### **Quality in Construction (QIC)**

### In-Person and Microsoft Teams Meeting

### February 15, 2023

9:00 am - 12:00 pm

### Attendees: \*Attended in-person

- Ann McGauran, OSA\*
- Chris Byerly, OSA\*
- Alan Robertson, OSA\*
- Stokey Bourque, OSA
- Jennifer Murphy, STREAM
- John Hull, STREAM
- Paul Marshall, THEC
- Rich McNeil, AIA\*
- Trey Wheeler, AIA\*

- Jim Cobb, TTU
- Bill Waits, MTSU
- Toney Poteet, UM
- Mark Longfellow, UM
- Austin Oakes, UT
- Michelle Crowder, UT
- Jim Prillaman, ACEC\*
- John Kenny, ACEC\*
- Daniel Pace, HFC\*

- Craig Parisher, HFC\*
- Bryan Hay, ABC\*
- Bob Pitts, ABC
- John Gromos, AGC\*
- Jason Madeiros, AGC
- Tom Lampe, AGC\*
- Marty Gibbs, AGC

#### **Discussion:**

- I. A role call was conducted, and each attendee identified themselves by name and the organization that they represent.
- II. Health Facilities Commission Craig Parisher (Health Facilities Commission (HFC))
  - 1. Craig Parisher provided a presentation relating to the Health Facilities Commission emphasizing, plans review, submittals, and fire and building inspection. (Presentation attached and posted at: https://www.tn.gov/osa/general-information/events---presentations.html)
    - a. Alan Robertson asked if HFC requires both the State Fire Marshal's review and an HFC review.
      - i. Craig Parisher responded that State Fire Marshal (SFM) does not review anything that falls underneath HFC facility types. Craig stated that HFC does consider the building codes, and that HFC also subscribes to NFPA requirements.
    - b. Alan Robertson asked, "Do you find HFC coordinating with other code authorities during the project?"
      - i. Craig responded that, when possible, HFC will assist in coordination with general contractors and others and that HFC has 30 days by law to review anything submitted to our office and that as a team, HFC averages a two week turn around for review.
      - ii. Craig responded that the referenced close out documentation is required to be submitted on physical compact disc media.
    - c. Chris Byerly asked if there was intent in the future for the compact disc data to be submitted electronically through the HFC portal.
      - i. Craig responded that the future intent is to have documentation submitted through the HFC portal known as FileNet.
    - d. Alan asked about the intent of the registered nurse inspection.

- i. Craig responded that nurses would inspect programmatic elements including secured units, medical equipment and other elements required by Centers for Medicare & Medicaid Services, (CMS).
- e. Alan Robertson asked if additional COVID-19 mitigation measures are to be expected aside from air pressurization methods.
  - i. Craig responded that at this point there are no additional measures being considered but that typically the Facilities Guidelines Institute (FGI) offer guidance as needed which is evaluated by HFC for implementation.
- f. Jason Madeiros asked about HFC's method of engineering judgement specifically in relation to details.
  - i. Craig noted that engineering judgements should be used only when a tested system is not available for a particular design solution. Craig continued that HFC will review engineering judgements and that specific performance requirements must be submitted. Craig noted that area representatives can be valuable in navigating the engineering judgement process.
- g. Ann McGauran noted that in regards to HFC's code adoption process that OSA can help connect HFC with professional associations, industry leadership and other appropriate peer groups.

### III. Construction Industry Market Update – John Gromos (AGC) and Bryan Hay (ABC), (Detailed Report Attached)

- 1. John Gromos recognized the market update information as a collaborative effort amongst various members of AGC, ABC and other industry contributors emphasizing that the meeting's report will focus on supply chain, subcontractor community/labor and escalation.
- 2. Bryan Hay provided a detailed report emphasizing the Architecture Billing Index, commodities, materials, and lead times.
  - a. Alan Robertson asked if lead times were down to pre-pandemic lead times.
    - i. Bryan responded that the data does not suggest lead times have returned to pre-pandemic levels.
  - b.John Gromos noted that data centers and EV plants are having a major impact on equipment and labor availability regionally, nationally, and globally.
  - c. Alan Robertson stated that the report would be distributed to the group.

### IV. Public-Private-Partnerships (P3) – Austin Oaks (UT)

- 1. Austin Oakes provided an update on the P3 process noting that UT has entered into a request for proposal stage at this point in time.
- 2. Austin stated that late last year, UT received approval from the State Building Commission to launch a request for proposal for a public-private-partnership development on the Knoxville campus. Austin added that the goal of that process is to bring about 2000 beds online in the Knoxville area.
- 3. Austin stated that UTK has approximately 40% increase this year in applications as compared to last year underscoring the need for additional student housing.
- 4. Austin noted that proposals were due from firms about two weeks ago, on February 3rd. Austin stated that UTK is now in the review process of those materials and intend to start the interview phase of this process in about 2 weeks.
  - a. Rich McNeil asked how many P3 proposals have been submitted.
    - i. Austin stated that there are 5 development groups currently proposing.
  - b. Tom Lampe asked if P3 has been executed by any Tennessee state institutions in the past.

- i. Austin noted that nationally P3 is relatively common but that this is the first P3 in Tennessee that he is aware of.
- c. John Gromos asked if the P3 project was a land lease.
  - i. Austin stated that a ground lease would be a component of the overall structure.
- d. Ann McGauran asked if UTC's South Campus Housing was a P3 delivery.
  - i. Austin stated that UTC's South Campus housing was developed by the Chattanooga Foundation.
- e. Ann McGauran asked if other Higher Education leadership is considering P3 delivery.
  - i. Tony Poteet responded that the University of Memphis is interested in considering P3 delivery.
  - ii. Tony noted that it would be helpful to hear future information from UT regarding lessons learned on P3 projects.
  - iii. Bill Waits stated that MTSU is working on 2 projects where P3 is being considered. Bill stated that one project is a hotel development project and the other is a student housing project.
- f. Ann McGauran asked if TTU had considered P3 in the past.
  - i. Jim Cobb responded that there has been past interest in P3 projects and that he expects that TTU will be tracking P3 projects across the state as they continue to consider this delivery method.

### V. ESCo Update – John Hull (STREAM)

- 1. John Hull stated that ESCo is a new program for Tennessee. John stated that they have looked at how many other states have already implemented ESCo noting that various components have been taken into consideration regarding what is appropriate for Tennessee.
- 2. John stated that various documents are under review by OSA, the Comptroller's Office and the AG staff.
- 3. John stated that the next step is to go to the State Building Commission to release an RFQ with the goal of creating a master list of companies that are qualified.
- 4. John stated that if the money for this program is approved that it is expected that there may be 5-7 projects that proceed in working with ESCo's.
- 5. Ann McGauran stated that when this procurement goes out to the pool, it will contain the full body of documents including subsequent RFQ documents as well as subsequent contract documents for the whole process. Ann stated that when the procurement goes out, before the first project is assigned, all of the aforementioned documents will be made public providing an opportunity for full review.
- 6. Ann McGauran noted that a unique aspect of Tennessee's approach to ESCo is that the State is considering using State dollars to finance through a cash model.
- 7. Alan Robertson noted that a similar procurement program was executed in the past and that he expects that this procurement will be an improvement considering that more robust sub-metering will be in place.
- 8. Tony Poteet asked if there was an application process for LGI's.
  - a. Ann McGauran noted that currently this procurement is only available for General Services per statute.
- 9. Jim Prillaman asked if there were certain types of projects for which this procurement method is being considered.

a. John Hull stated that there are currently specific types of projects that will be considered under this model and that more information will be provided as the process develops.

### VI. Higher Education Budget – Ann McGauran (OSA) presenting on behalf of Patti Miller (THEC), (See Attached Summary)

- 1. Ann McGauran gave a summary of the Governor's Recommended Projects for FY 23/24 and the upcoming budget cycles as provided by Patti Miller (THEC). (See Attached)
- 2. Ann McGauran noted there will be an amendment by the governor's office as well as a legislative amendment that comes through.
- 3. Paul Marshal added that THEC also had requested \$25 million for a one-time safety and security improvement, but that was also not included.
- 4. Paul stated that the capital maintenance budget request was established based on total state square footage, age of buildings and all the other factors involved in that formula and added that that amount of capital maintenance request was very thoroughly derived.
- 5. John Kenny noted the State may experience a penalty for deferring maintenance given current market conditions.

### VII. SPA Projects Update – Jennifer Murphy (STREAM)

- Jennifer Murphy stated that the last two years have been extremely heavy from a
  quantity of capital line items that general government has received. The vast majority
  of those projects have been brought to SBC and approved and designers have been
  selected on those projects.
- 2. Jennifer stated that a majority of projects that STREAM has received funding for in the last two years are in design or have already gotten CMGC's and that some have come to bidding at this point.
- 3. Jennifer noted that the office consolidation project is proceeding well.
- 4. Jennifer added that the budget is a little heavier on improvements than what we've seen in previous years.
- 5. Jennifer stated that there is an additional phase in Bolivar, TN for the West Tennessee Mental Health Institute.

### VIII. SPA Projects Update – Austin Oakes (UT)

- 1. Austin Oakes spoke to institutionally funded projects included in the governor's budget and that the largest of those is an addition of funding to support UTK College of Business project that was in last year's budget.
- 2. Austin stated that UT is predominantly focused on some of our smaller lab upgrades, classroom upgrades, fire/life safety upgrades and improvement projects in our research and education centers in the statewide agricultural organization.
- 3. Austin closed by stating that several projects will be following the CMGC procurement route.

### IX. SPA Projects Update – Tony Poteet (UoM)

- 1. Tony Poteet stated that UoM has several projects in construction that are going well. Tony stated that the new \$44 million STEM facilities project is proceeding well.
- 2. Tony noted that UoM just had a grand opening of the Scheidt Family Music Center which came in a little less than \$500.00 a square foot. Tony stated that the middle school and high school projects are contracting now and noted several other projects in design such as a roofing project, a boiler project, some chiller replacements, some elevators, fire alarm projects and paving projects.

### X. SPA Projects Update – Bill Waits (MTSU)

- 1. Bill Waits stated that the Kirksey Old Main and Rutledge Hall as are in SD phase and will be using CMGC.
- 2. Bill stated that the Applied Engineering Building required an inflationary budget request. This project and The Student Athlete Performance Center project will both have CMGC already on board and MTSU will be starting construction on the site utility packages on both of those projects in the Spring.
- 3. Bill noted that MTSU will be focusing on the central plant including central chilled water and satellite chiller plants.
- 4. Bill stated that the project to relocate the Aerospace campus at the Murfreesboro airport facilities down to Shelbyville is on hold pending land acquisition.

### XI. SPA Projects Update – Jim Cobb (TTU)

- 1. Jim Cobb noted that since the last QIC meeting that TTU has issued 2 RFQ's for designers and that designers were selected for the Johnson Hall Renovation which includes demolition of the adjacent Foster Hall.
- 2. Jim stated that a designer has been selected for the Advanced Construction and Manufacturing Engineering Building adding that Community Tectonics was awarded the Johnson Project and Upland Design was awarded the Engineering project.

### XII. SPA Projects Update – Dick Tracy (TBR)

- 1. TBR did not have a representative at the meeting at the time of SPA Project Updates.
- Ann McGauran noted that the TCAT master plan was presented at the most recent SBC meeting. Ann recommended that the members view the presentation which is available online.

### XIII. SPA Projects Update – Marc Brunner (APSU)

1. APSU did not have a representative at the meeting at the time of SPA Project Updates.

### XIV. SPA Projects Update – Laura Bailey (ETSU)

1. ETSU did not have a representative at the meeting at the time of SPA Project Updates.

### XI. Closing Remarks

- 1. Alan Robertson thanked the attendees for their continued input on the future meeting agendas.
- 2. Jim Cobb stated that the TTU Environmental Health and Safety team expressed concern regarding the fact that the State Fire Marshal may not adopt NFPA.
  - a. Alan made a note to follow up with the State Fire Marshal and to update the members.
- 3. Alan noted that the next meeting will be both in-person and virtual
- 4. Ann McGauran thanked the QIC members for their participation and valued discussion.

### **Action Items:**

- John Gromos and Bryan Hay to provide Construction Market Update (See Attached)
- Craig Parisher and Daniel Pace of HFC to provide inspection template samples for distribution to the QIC members by OSA
- Alan Robertson to provide an update from the State Fire Marshal regarding code adoption.

Next Meeting: May 17th, 2023 Ed Jones Auditorium at Ellington Ag Campus / Virtual - MS Teams



Craig Parisher
Facilities Construction Director
665 Mainstream Drive 2<sup>nd</sup> Floor
Nashville, TN 37243
(615) 253-5304

Craig.L.Parisher@tn.gov

# **TOPICS**

- Brief Overview
- Plans Review
- Fire & Building Inspection

# \*\*\* DEPARTMENT NAME CHANGE\*\*\* EFFECTIVE JULY 1, 2022

Pursuant to Public Chapter 1119, The Department of Health Office Licensing Health Care Facilities merged with Health Services & Development Agency to become Health Facilities Commission (HFC). This change was made to help streamline the Certificate of Need and licensure process.

# **PLANS REVIEW - FIRE SAFETY OVERVIEW**

### Plans Review

Responsible for reviewing architectural and engineering building construction documents for compliance with applicable fire, life safety, building codes & regulations for approximately 1800 licensed facilities consisting of 13 different facility types within 30 days.

### Fire Safety

Responsible for surveying scheduled annual inspections, conduct investigations of complaints and inspect buildings for code compliance during construction of new projects for approximately 1800 licensed facilities consisting of 15 different facility types.

# **FACILITY TYPES**

- I. Office Based Surgical Centers
- 2. Intermediate Care Facilities
- 3. Hospitals
- 4. Prescribed Child Care Centers
- 5. Nursing Homes
- 6. Ambulatory Surgical Treatment Centers
- 7. Homes for the Aged
- 8. Residential Hospices

- 9. Birthing Centers
- 10. Assisted-Care Living Facilities
- 11. HIV Supportive Living Centers
- 12. End Stage Renal Dialysis Clinics
- 13. Outpatient Diagnostic Centers
- 14. Adult Care Homes Level 2
- 15. Traumatic Brain Injury Residential Homes

# **PLANS REVIEW**

# **PLANS REVIEW**

### Plans Reviewers

Daniel Pace - (Lead Reviewer)	615-253-5293
Jendy Avens -	615-253-4805
Richard Payne -	615-253-4804
Troy Franklin -	615-741-6996
Denise King-	615-741-9878
Josh Patton-	615-741-6997
Anna Baker – Admin. Asst.	615-741-6998 (Prompt #7)

# **CURRENT ADOPTED CODES**

The current codes that the Board for Licensing Health Care Facilities has adopted effective January 1, 2019 are as follows:

- 1. 2012 NFPA 101 Life Safety Code
- 2. 2012 International Building Code
- 3. 2012 International Mechanical Code
- 4. 2012 International Plumbing Code
- 5. 2012 International Fuel & Gas Code
- 6. 2018 Guidelines for Design and Construction of Hospitals, Outpatient Facilities, and Residential Health Care & Support Facilities (FGI)
- 7. 2011 National Electric Code
- 8. 2009 U.S. Public Health Service Code
- 9. 2010 Americans with Disabilities Act (ADA)

# PLAN SUBMISSION STEPS

- I. Certificate of Need (CON) if required
- 2. Licensure Application for a new facilities
- 3. Notify licensure of work to be performed in existing facilities
- 4. Plans Review Submittal Form or Submit Electronically
- 5. Plans & Specifications Hard Copies or Electronic plans
- 6. Review Fee
- 7. Sprinkler shop drawings
- 8. Hood & duct, Nurse/E-call, and fire alarm, shop drawings
- 9. Project record disc (CD or DVD)

# **PROJECT CATEGORIES**

- I. Major
- 2. Minor Renovation
- 3. Locking Hardware
- 4. Hood and Duct
- 5. RHA Six Beds or Less
- 6. No Review

# DO PLANS HAVE TO BE SUBMITTED?

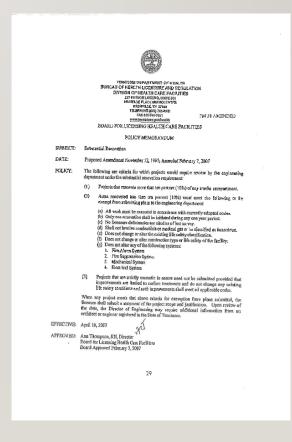
The Rules & Regs for all facilities licensed by HFC contain the following rule within the Building Standards section. The following rule for hospitals has been provided as an example:

No new hospital shall be constructed, nor shall major alterations be made to an existing hospital without prior written approval of the department, and unless in accordance with plans and specifications approved in advance by the department. Before any new hospital is licensed or before any alteration or expansion of a licensed hospital can be approved, the applicant must furnish two (2) complete sets of plans and specifications to the department, together with fees and other information as required. Plans and specifications for new construction and major renovations, other than minor alterations not affecting fire and life safety or functional issues, shall be prepared by or under the direction of a licensed architect and/or a licensed engineer and in accordance with the rules of the Board of Architectural and Engineering Examiners. [Rule & Regs 0720-14-.08(5)]

# WHAT CATEGORY SHOULD BE SELECTED?

Board for licensing Health Care Facilities Policy Memorandum #58 outlines the criteria for which projects would be required to be submitted for review:

- 1. New facilities and projects that renovate more than 10% of any smoke compartment. (Major)
- 2. Areas renovated less than 10% of any smoke compartment. (Minor)
- 3. Projects that are strictly cosmetic in nature need not be submitted, provided that improvements are limited to surface treatments and do not change and existing life safety conditions and such improvements shall meet all applicable codes. (No Review)



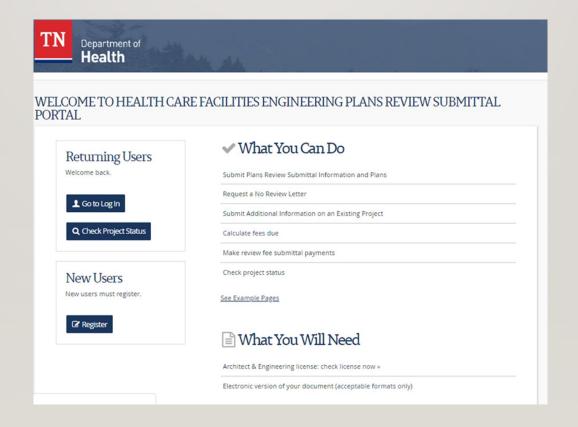
# MINOR RENOVATION

- All work must be executed in accordance with currently adopted codes.
- Only one renovation shall be initiated during any one-year period.
- No licensure deficiencies are cited as of last survey.
- Shall not involve combustible or medical gas or be classified as hazardous.
- Does not change or alter the existing life safety classification.
- Does not change or alter construction type or life safety of the facility.
- Does not alter any of the following systems:
  - I. Fire alarm system
  - 2. Fire suppression system
  - 3. Mechanical system
  - 4. Electrical system

# WHERE DO I GO TO SUBMIT PLANS ELECTRONICALLY?

https://apps.tn.gov/tnhcf/

# PLANS REVIEW SUBMITTAL PORTAL



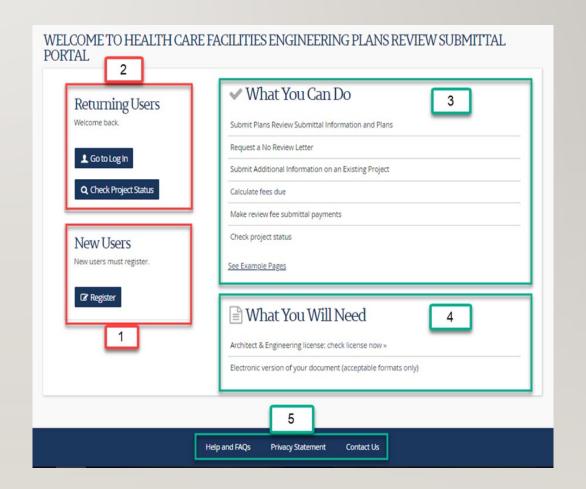
# PLANS REVIEW E-PORTAL

### **USER ACCESS SECTIONS:**

- I. New Users
- 2. Returning Users

### **HELP SECTIONS:**

- 3. What You Can Do
- 4. What You Will Need
- 5. Application Help and Contact



# FIRE & BUILDING INSPECTIONS

# FIRE & BUILDING CODE INSPECTORS

Fire & Building Code Inspection Manager	
Colby Henson –	615-806-4798
Middle TN Region	
Britni Haun (Supervisor) -	615-762-8942
Alex Warner -	615-483-9742
Brandon Owen –	615-487-0819
Richard Read -	615-906-0504
East TN Region	
Stuart Hurwitz (Supervisor) -	865-320-8922
Dustin Phillips -	865-320-8921
Tim Watson -	865-333-9036
Craig Malone -	865-801-5123
West TN Region	
Brandon Maness (Supervisor) -	731-571-1303
Adam Price -	615-788-4732
Wanda Browning -	731-571-0313
Clayton Sikes -	615-218-3938

# PRECONSTRUCTION MEETING

- We offer a preconstruction meeting for new projects.
- General contractor, subcontractors, architect and owner's representative should attend the meeting.
- The meeting will cover:
  - What progress inspections are needed
  - Scheduling progress inspections
  - Most common inspection deficiencies
  - Final inspection

# **PROGRESS INSPECTIONS**

- Progress inspections shall be scheduled 10 days prior to the inspection.
- General contractor shall inspect areas prior to inspections (inspectors are not on site to conduct a punch list).
- An exit conference will be conducted after each progress inspection and a progress inspection report will be emailed within 5 working days to the general contractor and facility owner.

# PROGRESS INSPECTIONS

	Progress Report
Date:	-
Facility Name	
Address	
City	Zip Code
Project Number	Are approved plans on site?
Fire Safety Inspector	
TDOH Plans reviewer	
Onsite Contact Person	Phone #
A. Foundation Completed B. Mechanical Completed C. Electrical Completed D. Plumbing Completed E. Fire Alarm Completed F. Framing Completed G. Interior Completed CD/ROM MUST BE SUBMITTED AN Comments:	%         H. Sprinkler Completed         %           %         Underground Test         %           A bove Ground Test         %           %         I. Med Gas Completed         %           %         J. Fire/Smoke Dampers         %           %         K. Fire Stopping         %           %         L. Kitchen Hood Test         %

# **COMMON INSPECTION DEFICIENCIES**

- Work being conducted with NO approved plans on site.
- Underground fire supply line covered up before inspection
- Firestopping
- Not following approved plans or submitting changes.
- Phasing plan not available and/or not knowing phases shall be completed in order.
- \* Requesting a final inspection when CD has not been submitted or completed.

# FINAL INSPECTION

- \* CD must be submitted and approved 30 days prior of final inspection.
- CD must contain all as built approved plans with all approved changes.
- ❖ Fire Safety final inspection is part 1 of 2.
- The facility owner must submit a request (letter) to the HFC Regional Administrator requesting the health inspection (nurse) for the final inspection.

# FINAL INSPECTION DOCUMENTATION CHECKLIST

#### Final Inspection Documentation Checklist\*

Item	Yes	No	N/A
1. Certificate of Occupancy			
Sprinkler System (Aboveground)     Sprinkler System (Underground )     Sprinkler Inspection/Test Contract			$\equiv$
3. Fire Alarm Certification			
4. Fire Stopping Systems			
5. Fire Damper, Fire/Smoke Damper Tes	t		
6. Nurse Call Certification			
7. Med-Gas Certification			
8. Generator Certification			
Interior Finish, Contents & Furnishings Certifications			
10. Electrical Approval			
11. Elevator Test Certificate			
12. Air Balance Report			
13. Boiler Test Certificate			
14. Hood System Certification			
15. Disaster Preparedness Plan			
16. Special Inspection Reports			
<ol> <li>Copys of Douments for Facility</li> <li>NFPA 25</li> <li>Kitchen Hood ANSUL System Manu</li> </ol>	al		
c. Generator Manual			
d. Fire Alarm Manual, Drawings/Softwa	are		
e. Fire Extinguisher Instruction Manual			

<sup>\*</sup> CD/ROM MUST BE SUBMITTED AND APRROVED 30 DAYS PRIOR TO THE FINAL INSPECTION.

Revised 3/11/2021

# **ADDITIONAL RESOURCES**

- Board for Licensing Health Care Facilities Rules and Regulations https://publications.tnsosfiles.com/rules/0720/0720.htm
- Plans Review
  <a href="https://www.tn.gov/hsda/health-care-facilities/hcf-main/plans-review.html">https://www.tn.gov/hsda/health-care-facilities/hcf-main/plans-review.html</a>
- Interpretative Guidelines
  <a href="https://www.tn.gov/content/dam/tn/health/
- Centers for Medicare & Medicaid Services
  <a href="https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMSI201984">https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMSI201984</a>

# **QUESTIONS?**



### Progress Report

Date:	
Facility Name	
Address	
City	Zip Code
Project Number	Are approved plans onsite?
Fire Safety Inspector	-
TDOH Plans Reviewer	-
Onsite Contact	Phone #
B. Mechanical Completed C. Electrical Completed D. Plumbing Completed E. Fire Alarm Completed F. Framing Completed K. F	Sprinkler Completed Underground Test Above Ground Test Med Gas Completed Fire/Smoke Dampers Fire Stopping Kitchen Hood Test  Mathematical Mathematic

### Final Inspection Documentation Checklist\*

	Item	Yes	No	N/A
1.	Certificate of Occupancy			
2.	Sprinkler System (Aboveground) Sprinkler System (Underground) Sprinkler Inspection/Test Contract			
3.	Fire Alarm Certification			
4.	Fire Stopping Systems			
5.	Fire Damper, Fire/Smoke Damper Test			
6.	Nurse Call Certification			
7.	Med-Gas Certification			
8.	Generator Certification			
9.	Interior Finish, Contents & Furnishings Certifications			
10	Electrical Approval			
11	Elevator Test Certificate			
12	Air Balance Report			
13	Boiler Test Certificate			
14	Hood System Certification			
15	Disaster Preparedness Plan			
16	Special Inspection Reports			
17	Copy of Documents for Facility a. NFPA 25 b, Kitchen Hood ANSUL System Manual c. Generator Manual d. Fire Alarm Manual, Drawings/Software e. Fire Extinguisher Instruction Manual			

<sup>\*</sup> CD/ROM MUST BE SUBMITTED AND APRROVED 30 DAYS PRIOR TO THE FINAL INSPECTION.

### AGC/ABC Insights: QIC Construction Market Update – 2/15/2023

### Overview: Signs of Supply Chain Recovery Are Growing, BUT Overall, Outlook is Still Mixed

- On the positive side, many material categories—including roofing, structural steel, cement, concrete, gypsum-based products and lumber—have seen significant improvement in availability and pricing is trending down.
- We are beginning to see improvements in the subcontractor market with an increase in the number of bidders which could be attributed to increased uncertainty in the market from projects being paused or even cancelled from cost escalation's strain on proformas and lenders pulling back in the capital markets.
- Of the major trades, bid coverage in the electrical trade remains the most challenging.
- One of our main concerns for 2023 will be growing lead times for mechanical and electrical equipment – 52 to 80 weeks, depending on equipment type. Manufacturers say an increase in manufacturing and data center construction projects is the root cause.
- The Tennessee market saw escalation in the 10-12% range last year with the higher range being in Middle TN.
- We are advising escalation of 7% 9% in the Tennessee market with Middle TN reflecting the higher range.
- "Mega" projects in TN (Blue Oval, GM/Spring Hill, data centers, ORNL, other) are
  contributing to supply chain issues and labor availability, and therefor to escalation. The
  impact of other mega projects in the southeast and Ohio Valley are further contributing
  to supply chain and labor issues we do not expect these impacts to relieve in the near
  future.

### **Architecture Billings Index**

- The December 2022 Architecture Billings Index (ABI) score of 47.5. Architecture firms reported ongoing softness in business conditions – firm billings declined for the third consecutive month. Firm leaders (40%) are seeing an increase in delayed projects at their firm.

### **Supply Chain Trends and Pricing**

- Roofing products - Roofing supply chain recovery is accelerating. Many roofing system components that have been problematic are now stabilizing. Polyiso insulation lead times now average 20 weeks or less, down from their 52-week peak. Most membranes are running at 18 to 20 weeks, and cover board is averaging eight weeks, down from 22 weeks. One category to watch is fasteners. Fasteners that are 9" or longer still have extended lead times.

- **Asphalt** Asphalt pricing will follow energy costs and construction demand. Generally, we anticipate costs for this material to remain stable in 2023.
- Concrete Cement and concrete markets continue to improve and are well-balanced in most geographies. We suggest continued monitoring as some rigidity may exist in certain locations.
- **Structural steel** Structural steel pricing is down from its peak in June of 2022. Wide flange is down 12 percent. Hollow sections are down 30 percent, and plate is down 24 percent. Lead times are also shrinking. Bar joist lead times, which peaked at 48 weeks towards the end of 2021 and remained at 26-28 weeks for most of 2022, now stand at 20 weeks. Steel decking lead times have also come down to the 20-week range.
- **Architectural Interiors** The availability of interior products has improved across the board, and lead times are down significantly—even glass-mat gypsum products are readily available. Pricing levels have also receded. Many drywall manufacturers have announced increases in January, but many people in the industry do not believe they will stick as housing starts continue to soften. These increase notices may be a defensive move to slow price decreases in the short term.
- Doors and Hardware Door hardware and hollow metal door lead times are holding steady. Lead times for hollow metal doors are currently in the 7-10 week range. The most challenging materials continue to be on the electronic access side. Since card reader lead times are still unpredictable, we recommend anticipating a six-month lead time. The availability of semiconductors is driving card reader lead times.
- Appliances We are getting mixed reports regarding supply chain stability from
  different manufacturers. Some experience continued challenges from component
  suppliers and resulting lead-time extensions. Others report stabilizing supply chains and
  improved lead times in the two to three-month range. We expect more widespread
  improvements as housing demand continues to cool during 2023.
- Elevators, Escalators. Moving Walks While some supply chain challenges remain related to semiconductors for controllers, both lead times and pricing have generally stabilized over the past three months. We expect lead times to come down later in 2023, with pricing expected to rise at the more typical annual rate of three to five percent. Lead times for elevators vary considerably depending on the category:
  - Low-rise elevators range from 14-24 weeks
  - Mid-rise elevators range from 20-27 weeks
  - High-rise elevators range from 40-48 weeks
  - Escalators range from 12-20 weeks
- Plumbing and Fixtures While lead times have come down over the past three months, prices for pipe, valves, fittings and fixtures have become variable, depending on the specific category. The average sales price of PVC and steel pipe has steadily declined over the past three months, as commodity prices and freight costs have also declined. However, recent increases in steel costs may start to push those other material prices up moderately in Q1 2023. The average price of copper has decreased from its high in

- June but remained stable over the past three months, with prices expected to rise again. Regarding valves, fittings and fixtures, approximately 100 manufacturers have announced price increases in January 2023 that range from six to eight percent. Over the next 6-12 months, prices are expected to increase by 5-10 percent.
- HVAC Equipment Since our update last quarter, there has been very little change in the HVAC equipment market. The only real update is that the semiconductor chip shortage in Asia is worsening, causing several major manufacturers to push out delivery commitments. Lead times for chillers have increased significantly, now averaging 52 weeks for most models. Demand for HVAC equipment continues to be very strong across all market sectors—especially in the semiconductor, data center, automotive and life sciences sectors. Lead times for specialized ECMs are running 70+ weeks.
- Electrical Gear Similar to HVAC gear, very little has changed regarding the supply of electrical equipment. The semiconductor shortage is affecting the supply of trip units and circuit breakers. Unprecedented demand from the data center market continues to push out lead times for switchgear, switchboards, busway, UPS systems and transformers. Switchgear and switch panel lead times continue to be at 70-80 weeks and are expected to increase due to demand from the data center, industrial, healthcare, education and semiconductor sectors.
- Electrical Commodity Materials (includes lighting fixtures) Lead times for most commodity electrical items are down as manufacturers have stabilized their supply chains and increased factory output. Declines in copper and PVC resin raw material costs have helped minimize price increases. However, labor costs are trending up due to inflation, and prices are expected to increase by three to six percent over the next 6-12 months.
- Generators Demand for generators continues to be very strong and shows no signs of slowing. Primarily driven by the data center market, lead times for 2MW gensets are now exceeding 100 weeks. Forecasts indicate that the need for data centers will increase over the next three to four years. Gensets in the range of 230kW to 2MWs are running 65-75 weeks due to broad demand from many industries. Prices continue to rise at an annual rate of 15-20 percent due to material, labor and overall demand.
- **Lab Casework and Fume Hoods** Lab casework lead times are back to the standard range of 8-12 weeks. As input material price escalations have slowed, pricing in this category has stabilized.
- **Wood Products** Lumber pricing remains at pre-COVID levels due to the cooling housing market and the resultant fall in demand. December housing starts were reported at approximately 1.4 million (annualized), a decline of 23 percent from peak housing starts reported in April 2022.
- Logistics The Logistics Managers Index (LMI) tracks key metrics—such as transportation, warehousing and inventory data —and is collected monthly from industry professionals. A value of less than 50 indicates a contracting market and above

- 50 indicates a growing market. The LMI for December was 54.6. This is up slightly from November's reading, which indicates that growth is increasing.
- **Transportation** Shipping container prices continue to decline, and prices are down almost 80 percent year over year. Rates for routes from Asia to the U.S. West Coast are just over \$2,000 for 40' containers, which is near pre-pandemic pricing. The key driver to the price decrease is the strong downward shift in consumer demand.

### **Remedies/Solutions**

- Every team needs to get deeper into the supply chain. It is not enough to depend on subcontractor and supplier input.
- Contractors should be leveraging relationships with the manufacturers to access delayed materials and equipment can push to get partial, critical orders on critical path.
- It is not enough to look at overall escalation %, you need to look closer and account for escalation material by material because of the variation between materials.
- A robust procurement strategy is essential leads times are emphasis.
- Example item in a procurement strategy: Buying large air handlers early and designing around it.
- Cost benefit of escalation clauses leverage allowances talk with trade partners about allowances in lieu of trade partner taking all the risk to keep from paying worse-case scenario all the time.
- You can drive escalation into a project by buying too early.
  - Understand when materials need to be on site.
  - Make acquisitions just in time where possible.
- Early release packages for long-lead items continues to be a good strategy...consider warehousing strategies (costs associated with this) to ensure schedule.

### THEC - FY 2023-24 Capital Investment

02.14.2023

### Outlay

- The THEC Commission requested \$551.3 million in capital outlay funding for projects at five LGIs, three UT Universities, and three TBR institutions, two of which are TCAT projects and one additional project for Jackson State Community College.
- The Governor's Budget includes funding for two inflation-related expansions for MTSU and APSU (totaling \$49.9 million) and funding for the completion of the recently approved TCAT Master Plan (totaling \$945.9 million). The remaining three LGI projects and three UT projects were not included for funding within the proposed budget.

#### Maintenance

- The Commission requested \$238.4 million in capital maintenance funds, including \$93.1 million for the LGIs, \$88.6 for the UT Institutions, \$29.7 for the Community Colleges and \$27.0 million for the TCATs.
- The Governor's Budget includes \$29.7 million for the LGIs, \$30.9 million for the UT Institutions, \$16.6 million for the community colleges and \$34.0 million for the TCATs.
- The Commission also requested \$106.5 million for ADA Improvements, and \$25.0 million for Safety and Security Upgrades. These items are not included in the administration budget.

### Other Capital Investments

• Additionally, the Commission requested \$6.0 million for demolition projects, and \$6.0 million in non-recurring dollars to fund a statewide higher education Facilities Condition Survey. These items are not included in the administration budget proposal.

### **Disclosures**

• A total of 48 Disclosure projects totaling \$1,095,819,050 (funded by TSSBA, gifts, grants, auxiliary, or plant funds) are proposed for disclosure.