less than 2" in 12", and when the roof covering is removed and insulation remains, and when the required *R*-value cannot be provided due to thickness limitations presented by existing rooftop conditions, (including heating, ventilating and air conditioning equipment, low door or glazing heights, parapet heights, weep holes, and roof flashing heights not meeting the manufacturer's specifications), the maximum thickness of insulation compatible with the available space and existing uses shall be installed. Insulation used shall be minimum *R*-3.5 per inch. In areas where flashing may be terminated a minimum of 8" above the roof covering (including required insulation), insulation shall be a minimum of *R* 20.
- 8. R-value for roof assemblies with tapered insulation above deck with slope greater than ½" in 12" shall average *R*-20.
- Surface applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the Code does not require the glazing or fenestration assembly to be replaced.

R503.1.2 Heating and Cooling Systems. New heating, cooling and duct systems that are part of the alteration shall comply with Section R403.

Exception: When ducts from an existing heating and cooling system are extended, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. Altered duct systems shall be sealed in accordance with Section R403.3.2.

SECTION R504 REPAIRS

R504.2 Application. For the purposes of this Code, the following shall be considered repairs:

- 1. Glass only replacements in an existing sash and frame.
- 2. Roof repairs.

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- 3. Insulation with new roof covering for roof slopes less than 2 in 12 inches only in areas where the tapered insulation is used above an existing roof covering to create slope between drains or upslope from obstructions to water flow.
- 4. Repairs in which only the bulb, ballast or both within the existing luminaires in a space are replaced, provided that the replacement does not increase the installed interior lighting power.

(Source: Amended at 46 Ill. Reg. _____, effective _____)

CHANGE ORDER FOR BOARD AUTHORIZED PROCEED ORDER

Project Number	Project Description	Proceed Order or Change Order Number	Total Amount of Proceed Order	Board Date Approved	Total Amount of Associated Change Order(s) & Date Executed	Value of Change Order Work Completed
250-000-022 Ph. 2	Illinois Department of Central Management Services – Renovate Building - Springfield, Sangamon County, IL	G-08	\$3,534,819.00	9/13/2022	G-08 \$2,180,295.58 3/27/2023	61.7%

SUBJECT: Emergency Selection / Informational Item

Project Number	Firm/Job Description	Estimated Total Project Cost
120-295-022	Emergency Boilers and Water Heaters Replacement Department of Corrections Lawrence Correctional Center - Lawrence County	\$TBD
	SELECTED FIRM:	
	Clark Dietz, Inc.	

CDB PROJECT NO: 120-295-022

PROJECT DESCRIPTION: Emergency Boilers and Water Heaters Replacement

PROJECT LOCATION: Department of Corrections

Lawrence Correctional Center - Lawrence County

PROJECT AMOUNT: \$TBD

PROJECT SCOPE OF WORK:

The Boiler House #1 (Building Number: C8506) is a 2,535 square foot, 1-story building established in 2000. The Boiler House #2 (Building Number: C8507) is a 2,535 square foot, 1-story building established in 2000.

The scope of work provides for expedited design services to assess and replace the heating boilers, and associated controls, pumps, selected piping, insulation, and accessories. Additionally, the scope includes the replacement of domestic water heaters, storage tanks, controls, pumps, selected piping, insulation, and accessories. Associated electrical, general, and/or other supporting work may be required. The A/E is also to determine whether any immediate temporary repairs can be implemented.

The A/E will need to determine if any components of this project are eligible for a utility company or other energy grant or rebate and will be responsible for preparing and submitting the grant application if the project qualifies for the rebate.

ARCHITECT/ENGINEER: Clark Dietz, Inc. (16848)

Champaign, IL 61820

FY23 CDB BOARD MEETING SCHEDULE

DATE	TIME	LOCATION
July 12, 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
August 9 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
September 13, 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
October 11, 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
November 15, 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
December 13, 2022	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
January 10, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
February 14, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
March 14, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
April 11, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
May 9, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference
June 13, 2023	11:00 a.m.	Chicago, Springfield & Collinsville Video conference