

NC Architecture

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AIA

JOINT COMMITTEE RECOMMENDATIONS

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In This Issue

Joint Committee Recommendations



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Joint Committee Recommendations

The recommendations in this magazine were developed and passed by the AIA North Carolina/ Carolinas AGC Joint Cooperative Committee. The Committee has been active and engaged in developing standards of practice in the industry since 1973. The architect members of the Committee are appointed by the president of AIA North Carolina, while the contractor members are appointed by the president of the Carolinas Associated General Contractors of America, Inc.



available by visiting www.cagc.org or www.aianc.org.

The recommendations, while not mandatory since they are not laws, represent months and, in some cases, years of study by architect and contractor members of the committee.

Many times, it is discovered that a particular subject does not lend itself to a recommendation. Therefore, these recommendations cover only those matters that the authorized representatives of the AIA North Carolina and the Carolinas AGC feel should be offered to the construction industry as guidelines for an efficient and effective implementation of construction practice.

Cooperation by architects and contractors in the implementation of these recommendations is the goal of the Joint Committee. Any questions and/or suggestions regarding the recommendations should be directed to the secretary of the Joint Committee:

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It's hoped that owners, architects and contractors will recognize these guidelines, which have been developed in the interest of all concerned, and will follow the standards so design and construction teams can deliver maximum value for owners and all participants involved in the delivery of building projects.

Top 15 AIA/AGC Joint Committee Recommendations

Rank	JCR#
1	JCR-23: Alternates
2	JCR-65: Project Closeout
3	JCR-44: Shop Drawings and Product Data Submittals
4	JCR-48: Unsuitable Material Allowances
5	JCR-60: Coordination of Construction Documents
6	JCR-61: Design-Build Policy for Public Construction Work
7	JCR-5: Issuance of Addenda
8	JCR-14: Pre-Construction Conference

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9	JCR-16: Certification of Substantial Completion
10	JCR-31: Field Record Drawings
11	JCR-32: Construction Time for Projects
12	JCR-36: Temporary Heat, Cooling, Ventilation, Lights & Utility Services
13	JCR-36A: Temporary Job Site Utility Energy Cost
14	JCR-43: Bid Submission and Opening Procedures
15	JCR-49: Liquidated Damages Clause

Joint Committee Recommendations

JCR-23

Alternates

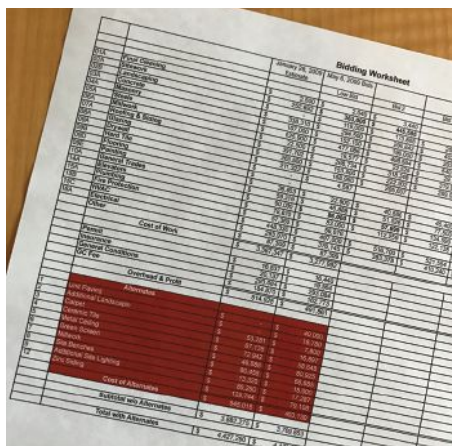
October 1974, October 1975,
October 1999, April 2015

Recommendations

1. Alternates should be kept to an absolute minimum.
2. Only additive alternates should be considered.
3. Alternates should be considered in sequential order in determining the low bidder.
4. For Preferred Brand Alternates on public projects, follow N.C.G.S 133-3.

Comments

- A. If alternates are required, they should be limited to six.
- B. Alternates should have carefully and clearly defined scope.
- C. Owners should be advised by the architect the need to minimize the use of alternates.
- D. Alternates involving multiple trades should be included in the initial bid documents and should not be added by addendum.
- E. In the event that deductive alternates are required, all alternates should be deductive. A combination of additive and deductive alternates should not be used.



JCR-65

Project Closeout

October 2014

Recommendations

These recommendations are provided to facilitate a comprehensive approach for the project closeout process in consideration of

the shared goals of the project architect, the contractor and their shared clients, and the building owner. The effective completion of the final details related to all construction projects is the last best opportunity to ensure a successful project and protect the financial well-being of all parties. The following are recommended best practices for project closeout:

1. Managing Expectations for Closeout

Architects should review project closeout requirements with the owner prior to bidding the project. Tailor closeout requirements to meet the specific needs of the project. Closeout requirements should also be reviewed and incorporated in the minutes of the preconstruction conference. A closeout meeting with the owner, the contractor, the architect and the regulatory authority should be conducted prior to the final inspection to review requirements for final inspection, punch lists, submittal of closeout documents and acceptance of the work.

2. Define Closeout Requirements Related to Third Parties

Delineate third-party responsibilities such as commissioning for closeout. Establish contractor thresholds for engaging third-party participation. Owners, architects and third-party participants should work together to avoid transferring the expectations for third-party performance onto the contractor.

3. Final Inspection

The final inspection will be undertaken when all known work has been completed, after the recognition of all delays, after the submission of all claims, after the submission of all known change order proposals and when a certificate of substantial completion is pending. Unless provided otherwise, a preliminary punch list shall be prepared by the contractor. The contractor's punch list will provide the basis and working document for preparation of the architect's punch list that will be produced from the final inspection.

4. A Single Punch List

There should be only one punch list edited by the architect from the contractor's original punch list and the findings of the final inspection, including pertinent comments from all parties. Matters of

concern for the contractor, the architect, the architect's consultants, regulatory agencies, commissioning agent and the owner should be incorporated into that list. The punch list should be dated and signed by the architect, the contractor and the owner within a few days of the final inspection as part of the certificate of substantial completion.

5. Addressing the Punch List in Words and Deeds

The owner and the contractor should review, and within a reasonable period, address the architect in writing with any noted omissions or questions related to the specific requirements of the punch list. The architect should address in writing any discrepancies between the punch list and the contract documents and inform the owner and contractor of the status of disputed punch list items. Meanwhile, it is incumbent on the contractor, in fact a requirement of most contracts, to diligently pursue the completion of the punch list, utilizing all available resources. It is the responsibility of the contractor to ensure the uninterrupted efforts of the project manager, the project superintendent, the subcontractors and their suppliers throughout project closeout.

6. Additions to the Punch List

All parties should endeavor to avoid the addition of items to the punch list except as necessary to document matters of consequence related to the acceptance of the work as described in the contract documents.

7. Warranty vs. Punch List

It is important for all parties to differentiate between warranty service and completion of the work. The architect is responsible for maintaining the status of the punch list and shall carefully address attempts by either the owner, the contractor or the design team to include warranty matters in the punch list.

8. Superintendent's Closeout Role

It is incumbent on the contractor to maintain continuity of construction oversight through the project superintendent. The project superintendent should remain responsible for addressing the incomplete

nature of the work for which he or she has directly or indirectly been responsible.

9. Coordination with Regulatory Authorities

The contractor is responsible for keeping regulatory authorities advised of closeout progress and arranging for inspections as required to ensure timely receipt of the certificate of occupancy and other required approvals.

10. Design Consultant's Responsibilities

The architect is responsible for ensuring diligent response from his or her consultants for attention to final inspections, closeout RFIs, closeout submittals and review of punch list completion.

11. Damages Related to Delay

Delay and damages related to delay, if applicable, shall be addressed prior to the final inspection. It is recommended that the accumulation of liquidated damages, if any, cease with the issuance of the substantial completion certificate with a provision that damages will resume after a reasonable period of time, subject to the timely completion of the punch list.

12. Partial or Early Occupancy

Early occupancy can be disruptive to construction and/or management of the closeout effort and should be avoided. Partial and early occupancy should be undertaken only as provided in the contract documents and only with the approval of all parties. The terms for early occupancy should be agreed to in writing, including the status of the certificate of occupancy, punch lists, warranties, separation from construction activities, condition of the occupied area, utilities, insurance, contractor access, expectations, liquidated damages, requirements for completion, the project completion date and other relevant matters.

13. Submittal of Closeout Documents

The requirements for closeout documents, as delineated in the construction documents, should be reviewed with the contractor and owner a few weeks before the final inspection. Closeout submittals should be delivered as a single submittal to the architect. Any questions concerning the contents of a complete submittal shall

be directed to the architect. The design team is responsible for providing reasonable assistance to the contractor to clarify expectations for the particulars of the closeout submittal.

14. Warranty Submittals

The architect shall endeavor to avoid conflicts in warranty requirements as described in the contract documents. The project manual should include a comprehensive list of warranty requirements for the entire project, recognizing that the list may not be complete and that it is superseded by the warranty requirements of individual sections of the specifications. Warranty requirements should be indexed in the project manual and specifications to avoid ambiguity in the interpretation of those requirements. Warranty start dates may be staggered as permitted by the contract documents or as stipulated by "early occupancy," provided that start dates are not excessive in number and that they reflect the actual use by the owner of the warranted item.

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15. Record Drawings

When included in the closeout procedures, the contractor will provide marks for record drawings or enter changes directly into the BIM file depending on the protocol prescribed for the project. Changes in the work are to be noted on a daily basis, including changes in the field, RFIs, discoveries, change orders and directives.

16. Closeout Management

The contractor is responsible for the management of the closeout efforts of the construction team. Supervision and monitoring of the closeout efforts of subcontractors and suppliers is a crucial responsibility of the contractor.

17. Final Completion

The owner, the architect and the contractor should reasonably cooperate throughout project closeout to ensure the timely final completion of the work in compliance with project requirements.

Comments

1. The time for establishing project requirements for closeout is at the beginning of the project, not the end.
2. The purpose of the final inspection is to document noncomplying work that would otherwise be unknown to the general contractor or his subcontractors.

3. It is generally accepted that a successful final inspection is actually three inspections: **First** to establish the scope and nature of incomplete work; **second** to determine what punch list work requires further attention; and **third** to confirm that all punch list work has been completed. Additional inspections may be required to account for partial completion, where provided in the construction documents.
4. Delay in the prompt completion of the punch list typically leads to scope creep and can further delay project completion.
5. The job superintendent typically pursues the construction of a project for months. The superintendent is familiar with the contract documents, job requirements, job personnel and the expectations of the owner and architect.

JCR-44

Shop Drawings & Product Data Submittals

April 1988, April 1989, September 1989, April 1995, October 1995, October 1999, October 2001, October 2015

Recommendations

Upon receipt of contractor's approved shop drawings, architect shall review and approve or take other appropriate action upon the

contractor's submittals and shop drawings. Architect's action shall be taken with such reasonable promptness as to cause no delay in the work while allowing sufficient time to permit adequate review.

Comments

- A. Generally, 14 calendar days should be adequate review time for properly submitted shop drawings. Faster turnaround on certain long-lead items and submittal returned "revise and resubmit" should receive special consideration if requested by contractor.
- B. Submittal numbering system should be generated based on specification number, submittal # (001, 002, 003, etc), and revision number (A, B, C, etc.) or as mutually agreeable between contractor and architect. For example: 095100-001-A.
- C. Unless indicated otherwise in the project specification, submittals should be transmitted electronically in PDF with an initial cover page by the contractor. Files should be named with the following structure: Submittal # Brief Description. (For example: 095100-002-B Acoustical ceiling product data.) To facilitate tracking submittals, architect and contractor should endeavor to keep file naming convention consistent through transmission between contractor, architect, consultants and back.
- D. Submittals should be transmitted without being "flattened" to allow reviewer to quickly jump from comment to comment.
- E. Larger or more complex projects may benefit from formatting of comments on submittals. If applicable, architect and contractor should discuss and agree on formatting of comments including, but not limited to:
 - Place reviewer's initials in front of comments made
 - Color comments according to group: (Architect: Red, CM/GC: Blue, Owner: Black, Consultants: Purple)
- F. Contractor shall submit shop drawings timely in order not to place an undue burden on the architect. A schedule for submittals should be developed as part of the initial project setup, which allows for submittal procurement, contractor review, architect and A/E review. Contractor shall indicate his approval of the shop drawings prior to submission to the architect.

- G. Contractor shall maintain a complete set of approved shop drawings on the job site or available electronically.
- H. Items requiring finish selection may require more time and shall be grouped to allow the architect to fully coordinate all

color selections. Architect should identify such items or other items which need to be grouped.

- I. Architect should utilize a submittal cover-sheet similar to the following:

Recommended Action:

Sample Stamp

____ Approved ____ Approved as Corrected ____ Not Approved ____ Revise and Resubmit

Review is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Neither the Architect's review or approval shall relieve the Contractor of his obligations as required by the Contract Documents.

Architect and/or Engineer: _____

Address: _____

By: _____ Date : _____

JCR-48

Unsuitable Material Allowances

April 1988, October 1999

Recommendations

The specifications should provide for the handling of unsuitable soil and unit prices to govern when it's anticipated that unsuitable soil will be encountered.

The following is a suggested specification paragraph and unit price schedule to accomplish the task.

QUANTITY OF UNSUITABLE MATERIAL:

The following quantity of undercut and removal of unsuitable material shall be included in the Base Bid and considered as part of the Contract as follows:

- (A) _____ cubic yards – general earth excavation, machine
- (B) _____ cubic yards – trench earth excavation, hand
- The unit prices quoted on the Bid Form shall apply for adding to the above quantity in accordance with the method used. The unit prices quoted on the Bid Form

shall also apply for deducting from the above quantity.

QUANTITY OF BACKFILL:

The following quantity of backfill shall be included in the Base Bid and considered a part of the Contract as follows:

- (A) Earth backfill, machine _____ cubic yards
- (B) Earth backfill, hand _____ cubic yards
- Unit Prices: Should the undersigned be required to perform work over and above that required by Contract Documents or should he be ordered to omit work required by Contract Documents, he will be paid extra or he shall credit the owner, as the case may be, on basis of unit prices quoted herein, prices quoted being sum total compensation payable or creditable for such items IN PLACE.

Comments

- A. Earth excavation cubic yard quantities, for all categories, shall be based on the volume of the excavated area and not the volume of the earth removed.
- B. Earth backfill cubic yard quantities, for all categories, shall be considered as compacted in place quantities based on the volume of the area to be filled.



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- UVA-Chiller Plant
- NCSU Gregg Museum
- Grandfather Mountain Restroom Facility
- Union County Human Services Building
- Davie County High School
- SC National Guard Facility Maintenance Building/Readiness Center
- Bergen Mercy Hospital

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Material	Unit	Price-Add	Price-Deduct
General Earth Excavation, Machine	Ea CY	\$ _____	\$ _____
Excavation, Machine	Ea CY	\$ _____	\$ _____
Trench Excavation, Hand	Ea CY	\$ _____	\$ _____
Earth Backfill, Machine	Ea CY	\$ _____	\$ _____
Earth Backfill, Hand	Ea CY	\$ _____	\$ _____



- C. State whether or not unsuitable soil, as determined by the independent geotechnical laboratory in the field, shall be disposed of on or off the property. State also whether or not suitable fill material is available on-site or off-site. Adjust unit prices to fit the situation.
- D. It may be necessary to further define the unit prices to allow for the work to be done using various types of equipment which would alter production accomplished.
- E. If a large volume of unsuitable soil may be encountered, consider using quantity-defined unit prices (example: "0 – 100 CY"; "100 – 500 CY"; and "over 500 CY") in order that large quantities may be accomplished with smaller unit prices.
- F. Compaction of backfill should meet standards prescribed in these specifications.

JCR-60

Coordination of Construction Documents

April 1988, October 1999

Recommendations

For a project to be properly coordinated, the architect, engineers, general contractor, subcontractors and utility companies must all review the work together.

The following guidelines for coordination of construction documents are recommended.

1. The architect should coordinate the architectural drawings with the civil drawings, structural drawings, plumbing drawings, mechanical drawings, electrical drawings, and fire protection or other specialty drawings if they are issued as part of the design package.

2. Drawings should be properly coordinated prior to issuing drawings for bidding, negotiation, or construction.
3. The project drawings should be properly coordinated with the project manual (i.e., project specifications).
4. After drawings have been issued for construction, any revisions to the drawings should be properly flagged and bubbled, noting all revisions in the title block.

Comments

- A. If a contractor notes any coordination issues in the set of drawings being priced, these should be immediately brought to the attention of the architect for clarification.
- B. The contractor should make available to all subcontractors all drawings and specifications on the project for review.
- C. During the construction process, shop drawings should be properly coordinated prior to submittal of shop drawings to the architect.
- D. All public utility companies associated with the installation and/or extension of lines to a project site should receive a full set of drawings for review and coordination in the planning and/or pricing of their work.

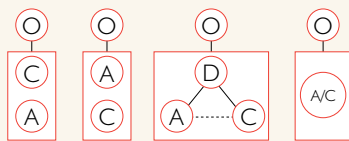


JCR-61

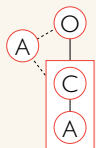
Design-Build Policy for Public Construction Work

October 2000

"Design-build" involves a project delivery method where one entity or team signs a single contract, accepting full responsibility for both the design and construction services of the building project. Modified design-build, or "Bridging," involves a two-phase process wherein an owner hires an



Design-Build



Bridging



DESIGN-BUILD

Pros

- Single source of responsibility
- Time/enforceable price sooner
- Methodical & early subcontract negotiation
- Potential of: higher quality, less litigation and cost savings

Cons

- Potential loss of owner/architect control
- Loss of competitive bidding
- Requires teambuilding, experience, integrity
- Possible absence of clear roles
- Price established before design

architect to define the preliminary design and performance specification of a project and to serve as the owner's representative throughout the project. Following the development of specific design criteria for the project, the owner solicits proposals from design-build entities to execute the project.

In the private sector, an owner has the option of completing a project using any project delivery system it chooses: design-bid-build, negotiation (cost plus a fee or guaranteed maximum price contract), construction management or design-build. AIA North Carolina and Carolinas AGC continue to feel that the public owner can best provide a fair and full opportunity for open competition through the use of the design-bid-build method.

However, we are aware of industry statistics that show an increasing portion of the private construction market is turning to design-build, seeking the potential benefits of single-point responsibility, cost or time savings, and efficient coordination of design and construction services. The design-build project delivery system is now being used more often by federal agencies such as the Department of Defense, the General Services Administration, Department of Veterans Affairs and Bureau of Prisons. A number of states, including Alaska, California, Florida, Illinois, Idaho, Minnesota, New Mexico, Texas and Virginia have also enacted legislation expressly authorizing the use of design-build.

The public owner, however, has the responsibility to secure construction services with methods that will provide a fair and full opportunity for open competition and to ensure the public project is built at a competitive price to the taxpayer without risk in the performance of the contractor or favoritism. Licensed design professionals also have responsibilities to public health, safety and welfare that cannot be lessened or delegated in any way because of the involvement as part of a design-build entity. Under the North Carolina General Statutes, design-build on a public project is currently not permissible without special legislation.

AIA North Carolina and Carolinas AGC recognize that certain conditions may cause a public owner to consider construction services using an alternative delivery system such as design-build. When evaluating the suitability of the design-build delivery system for use on specific projects, the public owner must carefully consider:

1. Time and cost constraints for delivery of the project
2. The capability and experience of potential teams to respond to the owner's request for proposals (or RFPs)
3. The capability of the public owner to manage the project, including personnel to oversee the project who are familiar with the design-build delivery system
4. The degree to which the owner or the public seek to participate in the design and approval of the project
5. The functional, technical and aesthetic quality objectives established for the project



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6. Contractual issues involving liability and dispute resolution

The Project Definition Phase

Because of its unique ability to combine the strengths of the design-bid-build project delivery system with those of design-build, AIA North Carolina and Carolinas AGC believe that public agencies considering design-build should employ the modified, two-phase process referred to as "Bridging."

In the first phase of this process, the public owner would select an architect or licensed design professional and execute a contract with them to prepare a "design criteria package" for the project. The primary purpose of the design criteria package is to define the project scope, including the preliminary design and performance specifications of the project. The package should also furnish interested design-build entities with sufficient information that will allow them to respond to the owner's RFP to complete the design, construction documents and construction phases of the project.

The design criteria package should specify performance-based criteria for the project, including but not limited to:

- Legal description of the site
- Survey information
- Site development requirements
- Provisions for utilities, storm water retention and disposal and parking requirements
- Interior space requirements (space program)
- Quality and performance standards for materials and building systems
- Schematic layouts and conceptual design criteria
- Exterior elevations and building cross-sections
- Cost or budget estimates
- Design and construction schedules
- Objective evaluation criteria that will be used as the basis for selection
- Contract forms of agreement for the project

The Selection Phase

After the design criteria package is prepared and distributed as part of the RFP, the public owner should determine the

minimum number of proposals that must be received and the selection criteria that will be used in evaluation. A minimum of three to five responses from qualified teams is recommended if design-build is used. The owner should establish a selection panel that includes design and construction professionals familiar with the project and the design-build delivery system. The panel should also include representatives from the agency or public who will use the facility.

When a public agency employs the design-build method, selection of the design-build entity should involve qualifications-based selection procedures, which require comprehensive consideration of competence, capability and a negotiated price that is fair and reasonable to the public.

Upon receipt of proposals, the selection panel should select a minimum of three design-build teams to submit sealed competitive proposals. Public owners should consider providing a pre-announced stipend to all teams that are finalists for the project. Interviews should then be conducted between the owner and the three teams determined to be finalists in the selection process. Finalists should be provided an opportunity to make a formal presentation before the public owner's agents. The combination of time and cost to complete the project should constitute the major criteria for the final selection process.

To ensure fairness in the process, all qualified design-build teams must be afforded a reasonable and equal time to prepare and present their proposals. To avoid unfair advantage, no person or entity involved in the development of the RFP or design criteria package should be allowed to participate as a member of a design-build team submitting a proposal.

Conclusion

AIA North Carolina and Carolinas AGC believe these guidelines will improve the contractor selection process for public agencies who consider using an alternative project delivery system such as design-build. When implemented, these guidelines will benefit public owners, design profes-

sionals and the construction community by bringing uniformity and consistency to the design-build process in the public sector.

JCR-5

Issuance of Addenda

December 1973, October 1975, May 1977, October 1994, October 1999

Recommendations

1. If addenda are necessary, they should be issued as soon as possible, but in any event, not later than four working days before receipt of bids.
2. When addendum requires major or extensive changes, an appropriate extension of the bidding period should be granted.

Comments

In order that the architect may have sufficient time to prepare any necessary addenda, it is requested that all inquiries be made in time to reach the architect at least five working days before receipt of bids.

JCR-14

Pre-Construction Conference

October 1974, October 1975, October 1999

Recommendations

Promptly after award of a contract, a pre-construction conference should be held. A letter of notification of the pre-construction conference, to be attended by appropriate representatives of the owner, architect, engineers, contractor, major subcontractors, utility representatives, etc., should be written to all parties by the architect in charge of the project. The letter should include a discussion checklist. All parties involved in the project should, prior to the conference, add any additional items they wish discussed.

Comments

- A. The following information should be furnished by the architect:
1. Names of architect representatives and specific assignments.
 2. Reports and completed forms required from the contractor.
- B. Information to be furnished by contractors:
1. Project Manager: Name, Address, Phone Number.



2. Superintendent: Name, Address, Phone Number.
- C. Information furnished by the owner:
1. Owner's representative: Name, Address, Phone Number.
 2. Provisions and procedures for payment.
 3. Owner's insurance coverage (Builder's Risk, etc.).
 4. Site security provided.
- D. Discussion Checklist: (Suggested Guide)
1. Contractor's plan of operation, including a GPM Schedule.
 2. Approval of qualified subcontractors.
 3. Names of principal suppliers.
 4. Provision for inspection of materials.
 5. Responsibility for locating existing utilities.
 6. Responsibility for damage to utilities.
 7. Time schedule for relocation of utilities.
 8. Shop drawing submittal and approval procedures.
 9. Acceptance and approval of work procedures.
 10. Labor compliance, payrolls, certifications.
 11. Safety regulations for contractor's and owner's employees.
 12. Proof of adequate property damage and liability insurance.
 13. Suspension of work and time extensions.
 14. Change order procedures.
 15. Procedures for submission of applications for payment.
 16. Any interpretation of plans and specifications requested by contractor.
 17. Any conflicts or omissions in plans and specifications.
 18. Traffic control.
 19. Processing and administration of third-party complaints.

20. Substitutions of materials or methods.
21. Cash flow schedule.
22. Schedule and format for job meetings.
23. Job site cleanup responsibility.
24. As-built prints maintained.

- E. Representatives of all involved utilities should have the authority and knowledge to discuss location of utility, time schedule for relocation, emergency action in event of damage to utility, etc.

JCR-16

Certification of Substantial Completion

October 1974, October 1975, October 1999

Recommendations

The nationally approved AIA Form G704 (Certificate of Substantial Completion) is the preferred method of documenting substantial completion and owner's feasibility to occupy.

Comments

- A. Execution of this form:
1. Establishes the date of substantial completion and mutually agreeable date of occupancy.
 2. Establishes schedule for completion of remaining work.
 3. Establishes the commencement of all warranties and of all guarantees.
- B. Refers to JCR-10 for retainage recommendation on uncompleted items of work.

JCR-31

Field Record Drawings

October 1975, May 1977, October 1999

Recommendations

AIA A201 General Conditions 1997 Edition adequately provides for field record drawings and should not be modified.

Comments

- A. The contractor's responsibility for field record drawings should not extend beyond furnishing the architect a set of record prints marked to indicate changes made during construction.
- B. If the owner desires a permanent set of field record drawings (sepia), he should engage the services of the architect to furnish and revise the drawings accord-



ingly. In many owner-architect contracts, field record drawings are required.

JCR-32

Construction Time for Projects

May 1977, September 1979, April 1991, October 1999

Recommendations

1. The bidding documents should specify the number of calendar days allowed for construction, particularly on projects utilizing separate contracts.
2. The total number of calendar days stipulated for construction should include, and so designate, the number of working days allowed in the construction time for normal bad weather.
3. Normal bad weather days should be those days on which precipitation is 0.10 of an inch, or greater, or any day the temperature fails to exceed an average of 40° F and that bad weather shall have had an adverse effect on the schedule.
4. If the total accumulated number of working days lost due to bad weather, from

the start of work until the project is completed, exceeds the total number of days allowed in the construction time for normal bad weather, the time for completion should be extended by the difference.

5. The normal bad weather days and any time extension should be based on the Local Climatological Data Sheets compiled and published by the National Climatic Center, Asheville, North Carolina, and on daily weather logs kept on the job by the contractor reflecting the effect of the weather on progress of the work as initialed by the architect's representative.
6. Bad weather days that have delay consequences beyond the day of occurrence should be considered as lost construction days. For example, at phases of the job when clearing, foundation work, slabs on grade, masonry, etc., are in progress, several days can be lost due to rain, snow or freezing temperatures before conditions are suitable to proceed with construction. This, of course, is a judgment call between the architect and contractor and should be considered if contractor requests additional contract time.

Comments

- A. Specifying the number of calendar days for construction in the bid documents allows for competitive bidding on an equal basis.
- B. When time is of the essence on any private project, contractors should be notified that the project will be awarded on a price and/or time basis.



Recommendations

The following should be included in the Supplementary General Conditions:

Each prime contractor shall provide necessary and adequate facilities as they relate to his contract work and as required for the completion of the project in accordance with the contract documents. Any permanent meters installed shall be listed in the project expeditor's name until substantial completion.

In the event the project does not require the services of a particular prime contractor, then the general construction contractor will provide the temporary utilities normally furnished by that prime contractor.

Each prime contractor is responsible for:

1. Installation, operation, maintenance and removal of each temporary service or facility usually considered as its own normal construction activity.
2. Plug-in electric power cords and extension cords, and supplementary plug-in task lighting and special lighting necessary for its own activities.
3. Its own field office, complete with necessary furniture, utilities and telephone service.
4. Its own storage and fabrication sheds.
5. Special or unusual hoisting requirements, including hoisting material or equipment into spaces below grade, and hoisting requirements outside building enclosure.
6. Collection and disposal of its own hazardous, dangerous, unsanitary or other harmful waste material.
7. Secure lockup of its own tools, materials and equipment.
8. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
9. Water hoses, etc.
10. Arranging for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certificates and permits.
11. Drinking water for its own employees.

Temporary Electrical Service, Wiring and Lights

1. Temporary electrical service, power wiring distribution and lights shall be furnished, installed, maintained and removed by the electrical prime contractor.
2. Temporary electrical service, wiring and lights shall, as a minimum, include the following unless the designer has specified a more stringent requirement:
 - a. 100 amp panel, pole mounted adjacent to foundation excavation with 1-220 volt outlet and 8-110 volt outlets.
 - b. 100 amp service for each prime contractor's office trailer and the specified office trailers of the owner, architect, engineers, etc.
 - c. 100 amp panel for each 20,000 square feet of floor area or one on each floor with less than 20,000 square feet with 15 and 20 amp outlets.
 - d. Five-foot candles of light at the floor in open spaces.
 - e. Ten-foot candles of light at the floor in corridors and stairs.
 - f. Job requirements in perimeter site lighting when specified.
 - g. Install an outlet at each floor for the heat trace on the temporary water lines.
3. Temporary lighting for areas of 100 square feet or less will be provided by the trade requiring the lighting.
4. When the complexity of the project requires a temporary electrical power riser diagram and typical lighting layout, the architect/engineer shall include this in the bidding documents.

Permanent Power and Wiring

1. The electrical prime contractor shall have the building's permanent power wiring distribution system in sufficient readiness and shall provide electrical power as required by the HVAC prime contractor for temporary climatic control.
2. The electrical prime contractor shall also have the permanent power wiring distribution in sufficient readiness for the use of other contractors such as elevator contractors.
3. The electrical prime contractor shall have sufficient permanent wall outlets ready for use by other contractors when the temporary service is removed.

4. All metered electrical power costs, both temporary and permanent, will be paid for by the project expeditor named by the owner until the meters are re-listed in the owner's name.

Permanent Lighting System

1. The electrical prime contractor shall have the building's permanent lighting system ready at the time the general prime contractor begins the building finishes and shall provide adequate lighting in those areas where finish is being performed.
2. When the permanent lighting system is used during the finishing stages, all lamps shall be burning at the time of final inspection. The electrical prime contractor shall turn over to the owner a sufficient number of lamps and ballasts to equal 5 percent of each type used in the project for installation by the electrical prime contractor during the warranty period.

Temporary Toilet Facilities and Water

1. The plumbing prime contractor shall provide the project requirements of water distribution.
2. Piped water shall, at a minimum, be furnished to each floor of the building and other locations that the type of construction may require.
3. All metered water costs will be paid for by the project expeditor named by the owner.
4. Temporary water lines shall be freeze protected by the plumbing prime contractor with insulation or heat trace or both.
5. The project expeditor will be responsible for providing the job requirements of temporary chemical toilets.

Comments

1. The architect shall make every effort to convince the owner it is in everyone's best interest for the owner to pay all metered utility costs.
2. The architect shall take into consideration extending the specified warranty period for equipment and materials that are used in providing temporary utilities.
3. The architect/engineer is requested to include the warranty requirements in the technical sections of the specifications as well as in the general conditions section, especially in the P M & E sections.

JCR-36A

Temporary Job Site Utility Energy Cost

April 1998, October 1999

Recommendations

Architect should advise both public and private owners of the option to allow the architect to structure the General and Supplementary Conditions so the owner pays the actual cost of the temporary utilities and fuel.

Temporary Electricity Cost

1. The owner would be responsible for the temporary electricity cost from the date the temporary electrical service is installed through the completion of the project.
2. Electricity for tower cranes, material hoist, personnel hoist, etc., would be provided and paid for by the trade requiring the facility unless the specifications required that such facilities be furnished by a particular trade for use by all trades on the project, then the owner would pay for the electricity.
3. The owner would not pay for electricity required for job site offices and storage facilities of the contractors.

Temporary Heating, Cooling and Ventilating Fuel Cost

1. The owner would be responsible for paying for fuel required for the temporary heating, cooling and ventilating beginning at the time the prime HVAC contractor is required to furnish these services. This would also apply if the HVAC prime contractor uses a heating, cooling or ventilating source other than the building permanent system so long as the method of calculating the fuel used is accurate.

Temporary Water and Sewage Disposal Cost

1. The owner would be responsible for the cost of temporary water and sewage disposal charges from the date the services are connected until the completion of the project, including when the permanent meters are installed and sewer connections are made.
2. The owner would not be responsible for any chemical toilet costs.

General

1. All temporary and permanent meters will be listed in the project expeditor's name.
2. The project expeditor will bill the owner monthly for the temporary utility fuel and energy cost.
3. If the project completion date is extended past the contract completion date through

no fault of the owner, the fuel and energy cost for the temporary utilities for the extended period will be a consideration of the liquidated damages.

4. The project expeditor will have an additional responsibility of monitoring the project to ensure that the temporary utility fuels (electricity, water, steam, gas, etc.) are not misused or wasted, such as unnecessary lights on, doors and windows open to heated or cooled spaces, water running in temporary toilets, etc.
5. The architect and owner shall consider extending the specified warranty period for permanent equipment and materials that are used in providing temporary utilities.
6. One possible structure that can be utilized is the establishment of an allowance.

JCR-43

Bid Submission and Opening Procedures

September 1979, November 1984, October 1999

Recommendations

The following bid submission and opening procedures are the accepted standard and are recommended to be followed by architects receiving and opening bids. House Bill 1327 states you must have three of whichever prime contractors are bidding. Senate Bill 308 applies to any project.

The Instructions to Bidders of Supplement thereto as bound with the specifications should contain the following bid submission information:

1. Bids shall be submitted in a two envelope system. The name, address and license number as well as type of contract (General, Mechanical, Plumbing, Electrical, etc.) to be shown on the outside. On the inside of the outer envelope, include the following:
 - a. Bid security, if required.
 - b. Certification of receipt of addenda. Written on contractor's letterhead.
 - c. Any special reference, financial statements, etc., required of the contractor.
 - d. Any modification of bid amount.
 - e. A sealed envelope containing the proposal and marked on outside, "PROPOSAL."
2. Bids shall be mailed or delivered to the owner or his representative at the place of and prior to the time for opening bids.



Opening procedures should be observed as follows:

1. All bid openings should be open to all interested parties.
2. Bid tabulation forms should be prepared in advance by the architect and provided to all interested parties attending the opening. Forms should contain the names of the prospective bidders and blank spaces for recording the bidder's license number, bid bond, base bid, calendar days for construction if not specified in the bidding documents and alternates. Space for unit prices should be provided only when they are to be used in determining the low bid.
3. Approximately five minutes prior to the designated time for receiving bids, the architect should announce the "official time" that will be used in declaring the bidding closed.
4. At the designated time for receiving bids, the bidding should be declared closed and no bid accepted after the announced closing.
5. Modification of a bid should not be accepted unless it is received by the owner and/or his representatives at the place of and prior to the time for opening bids. Such modification should only be accepted when it is by telegram or in writing properly authorized by the bidder.
6. After the announced bid closing, the architect should proceed as follows:
 - a. If public money is involved, ensure he has at least three bidders for each prime contract. Should he not have three, do not open bids on that portion of the work. Ask the bidders to hold their bids for a re-advertisement. Upon re-advertisement for bids, an award can be made if one bid is received.
 - b. Announce the number of addenda issued for all trades, if any, and be prepared to read same if asked to do so.
 - c. Inquire if any bidder desires any clarification of the plans and specifications.
 - d. Inquire if any bidder desires to withdraw his bid. If so, he should be allowed to do so at this point.
 - e. Ask if anyone has any objections to proceeding, with the opening of the bids. If anyone objects to pro-

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ceeding, the following alternatives are recommended:

- Attempt to satisfy the objection.
 - Secure complete information as to the objection and proceed with either of the steps listed next.
 - Postpone the bid opening to a later date to allow sufficient time for the objection to be satisfied.
 - Rule the objection as informal and proceed with the opening of the bids.
7. If open to the public, bids should be read aloud to the assembled group in the following order:
- a. Name of bidder
 - b. License number of bidder
 - c. Open the envelope and verify to all assembled that proper bid security and other required certifications are enclosed with the bid. Read aloud any modifications to bid amount. If all of the required material is not with the bid, the proposal should not be opened.
 - d. If all bidding conditions have been satisfied, open the envelope containing the proposal and read the base bid and alternate bids.
 - e. Read unit prices and construction time only if either or both are to be used in determining the low bidder.

Comments

- A. Immediately following a bid opening that is open to all interested parties, the architect may furnish a tabulation of bids to the AGC office when requested.
- B. Under the provisions of GS 87-13, "Any architect or engineer who recommends to any project owner the award of a contract to anyone not properly licensed under this Article, shall be deemed guilty of a misdemeanor and shall for each such offense of which he is convicted be punished by a fine of not less than five hundred dollars (\$500.00) or imprisonment of three months, or both fine and imprisonment at the discretion of the court."
- C. If bids are not opened in the presence of the bidders or unless there is strong objection from the owner, a tabulation of all bids received should be furnished to each bidder.
- D. Qualified bids are not acceptable.

JCR-49

Liquidated Damages Clause

October 1988, October 1999

Recommendations

1. Liquidated damages should be specified only when time is of the essence. Such a clause should never be used as a penalty to the contractor.
2. Special attention should be brought to the liquidated damages clause. A good time to do this would be at a pre-bid conference, at which time prospective bidders could acknowledge or challenge the proposed construction time frame.

Example

"The contractor shall commence work to be performed under this agreement on a date to be specified in a written order from the designer and shall substantially complete all work hereunder ____ calendar days.

For each day in excess of the above number of days, the contractor shall pay to the owner a sum of \$_____ as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the owner by reason of failure of said contractor to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof."

Comments

1. See JCR-32 for additional information to be included in the Supplementary General Conditions or Special Conditions of the project.
2. The time frame must be realistic.
3. In case of multi-prime contract, the architect and project expeditors shall arbitrate the responsibility of each prime contractor causing delay.
4. Where possible, contractors should be allowed to bid number of calendar days.



End of JCR

These recommendations are the result of considerable discussion and deliberation by the architect and general contractor members of the Joint Cooperative Committee of AIA North Carolina and the Carolinas AGC. While these provisions are not binding on individual architects or general contractors, the committee believes that adherence to the recommendations will benefit the owner and the construction industry in general.

Joint Committee Recommendations

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Find these online at www.aianc.org/government-affairs

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Recommendation No. 3 Dec. '73, Rev. Oct. '75, Sept. '81, Oct. '94, Oct. '99	Plan Deposit Guarantee
Recommendation No. 4 Oct. '86, Rev. Dec. '93, Apr. '97, Oct. '99	Number of Sets of Bidding Plans and Specifications
Recommendation No. 5 Dec. '73, Rev. Oct. '75, May '77, Oct. '94, Oct. '99	Issuance of Addenda
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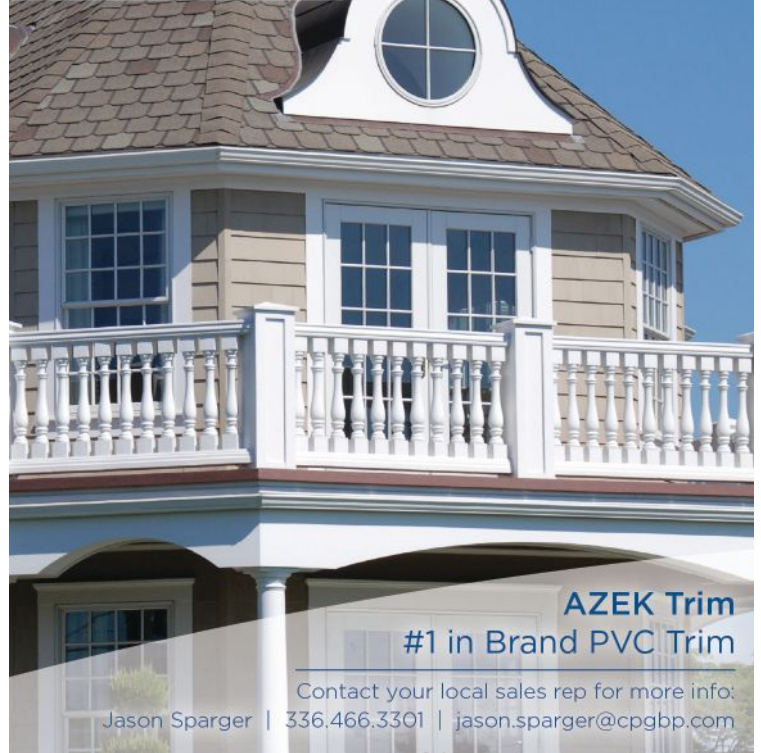
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