



ARCHITECT/ENGINEER MANUAL

May 1997

MEMBERS OF THE CAPITAL DEVELOPMENT BOARD

George Fleischli, Chairman
Bernard B. Birger, Vice Chairman/Secretary
Robert B. Oxtoby
Dennis Gannon
Roland C. Harris
Raymond Mota
Joby H. Berman

Sam McGaw, Executive Director

Capital Development Board
3rd Floor, Wm. G. Stratton Building
401 South Spring Street
Springfield, Illinois 62706
217/782-2864
Fax No.: 217/782-8625
TDD No.: 217/524-4449

Capital Development Board
Suite 14-600, James R. Thompson Center
100 West Randolph Street
Chicago, Illinois 60601
312/814-6000
Fax No.: 312/814-2041

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ARCHITECT/ENGINEER MANUAL
STANDARD CONDITIONS
OF THE
PROFESSIONAL SERVICES AGREEMENT

ARTICLE 1 DEFINITIONS

1.1 Agreement means:

- A. Professional Services Agreement and Appendices
- B. Architect/Engineer Manual
- C. Standard Documents for Construction
- D. Program Statement and/or Scope of Work Attachment
- E. Any Approved Modifications to the Agreement

1.2 Addendum. A supplement to the bidding documents, issued prior to the bid opening, for the purpose of clarifying, correcting or otherwise changing the bidding documents previously issued.

1.3 Architect. Architect means a person who is licensed as an architect by the Department of Professional Regulation, State of Illinois.

1.4 Architect Engineer (A/E). The Architect/Engineer (A/E) is the firm that prepares the bidding documents and has certain construction phase duties under contract to CDB. For certain projects, CDB may use staff to prepare the bidding documents and will act as the A/E.

1.5 Assigned Contractor. An assigned contractor is a contractor who has been assigned to the coordinating contractor for the limited purposes of scheduling and coordination of the work. This assignment is limited and CDB retains certain rights of the contract.

1.6 Change Order. A change order is a written change in a contract term, other than as specifically provided for in the contract, which authorizes an addition, deletion or revision in the work or necessitates any increase or decrease in the cost of the contract or the time to completion.

1.7 Contractor. The contractor is any individual, firm, partnership, corporation, joint venture or other entity who has entered into a prime construction contract with CDB.

1.8 Coordinating Contractor. The designated contractor for the project to whom CDB may assign limited administration of the other contracts.

1.9 Direct Wage Expense (DWE). Actual hourly wages paid employees, exclusive of statutory and fringe benefits, personal and/or performance/profit bonuses.

1.10 Engineer. Engineer means a person who is licensed as a professional engineer or a structural engineer by the Department of Professional Regulation, State of Illinois.

1.11 Subcontractor and Suppliers. A subcontractor is any individual, firm, partnership, corporation, joint venture, or other entity, other than the contractor, who furnishes any goods or services of any kind under a subcontract entered into with a construction contract with CDB's prime contractors. This legal definition shall govern

in general, but various contract Articles herein shall distinguish between a subcontractor and a supplier. In those cases, a subcontractor is a business entity that has responsibility for a portion of the work that includes onsite installation labor. Suppliers are business entities that furnish only goods produced off site which will be incorporated into the work by others. The clause on change orders and others makes such a distinction.

- 1.12 **User or Using Agency.** State agency or governmental entity benefitting from the project improvement that will occupy and/or operate the facility, equipment, etc.
- 1.13 **Work.** The work comprises the complete construction required by the contract documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

ARTICLE 2 A/E'S RIGHTS AND RESPONSIBILITIES

- 2.1 **A/E's Principal in Charge.** The A/E shall designate a principal in charge for the agreement. CDB shall address all questions and concerns about this agreement and the A/E's performance of its duties of the agreement to the A/E's principal in charge.
- 2.2 **Federal and State Laws.** All applicable Federal and State laws and the rules and regulations of all authorities having jurisdiction over the design of the project shall apply to the agreement throughout, and they will be deemed to be included in the contract the same as though written therein in full.
- 2.3 **Project Codes, Standards and Regulations.** The A/E shall prepare the bidding documents in accordance with all applicable codes, standards and regulations.
- 2.4 **Legal Responsibility.** Notwithstanding any other provision herein, the A/E shall perform all of its services in conformity with the standards of reasonable care and skill of the profession. The A/E shall be responsible for the performance of persons retained by the A/E and states that its consultants, subcontractors, agents, employees and officers shall possess the experience, knowledge and character to properly perform their duties.
- 2.5 **Standard of Project Quality.** It is the policy of CDB to provide its client agencies with projects that maximize program features and minimize maintenance requirements. The A/E shall exercise professional expertise and judgment in establishing a standard of quality appropriate for each project. The A/E shall establish the standard early in the design process for review by the using agency and CDB. The A/E is cautioned to avoid specifying products which are not known by the A/E to be effective.
- 2.6 **A/E's Consultants.** The A/E shall employ all consultants necessary for the performance of the services herein described and be contractually responsible for them. Professional and testing consultants shall be prequalified in their respective professions with CDB. The A/E shall complete and submit Appendix B listing all consultants to be used on the project.
- 2.7 **Construction Supervision.** The A/E shall not be responsible for construction means, methods, techniques, sequences, procedures, supervision or for safety precautions and programs in conjunction with the project or work thereon.
- 2.8 **Contractor Performance Evaluation.** The A/E will, at the completion of construction and as determined by the CDB Project Manager (PM), participate in the evaluation of the contractor's performance. The A/E may also prepare interim evaluations as necessary.

- 2.9 **Defaulting Contractor.** The A/E, in the event of default by any contractor, agrees to work in concert with CDB and the surety for the defaulted contractor to ensure completion of the contract. The A/E may be entitled to additional compensation for services provided in assisting CDB in completion of the defaulted contract.
- 2.10 **Redesign.** Should the lowest responsible competitive proposal or bid obtained on any contract be in excess of the final detailed statement of probable construction costs, CDB may request the A/E, in consultation with CDB, to redesign the project within the statement of probable construction costs at no additional compensation. However, should CDB elect not to redesign, the A/E shall not lose its right to compensation in accordance with Article 6.
- 2.11 **Addenda and Change Orders.** Upon notice or discovery, the A/E shall perform necessary professional services including issuance of addenda to the bidding documents and change orders to the contract documents, to correct or revise errors, omissions, or ambiguities, without additional compensation.

ARTICLE 3 CDB RIGHTS AND RESPONSIBILITIES

3.1 Project Manager.

- A. CDB will designate a PM for the project who shall be CDB's primary representative in the administration of this agreement. The A/E will report to the PM.
- B. The CDB PM shall be the liaison between the A/E and the using agency. All correspondence between the A/E and the using agency shall be communicated to the PM. All correspondence related to the project shall include the project title and CDB's project number.

- 3.2 **CDB Review.** CDB shall have the right to review and approve the A/E's submittal of the respective phases of design services for conformance with the provisions of this agreement and to require a written response to all questions raised regarding such services. CDB's review and any approval of the A/E's submittal does not relieve the A/E of its responsibilities.

- 3.3 **Interpretation of Agreement.** CDB shall have the authority to determine questions of fact that arise in relation to the interpretation of this agreement and the A/E's performance hereunder. However, such determinations, except terminations of the contract, are subject to alternative dispute resolution (ADR) as described herein. Unless the parties agree otherwise, such determinations and/or mediation procedures shall not be cause for delay of the performance of this agreement. The A/E shall proceed diligently with the performance of this agreement and in accordance with CDB's decision whether or not the A/E or anyone else has an active claim pending. Continuation of the performance of this agreement shall not be construed as a waiver of any rights accruing to the A/E.

- 3.4 **Error/Omission Change Order Policy.** By policy, CDB reserves the right to recover from the A/E all or a portion of the costs associated with change orders issued to correct errors or work omitted in the construction documents prepared by the A/E. Consequential damages, including any delay of work or damages incurred by other parties due to errors and omissions may be included in the recovery. The current policy is available from CDB.

- 3.5 **Ownership, Dissemination and Publication of Documents.** The drawings, specifications, reports, renderings, models, electronic media and all such other

documents to be prepared and furnished by the A/E pursuant to this agreement, including the copyrights, shall be the property of CDB. All documents listed above may be issued for informational purposes without additional compensation to the A/E.

- 3.6 **A/E Performance Evaluations.** CDB will evaluate the performance of the A/E at the completion of the design and construction phases or as deemed appropriate. CDB may also request the using agency or contractors to evaluate the A/E. The A/E has the right to review and respond to its performance evaluations.

ARTICLE 4 COMPENSATION AND PAYMENT

- 4.1 **Appendix A.** An attachment to the agreement that delineates the compensation to the A/E for the various services agreed upon and establishes the project schedule.
- 4.2 **Basic Services Fee.** As compensation for design phase and construction phase services under the agreement, the A/E shall receive a basic services fee as set forth in Appendix A.
- 4.3 **Design Phase Compensation.** The design phase fee is for design and bidding services through the award of construction contracts. The portion of the basic services fee payable for each level of design phase services is set forth in Appendix A. Progress payments shall be paid to the A/E upon successful completion of each level of design and bidding phase as set forth in Appendix A. Progress payments proportional to the percentage of completion of services may be made monthly. A/E shall submit evidence of services completed to be eligible for payment.
- 4.4 **Construction Phase Compensation.** The portion of basic services fee for construction phase services is set forth in Appendix A. Progress payments will be paid to the A/E in installments proportional to the percentage of construction completed.
- 4.5 **On-Site Representative Compensation.** Appendix A indicates the allowance for on-site compensation. A/E must provide evidence of site visit to receive compensation as set-forth herein. See Paragraph 19.3. Should the A/E anticipate a need for additional on-site compensation, a written request for said expenses shall be submitted to CDB for review. All changes to the agreement shall be by written modification duly executed by the contracting parties.
- A. The A/E shall be reimbursed the actual direct wage expense (DWE) of the approved on-site representative times the overhead and profit multiplier indicated in Appendix A. Proof of the on-site representative's DWE shall be submitted with the applicable pay requests.
- B. Full-time, on-site representatives (5 days/week) shall not be reimbursed for travel time. Part-time on-site representatives may bill up to a maximum of three hours per day of actual travel time to and from the project site at their DWE rate times the overhead and profit multiplier indicated in Appendix A.
- 4.6 **Additional Services.** The A/E shall provide additional services germane to the agreement when authorized by CDB in writing. Compensation, as agreed to and set forth in such authorization, will be based on a negotiated lump sum fee. Payment for additional services shall be made upon completion of the services or as otherwise agreed upon in writing with CDB.

- A. At CDB's option, compensation may be based on a negotiated not-to exceed fee payable at DWE times the overhead and profit multiplier rate shown on Appendix A. Evidence of DWE and time expended shall be furnished to receive payment.
 - B. Change orders which alter the project scope shall, with prior approval of the PM, be prepared and processed as additional services.
- 4.7 **Reimbursable Expenses.** The A/E shall be reimbursed for actual costs of reimbursable services as set forth in Appendix A. Unless approved in writing by CDB, no mark-up will be allowed. The expense of administering subcontracts shall be considered a basic service. Should the A/E anticipate a need for additional reimbursable expenses, a written request for said expenses shall be submitted to CDB for review. The A/E shall provide evidence of an authorized expense when requesting any reimbursement. All changes to the agreement shall be by written modification duly executed by the contracting parties.
- 4.8 **Construction Administration Fee.** The Construction Administration Fee (CAF) is one and one half percent (1.5%) of the basic services fee plus all additional services fees rounded up to the next hundred dollars as shown on Appendix A. The full amount of this Fee shall be invoiced by the A/E on the initial progress payment request. Prior to the approval of the second progress payment request and no later than 20 calendar days after receipt of the warrant for the initial payment request, the A/E shall direct to the Office of Fiscal Management of CDB, a check or money order made payable to CDB in the amount of the CAF. Additional CAF imposed as a result of an increase of basic services and/or additional services fees shall be invoiced in the first subsequent pay request and paid to CDB as stated above.

- 4.9 **Changes in Compensation.** Should CDB elect to change the project scope to the extent that services to be performed by the A/E are substantially altered, then CDB and the A/E will negotiate an equitable adjustment in the A/E's compensation. All changes to the agreement shall be by written modification duly executed by the contracting parties.
- A. Changes to design requested or approved by CDB in the preparation of the bidding documents may be compensable as additional services if the requested change adds services or requires revisions to previously accepted documents.
- 4.10 **Withholding of Payments.**
- A. CDB may withhold payments, in whole or in part, for a material breach of the contract, including but not limited to, the A/E's failure to perform services or meet the schedule, design errors or omissions, failure to pay consultants and failure to adhere to terms of this agreement.
- B. Pursuant to 15 ILCS 405/10.05, CDB reserves the right to withhold payments as a set off when the A/E is liable to CDB in connection with any contract, past or present, that the A/E has performed for CDB. When payments are withheld, CDB will notify the A/E in writing.
- 4.11 **Pay Request.** A/E requests for compensation shall be in accordance with Appendix A of the agreement and as described in this section. A complete application for payment shall consist of the following:
- A. State of Illinois Invoice-Voucher (Exhibit A)
- B. A/E PRB - Pay Request Breakdown (Exhibit B)
- C. On-Site Representative Summary (Exhibit C), DWE verification ie payroll register, pay stubs, when applicable
- D. Copies of Invoices for Reimbursable Items
- E. Evidence of receipt of payment of previous invoices from consultants
- F. Proof of payment of previously submitted reimbursable invoices

ARTICLE 5 INSURANCE REQUIREMENTS

- 5.1 **General.** The A/E shall purchase and maintain insurance coverage as set forth herein for the life of the agreement. CDB shall determine the acceptability of the A/E's insurance carriers as of the time of contract execution. Subsequent to execution, if the A/E chooses to change carriers, CDB approval is required. Subsequent to execution, if CDB requires the A/E to change carriers due to an erroneous acceptability determination, the additional cost of the change shall be borne by CDB. If an insurance company is determined to be unacceptable under paragraph 5.8 herein, during the life of the agreement, CDB shall not require the A/E to change companies for that reason.
- 5.2 **A/E's Duty to Maintain Insurance.** The A/E shall have the duty to confirm that the terms of all insurance comply with the agreement. No action or failure to act on the part of CDB shall constitute a waiver of any requirement.
- 5.3 **Failure to Maintain.** If CDB determines at any time that the insurance does not meet the requirements, this shall constitute a material breach of the agreement and CDB shall provide prompt notice to the A/E and, in its sole discretion, may take any one or more of the following measures to protect itself and the public from the effect of the A/E's breach.

- A. Order the A/E to cease all operations until the proper insurance shall be procured and made fully effective. The cost of any such interruption of the performance of this agreement and any delays resulting therefrom, shall be borne by the A/E and may be paid out of contract funds in the hands of the CDB, which are due or to become due to the A/E.
 - B. In the exercise of any of its rights as declared herein, CDB does not waive any of its other rights provided in the agreement documents.
 - C. Should it become necessary to make a claim on the A/E's insurance policies and it is discovered that the insurance policies do not meet the CDB insurance requirements set forth in the contract documents, the A/E shall be liable for all claims to the extent they would have been covered by the insurance policies had they been in compliance with CDB requirements.
- 5.4 **Sole Discretion.** CDB shall exercise sole discretion to determine acceptability of insurance.
- 5.5 **Acceptability of Insurance Companies.** Insurance that conforms to Paragraphs 5.10, 5.11 and 5.12 shall be acceptable to CDB when issued by an insurance company that meets all of the following standards:
- A. Has a current Best's rating of any level of "B+" or better and has a current Best's financial class of "VI" or higher.
 - B. Does not have an unacceptable record of improper conduct or financial problems with the Illinois Department of Insurance.
 - C. Does not have a history of unacceptable performance related to CDB claims.
 - D. Neither the firm, nor any of its officers or owners, shall have been convicted of a felony, unless more than one year has passed since the completion of the felony sentence, and further, the firm is not disqualified from bidding on public works projects by reason of any consent decree or order imposing sanctions upon the company arising out of a civil or criminal action brought against the firm or any of its officers or owners.
- 5.6 **Cut-through Endorsements.** Policies with a 100% cut-through endorsement giving all claimants a direct right of recovery, against a reinsurer that meets the criteria of Paragraph 5.5 when the primary insurer fails or is unable to pay for any reason, shall be acceptable provided that a proper endorsement and reinsurance treaty is submitted.
- 5.7 **Discretion to Adjust Criteria.**
- A. Acceptability criteria set out in Paragraph 5.5 shall constitute minimum requirements unless waived prior to executing the agreement by CDB in extraordinary cases that include but are not limited to the following:
 - 1. Insurance that meets the requirements is not available due to market changes or the nature of the project.
 - 2. Characteristics of the construction project justify less stringent requirements.

3. Available insurance, although not in technical compliance with the requirements, is determined to be as reliable as insurance in technical compliance.
 4. Substitution of a non-diminishing irrevocable bank letter of credit, on contracts under \$100,000, as authorized by the Public Construction Bond Act (30 ILCS 550/1).
- B. CDB may set more stringent criteria for insurance when determined to be justified by the nature of the construction project.
 - C. CDB may require wrap up insurance when required by the nature of the project.

5.8 Unacceptable Performance of an Insurance Company. Unacceptable performance of an insurance company, related to CDB claims, may consist of one or more of the following:

- A. Failure to abide by the requirements of the agreement and herein.
- B. Failure to respond to CDB communications within a reasonable time.
- C. Failure to acknowledge receipt of a claim within 30 calendar days.
- D. Failure to investigate and respond to a claim within 60 calendar days.
- E. Failure to pay meritorious claims on a timely basis.
- F. Failure to properly utilize CDB procedures and forms as may be required.
- G. Failure to work cooperatively and in good faith with CDB.
- H. Failure to provide CDB with requested documentation within a reasonable time, including but not limited to, insurance policies, inspection reports, certificates, binders, and general correspondence.

5.9 Evidence of Insurance.

- A. The A/E shall file with CDB evidence of complete coverage of all insurance required with the original signature of the insurance company's authorized agent. Fax copies will be accepted, provided CDB receives the original within seven (7) calendar days. The following are acceptable evidence of insurance:
 1. A binder or certificate of insurance accompanied by endorsements as set out below, or
 2. The complete insurance policy, including all required endorsements.
- B. Endorsements shall be required on each policy, which state each of the following:
 1. That "The coverage and limits conform to the minimums required by the professional services agreement." Any exception or deviation shall be brought to the attention of CDB for a ruling on acceptability.

2. The CDB project number and CDB contract number of the project covered by the policy.
 3. That the company agrees to timely provide complete copies of policies upon request by CDB.
 4. That the policy will not be canceled, changed or altered until at least ten (10) calendar days prior written notice has been given to the A/E and CDB, unless the same is stated in a policy provision.
 5. That CDB, its officers and employees, and the using agency, its officers and employees are included as additional named insureds for occurrences arising, in whole or in part, out of the work and operations performed. This endorsement does not apply to Worker's Compensation and Professional Liability policies.
- C. The agreement will not be executed until acceptable evidence of coverage is on file with CDB. The A/E shall, at its own expense and delay, cease operations if the insurance required is terminated or reduced below the required amounts of coverage. CDB may stop payment to the A/E if the insurance required is terminated or reduced below the required amounts of coverage. In no event shall any failure of CDB to receive policies or certificates or to demand receipt be construed as a waiver of the A/E's obligation to obtain and keep in force the required insurance and to provide the required evidence of insurance.

5.10 **General Liability Insurance Requirements.**

A. **Comprehensive Automobile Liability.**

1. The policy shall cover owned, non-owned and hired vehicles.
 - (a) \$1,000,000 Bodily Injury and Property Damage Liability Limit Each Occurrence

B. **Commercial General Liability.** Include coverage for premises and operations, broad form property damage, products completed operations, independent contractor's personal injury liability, and contractual obligations. Coverage shall not be excluded because of the A/E's negligence.

1. The general aggregate limit shall be endorsed on a per project basis.
 - (a) \$1,000,000 Bodily Injury Per Person
 - (b) \$1,000,000 Bodily Injury Aggregate Limit
 - (c) \$ 500,000 Property Damage per Occurrence
 - (d) \$1,000,000 Property Damage Aggregate Limit
 - (e) \$1,000,000 Combined Single Limit Coverage for bodily injury and property damage per occurrence and, in the same aggregate limit, will be accepted in lieu of the separate limits specified above.

C. **Umbrella or Excess of Loss Coverage.** If the limits specified in Paragraphs 5.10.A and 5.10.B are not met, an Umbrella or Excess Liability policy of not less than \$1,000,000 for any one occurrence and subject to the same aggregate over the Comprehensive Automobile Liability and Commercial/Comprehensive General Liability coverages is acceptable.

5.11 **Worker's Compensation Requirements.**

A. **Statutory Requirement.** Worker's compensation shall be provided in accordance with the provisions of the Illinois Worker's Compensation Act, as amended. Notwithstanding the rating and financial size categories stated in this article, coverage may be provided by a group self-insurer authorized in Section 4(a) of the Act and approved pursuant to the rules of the Illinois Department of Insurance.

B. The A/E may use a Self-Insured Plan for Worker's Compensation Insurance if the plan is approved by the State of Illinois. For approval, the A/E shall obtain a certificate from the Illinois Industrial Commission, Office of Self-Insurance Administration, Springfield office.

C. **Employers Liability**

- (a) Each accident \$500,000
- (b) Disease-policy limit \$500,000
- (c) Disease-each employee \$500,000

D. The worker's compensation insurance carrier, or self insurance service agency where applicable, shall certify that to the best of its knowledge, the A/E has properly reported wage and workforce data and made premium payments in compliance with Illinois rates and worker classifications.

- 5.12 **Professional Liability Insurance Requirements.** Professional liability insurance shall cover the A/E against claims the A/E may become obligated to pay arising out of the performance of the A/E under the agreement and caused by any error or omission of the A/E or of any person employed by the A/E, or any others for whom the A/E is liable. The minimum required coverage is stated in the agreement. The limit amount of the insurance shall be on a per claim basis.
- A. Damage claims of contractors, subcontractors, material suppliers and the using agency, as well as the claims of the CDB shall be included in the coverage contemplated herein.

ARTICLE 6 TERMINATION AND SUSPENSION OF THE AGREEMENT

- 6.1 **Termination for Convenience.** CDB may terminate this agreement on 15 calendar days written notice to the A/E for the best interest of the State of Illinois. The A/E shall deliver to CDB all drawings, specifications, reports, models, electronic media and all such other documents to be prepared and furnished by the A/E in the performance of services under this agreement, whether complete or in progress. The A/E shall be compensated for services performed prior to the termination date plus any reimbursable expenses then due and other reasonable and unavoidable non-labor costs.
- 6.2 **Termination for Cause.** If the A/E fails to perform any of its obligations under this agreement, CDB may, after seven (7) calendar days written notice during which period the A/E fails to perform such obligations, terminate the agreement. This shall be without prejudice to any other remedy CDB may have. CDB may deduct from the payments then or thereafter, due the A/E, the cost of correcting such deficiencies with a completing A/E and, including but not limited to, the cost of additional A/E services made necessary by such failure to perform. CDB may take possession of any jobsite facilities, records, etc. and use same to the full extent they could have been used by the A/E. If CDB's expenses in completing the agreement exceed the unpaid balance or the agreement sum, the A/E shall pay the difference to CDB.
- A. Should CDB terminate the A/E after bidding and prior to completion of the project, CDB shall not waive any claim it may have as a result of errors or omissions, except that the terminated A/E shall not be liable for any changes to the documents made by another A/E contracted by CDB to complete the project.
- 6.3 **Suspension.** CDB may suspend this agreement upon written notice for a maximum period of 12 months after which time the agreement will be subject to renegotiation. The A/E shall be paid for services performed prior to the suspension plus any reimbursable expenses then due.

ARTICLE 7 GENERAL PROVISIONS

- 7.1 **Governing Law.** This agreement shall be governed by the laws of the State of Illinois.
- 7.2 **Severability of Clauses.** It is agreed that the illegality or invalidity of any term or clause of this agreement shall not affect the validity of the remainder of this agreement, and the agreement shall remain in full force and effect as if such illegal or invalid term or clause were not contained herein.
- 7.3 **Waiver of Breach.** The waiver by either party of any breach of this agreement shall not constitute a waiver as to any other breach.

- 7.4 **Written Notice.** Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by certified mail, return receipt requested, to the last known business address of the recipient.
- 7.5 **Obligations Survive.** The obligations or duties imposed upon the A/E under the agreement shall survive any termination or closeout of the agreement.
- 7.6 **Successors and Assigns.** CDB and the A/E each binds itself, its partners, successors and assigns and legal representative to other party hereto and the partners, successors, assigns and legal representative of such other party in respect to all covenants, agreements and obligations contained herein.
- 7.7 **Independent Contractor.** The A/E is an independent contractor and in providing its services under this agreement shall not represent to any third party that its authority is greater than that granted to it under the terms of the agreement.
- 7.8 **Work of other Consultants and Contractors.** CDB reserves the right to execute other contracts in connection with the project.
- 7.9 **Indemnification.** The A/E hereby agrees to indemnify, keep and save harmless, CDB, the using agency and the State of Illinois and their respective board members, officers, agents and employees, in both individual and official capacities, against all suits, claims, damages, losses and expenses, including attorneys' fees which are the result of an error, omission or negligent act of the A/E or any of its employees or agents arising out of or resulting from the performance of service under this agreement, except where such is due to the active negligence of the party seeking to be indemnified. This provision is applicable to the full extent as allowed by the laws of the State of Illinois and not beyond any extent which would render this provision void or unenforceable.
- 7.10 **Non-Assignment.** The A/E acknowledges that CDB is induced to enter into this agreement by, among other things, the professional qualifications of the A/E. The A/E agrees that neither this agreement nor any right or obligations hereunder may be assigned in whole or in part to another firm, without the prior written approval of CDB. However, if this agreement is awarded to a Minority or Female Business Enterprise, contract proceeds may be assigned to secure financing necessary to enable performance of the agreement.
- 7.11 **Fair Employment Practice.** The A/E agrees in performing this agreement to comply with all statutory employment requirements, including, but not limited to, the provisions of the "Illinois Human Rights Act" (775 ILCS 5/1-101 et seq.) and "An Act to prohibit discrimination and intimidation on account of race, creed, color, sex or national origin in employment under contracts for public buildings or public works" (775 ILCS 10/1 et seq.).
- 7.12 **Record Keeping.** In accordance with 30 ILCS 505/6(I), the A/E shall maintain, for a minimum of five (5) years after the completion of the agreement, adequate books, records, and supporting documents to verify the amounts, receipts, and uses of all disbursements of funds passing in conjunction with the agreement. These records shall be available for the review and audit by the Auditor General. The A/E agrees to cooperate fully with any such audit and shall provide full access to all relevant materials. Failure to maintain the records required by this provision shall establish a presumption in favor of the State for the recovery of any funds paid by the State under the agreement for which adequate records are not available, through some fault of the A/E, to support their purported disbursement.

- 7.13 **Right to Audit.** CDB shall have the right to have access to and audit all of the A/E's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar data relating to this contract throughout the term and for a period of five years after payment. In addition, CDB or its authorized representative shall have access to the A/E's facilities and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article.
- 7.14 **Confidentiality.** The A/E shall keep all information concerning the project confidential, except for communications incident to completion of the project between the CDB, the A/E, using agency, and the assigned contractors, and their independent subcontractors, suppliers, and subconsultants, and except for publicity approved by CDB and communications in connection with filings with governmental bodies having jurisdiction over the design and construction of the project.
- 7.15 **Cooperation with CDB's Consultants.** The A/E agrees to cooperate with any consultant retained by CDB, but the A/E shall not be contractually responsible for such consultants.

ARTICLE 8 ALTERNATIVE DISPUTE RESOLUTION (ADR)

- 8.1 **General.** Except as otherwise provided below, in the event of disputes or conflicts between the contracting parties, CDB will solely resolve the matter and its decision will prevail unless otherwise removed to the Court of Claims or a court of competent jurisdiction. Notwithstanding any other provisions, CDB shall retain all rights under the sections titled CDB Rights and Responsibilities and A/E Suspension contained herein.
- A. In the event any dispute or claim, related to construction or the contracts, should arise between any of the parties to this agreement, each party agrees to exercise good faith efforts to resolve the matter fairly, amicably and in a timely manner. The parties shall consider litigation as a last resort, to be employed only when ADR methods fail. To this end, the parties agree to take affirmative steps to communicate effectively, to keep lines of communication open and to handle all disputes in a reasonable and businesslike manner, which may include the use of a dispute resolution board.
- B. Each party to any dispute under \$50,000 agrees, upon the request of any other party to the dispute, to submit the matter to mediation. The parties shall first confer informally with one another to attempt to resolve the dispute. The mediator shall be a person the parties agree is unbiased and qualified to understand the dispute and make the determinations that are required.
- C. Each party to any dispute over \$50,000 agrees, upon the request of any other party to the dispute, to submit the matter to ADR, in a form to be determined by agreement of the parties. The parties shall first confer informally with one another to attempt to resolve the dispute. In the event that the assistance of an unbiased neutral is required, the parties shall meet and come to an agreement as to what form the ADR should take and who the unbiased neutral should be. Forms of ADR that may be utilized include, but not limited to, mediation and mini trials. Formal arbitration is prohibited. The unbiased neutral may be a professional mediator, an attorney, an architect, an engineer, a board composed of two (2) or more qualified persons, or any person(s) the parties agree is unbiased and qualified to understand the dispute and make the determinations that may be required.

- D. When ADR is utilized, regardless of the dollar value of the dispute, each party agrees to have in attendance at the mediation (or whatever method is utilized), a person with actual authority to resolve the dispute. In some instances, where approval of CDB's Board is required, CDB personnel shall be exempt from the requirement, but shall notify the other parties at the earliest possible time when it is apparent that Board approval will be required for ultimate resolution.
 - E. Parties to the project who do not have a direct contract with CDB may, by agreement, be parties to the ADR. Persons who have a stake in the dispute but who are not parties may be included in the ADR by consent of the parties. When disputes arise between only persons involved in the project who are not parties to an ADR agreement with CDB on the project, the parties agree to encourage and facilitate the use of ADR when possible.
 - F. The A/E and the contractors agree that ADR is a condition precedent to the filing of a Court of Claims action or other administrative proceeding seeking economic recovery from the State of Illinois in an amount greater than \$50,000.
 - G. When ADR is utilized, the parties included in the process agree to equally share the cost of same or as mutually agreed to in writing by all parties.
 - H. Any and all written agreements for mediation or other method of ADR, must be agreed to by all contractual parties to the dispute and shall be incorporated in the agreement.
- 8.2 **A/E Shall Carry Out the Services.** Decisions by CDB and/or mediation procedures above shall not be cause for delay of the work. The A/E shall proceed diligently with the performance of this agreement and in accordance with CDB's decision whether or not the A/E or anyone else has an active claim pending. Continuation of the performance of this agreement shall not be construed as a waiver of any rights accruing to the A/E.

ARTICLE 9 STATUTORY REQUIREMENTS

- 9.1 **General.** The following are statutory requirements that may impact the project. This list is not exclusive. The A/E shall comply with all State and Federal requirements governing the design of the project and its contract. This section lists some of those requirements that are unique to State projects.
- A. CDB will make every attempt to note these requirements in the project program or scope statements when they can be anticipated. The cost impact of these requirements will also be included whenever possible.
 - B. When the requirements are not noted, the A/E, in cooperation with CDB, shall review the project and determine if any of the statutory requirements apply. If a statutory requirement impacts the project, the A/E shall determine the funding impact to the project and advise the PM in the A/E's initial review of the project budget.
- 9.2 **Life Cycle Cost Analysis.** Public Act 80-430 amended the Capital Development Board Act and requires CDB "To prepare, or cause to be prepared, general plans, drawings and estimates, including the life-cycle cost estimate of energy systems, for public buildings and improvement to be erected for any State agency." A/Es are required to prepare life cycle cost estimates for the energy consuming systems proposed to be improved or constructed new.
- A. CDB shall establish the parameters for all life cycle cost estimates to be prepared. These include the life of the study, the "discount rate or cost of capital", escalation

rates by category, bond financing repayment schedule, etc. The life cycle cost estimates shall be prepared in accordance with CDB's latest revision of its Life Cycle Cost Analysis Manual unless another computation model is approved by CDB.

- B. The preparation of life cycle cost estimates is considered part of the basic services of the agreement.

9.3 **Farmland Preservation Act.** The Farmland Preservation Act, 505 ILCS /1 et seq., seeks to "minimize the conversion of prime farmland that results from the direct or indirect effects of State programs..." In compliance with that act, CDB has adopted a Agricultural Land Preservation Policy and a working agreement with the Department of Agriculture.

- A. No State funds may be committed for land acquisition or construction unless it is provided for in an exception in CDB's working agreement with the Department of Agriculture or until a study of the agricultural impact has been completed by the Department of Agriculture.
- B. If required, CDB shall notify the Dept. of Agriculture if the proposed project will lead to conversion of farmland to nonagricultural purposes. The A/E may be directed to mitigate the conversion to greatest extent possible. This policy does not affect the agreement and any effort involved is considered part of the basic services.

9.4 **Endangered Species Act.** The Illinois Endangered Species Protection Act, 520 ILCS 10/1 et seq., provides protection for the State's threatened or endangered flora and fauna. It is the public policy that all agencies, through a consultation process with the Department of Natural Resources, determine whether any action funded by CDB is "likely to jeopardize the continued existence of Illinois listed endangered and threatened species or are likely to result in the destruction or adverse modification of the designated essential habitat of such species.....". CDB may request the A/E to prepare or cause to be prepared a determination of the project impact on any endangered flora and fauna at the site. This study would be an additional service under the agreement.

9.5 **Wetlands Policy Act.** The Interagency Wetlands Policy Act of 1989, 20 ILCS 830 /1et seq., requires State agencies to avoid impacting wetlands. If impacts are unavoidable, compensation is required. This Act is administered by the Department of Natural Resources through administrative rules that the department has and may promulgate.

- A. Any CDB project having an adverse impact to a wetland is subject to compliance with this act and the associated administrative rules. No project impacting a wetland shall commence without review and approval of the compensation plan by the Department of Natural Resources.

- B. The A/E shall prepare, or cause to be prepared, a wetland impact determination according to the administrative rules. In addition to the project identifying information, the A/E shall provide the alternative actions considered and the justification for the selected alternative that may or is likely to adversely impact a wetland.
- C. The A/E may be requested to prepare a wetlands compensation plan when the wetland determination which adversely impacts a wetland is approved. This plan must be developed in cooperation with the using agency and CDB.
- D. If the project impacts a wetland, both the determination and the compensation plans must be approved by the Department of Natural Resources prior to commencement of the design.
- E. The preparation of a wetland determination and compensation plan is an additional service to the agreement.

9.6 **Historic Preservation Act.** The Historic Preservation Act, 20 ILCS 3410/9, states that “Public funds administered by State agencies shall not be used in projects which will have an adverse economic or environmental impact on a Registered Illinois Historic Place unless in the opinion of the Director (Historic Preservation Agency):

- 1. the project is necessary to provide an important public service or benefit
- 2. the project cannot be carried out practically so as to avoid the adverse effect and
- 3. the adverse effect is minimized to the maximum extent feasible.”

- A. A historic place includes real property where any significant improvements are at least 40 years old or any aboriginal mound, fort earthwork, village, location, burial ground, historic or prehistoric ruin, mine case or other location which is or may be the source of important archeological data. A Registered Illinois Historic Place means any historic place placed on the registry.
- B. CDB may request the A/E to prepare or cause to be prepared an impact statement of the project on a Historic Place. This would be an additional service to the agreement.

9.7 **Archaeological and Paleontological Resources Protection Act.** The Archaeological and Paleontological Resources Protection Act, 20 ILCS 3435, regulates the exploring, excavating, and surveying of all such resources on public land through the Historic Preservation Agency (HPA). Resources are defined as any significant material remains or localities of past human life or activities. A permit from the HPA is required before disturbance, exploration, excavation or collection of any resources protected by this act is commenced.

- A. CDB may request the A/E to prepare, or cause to be prepared, an application for a permit from HPA when CDB believes that significant archaeological or paleontological resources exist on a project site. CDB may also request the A/E or its consultant to explore, survey, and collect information on the resources on the site. This would be an additional service to the agreement.
- B. If during the life of the project, archaeological or paleontological resources are unexpectedly discovered on the project site, the A/E shall issue directives to protect the resources and advise CDB immediately of the findings.

9.8 **Steel Products Procurement Act.**

- A. The Steel Products Procurement Act, 30 ILCS 565, requires that all contracts for the construction, reconstruction, or improvement of public works contain a provision that steel products used or supplied by the contract or a subcontract thereto, shall be manufactured or produced in the United States. Steel products means “products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed or process by a combination of two or more such operations, from steel made in the United States by open hearth, basic oxygen, electric furnaces.”
- B. The exceptions to the Act are:
 - 1. Where the expenditure is less than \$500.
 - 2. Where the Executive Director of CDB certifies in writing that:
 - (a) The specified product can not be manufactured or produced in sufficient quantity to meet the project needs.
 - (b) The specified product can not be manufactured or produced in necessary time to meet the project needs.
 - (c) Obtaining the product would increase the cost of the contract by more than 10 percent.
 - 3. When the application of the Act is not within the public interest10%.
- C. The A/E shall select products for inclusion in the project specifications that meet the requirements of the Act.
- D. The Act provides that CDB may not authorize payment to any contractor in violation of the Act.

ARTICLE 10 GENERAL SERVICES

- 10.1 **General.** The A/E shall provide the services indicated herein in accordance with the terms and conditions of the agreement.
- 10.2 **Meeting Minutes.** The A/E shall record minutes of all meetings held throughout the course of the project and distribute copies to participants and the project team within seven (7) calendar days.
- 10.3 **Monthly Progress Reports.** The A/E shall submit monthly progress reports of design/construction activities to the CDB PM. Failure to submit monthly reports may result in delay to A/E’s progress payments. The report shall include:
 - A. Activities completed and items pending since last report;
 - B. Projected progress;
 - C. Comparison of schedule and actual progress; and,
 - D. Decisions or information required.

ARTICLE 11 PROJECT BUDGET AND ESTIMATING

- 11.1 **Project Budget.**
 - A. The project budget is the total funding available for the project. Any changes to the project budget will be issued in writing by the PM. The project construction budget

indicated on Appendix A, is the balance of funds available for construction after subtracting the value of the A/E Agreement and any miscellaneous items required by state statute or CDB policy. The A/E shall design the project using 90 percent of the project construction budget for the base bid work unless otherwise authorized in writing by CDB as described in Paragraph 11.2.

- B. The A/E shall use the Proposed Project Cost Budget form, Exhibit D, to show the distribution of the project costs. The PM shall furnish the A/E any miscellaneous costs deducted from the project budget for inclusion on this form. This form is to be used as a summary of project costs and updated and submitted with each design review phase. This form does not satisfy the requirement of a detailed construction cost estimate as described herein.

11.2 **Contingency Budget.** Ten percent of the project construction budget shall be set aside for the project contingency. When appropriate, CDB may permit the base bid to be designed up to 95 percent of the project construction budget for selected projects. The A/E shall make all requests to exceed the 90 percent threshold in writing to the PM and include appropriate documentation, including a detailed estimate. Evaluation of such request shall be at the Unit Manager level and the A/E shall be notified in writing of the result.

11.3 **Alternate Bids.** The A/E shall prepare the bidding documents to include all elements of the work. When the base bid design clearly exceeds the available funding, the A/E shall evaluate the components of the design and move any portion not essential to the function of the project to an alternate bid. All alternate bids shall be clearly identified on the Proposed Project Cost Budget form.

- A. Alternate bids are intended to complete the original scope of work design.
- B. Alternate bids shall be developed in manageable dollar values. No more than three alternates shall be provided unless otherwise approved by CDB.
- C. When the base bid design fully accomplishes the scope of work, alternate bids that enhance the base bid may be eligible for additional service compensation.
- D. CDB may negotiate an adjustment to the construction phase services fee for services not rendered as a result of not awarding any alternate.

11.4 **Estimates.** Estimates of probable construction costs shall be prepared at each stage of the project design phase. The A/E shall submit these estimates with each review submittal. These estimates shall be prepared in greater detail as the design progresses.

- A. At program analysis, the estimate may be presented as scope items and their anticipated cost. Parameter based estimating is acceptable at this phase. For example:

Install fire detection system	\$5.00 per bldg gsf
Replace bituminous paving	\$15.00 per sy
paving	

- B. At the intermediate phases of the design, estimates can be based on components of the work. Components costs as illustrated in R.S. MEANS Square Foot Costs or Assemblies Cost Data manuals is the level of detail required at these stages of design development. For example:

Roofing, built-up tar and gravel	\$1.65 per sf of roof
2-1/2 inch bituminous overlay	\$4.50 per sy paving

6 inch aggregate base

\$8.75 per sy paving

- C. At the final design review, the estimate shall be fully itemized and detailed at a level equal to R.S. MEANS Construction Cost manual. The costs as reported by R.S. MEANS are not endorsed by CDB and are used only as an example.
- D. Itemized and detailed estimates are required prior to bidding. CDB reserves the right to cancel the bid opening if the estimate is not submitted prior to the bid opening. All costs associated with the rebid shall be at the A/E's expense.

ARTICLE 12 PROGRAMMING, PROGRAM ANALYSIS, AND DESIGN PHASE

12.1 Programming.

- A. A project scope statement will be supplied by CDB for projects with a simple or well-defined scope. The scope may contain background and justification for the project and quantification of work items contained in the project. The project scope statement will define the project budget.
- B. For new construction and major rehabilitation projects, CDB may provide a program statement describing proposed program activities, space requirements, and equipment needs.
 - 1. In the event a program statement is not provided by CDB and programming is required from the A/E, it will be considered as an additional service with compensation negotiated.
- C. Most new construction and major rehab projects will require new movable equipment. The responsibility for specifying, purchase and installation often is that of the using agency and the Department of Central Management Services. The A/E shall cooperate by providing the using agency with dimensional, color finish, etc. information necessary to specify any equipment not included in the CDB project.

12.2 Federally Funded Projects. Certain projects may be funded in full or in part with federal funds which may have specific restrictions. On federally funded projects, standards of the federal agency may supplement or take precedence. Special requirements for individual projects will be provided by the CDB PM.

12.3 Orientation Meeting. An orientation meeting will be scheduled by the PM, generally within fifteen (15) calendar days of CDB's selection of the A/E. The orientation meeting shall be attended by the A/E and all consultants, CDB and the using agency. The purpose of the orientation meeting is to review and confirm the project scope, to discuss special project requirements and project schedule, and to begin negotiations for the scope of services and compensation for such services.

12.4 Program Analysis Phase.

- A. Review and coordinate the data contained in the project scope statement, consult with designated representatives of CDB and the using agency when required and visit the project site to obtain a thorough understanding of the existing conditions and the project.
- B. Provide a program analysis report containing the coordinated project scope supplemented by all other information necessary to form a complete basis for the project design. Requirements for program analysis submittal vary with the scope of the project, but generally include the following:

1. Narratives and diagrams required to show all program functions, off-site elements, and their relationships. Provide flow diagrams showing the movement of persons (visitors, staff and residents) and traffic when appropriate.
 2. Space itemization including: function and size (show as net assignable sq. ft./area), number and classification of occupants, type and quantity of fixed and movable equipment (noting required utilities), special environmental and/or system requirements.
 3. Total of all program areas including a percentage allowance for circulation, mechanical and maintenance functions.
 4. Code analysis report indicating all regulatory agencies, permits, building codes, and standards that apply to the project. Include in this report an action checklist indicating all required regulatory agencies reviews and permits.
 5. For remodeling projects, A/E shall provide a statement of the status of asbestos inspections and/or abatement. The A/E shall review the asbestos inspection report and/or management plan, where available, and note any possible disturbances of asbestos-containing materials as a result of the project.
 6. Preliminary cost estimate and Proposed Project Cost Budget form.
- C. Resolve, in consultation with CDB and the using agency, any discrepancies in the project scope or budget prior to proceeding to preliminary design.

12.5 **Preliminary Design Phase.**

- A. Prepare preliminary design submittal based on the accepted program analysis report. Submittal shall illustrate the resolution of all building and site elements. Fix and illustrate the scope, scale and relationship of the project components for structural, mechanical and electrical systems. Identify materials and specify performance characteristics and quality standards.
- B. Requirements for the preliminary design submittal vary with the scope of the project, but generally include the following:
 1. Project Manual:
 - (a) Outline specifications for each major project component.
 - (b) Complete Section 01010 for review.
 2. Site Plan. Locate each building, existing and finished contours, ground floor elevations, roads, walks, parking areas, utilities (existing, new and relocated), other site construction, and limits of the contract. (Coordinate any proposed interruptions to services, roads, etc. with the using agency.)
 3. Proposed Project Cost Budget form and preliminary construction cost estimate broken down by principal elements and major trades.
 4. Current project schedule.

5. Life Cycle Cost Analysis for each alternative energy system considered, if applicable.
 6. Model or rendering if included in the agreement.
 7. An area analysis tabulation comparing the net and gross square footage with those provided in the Program Analysis Phase.
 8. Floor Plans. Identify room numbers, names, and mechanical spaces.
 9. All elevations showing finishes, window and door styles, etc.
 10. Provide vertical building sections.
 11. Provide location and type of primary structural members.
 12. Utility service requirements, including temporary service.
 13. Identify wiring distribution systems and basic layouts of lighting systems showing illumination levels, switching patterns, and switch locations. Show special systems such as fire alarm, emergency lighting and exit signs. Show communication systems such as telephone, data, CCTV, TV, intercoms, and nurse call systems.
 14. Description and number of plumbing fixtures, including design population and plumbing fixture to population ratios.
 15. Fixed equipment in tabular form with utility connection requirements noted.
 16. Identify areas requiring acoustical treatment.
- C. A/E shall not proceed beyond preliminary design until provided with a written statement properly endorsed by CDB and the using agency signifying acceptance of the proposed design. Acceptance statement shall include all agreed upon revisions to the preliminary design submitted.

12.6 **Bidding Documents Phase.**

- A. Prepare bidding documents based on the accepted preliminary design submittal, including all agreed upon revisions, in a form suitable for public bidding of contracts in conformance with the Illinois Purchasing Act and CDB Rules and Regulations.
- B. Documents may be submitted and reviewed at the 25 percent, 50 percent, 75 percent and 100 percent stages of completion as set forth and agreed upon in the agreement. Each submittal will contain (at a minimum) the Project Manual, Drawings, detailed cost estimate and Proposed Project Cost Budget form.
- C. Additional information to be submitted to the CDB by the 100 percent design stage include the final code analysis/regulatory review action checklist, copies of all permits and approvals, and executed utility agreements, as applicable.
 1. Utility agreements are contracts between CDB and a utility company for the installation or relocation of utility service facilities in conjunction with a CDB project to be maintained by either the utility company or the

customer (using agency). The A/E shall review such agreements to determine that the required utility service/equipment has been provided for the project and shall include the associated costs in the summary of proposed project costs.

- D. A/E shall prepare bidding documents in accordance with Articles 13 and 14 of this agreement.

ARTICLE 13 BIDDING DOCUMENTS PREPARATION

13.1 **General.** The A/E shall prepare the bidding documents consisting of Project Manual, Bid Form(s), Drawings and Addenda as set forth herein.

13.2 **Division of the Work.** The A/E shall divide the work into distinct trade contracts as required by CDB and in accordance with the Illinois Purchasing Act. This division shall be clear, concise and allocate all the work to a contractor. The A/E shall not include any clause or provision in the contract documents that attempts to assign any of the work by common trade practice, by indirect linkage, etc.

- A. The Illinois Purchasing Act, 30 ILCS 505/6, requires that projects with an estimated value of the construction work exceeding \$250,000 be divided into at least five trade contracts. They are:

1. General
2. Plumbing
3. Heating
4. Ventilation
5. Electrical

- B. The required five trade contracts may be expanded as appropriate for the project. The A/E shall confer with the PM for the appropriate contract trade designations. Some examples of additional designations are:

1. General/Roofing
2. General/Paving
3. Asbestos Abatement
4. Sprinkler
5. Test and Balance
6. Temperature Control/Building Automation
7. Electrical/Communications

- C. Below the \$250,000 level, CDB may elect to bid the work as one or more contracts as approved by the PM.

- D. Trade Contract Division in Project Manual. In Paragraph 1.1 of each specification section, the division of the work specified in that section shall be distinguished.

- E. Trade Contract Division in Drawings. The appropriate letter identification shall be used on the drawings to designate separate contracts within the project. Cover sheets and information sheets should be designated G.

1. GENERAL WORK
 - (a) Civil C
 - (b) Architectural A
 - (c) Structural S
 - (d) Fencing F

- | | | | |
|-----|---|------|--|
| (e) | Carpet | CPT | |
| (f) | Painting | PNT | |
| (g) | Demolition | D | |
| (h) | Equipment | EQP | |
| (i) | UST Removal/Replacement | UST | |
| 2. | PLUMBING WORK | P | |
| (a) | Well Drilling | WD | |
| 3. | HEATING WORK | H | |
| (a) | Temperature control/Building Automation | TC | |
| 4. | VENTILATION WORK | V | |
| 5. | ELECTRICAL WORK | E | |
| (a) | Security/Communications | COM | |
| (b) | PCB Equipment Disposal | PCB | |
| 6. | OTHERS | | |
| (a) | Test and Balance | T&B | |
| (b) | Pipe covering and insulation | INSL | |
| (c) | Sprinkler | FP | |
| (d) | Asbestos Abatement | ASB | |

13.3 **Competitive Product Selection.** It is the responsibility of the A/E to select and specify products. The A/E shall utilize specifications that are explicit, realistic, and non-restrictive as required in this section. The A/E may request approval from CDB to prepare a performance specification for a specific material or equipment item when that product or system can be specified by reference to commonly accepted standards such as ASTM, IEEE, NEMA, etc.

- A. Products shall be specified by manufacturer and model number and shall have a minimum of three manufacturers named who make comparable products. When available, specifications shall include Illinois manufacturers.
 1. The A/E shall not prepare bidding documents which eliminate all but one particular product or system without written approval of CDB.
- B. In compliance with the Illinois Purchasing Act and CDB policy, products or systems cannot be sole sourced unless the A/E receives written approval from CDB to specify less than three sources.
 1. Requests for single or dual sourcing may be initiated by the A/E or using agency and shall be in writing, addressed to the PM. A/E shall review and make recommendations to CDB on any using agency single or dual source requests.
 2. Each request shall include justification for the request, including a cost/benefit analysis that establishes that the product or system is economically procurable from only one source.
 3. Approvals will not be given for aesthetic desirability alone and are valid for each approved product for the project in question, only.

- C. The use of “or approved equal”, in the bidding documents is prohibited. The use of such phrases as “similar products manufactured by...,” and “equal products manufactured by...,” are also prohibited. Language shall be specific and include name, model numbers, etc. of all manufacturers whose products are considered by the A/E to be of equal quality.
 1. Only those products named in the bidding documents or approved by written change order shall be approved for installation, and the language shall so state.
 2. Where sole sourcing has been approved by CDB for use in the bidding documents because it is meant to be restrictive, the language shall state that no substitutions will be acceptable.
- 13.4 **Specified Contractors.** The A/E shall not specify a restricted list of acceptable contractors or subcontractors for furnishing and installation of any component or system without the written approval of CDB. Although the A/E may have determined that their equipment is acceptable, the firm may not be a responsible contractor. Determination of contractor responsibility is the province of CDB. The A/E shall submit a written request to the PM indicating the system or component of the work for which the A/E desires to specify a list of furnishing and installing contractors. This request shall indicate the justification for specifying the installing firms in addition to the equipment desired. **All requests must be approved by a CDB Unit Manager.** If the request is approved, all the specified contractors must be registered with CDB regardless if they would be subcontractors to a registered firm. CDB may direct the A/E to publicly solicit additional qualified firms.
- 13.5 **Alternates.** Except as provided in Paragraph 11.3 A, alternate bids may not be included in the project without permission of the PM. The A/E shall prepare the bid form(s) and project specification Section 01030 describing each alternate to be bid as formatted in the Project Manual Workbook. Alternate bids shall be clearly delineated on the drawings. Each contract to be bid that has work in the same alternate shall have the same alternate designation number following the trade designation letter. The A/E shall consult with the project team regarding the priority of alternates and shall provide CDB with a letter stating the priority of alternates to be awarded prior to the bid opening. Priority of award and alternate designation numbers are not required to be the same sequential number.
- 13.6 **Construction Administration Fee (CAF).** The A/E shall determine the construction administration fee (CAF) and include this information in Section 01010 and on the bid form. The CAF shall be computed for each construction contract. The CAF shall be computed as one and one half percent (1.5%) of the base bid plus all the alternates rounded up to the next hundred dollars.
- 13.7 **Unit Prices.**
- A. The use of unit prices is discouraged. Prior to bidding, the Unit Manager must approve the use of unit prices in any construction contract. Where unit prices are used, it is preferable that they be incorporated so that they are extended to, and included in, the contractor's base bid. (If the unit price is rejected, the project will be rebid.)
 - B. Only in extreme cases may unit prices be utilized that are not extended into calculation of the base bid. CDB’s Executive Director shall be advised of all bid unit prices outside the base bid by the unit manager.
 - C. The evaluation of unit prices must be performed prior to the award of any contract. The A/E shall recommend the acceptance or rejection of all unit prices. All

recommendations to award unit prices shall include documentation of that review and approval by the A/E and the PM. This documentation must accompany the recommendation to award and include the PM instructions on which unit prices are to be incorporated into the contract.

13.8 **Project Manual.**

- A. The specifications for each project shall be prepared according to the Project Manual Workbook (latest edition). The A/E may utilize the latest Construction Specifications Institute (CSI) Master List of Specification Sections in the development of technical specification Sections 2 through 16. The project manual includes the:
 - 1. Cover Page
 - 2. Table of Contents
 - 3. Advertisement for Bid
 - 4. Bid Forms
 - 5. Minority/Female Workforce Participation Requirements (PC-2)
 - 6. Contract Requirements for Minority/Female Business Participation
 - 7. Bid Bond
 - 8. Product Substitution Form
 - 9. Supplementary Conditions for Federally Funded Project (if applicable)
 - 10. Prevailing Wage Rates
 - 11. Drawings, Schedules, and Details
 - 12. Section 01010, Project Summary, providing prebid and contract information. The A/E shall follow Instructions for Preparing Section 01010 in the Project Manual Workbook.
 - 13. Alternate Bids Requirements
 - 14. Regulatory Requirements
 - 15. Sections 01110 up to Division 2 for contract requirements such as submittals, schedule, etc.
 - 16. Technical Specifications. A/E shall follow Guidelines for Preparing Technical Specification Sections as provided in the Project Manual Workbook.
- B. Prepare the Project Manual cover as shown in Exhibit E.
- C. Specifications shall be written as directions to the contractor.
- D. Provide soil boring logs in the Project Manual or on drawings. A/E may include a statement in the Project Manual that the complete soils report is available for review at the A/E office prior to bidding.
- E. A recommended sequence of construction shall be included in the specifications for all unusual conditions such as rehabilitation of existing structures, underpinning of existing foundation, constructing openings through an existing wall or floors, etc. The A/E shall include, in the specifications, special considerations to construction sequencing required by its design.
- F. Any warranties requested beyond two years for HVAC equipment, roof systems, carpet, etc. should be clearly specified by the A/E as warranties from the manufacturer. It is the A/E's responsibility to verify that such warranties are available. A/E note that all extended warranties must be specified in the appropriate Project Manual section. See current Standard Documents for Construction for limitations.

- G. Specify all tests required for all systems and devices to be tested. Where required, testing procedure shall also be specified.

13.9 Drawings.

- A. Cover sheet shall be prepared per Exhibit F. In addition to the information shown in the exhibit, include a list of symbols, abbreviations and applicable building codes. When appropriate for the project, include building square footage, occupancy classification, type of construction and fire resistive rating.
- B. The title block and all related information shall appear on each sheet. Standard sheet size 30" x 42" maximum - 24" x 36" minimum unless otherwise approved by CDB.
 - 1. With CDB approval, the complete project or selected details may be prepared on 8 ½" x 11", or 11" x 17" (folded to 8 ½" x 11") paper and bound into the Project Manual.
 - 2. Drawings bound into the Project Manual shall be noted as such in section 00860 and shall be located after the last technical specification section.
 - 3. All drawings comply with the requirements of this section. When bound into the Project Manual, a cover sheet is not required.
- C. Minimum scales of drawings, unless approved otherwise by the PM, shall be:
 - 1. Site Plan 1" = 30'
 - 2. Floor and Roof Plan 1/8" = 1'0"
 - 3. Temperature Control 1/16" = 1'0" (Schematics, not to scale, may be acceptable)
- D. All sheets shall contain a graphic scale. Each plan shall indicate north arrow consistent between all sheets.
- E. Minimum acceptable lettering size is 1/8 inch adequately spaced for microfilming purposes. The record drawings for all CDB projects are recorded and stored on microfilm. In order that legible information will be available when the microfilm is viewed or reproduced, the A/E shall prepare the original drawings using drafting techniques and procedures suitable for this purpose.
- F. Match lines shall be used to identify portions of buildings or site shown on separate sheets. Match lines shall be consistent throughout drawing set.
- G. Other Drawing Requirements:
 - 1. All floor plans and partial floor plans shall show consistent column grid line indications, room names and numbers and shall be to the same scale. Larger scale plans of special areas such as toilets (including elevations), lecture rooms, stairs, kitchens, shall be provided as necessary to show details of the work.
 - 2. The elevation of the finished floor shall be indicated under the title for each floor level (all disciplines).

3. All details shown on drawings shall be applicable to the project. Details shall be drawn to scale and may be bound separately (See Paragraph 13.9.B above).
4. Designation for sections, details, etc. shall denote detail and sheet number on which it is cut and sheet number on which it is detailed.
5. Items shown on the drawings that are not a part of the contract shall be labeled as NIC (not in contract).
6. Assign a number or name to all buildings, rooms, corridors, etc. for reference purposes. Ensure that they are identical for all drawings. Names are preferred if they do not cause drawing congestion.
7. Clearly identify and define all work involved in alternate bids, removals, abandonment, or other activities associated with the project.
8. A key plan in the lower right-hand corner of the drawing shall be used to locate a building, a portion of a building or portion of a site in relation to the larger unit.
9. All work shown is assumed to be new unless stated otherwise. Do not use the word "Proposed" on contract drawings when referring to required work. Existing items pertinent to the project may be marked as "existing" to avoid confusion with new work. Future work shall be shown only where necessary to coordinate with current project and shall always be noted as "NIC".
10. Show all known asbestos-containing material (ACM) locations where the contractor(s) activities could accidentally damage the ACM. Include a note stating that this material is known or assumed to contain asbestos and the workmen should exercise extreme caution to avoid damaging the material. Any accidental damage should be immediately reported to the A/E and coordinating contractor (when applicable), and/or the facilities asbestos designated person for proper cleanup and/or repairs.

13.10 **Permits.** When specifically directed by CDB, prior to the bidding phase, the A/E shall provide the local authority (or authorities, where more than one local authority has jurisdiction) with sufficient design documents as it may require for purposes of review and/or issuance of permits. A/E shall provide CDB with all review correction notices or comments issued by the local authority. When directed by CDB, A/E shall make corrections to the documents and resubmit to the local authority for review and/or issuance of permits.

13.11 **Application of Professional Seals.** Documents submitted for final CDB design review, technical reports, record documents and all bidding documents shall contain a legible seal, signature, date and license expiration date of the architect, structural engineer or professional engineer responsible for the document or under whose supervision the document was prepared.

- A. For drawings, including record drawings, each sheet shall be sealed in the prescribed manner above.
- B. For project manuals and technical reports the seal shall be provided by the design professional responsible for the overall coordination of the project. If more than one design professional has responsibility for portions of the work, additional seals may

be provided on the cover, or on a separate signature sheet immediately following the table of contents.

ARTICLE 14 DESIGN CRITERIA AND GUIDELINES

14.1 **General.** CDB has adopted certain design policies in force at the time of execution of this agreement, that shall be incorporated into the A/E's services. The A/E shall determine the policies required for the project and obtain the current policy from the PM. Design policies that may be required for the project may include:

- A. **Flood Plain Construction Policy.** In response to Executive Order IV (1979), CDB adopted a policy that all new construction under CDB jurisdiction must comply with the Flood Plain Regulations of the Illinois Department of Natural Resources (IDNR), Office of Water Resources. Prior to the design of a project, the A/E shall determine if the site is in a special flood hazard area. Assistance may be requested from IDNR Office of Water Resources.

- B. **Roofing Program Policy.** CDB has a comprehensive manual including sample specifications and a list of acceptable manufacturers that must be utilized for all projects which include new roofs, re-roofing, or modifications, including penetrations, of existing roofs. The policy manual addresses single and multi-ply membrane roofing, metal roofing and decking, and pre-engineered metal buildings.
- C. **Asbestos Abatement.** CDB has a comprehensive manual including sample specifications, estimating worksheets and complete procedures required for inspection, sampling, operations and maintenance plans, abatement design and design review procedures, and complete bidding and construction phase procedures.
- D. **Energy Policy Act.** Projects shall be designed in conformance with the Federal Energy Policy Act of 1992 (EPAC) which mandates compliance with ASHRAE 90.1-89. A statement indicating compliance with the Federal Energy Policy Act and ASHRAE 90.1-89 should be submitted at preliminary design.
- E. **Prohibitive Products Policy.** The following products are prohibited from use on all CDB projects:
 - 1. Asbestos and asbestos containing material. (ACM)
 - 2. Fire retardant treated (FRT) wood products in structural applications.
 - 3. Chlorofluorocarbons (CFC).
 - 4. Polychlorinated Biphenyl (PCB)

14.2 **Policy on Local Codes.** It is the policy of CDB to design projects in substantial compliance with building codes formally adopted by the unit of local government in which the project is located. All requests for deviations from the local codes shall be documented by the A/E and subject to approval by CDB. When “approval by local authority” or “authority having jurisdiction” is referenced, substitute CDB for the local authority. Where no code exists, the building code shall be deemed to be one of the following unless another is mutually acceptable to the using agency, CDB and the A/E.

- A. BOCA National Building Code, 1993, published by the Building Officials and Code Administrators International, Inc., 4051 West Flossmoor Road, Country Club Hills, IL, 60477. No later amendments or additions included, or
- B. Uniform Building Code, 1994, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, CA, 90601. No later amendments or additions included.

14.3 **Civil**

- A. The A/E shall use IDOT Standard Specifications for Road and Bridge Construction for site work including roads, bridges and miscellaneous concrete. Provide reference to appropriate articles and include a statement under Quality Assurance in the specifications that deletes reference to the method of measurement and basis of payment, and changes the term “Engineer” to “Architect/Engineer”.
- B. The A/E may use the latest edition of Illinois Society of Professional Engineers (ISPE) Standard Specifications for Water and Sewer Main Construction in Illinois for preparing water and sewer specifications. Provide reference to appropriate sections as applicable. Copies of the latest edition is available from ISPE, 1304 S. Lowell, Springfield, IL, 62704.

- C. Comply with local regulations for storm water piping or retention. Notify CDB at preliminary design review if there is an absence of local governing agency criteria and design to the following:
 - 1. Parking lots shall be designed to accommodate a minimum five-year storm.
 - 2. Buildings shall be protected from the effects of a 100-year storm.
- D. Fire hydrants shall be located within 10 feet of a road or a fire lane and at least 50 feet from the building. Any point on the perimeter of any building shall be covered with a maximum hose length of 300 feet.
- E. The compaction requirements and bearing limits of soils and fill material shall be based on the recommendation of the soils consultant or structural engineer.
- F. Only ACI Standards shall be specified in Division 3 "Concrete" specifications, except as otherwise approved for IDOT projects which shall be governed by IDOT's Standard Specifications and Design Manual for concrete as noted in Paragraph 14.3.A above.
- G. The A/E shall be required to provide or obtain surveys essential to the design and construction of the project as a basic service. A/E is responsible for obtaining its own benchmarks, location of utilities and topography information for establishing building and site improvements locations.
 - 1. The A/E may be reimbursed as an additional service for providing a survey not essential to the design effort (i.e. boundary surveys). The A/E is responsible for determining the scope of any reimbursable survey. Upon review of the A/E's recommendation, CDB will give written authorization to obtain the agreed upon services.
- H. New grading plan shall consider adequate site drainage including building and paved areas, and shall consider erosion and sediment control.
- I. Civil Drawings shall be labeled as appropriate for the division of work as set forth in Article 13. Drawings shall include the following as applicable to the project.
 - 1. Site development work, storm sewers, and landscaping shall be included in the general work contract. Water service shall be included in the plumbing work contract. Sanitary sewer may be included in either the general or plumbing work contract.
 - 2. Proposed contours shall be labeled, and shall indicate adequate drainage and contrast with labeled existing contours. Each fifth contour should be shown as an index contour.
 - 3. Show all new topography, newly established levels and grades, existing structures, new structures, roadways, walks, location of nearest drainage/sewer connections, other identifiable features and areas to be seeded and landscaped. All structures and improvements which are to be removed under the construction contract shall be shown.
 - 4. Profiles and cross sections shall be provided for all new roadways. Cross sections shall be provided for each type of sidewalk and curb design. Expansion joints shall be shown in plan view and details shall be provided of each joint type used.

5. Profiles shall be provided for all sewers. Show invert elevations of all sewers, manholes and catch basins. Show frame and grate elevations of all manholes and catch basins.

14.4 **Architectural**

- A. Architectural drawings shall be labeled as appropriate for the division of work as set forth in Article 13. Drawings shall include the following as applicable to the project.
 1. Plan of each floor and roof.
 2. Elevations of each facade.
 3. Longitudinal and transverse sections through entire building.
 4. Schedule of finishes, doors, and accessories.
 5. Roof plan showing high and low elevations; show exact slopes.
 6. Wall sections at relative elevations, including flashing details.
 7. Miscellaneous details, sections, and enlarged plans as necessary to effectively communicate the design.
 8. Reflected ceiling plans showing all ceiling elements visible on the ceiling such as; lighting fixtures, exit signs, speakers, detectors, diffusers, sprinkler heads, and suspended ceiling grids.
 9. Building expansion joints at intervals controlled by the design criteria and the shape of the building, but not to exceed 200 feet. Provide complete expansion joints between existing and new structures.

14.5 **Structural**

- A. Design for optimum use of materials. Plastic design or load and resistance factor design in steel and ultimate strength design in concrete construction shall be considered for more economical and efficient use of materials.
- B. Applicable Codes and Standards:
 1. Building Code Requirements for Reinforced Concrete - ACI 318.
 2. Specifications for Structural Steel for Buildings - AISC.
 - (a) Allowable Stress Design and Plastic Design.
 - (b) Load and Resistance Factor Design.
 3. Specifications for the Design of Light Gauge Cold-Formed Steel Structural Members - AISI.
 - (a) Cold-Formed Steel Design Manual
 4. Structural Welding Code AWS.
 - (a) Steel, AWS D1.1.
 - (b) Sheet Steel, AWS D1.3.
 5. National Design Specification for wood construction, and Supplemental Design Values for Wood Construction, NFPA.
 6. Specifications for the Design and Construction of Load-Bearing Concrete Masonry - NCMA.

7. Recommended Practice for Engineered Brick Masonry - BIA.
 8. Metal Building Systems-Metal Building Mfg. Association.
 9. Code of Recommended Standard Practice for Composite Deck, Form Deck, and Roof Deck Construction-SDI Design Manual
 10. Standard Specification for Steel Joists, Including Load and Weight Tables, SJI
 - (a) Open Web-Type K Series.
 - (b) Longspan and Deep Long Span-Type LH and DLH Series.
 - (c) Joist Girders.
- C. State buildings which are administrative, (National Guard Armories, State Police Headquarters, Emergency Operation Facilities) residential, (hospitals, skilled care), or institutional facilities (K-12 schools, prisons, Mental Health Centers) shall be considered essential facilities for assignment of importance factors.
1. Wind and seismic design requirements - In accord with the applicable building codes. Refer to Exhibit G for the seismic risk information by county.
 2. Snow load design requirements - In accord with the applicable building codes with the following modifications.
 - (a) Roofs for new buildings shall be designed to support a snow load using a ground snow load factor of 30 psf in Northern Illinois (Peoria and North), 25 psf in Central Illinois (South of Peoria through Carbondale), and 20 psf in Southern Illinois (South of Carbondale).
- D. Structural drawings shall be separated from architectural work. Drawings shall be labeled as appropriate for the division of work as set forth in Article 13. Drawings shall include the following as appropriate for the project.
1. Include the following information in general notes:
 - (a) Governing structural codes with year of edition.
 - (b) Design live, wind and earthquake loads, or design coefficients used as a basis for structural design.
 - (c) Detailed breakdown of dead loads.
 - (d) Net allowable soil bearing capacity.
 - (e) Strength of all structural materials.
 - (f) Other information required as a basis for structural evaluation.
 2. Show overall dimensions, center lines, location of members and offsets.
 3. Show all columns on grids.
 4. Schedule (as required) footings, columns, beams, girders, slabs, lintels, and reinforcement.
 5. Detail all special connections, assemblies, and expansion joints.

6. Show connection details or required design reaction loads for all structural steel framing connections.
7. For new construction, unless otherwise approved by CDB, design roof drainage slope into the structural system. CDB may permit the use of tapered insulation in re-roofing applications. Consult the Roofing Program Policy Manual.
8. Show elevations for top of beams and slabs; top and bottom of columns; bottom of footings, etc.

14.6 **Mechanical**

- A. Do not reference a "mechanical contractor." Refer specifically to the individual Heating, Ventilating, Plumbing or Sprinkler contractor.
- B. Refrigerants/Halons.
 1. The U.S. Clean Air Act's 1990 Amendments called for phasing out production of USEPA class 1 halogenated chlorofluorocarbons by January 1996. Included are R-11, 12, 113, 114, 115 and halons. New equipment shall use alternate refrigerants. Alternates would include HCFCs and HFCs.
 2. Specifications should be written for that refrigerant offering the best life cycle cost commensurate with engineering judgement as to industry trends.
 3. The complete phase out for manufacturing ozone depleting halons was January 1, 1995. Their use in new fire suppression systems is prohibited.
- C. Specify dielectric insulating unions between all dissimilar metals.
- D. Specify insulation thickness per Table 5.1 of ASHRAE 90.
- E. Underslab plumbing drain and waste lines shall be 4" diameter minimum. Plastic pipe under slabs and in inaccessible areas shall be permitted where permitted by local code, providing CDB and the using agency consent to use of plastic pipe.
- F. Sprinkler Systems shall be designed in compliance with NFPA 13. Calculate fire protection requirements per "Fire Suppression Rating Schedule" (latest edition) by Insurance Services Office, 160 Water Street, New York, NY 10038.
 1. The water line and water hydrants outside the building and entering the building including the backflow preventer is plumbing work. Sprinkler work begins at the outlet of the backflow preventer.
 2. Design sprinkler work as a separate bid where it is a major portion of a project. When specifying matching fire protection components, include cabinet, hose, extinguisher, etc. in the general contract.
- G. The use of pipe heat tracing systems in lieu of mechanical systems must be approved by CDB.

- H. Design roof drains in accordance with requirements of the locally adopted code. In the absence of any local code, design roof drains in accord with the Illinois Plumbing Code. Built-in gutters are subject to approval by CDB.
- I. Schedule equipment such as air handling units, fans, coils, diffusers, registers, grilles, pumps, chillers, cooling towers, boilers, unit heaters, convectors, air separators, radiation traps, etc. Include technical information (capacity, power requirements, motor sizes, etc.) only. Schedules on drawings are preferred. Indicate contractors' responsibilities where interface is required.
- J. Ductwork:
 - 1. Underfloor duct systems must be approved in writing by CDB. Provide groundwater evaluation with request.
 - 2. Fiberboard ductwork shall not be specified without prior CDB approval.
 - 3. Reference SMACNA duct gauges for all ductwork.
- K. HVAC temperature controls should provide energy-efficient operation where possible (i.e., demand type economizers, night setback, non-simultaneous heating and cooling, low leakage outdoor air dampers, etc.)
- L. Testing and Balancing, when not provided as a reimbursable consultant to the A/E in the agreement, shall be performed under a separate bid contract or as a part of the installing contractor's work as discussed and agreed upon with the PM.
- M. Building automation systems shall follow open protocol.
- N. Mechanical drawings shall be labeled for the appropriate division of work as set forth in Article 13. Drawings shall include the following as applicable to the project.
 - 1. Show where the work of others (contractors, utilities, existing work, etc.) stops.
 - 2. Show all connections to all equipment (electrical, etc.)
 - 3. Show duct work or piping over 12" to scale in double lines. Do not shade as this does not microfilm well.
 - 4. Detail major heating and plumbing equipment such as pumps, water heaters, coils, boilers, chillers and air handling units, showing valves, gauges, thermometers, unions, drains, etc.
 - 5. Show all work spaces (tube pull area, coil pull area, access space, etc.) for all equipment requiring same.
 - 6. Where rooftop equipment is used, provide a roof plan showing all equipment (units, exhaust fans, cowls, etc.). Mount rooftop equipment on a curb, or on supports that provided a minimum of 24" clearance above the roof. Avoid interior angles to facilitate flashing.
 - 7. Place rooftop piping and conduit on factory fabricated pipe supports.

8. Show all valves, cocks, unions, strainers, gauges, etc., on plan or in typical details.
9. Show and size all sprinkler mains and risers. Specify code.
10. Show all fire hose cabinets (provided by general contractor) on plumbing drawings or sprinkler system if a separate contract.
11. Provide waste and vent, hot and cold water riser diagrams; and isometrics for all plumbing fixtures or fixture groups. Number all fixture groups. Show air chambers on isometrics and shock absorbers where provided on multiple fixture groups in lieu of air chambers.
12. Schedule plumbing fixtures including kitchen equipment, drinking fountains, electric water coolers, water heaters and water treatment equipment.
13. Show underground plumbing work on a footing plan or foundation drawing.
14. Show all cleanouts on plumbing drawings.
15. Show all devices (balancing dampers, fire dampers, turning vanes, extractors, splitters, etc.), and access panels on drawings for contractor providing them.
16. Identify equipment provided by other contractors to be installed or connected by the plumbing contractor.

14.7 **Electrical**

- A. **General.** Comply with NFPA 70 latest edition. A/E shall provide the following information on either the drawings or in the project manual or directly to CDB as deemed appropriate to the project.
 1. Specifications that are applicable to the project, having the correct voltage, circuit elements, products, and wiring methods for the particular work at hand.
 2. Calculations performed to obtain load analysis, service size, panel and transformer capacities, available fault currents, and voltage drop, as well as the coordination study and resulting sizing of equipment made per the above.
 3. Single line diagram with all primary and secondary distribution equipment and loads, including feeder identification with conductor and raceway size and type.
 4. Primary distribution equipment and all other loads located in plain view, with initial spatial coordination done by the design professional.
 5. Service entrance arrangements with the serving utility, made, confirmed, and noted by the design professional.

6. Branch circuiting with voltage drop considerations, for both power and lighting, including switching, dimming, special controls, and homerun designations.
 7. Mechanical equipment power requirements and physical locations, including special information as to who mounts, connects, tests, etc.
 8. Control diagrams and schematics revealing interactive relationships as well as operating logic for all systems. Information should be adequate to understand and install appropriate wiring.
 9. Schedules of fixtures, panelboards, switchgear and other equipment, including sizes, types, styles, catalog numbers, and other pertinent characteristics.
- B. Line Side Taps: Taps, where used, shall be in a separate box ahead of the service panel.
- C. Incorporate transient/surge suppressors where deemed necessary. Consider K-factor or oversized transformers, added neutrals (or increased size) and uninterruptible power systems. Consider all sensitive electronic equipment.
- D. Define equipment grounding system, including special requirements for telecommunications, interference shielding, isolated systems, filters, etc., when used. Verify compatibility with ground fault protection systems used.
- E. Lighting:
1. Schedule light fixtures and lamps. Include the type designation, the number, type, and size of lamps per fixture, and the accessories and methods necessary for mounting the type of fixture.
 - (a) Illumination levels listed in the I.E.S. Lighting Handbook shall be used.
 2. Select service voltages to minimize energy losses. The use of 480Y/277 volt system is encouraged for all ballast lighting and power with reduction to 208/120 for general receptacles and incandescent lighting.
 3. Use efficient luminaires. Consider energy efficient ballasts, lamps, reflectors and refractors. The use of electronic ballasts and T-8 lamps for energy efficiency is encouraged. Where suitable, use of specular or semi-specular reflectors should be considered. When rehabilitating existing fixtures the use of replacement specular reflectors may be considered in addition to ballast and lamp replacement. When specifying electronic ballasts include:
 - (a) minimum power factor of 0.99
 - (b) less than 10 percent total harmonic distortion
 - (c) less than 6 percent third harmonic distortion
 - (d) five (5) year manufacturer's warranty
 - (e) compliance with ANSI spec
 - (f) no polychlorinated biphenyls (PCB's)
- F. Fire Alarm System.

1. For projects with sprinkler systems, kitchen hood fire extinguishing systems, or other special systems, include the devices and circuiting to actuate the system. Duct smoke detectors, fan shutdown and smoke evacuation devices shall be considered part of the fire alarm system. Duct smoke detectors which are not readily accessible should be provided with remote controls.
- G. Define lightning protection system if applicable.
- H. Telecommunications Equipment.
1. Telecommunications or radio equipment for State facilities (except Higher Education) fall under the jurisdiction of the Division of Telecommunications, Department of Central Management Services. The PM and using agency will instruct the A/E when/where outlets, conduits, wiring, etc. are to be included in the CDB project. Cooperate with other agencies.
 2. Consult with telephone company to establish network point of presence (NET POP) at the building (for a single building facility) or at a common distribution point for a multi-building complex.
 3. Consult with PM early in design to determine if telephone system beyond NET POP will be provided by using agency, CMS, or as part of project.
- I. Define switching methods employed for lighting, motor control, and other systems.
- J. Cable Testing.
1. When high voltage cable testing is required, specify that it shall be performed by a firm employed by the A/E with the contractor assisting.
 2. Properly identify the phase conductors tested in all test records.
 3. If during the testing, a fault in the cable, splice, termination, etc., is apparent, the fault shall be cleared, necessary repairs or replacement made, and the cable retested.
- K. Electrical Drawings shall be labeled as appropriate for the division of work as set forth in Article 13. Drawings shall include the following as appropriate to the project.
1. Include electrical power, telecommunications and other electrical systems on the site drawings or combined site plans. Designate as the work of the electrical contractor.
 2. Completely circuit and define all work. Do not leave for contractor to design.
 3. Show a one-line diagram of power distribution, including emergency power distribution and ground fault protection. Use riser diagrams, if appropriate, to further define distribution.
 4. Draw major items of electrical equipment such as switch gear, transformers, panels, lighting fixtures, etc., to scale.

5. Show power distribution and special systems layouts separate from lighting layouts for clarity. Provide separate plans for multiple systems.
6. Show a detailed schedule for each panel board, switchboard, motor control center, etc. Include breaker size, fusible switch size, or fuse size, frame size and trip setting, usage of circuit, spares, spaces, connected load for each circuit, etc. Preferably, show schedule on the drawing depicting wiring from that unit. Spares should not exceed 10 percent of poles used.
7. Schedule motor control, including auxiliaries, overload protection, interlocking, etc.
8. Provide the foot candle level and the watts per square foot for each room. Provide total wattage for building.
9. Identify equipment provided by another contractor to be wired by the electrical contractor.

ARTICLE 15 CDB REVIEW OF DESIGN

15.1 **General.** The PM will schedule design review submittals and/or review meetings required by the agreement. These reviews provide CDB and the using agency the opportunity to review contract documents and design concepts and make recommendations. The review of these documents by CDB does not constitute a complete and exhaustive review. CDB reviews the documents for general compliance with the program objectives, design standards and contract requirements. CDB's acceptance of these documents does not relieve the A/E of its responsibilities contained herein.

15.2 Review Process.

- A. Submit documents for review as required by the agreement. The A/E shall provide up to ten (10) sets of review documents for CDB and using agency for each review. CDB shall reimburse A/E for additional review sets.
- B. After receipt of review documents from the A/E, the PM will establish a review meeting date which considers the project stage, project complexity and agency workload. Meetings are usually held within 14 calendar days after receipt of documents.
- C. The review process may include the evaluation of the documents to determine that the design provides the functions required by the using agency and the established program, and that the project is within budget. CDB may also review for cost effective design, energy conservation, competitive bidding, operating and maintenance costs, and general compliance with applicable codes, rules and regulations.
- D. All key design staff and consultants should attend the review meeting(s).
- E. Review comments prepared by CDB, the using agency and/or regulatory agencies will be provided to the A/E at or prior to the review meetings. When a meeting is not required, comments will be transmitted to the A/E by the PM.
- F. CDB will, in writing or at the review meeting, provide notice of the acceptance of the review documents or issue instructions regarding required rework. If the

required corrections are minor, CDB may conditionally acceptance and authorize the A/E to proceed to the next review phase.

G. Following the reviews, the A/E shall:

1. Prepare meeting minutes indicating issues discussed/resolved.
2. Respond to the PM in writing to all review comments and questions within 14 calendar days.

ARTICLE 16 BIDDING PHASE

- 16.1 **General.** All bidding documents require the approval of CDB prior to the A/E printing and distributing documents to the public. Upon approval, the A/E shall sign, seal and date all drawings and the project manual with the same date. Dates shall reflect the most recent state of completion.
- 16.2 **Official Advertisement for Bids.** The Illinois Purchasing Act, 30 ILCS 505/4, requires that contracts shall be advertised in the official newspaper at least 14 calendar days before the bid opening. The A/E shall prepare and send the advertisement for bids to the PM. To expedite the advertisement in the official state newspaper for Springfield bid openings, a copy shall be sent to the Contract Administration Division of CDB. When bids are to be taken in a CDB office other than Springfield, a copy shall be sent to the contract technician in that office. The PM will ensure that the project is advertised in the CDB newsletter.
- A. For small or single contract projects a single bid opening will be scheduled. For large projects, the bids for the coordinating contractor will usually be received one week following receipt of bids for the assigned contractors.
 - B. The advertisement for bids shall include the pre-bid conference information if applicable. Any mandatory attendance requirements at the pre-bid conference shall be noted in the advertisement.
- 16.3 **Document Distribution.** The reproduction and distribution of bidding documents is the responsibility of the A/E. The number of bidding documents above the number of sets listed in Appendix A of the agreement are reimbursable to the A/E. The A/E shall maintain an accurate record of all vendor provided printing costs. "In-House" printing of bid sets is permitted when included in the agreement. CDB and A/E shall negotiate an appropriate reimbursement based on area costs for vendor provided printing.
- A. The A/E shall distribute bid documents to all interested bidders, subcontractors, suppliers, etc. Each prospective bidder shall be provided with one loose copy of the bid forms, the bid bond form, one CDB bid envelope addressed to the appropriate bid receipt location, and the "Bidder Check List." The envelope and check list are available from CDB.
 - 1. The PM can provide a list of potential bidders from the registration list maintained by CDB. Contractors not registered with CDB should be referred to CDB's Contract Administration Section.
 - 2. It is in the interest of both the A/E and CDB to solicit competitive and multiple bids for each contract to avoid having to rebid or redesign the work.
 - B. Plan holders shall make a reasonable plan deposit or be a member of a non-cash deposit program in accord with the advertisement for bids. The plan deposit may be cash or company check. Bidders that return plans within forty-five (45) calendar days of the bid opening shall have their deposit returned to them. The A/E will return the deposit within 10 days of receipt of bidding documents if the plans are in good reusable condition. An accurate record of all deposits shall be kept by the A/E and submitted to the PM. All deposits not returned shall be credited to the A/E printing reimbursable account and reported with the A/E's regular pay requests.
 - C. Plan holders shall not be charged handling and postage to obtain bidding documents for the number of sets included in Appendix A of the agreement. This is considered

an overhead item in the A/E agreement. Postage for additional sets above the number listed in Appendix A shall be a reimbursable to the agreement. Postage to return documents shall be at the plan holder expense. The contractors awarded the work shall not be required to return their bidding documents but their deposits shall be returned to them.

D. The following individuals and offices shall receive the bidding documents, or portions of the bidding documents. These individuals and offices shall be listed on the plan holder lists.

1. Dodge Plan Rooms. The A/E shall send one complete set of bidding documents to the F.W. Dodge Corporation Plan Room in Springfield, IL. F.W. Dodge divides the state into a north and south region for advertising purposes. Projects located in the northern region shall also be filed at the Chicago office. Projects located in the southern region shall also be filed at the St. Louis Area office.
2. Other Plan Rooms. The A/E shall send complete sets of the bidding documents to other plan rooms as prudent to solicit competitive bids and to make the bidding documents available to as many potential bidders, subcontractors, and suppliers as possible. PM shall advise A/E of distribution. All participating plan rooms are listed in each CDB Bid Information Newsletter.
3. CDB Offices. Bidding documents shall be distributed to various CDB personnel and sections as listed below:
 - (a) PM - one set of bidding documents plus detailed estimate.
 - (b) Technician - one set of drawings only.
 - (c) Bid Receiving Office, depending on project location and as directed by PM,
 - (i) Contract Administration Division in the Springfield office, project manual and all addenda plus detailed estimate OR,
 - (ii) Other Regional Office, project manual and all addenda plus detailed estimate.
4. Using Agency. Two sets of bidding documents including all addenda.
5. CDB maintains, for a period of 15 years, a set of the bidding documents for record purposes. The copy of the project manual and addenda sent to the Contract Administration Division is used for that purpose. The microfilm copy of the drawings is usually provided by Dodge for this purpose. It is the responsibility of the A/E to ensure that Dodge receives a full set of drawings and addenda.

16.4 **Plan Holder Lists.** Periodically, the A/E shall submit the list of plan holders, including address, telephone number, and contract(s) the plan holder intends to bid to the PM. A list of plan holders shall be submitted to the PM for verification of contractor's registration no later than seven (7) calendar days prior to the bid opening date.

16.5 **Addenda.** The A/E shall prepare all required addenda.

- A. All addenda, including all revised drawings and sections, must be approved by the PM prior to distribution to the plan holders. A/E shall allow sufficient time for CDB review and approval to fulfill the adequate notice requirement.
- B. Distribution and Adequate Notice. All addenda shall be issued to all plan holders as required to ensure receipt no later than three (3) business days prior to the bid opening. The A/E shall use whatever delivery method is most prudent to ensure receipt. A/E shall verify receipt of the addenda with each plan holder. When addenda are not timely issued, the bids will be returned unopened and the bid opening date will be extended. Any additional costs incurred by the A/E for the extension of the bids shall be at their expense.
- C. The A/E will consider written requests by prospective bidders to amend the bidding documents. Such requests must be received at least ten (10) calendar days prior to bid opening date and include complete description of the desired change including any technical data and references for the A/E's evaluation. If a request is approved, the A/E will include the modification by addendum. When requested, the A/E will provide to CDB a listing of the requests that were not approved.
- D. All addenda shall be prepared according to the format in the Project Manual Workbook. The A/E is not to prepare addenda on the firm's letterhead. The addenda shall be numbered sequentially and dated.
 - 1. List all changes in order of specification sections and drawing numbers.
 - 2. The A/E shall not cause a sole sourcing or dual sourcing of an item by addenda without written approval of the CDB. Any addenda creating a sole sourcing or dual sourcing of an item shall be in compliance with requirements contained herein.
 - 3. The Construction Administration Fee (CAF) amounts are not to be revised in any addenda. The one exception is when the project or contract is rebid by addenda.
 - 4. If one or more of the bid forms require a change, the A/E shall issue a complete set of new bid forms with the following information located in the lower right hand corner of each page; REVISED, ADDENDUM #(), (addendum date).
 - 5. Drawings shall have the changes clearly noted and identified (A, B, C, etc.). Make a notation in the revision column of the drawing indicating the change letter, the date of the change, and a brief description of the change. All changes are to be incorporated into the original drawing whether that be tracings, software file, etc. Changes are not to be issued from marked up copies or additional drawings. Revised drawing page numbers shall be identified by addition of "R" to the number (e.g. A-3R).
 - 6. The A/E shall state the status of previously issued addendum.
- E. Pre-bid conference minutes and bid tabulations are not to be issued as addenda. These are informational items and are to be distributed as such.
- F. Preparation of addenda may be considered a compensable additional service except as required by Paragraph 2.11.

- 16.6 **Pre-Bid Conference.** When a pre-bid conference is scheduled, the A/E shall include the date, time, and location of the pre-bid conference in the advertisement for bids. The pre-bid conference will be scheduled by the CDB PM and will be held no less than seven calendar days prior to the day the bids are to be opened. The CDB PM will chair the pre-bid conference.
- A. With the consent of the PM, attendance at pre-bid conference may be mandatory for prospective bidders when specified in the project manual. The list of bidders shall be submitted to the PM. This list will be transmitted to CDB's Contract Administration Division. Bidders who did not attend the mandatory pre-bid conference shall have their bids rejected.
 - B. The A/E shall record the names of individuals, and the names and addresses of their respective firms of all persons in attendance. This list shall be compared to the list of plan holders. The A/E shall also record the minutes of the pre-bid conference, listing all questions and all responses to those questions.
 - C. Minutes of the conference shall be issued to all plan holders and all persons attending the pre-bid conference, but are not to be included as part of any subsequent addendum.
- 16.7 **Final Estimate.** Prior to the bid opening, the A/E shall submit a final detailed estimate of probable construction costs of the contracts being bid based on the bidding documents and all addenda.

- 16.8 **Bid Openings.** The A/E shall attend all bid openings for the project unless specifically excused by the PM.
- A. The A/E shall have developed, in conjunction with the using agency and the PM, an order of priority to be used in awarding alternates. Unless an order of priority is publicly announced prior to the bid opening, alternates will be awarded in the order specified in the bidding documents.
 - B. A/E shall provide bid results to all parties that require the information. CDB will provide A/E with one set of bid tabulations at the bid opening.
 - 1. In the event the PM excused the A/E from attending the bid opening, the PM will telefax the bid tabulations to the A/E within two hours of the bid opening.
 - C. For projects that have a coordinating contractor, A/E shall issue the assigned contractor bid tabulations to the coordinating contractor bidders within two business days.
 - 1. These bid tabulations are to be issued for informational purposes only and shall not be issued as an addendum.

ARTICLE 17 AWARDING OF CONSTRUCTION CONTRACTS

- 17.1 **General.** CDB may award construction contracts within 60 days receipt of the bid(s) or any other period stated in Section 01010 of the Project Manual.
- A. CDB may request bidders to provide written consent to extend their bid beyond the 60 day period or as stated in Section 01010.
 - B. CDB shall notify all bidders of the rejection of any or all bids received.
 - C. A/E shall comply with CDB policy that discussions with bidders, news media, etc., not include any presumption of award until the award is decided by CDB.
- 17.2 **Bid Analysis.** A/E shall provide assistance to CDB to identify the apparent successful bidder or bidders.
- A. Review all product substitutions submitted in accordance with procedures set forth in Standard Documents for Construction and provide CDB with a written recommendation to accept or reject the proposed substitution.
 - B. Review all unit prices submitted and provide written recommendation or rejection.
 - C. Bids submitted that fail to acknowledge all addenda issued shall be reviewed. A/E will be requested to endorse a preprinted CDB document attesting that, in the A/E's opinion, the addenda not acknowledged is, or is not, work related.
- 17.3 **Award Notification.** CDB will notify the successful bidder(s) and deliver the construction contract for execution. The Notice of Award Letter will be issued with a construction contract which stipulates the acceptance of any alternate bids, unit prices, or product substitutions.

ARTICLE 18 CONSTRUCTION PHASE

- 18.1 **General.** The A/E shall perform administrative duties during this phase of the project as set forth herein. Additional and/or related requirements are located in CDB Standard Documents for Construction and CDB Procedures and Forms - Construction Phase.

- 18.2 **CDB's Representative.** The A/E shall consult and advise CDB and act as CDB's representative as provided in the Standard Documents for Construction and herein. CDB's instructions to the contractors may be issued through the A/E who shall have authority to act on behalf of CDB to the extent provided in this document and the Standard Documents for Construction.
- 18.3 **Construction Documents.** The A/E shall issue documents stamped and dated "Issued for Construction" to the contractors. The contractors shall not commence work without the documents stamped and dated "Issued for Construction".
- A. Each contractor will receive construction documents in quantity as determined by CDB up to a maximum of six sets. The contractor may purchase additional sets for a charge to cover reproduction and handling.
- 18.4 **Contractor and Tradesmen Licensing.** The contractors are responsible for any applicable licensing with the appropriate authority in accordance with the Contractor Licenses Section of the Standard Documents for Construction. The A/E shall receive and review all applicable licenses prior to that contractor or tradesman commencing any work. Evidence of proper licensure shall be forwarded to the CDB PM. The A/E shall not knowingly allow any work to commence or accept any work installed by a non-licensed firm or tradesman where licensure is required.
- 18.5 **Contractor's Work with Own Forces.** The Standard Documents for Construction requires that a percentage of the work be performed by the contractor's own forces. The A/E shall consider this requirement during the review and approval of the contractor's schedule of values and during the execution of the work. The A/E shall advise CDB of any deviation from this requirement.
- 18.6 **Pre-Construction Meeting.**
- A. This meeting will be scheduled by the CDB PM generally within 14 calendar days of awarding construction contracts. Attendance is mandatory for the A/E, coordinating contractor, all assigned contractors, and using agency representatives. Attendance by sub-contractors and A/E consultants is encouraged, but not mandatory.
- B. Minimum agenda will consist of CDB explanation of construction procedures, pay request application procedures, and documentation to be supplied by contractors, sub-contractors and material suppliers in support thereof. A/E will explain requirements for submittal of shop drawings, samples and product data. Using agency may review facility access and specific safety/security procedures.
- 18.7 **Contractor Submittals / Shop Drawings, Product Data, Samples.**
- A. A/E shall review and monitor all required submittals for timeliness and conformance with the contract documents and project schedule. A/E shall review and respond to submittals within 14 calendar days.
- B. Each submittal shall be stamped, dated, and either initialed or signed by the reviewer. The reviewer shall provide clear instruction to the contractor of any corrective action to be taken.
- C. The A/E shall only review those materials and equipment specified in the contract documents. The A/E shall not make changes in the contract requirements through the review of submittals.

- D. The contractor may not submit and gain approval of material substitutions through the shop drawing review process. In this event, the A/E shall return the submittal without review and advise the contractor that he may request and initiate a material substitution change order in accordance with the substitution clause of the Standard Documents for Construction.

- E. If in reviewing the submittal the A/E determines that contract changes are required, notify the CDB PM and request approval of the required changes prior to returning the submittal to the contractor. The submittal shall then be returned to the contractor with the note that a change order request is contemplated.
 - F. No work requiring review of submittals shall be commenced without A/E approval. The A/E shall notify the contractor to cease the work until approval is obtained. The contractor shall be liable to replace any work that is not in compliance with the subsequently reviewed submittal.
- 18.8 **Contractor's Schedule of Values.** Each coordinating and assigned contractor is required to prepare the CDB CSV form and submit it to the A/E for review and approval prior to the first progress/pay meeting. This form is a detailed breakdown of the contract amount and will form the basis for progress payment requests. The A/E shall review the form to ensure each item of work required for the contract is indicated and all values are expressed in separate line item costs for material and labor. The A/E may request the contractor provide subcontracts and relevant documentation to substantiate the values indicated.
- 18.9 **Construction Schedule.** The construction schedule is to be prepared by the coordinating contractor with input and concurrence of all assigned contractors and submitted to the A/E prior to the first progress/pay meeting. The A/E shall review the schedule for conformance with the contract requirements. Schedules may be in bar chart, arrow diagram, CPM or other format as specified in the project manual and shall include a schedule for submitting shop drawings, product data and material samples.
- 18.10 **Contractor Payment and Progress/Pay Meetings.**
- A. A/E shall review and certify contractor's applications for payment, maintain record of payments and contract balances, and all proposed and approved changes thereto. The A/E shall reconcile and maintain files for the contractor's and subcontractor's/supplier's waiver of liens and contractor's sworn statements.
 - B. Progress/Pay meeting dates are established by the CDB PM at the pre-construction meeting. Attending the meeting shall be the CDB PM, the A/E project manager, coordinating contractor, all assigned contractors, the using agency representative and, when requested by CDB, the on-site observer, design architect/engineer and consultants.
 - C. Minimum agenda will consist of reviewing contractor's progress, noting projections for work to be completed in the next month and comparing this information to the current approved project construction and submittal schedule, reviewing and reconciling contractor's pay applications using CDB form CASS (Contractor's Affidavit and Sworn Statement), and discussing of project problems and proposed contract changes.
- 18.11 **Contractor Stored Materials.**
- A. CDB may pay contractors for material stored for future use on its projects.
 - B. The A/E shall attest to the existence of any stored materials, its protection and identification in accordance with the Contract Documents by initialing the appropriate item on the SML.
 - C. The A/E shall be compensated, by CDB, for reviewing off-site stored material at the rate of compensation established in the agreement for on-site observation providing

the storage location is within reasonable travel distance, such that travel and review of the material does not exceed one full day's rate of compensation.

18.12 **Interpretations.** When requested by CDB or a contractor, the A/E shall provide interpretation of the contract documents. A/E shall prepare and distribute supplementary drawings, specifications and instructions as necessary to communicate the interpretation.

18.13 **Claims and Disputes.**

- A. A/E shall record any occurrence or work that might result in a claim for a change in contract time or amount. Any disputes or claims shall be referred directly to the CDB PM. A/E shall enter the claim or dispute into a claims log and provide a current copy of the log to CDB at each monthly progress/pay meeting.
- B. A/E shall review each claim or dispute, including documentation of any time, money or other expenditure made in connection with it. A/E shall provide a written response, interpretation and recommendation for resolution to the claimant and CDB. CDB shall make a final determination on all disputes unless removed to ADR and/or the Courts.
- C. While work is in progress, A/E shall observe, measure and verify costs incurred that are related to the dispute. Immediately notify the CDB PM if additional on-site representation is required to monitor the disputed work.

18.14 **Change Orders.**

- A. Specific procedures, general information, and standard CDB forms required for preparing and processing construction contract changes have been developed by CDB and are included in Procedures and Forms - Construction Phase Manual.
- B. Requests for a change may be initiated either verbally or in writing. Subcontractors' requests shall be directed to their contractor, assigned contractors to the coordinating contractor, and coordinating contractor to the A/E who in turn will notify the CDB PM of the request. Requests by the using agency or A/E shall be made to the CDB PM. Only the CDB PM can authorize the A/E to prepare a Request for Proposal/Change Order (RFP/CO). The A/E shall prepare an RFP/CO for each contract affected by the proposed change.
- C. The A/E shall prepare each RFP/CO including supplemental drawings and/or specifications to fully describe the change in the work. Each change order package should be self-explanatory. When requested by the CDB PM, the A/E shall submit a cover letter to the change order package explaining the need for the contract change. Sole sourcing via change order is prohibited by the Illinois Purchasing Act. Stringing of change orders is prohibited.
- D. The A/E shall review the contractor's proposal for completeness and conformance with the RFP/CO and contract documents. Where change orders require additional clarification or additional back-up, the A/E shall obtain such information from the contractors prior to forwarding the change order package to CDB.
- E. The A/E shall recommend issuance of a change order to CDB. Recommending issuance shall mean that the A/E has reviewed all quantities, prices and other data in the contractors' proposal and has found such to be reasonable and in conformance with the provisions of the Contract Documents.

- F. When applicable, the A/E shall be responsible for obtaining the signatures of the coordinating contractor and using agency representative prior to forwarding the change order package to CDB.
 - G. When requested by CDB, the A/E and any consultants shall be required to attend Board meetings to explain any change orders presented for Board approval.
 - H. A/E shall review all time extension requests and make their recommendations within a reasonable time.
- 18.15 **Contractors' Record Drawings.** The A/E shall observe the contractors' record drawings at intervals appropriate to the construction, and notify CDB of any apparent failure to maintain up-to-date records in accordance with the contract documents.

ARTICLE 19 QUALITY CONTROL

- 19.1 **Observation of the Work.** The A/E shall, as a basic service of the agreement, observe and report the progress and quality of the work as is reasonably necessary and as set forth herein, to determine in general that the work is proceeding in accordance with the approved construction schedule, and that the materials, finishes and workmanship are in conformance with the contract documents. CDB shall be notified immediately if, in the A/E's opinion, the materials, finishes and workmanship does not conform to the contract documents, requires special inspection or testing, or has been disapproved or rejected by the A/E. The A/E and the contractor shall be liable for the replacement and/or any damages incurred as a result of knowingly permitting non-specified material, or otherwise non-conforming work to be incorporated into the project.
- 19.2 **On-Site Representative.**
- A. When included in the agreement, the A/E may provide one or more on-site representatives to facilitate and report on the progress of the project. The duties of the on-site representative are exclusive of other construction phases basic services listed herein and are limited to:
 - 1. Expedite contract interpretation and clarifications.
 - 2. Record activities of the project including weather conditions, nature and location of the work being performed, verbal interpretation and other details as noted in Paragraph 19.3.
 - 3. Observe, measure and verify costs incurred by contractors related to any disputes or claims.
 - B. Prior to commencing the construction phase, A/E shall submit the name, resume', and DWE for each proposed on-site representative to the CDB PM for approval. CDB shall provide written acceptance or rejection of each person proposed.
- 19.3 **Observation Reports.**
- A. A written report shall be submitted to the CDB PM for each site visit made under basic services and each on-site representative's visit. Reports shall be submitted in a timely manner as the construction activity dictates. In no case shall submission interval exceed 30 days from the date of the site visit.
 - B. CDB shall not provide any reimbursement for on-site representative visits without an observation report.

- C. CDB may withhold a portion of the construction phase fee if the A/E fails to provide observation reports as set forth herein.
- D. Each report shall include general and specific information regarding the project as follows:
 - 1. General Information
 - (a) CDB Project Number
 - (b) Project Name and Location
 - (c) A/E Name and Phone Number
 - (d) Report Preparers' Name
 - (e) Coordinating Contractor's Name
 - (f) Date of Site Visit
 - (g) Date of Report
 - (h) Report Number
 - (i) Weather Conditions

2. Specific Information

- (a) Purpose of Site Visit
- (b) Names of All Observers Present
- (c) Names of Contractors On-Site
- (d) Size of Each Contractor's Workforce
- (e) Nature and Location of Work Being Performed
- (f) Progress of the Work
- (g) Items Inspected
- (h) Problems Resolved
- (i) Verbal Interpretations Given to Contractor
- (j) Tests Witnessed/Performed
- (k) Site Visitors

E. When directed by the CDB PM, the A/E shall provide copies of reports to the coordinating contractor, assigned contractors and using agency representative.

19.4 **Construction Testing.** A/E shall witness field tests, review and evaluate test reports and notify CDB of any deficiencies. A copy of all test results shall be provided to CDB.

ARTICLE 20 PERFORMANCE TESTING, START-UP AND TRAINING

20.1 **General.** A/E shall be responsible for ensuring that each contractor, as required by the contract documents, perform a thorough and systematic performance test and start-up of their respective work. Each general, mechanical, electrical and fire suppression element and the total system shall be tested in the presence of the A/E, all appropriate consultants, and the using agency prior to substantial completion of the project.

A. When requested, and if not previously provided in the contract documents, the A/E shall provide the contractor with all design criteria and system design/operation concepts to facilitate performance testing and start-up.

B. The A/E shall provide a report to CDB and the using agency that they have observed the performance testing and start-up process, and that each contractor has demonstrated that all systems comply with the requirements of the contract documents. The report shall include any changes and/or reconfiguration which may have occurred during the performance testing and start-up process.

20.2 **Using Agency Training.** The A/E shall ensure that each contractor required by the contract documents provide the specified training of the using agency's designated personnel prior to substantial completion. The A/E shall attend the training sessions to observe and provide any input into the operation and maintenance of the systems as designed.

ARTICLE 21 PROJECT CLOSEOUT PHASE

21.1 **General.** The A/E shall be responsible for certifying the completion of all contracts.

21.2 **Substantial Completion.** It is a condition which occurs when CDB accepts the certification of the A/E that construction is sufficiently complete in accord with the contract documents such that the project, or a designated portion thereof, may be occupied or utilized by the using agency for the use for which it was intended. Information and forms to assist the A/E in the administration of this phase are included in Procedures and Forms - Construction Phase Manual.

21.3 **Guarantees, Warranties and Bonds.** At substantial completion, the A/E shall obtain from the contractors and assemble all guarantees, warranties and bonds and check for coverage,

start date and duration in accordance with the contract documents before forwarding to the using agency. The A/E shall obtain and deliver to the CDB PM a signed receipt for all materials turned-over to the using agency.

- A. The A/E shall ensure that the contractors comply with the requirements of sections 01730 and 01740 of the Project Manual.
- B. The A/E shall obtain from each contractor a final list of all suppliers and subcontractors with complete names, addresses and telephone numbers of persons to be contacted for service and/or replacement of materials and equipment.

21.4 **Materials and Equipment.** The A/E shall confirm that all extra materials and equipment specified in the contract documents which are the property of CDB are properly identified, delivered and stored as specified. A/E shall obtain and transmit signed receipts of such deliveries by the contractor to the authorized agency or the using agency accepting the delivery.

21.5 **Notification and Preliminary Inspection.** The contractor shall provide written notification to the A/E that the work, or a designated portion thereof, is substantially complete. This notification shall include a list of any incomplete items. The A/E shall then make a preliminary inspection of the work and preliminary punch list. If A/E is in agreement with the contractor, notify the CDB PM that a substantial completion inspection meeting is warranted.

21.6 **Substantial Completion Inspection Meeting.**

- A. This meeting shall be set by the CDB PM when the PM concurs with the A/E that the project is substantially complete. A/E shall issue notice of the meeting. Attending the meeting shall be the coordinating contractor, assigned contractors, A/E, (including consultants and observer if provided), CDB PM, and the using agency representative.
- B. Minimum agenda will consist of the inspection, discussion of the punch list, determination of final completion dates, and the date and time the using agency will take occupancy. CDB PM will also review the requirements for contractor closeout in accord with the contract documents.
- C. Upon completion of this inspection meeting, the A/E shall prepare the certificate of substantial completion with the completed punch list and forward the package to the coordinating contractor and each assigned contractor. A/E shall refer to Procedures and Forms - Construction Phase manual for specific duties to complete this phase of work.

21.7 **Final Acceptance.** A condition which occurs when CDB accepts the certification of the A/E that the contractor has complied with all requirements of its contract, and that the contractor is authorized to receive final payment in full, including all retainage.

- A. Final acceptance is dependent only upon individual performance, and is not related to other contractor performance. The A/E shall expedite the closeout and final payment for each contractor as they complete their contractual obligations. The exception is when the project includes a coordinating contractor who has accepted other contractors assigned to him. In this situation, the A/E shall closeout the coordinating contractor last, regardless if the coordinating contractor has completed the work before the assigned contractors.

- 21.8 **Notification and Final Inspection.** The contractor shall notify the A/E in writing that all punch list items have been completed or corrected, all work has been reviewed and completed in accord with its contract, and the project is ready for final inspection. The A/E shall make an inspection of the completed work. If the A/E is in agreement with the contractor that all of its work is complete, the A/E shall notify the CDB PM that a final acceptance meeting is warranted.
- 21.9 **Final Acceptance Meeting.** A formal final acceptance meeting requiring attendance of all contractors, the using agency, CDB and the A/E shall be at the discretion of the CDB PM. If the PM requires the meeting, the A/E shall provide notification to all parties. In either case, verification of the punch list completion shall be made by the A/E and the PM.
- A. When the work is confirmed as finally accepted by the A/E and CDB, the A/E shall prepare and issue a Certificate of Final Acceptance to the contractor. A/E shall refer to Procedures and Forms - Construction Phase for specific duties to complete this phase of work.
- 21.10 **Contractor Final Payment.** A/E shall process and certify final payment including retention only after all items of the contract are completed. A/E shall ensure that the final pay request package is complete in accord with the contract prior to forwarding to CDB.
- A. A/E shall obtain from the contractor all releases, waivers of lien, and contractors's final declaration (CDB Form CFD).
- B. Subcontractors Final Waivers shall be on CDB provided forms only. Final waivers for the full subcontracted amount are required. A/E shall reconcile all waivers and provide a statement of final accounting to CDB when the final waivers are not for the full amount of the subcontract.
- C. Contractor must provide a fully executed CFD with Surety's Power of Attorney and Jurat (Notary's Statement Authenticating Signature) attached. A Final Waiver of Lien is necessary from the contractor in the full amount of its contract.
- D. The A/E shall complete a Contractor's Performance Evaluation (CPE) and forward this along with the contractor's final pay request to CDB. The A/E shall assist the CDB PM in obtaining contractor performance evaluations from the A/E's consultants and the using agency representative.
- E. The A/E shall acknowledge receipt of the contractor's record drawings on the final closeout package (FCP) form. This form shall be used as a checklist of the required documentation for closeout and it shall be transmitted with the contractor's final pay request to the CDB PM.
- 21.11 **Nine Month Inspection.** CDB shall notify the A/E, who shall make arrangements with the using agency, for an inspection of the contracted work nine months after substantial completion of the project. The A/E shall exercise care and judgement to determine corrective action to be taken under warranties or guarantees as opposed to using agency abuse, misuse, normal wear and tear or lack of proper maintenance. The A/E shall provide a written report of the inspection to CDB and the using agency within seven calendar days. CDB shall notify affected contractor of any corrective action noted in the report. A/E shall monitor all corrective work under the warranties or guarantees, and submit a final report.
- 21.12 **A/E Closeout**
- A. **Record Construction Drawings.** Prior to processing A/E's final payment, A/E shall submit to CDB two sets of revised contract documents labeled "Record

Construction Drawings,” which show all changes reported by the contractor(s), and all changes made by change orders, addenda, and clarifications made by the A/E during construction.

1. These drawings shall be black line prints suitable for microfilming. All drawing shall be sealed in accordance with Paragraph 13.11. Drawings that are not legible when reproduced will be returned to the A/E for revision. CDB may reject these record drawings for any of the following reasons.
 - (a) There is no A/E seal on the documents. Note that each sheet of the drawings must bear a legible seal that can be reproduced.
 - (b) The drawing index has not been updated to list new or revised sheets.
 - (c) The “Revisions” section of the title block on each sheet does not note the words “Record Drawings” and/or the date of the submission.
 - (d) Documents are submitted in any form other than blackline prints. Bluelines, sepias, etc. will be rejected.
 - (e) The reproduction quality is poor. If line work and/or lettering is too light or of poor quality or there is too much background the documents may be rejected.
 - (f) The lettering does not meet CDB standard 1/8" minimum height requirement.
 - (g) The documents contain improper sheet numbers or are in improper numbering sequence.
 - (h) The documents are submitted incomplete.
2. A/E shall provide a statement on the cover sheet certifying the following: “With this seal, we do hereby certify that no asbestos-containing materials were specified or approved for the construction identified within these documents.”
3. At the CDB PM’s option, A/E may be instructed to forward one set of drawings to the using agency and/or one set to the CDB archivist. In this case the PM shall receive a copy of each transmittal letter sent.

21.13 **Final Payment.** In addition to the construction related requirements in this section, A/E’s final payment is dependent upon final resolution of any fee adjustments required of CDB and/or required by the agreement. A/E is encouraged to resolve such issues early to expedite the final pay request.

EXHIBITS

Exhibit A is not available as a WordPerfect document. This is available only as a hard copy.

State of Illinois
CAPITAL DEVELOPMENT BOARD

001-1296

A-E PRB**Architect-Engineer Payment Request Breakdown**

Project No.:

Request No.:

Date:

Payment Period _____ 19 ____ to _____ 19 ____

FOR CDB USE ONLY

Name: _____

Project No: _____

Contract No.: _____

C.F. Locale: A/E #5**Architect-Engineer: (Name, Address)****PROJECT: (Name, Location, Using Agency)****FEIN:****Contract No.:**

TOTAL CONTRACT OBLIGATION					
	Original Contract	E Total Contract To Date	I Previous Payments	J This Request	K Balance to Become Due
Basic Services				_____	
Additional Services				_____	
Construction Administration Fee (CAF)				_____	
On-Site Representation (Attach Summary Form)				_____	
Reimbursables				_____	
Other				_____	
TOTAL					

TOTAL BASIC SERVICES BREAKDOWN (Less CAF)

Phases of Work	% of Basic Services	Dollar Value Per Phase	Previous Payments	This Request		Balance to Become Due
				%	\$ Value	
Program Analysis	_____					
Preliminary Design	_____					
Bidding Documents	_____					
Bidding	_____					
Construction	_____					
Project Turn Over and Close Out						
SUBTOTALS	100					

ITEMIZATION OF REQUEST FOR PAYMENT for Reimbursable Expenses & Other:

All requests for reimbursement of expenses must be accompanied by the invoices of such expenses.

	Original Contract	Total Contract To Date	Previous Payments	This Request	Balance Of Allowances
1. Sub-Soil Investigation					
2. Design Phase Material Testing					
3. Construction Phase Material Testing					
4. Printing Bid Documents					
5.					
6.					
7.					
8.					
SUBTOTALS					

SEE REVERSE FOR CONSULTANTS PAYMENT REQUEST BREAKDOWN

CONSULTANTS PAYMENT REQUEST BREAKDOWN
(MUST BE SUBMITTED WITH A-E PRB AND INVOICE VOUCHER)

CONSULTANTS NAME AND DISCIPLINE		TOTAL CONSUL- TANTS CONTRACT	PREVIOUS PAYMENTS	THIS REQUEST	BALANCE TO BECOME DUE
	DESIGN				
	CONST.				
	TOTAL				
	DESIGN				
	CONST.				
	TOTAL				
	DESIGN				
	CONST.				
	TOTAL				
	DESIGN				
	CONST.				
	TOTAL				

State of Illinois
CAPITAL DEVELOPMENT BOARD

002-1296
ON-SITE REPRESENTATIVE SUMMARY
(Must be submitted with A/E PRB & Invoice Voucher)

FOR CDB USE ONLY	
Name:	
Project No:	
Contract No.:	
C.F. Locale:	A/E #5

Project:		CDB Project No:	
A/E:		Contract No.:	
		Period:	to

Mo. Yr.		Observer No. 1		Observer No. 2		Observer No. 3		Observer No. 4	
		()		()		()		()	
Date	Day of Week	on-site / travel		on-site / travel		on-site / travel		on-site / travel	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
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18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
Total Hours									
DWE									
Overhead/Profit Multiplier .									
Total for Period									
Total									

EXHIBIT D

State of Illinois
CAPITAL DEVELOPMENT BOARD
027-0396
PROPOSED PROJECT COST BUDGET

FOR CDB USE ONLY

Name: _____
 Project No: _____
 Contract No.: _____
 C.F. Locale: **Design Phase**

CDB PROJECT NO.: _____
 BLDG. INVENTORY NO.: _____
 PROJECT: _____
 LOCATION: _____
 A/E: _____
 CDB PROJECT MANAGER: _____

DATE PREPARED: _____
 PROJECT STATUS: _____
 GSF: _____ NASF: _____ NASF/GSF: _____
 SITE ACREAGE: _____
 PREPARED BY: _____

1. LAND ACQUISITION COST \$ _____
 2. MOVABLE EQUIPMENT \$ _____
 3. OTHER \$ _____
 4. ART-IN-ARCHITECTURE \$ _____
 5. A/E Basic Service Fee \$ _____
 6. Additional Services \$ _____
 7. Construction Adm. Fee \$ _____
 8. On Site Representative \$ _____
 9. A/E REIMBURSABLE
 a. Survey Subsoil Investigation \$ _____
 b. Design Phase Material Testing \$ _____
 c. Constr. Phase Material Testing \$ _____
 d. Printing \$ _____
 e. Asbestos Air Monitoring \$ _____
 f. Asbestos Observ. (APM) \$ _____
 g. Asbestos Bulk Analysis \$ _____
 h. _____ \$ _____
 i. _____ \$ _____
 TOTAL \$ _____

7. CONSTRUCTION COSTS (from page 2)**TRADE ESTIMATES (A+B+E from page 2)**

General \$ _____
 Plumbing \$ _____
 Heating \$ _____
 Ventilating \$ _____
 Electrical \$ _____
 _____ \$ _____
 _____ \$ _____
 SUBTOTAL - _____
 TRADE ESTIMATES \$ _____
 10% CONTINGENCY \$ _____
 TOTAL BASE BID _____
 BUDGET \$ _____

8. TOTAL BUDGET (1 THRU 7) \$ _____

9. ALTERNATES TO BE BID (C FROM PAGE 2)

1. _____ \$ _____
 2. _____ \$ _____
 3. _____ \$ _____
 4. _____ \$ _____
 SUBTOTAL ALTERNATES \$ _____
 TOTAL BASE _____
 BIDS + ALTERNATES \$ _____

10. *AVAILABLE FUNDS FOR CONSTRUCTION \$ _____

*Item 10 plus 1 thru 6 equal to Total Project Funding below.

SUMMARY OF PROJECT FUNDING

a. CDB Funds (Bond) \$ _____
 b. CDB Funds (Gen. Rev.) \$ _____
 c. Basic User Funds \$ _____
 d. Additional User Funds \$ _____
 e. Federal Funds \$ _____
 f. _____ \$ _____
 TOTAL PROJECT FUNDS \$ _____

School Projects Summary (when applicable) Grant Index: _____

Local Share (_____) \$ _____
 State Share (_____) \$ _____
 Recognized Project Cost \$ _____

Asbestos Projects Summary (when applicable)

A/E Fees \$ _____
 Asbestos Removal \$ _____
 Replacement \$ _____
 Asbestos Total \$ _____

**PROPOSED PROJECT COST BUDGET
CONSTRUCTION COST SUMMARY**

<u>TRADE</u>		<u>BASE BID ESTIMATE</u>		<u>CONST. (1) ADM. FEE</u>		<u>CONTINGENCY (2)</u>		<u>TOTAL</u>	<u>\$/GSF</u>
GENERAL WORK									
Building	a.								(/gsf)
Site	b.								
Alternates	c.								
Subtotals	d.		+e.		+f.		=g.		(/gsf)
PLUMBING									
Building	a.								(/gsf)
Site	b.								
Alternates	c.								
Subtotals	d.		+e.		+f.		=g.		(/gsf)
ELECTRICAL									
Building	a.								(/gsf)
Site	b.								
Alternates	c.								
Subtotals	d.		+e.		+f.		=g.		(/gsf)
HEATING									
Building	a.								(/gsf)
Alternates	c.								
Subtotals	d.		+e.		+f.		=g.		(/gsf)
VENTILATING									
Building	a.								(/gsf)
Alternates	c.								
Subtotals	d.		+e.		+f.		=g.		(/gsf)
ASB. ABATE.	a, d		+e.		+f.		=g.		(/gsf)
SPRINKLER	a, d		+e.		+f.		=g.		(/gsf)
	a, d		+e.		+f.		=g.		(/gsf)
	a, d		+e.		+f.		=g.		(/gsf)
	a, d		+e.		+f.		=g.		(/gsf)
Subtotals-Building	a.								(/gsf)
Site	b.								
Alternates	c.								
Totals	d.		+e.		+f.		=g.		(/gsf)

(1) 1 1/2 % of "d" round up to nearest \$100.

(2) 10% of "a" & "b"

**Exhibit E and Exhibit F are not available as WordPerfect documents.
These are only available as a hard copy.**

SEISMIC RISK BY COUNTIES

In accordance with the 1993 BOCA National Building Code; these counties will be considered to be in seismic zones:

Effective Peak Velocity - Related Acceleration Coefficient (Av):

Linear Interpolation Is Acceptable

Av=0.05:

Henderson	Warren	Knox	Stark	Marshall	Putnam
LaSalle	Grundy	Will	Hancock	McDonough	Cook (Lower 1/2)
Fulton	Peoria	Woodford	Livingstone	Kankakee	Adams
Schuyler	Brown	Cass	Mason	Tazewell	McLean
Ford	Iroquois	Pike	Scott	Morgan	Menard
Logan	DeWitt	Champaign	Vermilion		

Av=0.10:

Calhoun	Green	Jersey	Macoupin	Montgomery	Christian
Sangamon	Macon	Piatt	Moultrie	Douglas	Edgar
Coles	Madison	Bond	Gayette	Effingham	Shelby
Cumberland	Clark	Jasper	Crawford	Clay	Richland
Lawrence	Edwards	Wabash			

Av=0.15:

St. Clair	Clinton	Marion	Wayne	White	Monroe
Washington	Jefferson	Hamilton	Gallatin	Randolph	Perry
Saline	Hardin	Jackson	Williamson	Johnson	Pope
Massac					

Av=0.20:

Union	Alexander	Pulaski
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Effective Peak Acceleration Coefficient (Aa):

Linear Interpolation Is Acceptable

Aa=0.05:

Adams	Brown	Cass	Mason	Logan	McLean
Ford	Iroquois	Menard	Dewitt	Piatt	Champaign
Vermilion	Pike	Scott	Morgan	Sangamon	Macon
Calhoun	Green				

Aa=0.10:

Jersey	Macoupin	Montgomery	Christian	Shelby	Moultrie
Douglas	Coles	Edgar	Madison	Bond	Fayette
Effingham	Cumberland	Jasper	Clark	Crawford	Richland
Lawrence	Edwards	Wabash			

Aa=0.15:

Monroe	St. Clair	Clinton	Marion	Clay	Randolph
Perry	Washington	Jefferson	Wayne	White	Jackson
Franklin	Hamilton	Williamson	Saline	Gallatin	Johnson
Pope	Hardin	Massac			

Aa=0.20:

Union	Alexander	Pulaski
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In accordance iwth the 1994 Uniform Building Code, these counties will be considered to be in seismic zones:

Seismic Zone 1:

LaSalle	Grundy	Will	Knox	Peoria	Cook
Waterford	Marshall	Livingston	Kankakee	Hancock	McDonough
Fulton	Tazewell	McLean	Ford	Iroquois	Adams
Schuyler	Brown	Cass	Mason	Menard	Logan
DeWitt	Champaign	Vermilion	Pike	Scott	Morgan
Sangamon	Macon	Piatt	Moultrie	Douglas	Coles
Edgar	Calhoun	Greene	Jersey	Macoupin	Montgomery
Christian	Shelby				

Seismic Zone 2A:

Madison	Bond	Fayette	Effingham	Cumberland	Clark
St. Clair	Clinton	Marion	Clay	Jasper	Richland
Crawford	Lawrence	Monroe	Washington	Jefferson	Wayne
Edwards	Wabash	Randolph	Perry	Jackson	Franklin
Williamson	Hamilton	Saline	Pope	White	Gallatin
Hardin					

Seismic Zone 3:

Union	Johnson	Alexander	Pulaski	Massac
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