



# JOLIET JUNIOR COLLEGE

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1901

(Business & Auxiliary Services)  
1215 Houbolt Road  
Joliet, Illinois 60431-8938

## **INSTRUCTIONS TO BIDDERS**

Sealed proposals are invited for **PHYSICS LAB RENOVATION** pursuant to specifications.

### **PROPOSALS:**

Proposals will be received and publicly read aloud by the Joliet Junior College District #525, Joliet, Will County, Illinois, at the place, date and time hereinafter designated. You are invited to be present if you so desire.

**PLACE:** Joliet Junior College District #525  
Office of Facility Services  
L-BUILDING Room #L1005  
1215 Houbolt Road  
Joliet, IL 60431-8938

**DATE:** **FEBRUARY 9, 2016**

### **FAXES ARE NOT ACCEPTABLE**

**TIME:** **9:30 AM**

Proposals received after this time will not be accepted.

Proposals must be made in accordance with the instructions contained herein. They shall be submitted on the forms provided on the College's website in a sealed envelope addressed to the Director of Business & Auxiliary Services, L-Building Room L1005, plainly marked, with the Bidder's Name and Address and the notation:

**BID:** **PHYSICS LAB RENOVATION**

### **PRE-BID MEETING:**

A mandatory pre-bid meeting will be held on **FEBRUARY 2, 2016 at 10:00 AM**. The meeting will be at the Main Campus, L Building, Room L1005, 1215 Houbolt Road, Joliet, IL. Bidders who do not attend the mandatory pre-bid meeting will have their bid returned unopened.

### **DELIVERY:**

All prices must be quoted F.O.B., Joliet Junior College, 1215 Houbolt Road, Joliet, IL 60431 unless otherwise noted.

**TAX EXEMPTION:**

Joliet Junior College District #525 is exempt from Federal, State, and Municipal taxes.

**SIGNATURE ON BIDS:**

Joliet Junior College District #525 requires the signature on bid documents to be that of an authorized representative of said company.

Each bidder, by making his bid, represents that he has read and understands the bidding documents and that these instructions to bidders are a part of the specifications.

**BIDDING PROCEDURES:**

1. No bid shall be modified, withdrawn, or cancelled for sixty (60) days after the bid opening date without the consent of the College Board of Trustees.
2. Changes or corrections may be made in the bid documents after they have been issued and before bids are received. In such case, a written addendum describing the change or correction will be issued by the College to all bidders of record. Such addendum shall take precedence over that portion of the documents concerned, and shall become part of the bid documents. Except in unusual cases, addendum will be issued to reach the bidders at least five (5) days prior to date established for receipt of bids.
3. Each bidder shall carefully examine all bid documents and all addenda thereto, and shall thoroughly familiarize themselves with the detailed requirements thereof prior to submitting a proposal. Should a bidder find discrepancies or ambiguities in, or omissions from documents, or should they be in doubt as to their meaning, they shall, at once, and in any event, not later than ten (10) days prior to bid due date, notify the College who will, if necessary, send written addendum to all bidders. The college will not be responsible for any oral instructions. All inquiries shall be directed to the Director of Business & Auxiliary Services. After bids are received, no allowance will be made for oversight by bidder.

**SUBSTITUTIONS:**

1. Each bidder represents that his bid is based upon the materials and equipment described in the bidding documents.
2. Any dealer bidding an equal product must specify brand name, model number, and supply specifications of product. The Board shall be the sole judge of whether an article shall be deemed to be equal.
3. A bidder's failure to meet the minimum specifications as listed may result in disqualification of his bid.

**REJECTION OF BIDS:**

The bidder acknowledges the right of the College Board to reject any or all proposals and to waive informality or irregularity in any proposal received and to award each item to different bidders or all items to a single bidder. In addition, the bidder recognizes the right of the College Board to reject a proposal if the proposal is in any way incomplete or irregular. The College Board may also award, at its discretion, only certain items quoted on. The College Board also reserves the right to reject the proposal of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature or a bid of a Bidder when investigation shows that Bidder is not in a position to perform the contract.

**ACKNOWLEDGEMENT OF ADDENDA:**

Signature of company official on original document shall be construed as acknowledgement of receipt of any and all addenda pertaining to this specific proposal. Identification by number of addenda and date issued should be noted on all proposals submitted.

**FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDA ON PROPOSAL SUBMITTED MAY RESULT IN DISQUALIFICATION OF PROPOSAL.**

**Bidders who obtain a copy of the bid from our web site are responsible for checking back on the site for any addenda issued.**

**CLERICAL ERRORS:**

If applicable, all errors in price extensions will be corrected by Joliet Junior College and totals for award determination corrected accordingly, unless the bidder specifies that no change be made in the total submitted. In this case, all incorrect price extensions will be noted at "lot", and award determination made on the basis of total price submitted.

**SAMPLES:**

Bidder may be required to furnish samples upon request and without charge to the College.

**BID SECURITY:**

A certified check or bank draft or bid bond, made payable to Joliet Junior College District #525, Will County, Illinois, **MUST** be submitted with the bid in the amount of **ten (10) percent of your total bid**. The bid security will be forfeited by the successful bidder in the event of the bidders failure to enter into a contract. Checks or drafts of unsuccessful bidders will be returned as soon as practicable after opening and checking the bids.

**PAYMENTS:**

Certified Payroll

1. With each pay application, contractors shall submit certified payroll in a format acceptable to Junior College District #525.

Partial Lien Waivers

1. The contractors' partial lien waiver, for the full amount of the payment, shall accompany the first payment application. Each subsequent payment application shall be accompanied by the contractor's partial waiver, and by partial waivers from all subcontractors and suppliers who were included in the immediately preceding payment application, to the extent of that payment.
2. Lien waivers from the Contractor and all subcontractors and suppliers shall accompany the first payment application when the amount of payment exceeds 50 percent of the total contract sum.

Final Lien Waivers: The contractor's request for final payment shall include:

1. The contractor's final lien waiver in the full amount of the contract.
2. Final lien waivers in the full amount of their contracts from all subcontractors and suppliers for which final lien waivers have not previously been submitted.

**INSURANCE:**

The successful bidder will be required to furnish a certificate of insurance in the following amounts:

The insurance coverage required here-in-under shall be the minimum amounts maintained by the Contractor and Subcontractors until all Work is completed and accepted by the Owner.

The Contractor will purchase and maintain “all risks” Builder’s Risk property insurance subject only to such exclusions as have been specifically approved by the Owner in writing.

#### A. Workers Compensation

1. State: Statutory
2. Applicable Federal: Statutory
3. Employer’s Liability:
  - a. \$1,000,000 per Accident
  - b. \$1,000,000 Occupational Disease

#### B. Commercial Comprehensive Liability

1. Each Occurrence: \$2,000,000
2. Products/Completed Operations Aggregate: \$2,000,000
3. Personal/Advertising Injury: \$2,000,000
4. General Aggregate: \$2,000,000
5. Policy shall include: \$2,000,000
  - a. Premises: Operations
  - b. Independent Contractors Liability
  - c. Products and Completed Operations: Maintained for minimum of one year after date of final Certificate for Payment, in full amount of the limits specified above.
  - d. Contractual Liability
  - e. Coverage for explosion (x), collapse (c), and underground (u).
6. The Commercial Comprehensive Liability policy shall include a contractual liability endorsement insuring the indemnity required by the contract. The indemnities shall be named as additional insured on the Contractor’s Commercial Comprehensive Liability policy using Form CG 20 10 or its equivalent and shall name Joliet Junior College, its Board of Trustees, officers, employees and agents as additional insured’s at a minimum. The Contractor hereby agrees to effectuate the naming of such additional insured’s as unrestricted additional insured’s on the Contractor’s policy. The additional insured endorsement shall provide the following:
  - a. That the coverage afforded the additional insurance will be primary insurance for the additional insurance with respect to claims arising out of operations performed by or on behalf of the Contractor.
  - b. That the policy shall contain a thirty (30) day notice of cancellation prior to the effective date thereof.
  - c. That the additional insureds have other insurance which is applicable to the loss, such other insurance will be on an excess or contingent basis.
  - d. That the amount of the company’s liability under the insurance policy will not be reduced by the existence of such other insurance.
  - e. That the additional insureds will not be given less than thirty (30) days prior written notice of any cancellation thereof.
  - f. That the Contractor agrees to indemnify the College for any applicable deductibles.

- g. That the insurance policy from an A.M. Best rated “secured” Illinois State licensed insurer.
- h. The Contractor shall provide the College with a copy of its insurance policy or in the alternative and subject to the College’s agreement, an excerpt of a page from the actual policy evidencing the additional insureds as provided for herein.
- i. Contactor acknowledges that failure to obtain such insurance on behalf of the College constitutes a material breach of the contract and subjects Contractor to liability for damages, indemnification and all other legal remedies available to College. The Contractor is to provide the College at all times with a certificate of insurance, evidencing the above requirements have been met. The failure of the College to object to the contents of the certificate or the absence of it shall not be deemed a waiver of any and all rights held by the College.
- j. That enclosed is a copy of the endorsement providing additional insured’s status and that the Contractor will furnish a Certificate of insurance evidencing the foregoing provisions.
- k. Please include clause below in the policy:  
It is agreed that Joliet Junior College, its Board of Trustees, officers, employees, agents and (Architect/Engineer Name) are additional insureds on the policy.

C. Business Auto Liability (including owned, non-owned and hired vehicles).

- 1. Bodily injury
  - a. \$1,000,000 per person
  - b. \$2,000,000 per accident
- 2. Property damage: \$1,000,000     OR
- 3. Combined Single limit: \$1,000,000

D. Umbrella

- 1. Umbrella Excess Liability: \$4,000,000
- 2. If the Contractor’s Workers Compensation, Commercial General Liability and Business Auto policies do not have these minimum limits, an Umbrella policy written by an insurance company acceptable to the Owner may be used to meet the minimum limits required.

All such policies of insurance shall be written by companies approved by the College and Certificates of Insurance shall be furnished to the College. The College shall be listed as an additional insured under such policies. Each policy shall require at least 30 days notice to the College in the event of cancellation. The contractor agrees to indemnify, defend, and hold harmless the College from and against all suits or claims, which may be based upon any injury to or death of any person or persons or damage to property, which may occur or which may be alleged to have occurred in the course of the performance of this Agreement by the Contractor, whether such sum claim shall be made by an employee of the Contractor, by a third person or their representatives, or whether or not it shall be claimed that the said injury, death, or damage or cause through a negligence act or omission of the Contractor; and the all charges of attorneys and all costs and other expenses arising there from or incurred in connection therewith; and if any judgment shall be rendered against the College in any such action or actions, the Contractor, at its own expense, shall satisfy and discharge the same.

**PERFORMANCE BONDS:**

The successful bidder on this proposal must furnish a performance bond and a labor and material payment bond made out to Junior College District #525, prepared on an approved form, as security for the faithful performance of their contract, within ten (10) days of their notification that their bid has been accepted. The surety thereon must be such surety company or companies as are authorized and licensed to transact business in the State of Illinois and have an A-XIV best rating. Attorneys in fact who sign bid bonds must file with each bond a certified copy of their power of attorney to sign said bonds. The performance bond is an amount equal to one hundred and ten percent (110%) of the contract sum. Such bonds shall be in force from the date of signing of the contract until one year after issuing of final certificate of payment. The cost of the bonds shall be included in the bidder's proposal.

**LAWS AND ORDINANCES:**

In execution of the work, the Contractor shall comply with applicable state and local laws, ordinances and regulation, the rules and regulations of the Board of Fire Underwriters, and OSHA standards.

**SEX OFFENDER REGISTRATION REQUIREMENT NOTIFICATION:**

Illinois Compiled Statutes (730 ILCS 150/2) requires that any person who is required by law to register as a sex offender and who is either a student or an employee at an institution of higher education, must also register with the police department of the institution they are employed by or attending. For purposes of this act, a student or employee is defined as anyone working at or attending the institution for a period of five (5) days or an aggregate period of more than thirty (30) days during a calendar year. This includes persons operating as or employed by an outside contractor at the institution. Anyone meeting the above requirements is required to register at the Campus Police Department located in G1013, within five (5) days of enrolling or becoming employed. Persons failing to register are subject to criminal prosecution.

**DAMAGE AND NEGLIGENCE:**

The Contractor agrees to indemnify and save harmless the College and employees from and against all loss, including costs and attorney's fees, by reasons or liability imposed by law upon the College for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damage to property including loss of use thereof as provided in the General Conditions and Supplementary Conditions.

College shall not be responsible for damages, delays, or failure to perform on its part resulting from acts or occurrences of force majeure. "Force majeure" means any (a) act of God, landslide, lightning, earthquake, hurricane, tornado, blizzard, floods and other adverse and inclement weather conditions; (b) fire, explosion, flood, acts of a public enemy, war, blockade, insurrection, riot or civil disturbance; (c) labor dispute, strike, work slow down, picketing, primary boycotts, secondary boycotts or boycotts of any kind and nature, or work stoppages; (d) any law, order, regulation ordinance, or requirement of any government or legal body or any representative of any such government or legal body; (e) inability to secure necessary materials, equipment, parts or other components of the project as a result of transportation difficulties, fuel or energy shortages, or acts or omission of any common carriers; or (f) any other similar cause or similar event beyond the reasonable control of College.

**INVESTIGATION OF BIDDERS:**

The College will make any necessary investigation to determine the ability of the bidder to fulfill the proposal requirements. Joliet Junior College reserves the right to reject any proposal if it is determined that the bidder is not properly qualified to carry out the obligation of the contract.

**APPRENTICESHIP AND TRAINING PROGRAMS:**

The bidder and all bidder's subcontractors must participate in applicable apprenticeship and training programs approved by and registered with the United States Department of Labor Bureau of Apprenticeship and Training. The apprenticeship and training programs(s) must be in the same trade in which the firm shall be performing work on behalf of the College under the Contract. This provision shall not apply to federally funded construction projects if, in the opinion of College, such application would jeopardize the receipt or use of federal funds in support of such project.

**A STATEMENT TO THE ABOVE EFFECT HAS BEEN ADDED TO THE BID FORM. BIDDERS MUST BE A MEMBER OF AN APPROVED APPRENTICESHIP PROGRAM PRIOR TO BID OPENING ON THE PROJECT. FAILURE TO LIST REQUIRED INFORMATION MAY RESULT IN DISQUALIFICATION OF BID”.**

**SUBCONTRACTORS:**

Bidders must state on the proposal form all subcontractors he intends to use for this project. Failure to do so may be cause for rejection of bid.

**PREVAILING WAGE RATE:**

The successful bidder must pay not less than the prevailing hourly wage rate determined by the Illinois Department of Labor for the county where the contract is executed and the craft or type of worker needed to execute the contract. See the prevailing wage scale attached.

If, during the course of work under this contract, the Department of Labor revises the prevailing rate hourly wages to be paid under this contract for any trade or occupation, Owner, will notify Contractor and each Subcontractor of the changes in the prevailing rate of hourly wages. Contractor shall have the sole responsibility and duty to ensure that the revised prevailing rate of hourly wages is paid by contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions to the prevailing wage as set forth above shall not result in an increase in the Contract Sum.

In compliance with the Office of the Attorney General the following is also required of all bidders:

**Payment of Prevailing Wage:**

- The Act requires that all laborers, workers and mechanics employed by or on behalf of a public body in the construction of public works be paid the general prevailing rate of hourly wages (including allotments for training and approved apprenticeship programs, health and welfare, insurance, vacation and pension benefits) for work of a similar character in the locality in which the work is performed. See 820 ILCS 103/3. The Act contains all relevant definitions, including those for the terms “public body”, “public works” and “general prevailing rate of hourly wages”, which will assist you in the understanding its requirements and your responsibilities. See 820 ILCS 130/2.
- The Illinois Department of Labor publishes the current prevailing wage rate. See <http://www.state.il.us/agency/idol/rates/rates.htm>. The rate is revised regularly and such revision takes effect immediately.

### Specifications and Contractual Language:

- Public bodies must insert a provision or stipulation requiring the payment of the prevailing wage rate into every public works resolution or ordinance, call for bids, project specification and contract. See 820 ILCS 130/4(a).
- Contractors and subcontractors must insert a provision or stipulation regarding the payment of the prevailing wage rate into every public works project and bid specification, subcontract, and contractor's bond. See 820 ILCS 130/4(b), (c).
- Contractors or construction managers who have been awarded public works contracts must post the relevant prevailing wage rate(s) at a location on the project site that is easily accessible by workers. See 820 ILCS 130/4(f).

### Record-Keeping Responsibilities:

- All contractors and subcontractors must create and keep for at least three years, records of all laborers, mechanics, and other workers employed by them on a public works project. See 820 ILCS 130/5(a) (1).
- These records must include each worker's name, address, telephone number (if available), social security number, classification(s), hourly wages paid in each pay period, number of hours worked each day, and the starting and ending times of each work day. Each contractor and subcontractor is required to make these records available for inspection by the public body's agents or Illinois Department of Labor officials at a reasonable time and place upon seven business days notice. See 820 ILCS 130/5(a) (1), (b).

### Certified Payroll Records:

- A contractor or subcontractor participating in a public works project must also submit a Certified Payroll the public body every month. This Certified Payroll must consist of a complete copy of the records required to be kept under Section 5(a)(1) of the Act, discussed above (with the exception of daily work starting and ending times). See 820 ILCS 130/5(a)(2).
- The monthly Certified Payroll shall also include a statement signed by the contractor or subcontractor submitting that: (1) the records are true and accurate; (2) the hourly rate paid to each worker is not less than the general prevailing wage rate required; and (3) the contractor or subcontractor is aware that filing a Certified Payroll that he or she knows to be false is a class B misdemeanor. See 820 ILCS 130/5(a)(2).
- The Act requires that a public body shall keep all Certified Payrolls submitted pursuant to the Act for at least three years. See 820 ILCS 130/5(a)(2). The retention of these monthly Certified Payroll submissions for three years by public bodies is crucial to the State of Illinois' efforts to enforce the Act and will be of particular interest to the Attorney General's office in the coming months.

### Failure to comply with the Act's Requirements:

- No public works project may be instituted unless the provisions of the Act have been met. The Illinois Department of Labor is empowered to sue for injunctive relief against the awarding of any public works contract, or continuation of work under any such contract, if it is not in compliance with the Act's prerequisites. Contracts that are not in compliance with the Act's prerequisites are void as against public policy. See 820 ILCS 103/11.

Please note that this is not a complete list of all relevant requirements and prerequisites under the Act. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, including but not limited to, all wage, notice and



record keeping duties. For a full understanding of all of the Act's requirements and prerequisites, as well as the text of the Act and all related regulations, please see the Illinois Department of Labor's website at [www.state.il.us/agency/idol/laws/Law130.htm](http://www.state.il.us/agency/idol/laws/Law130.htm).

**BLACKOUT PERIOD:**

After the College has advertised for bids, no pre-bid vendor shall contact any College officer(s) or employee(s) involved in the solicitation process, except for interpretation of bid specifications, clarification of bid submission requirements or any information pertaining to pre-bid conferences. Such bidders or sub-bidders making such request shall be made in writing at least seven (7) days prior to the date for receipt of bids. No vendor shall visit or contact any College officers or employees until after the bids are awarded, except in those instances when site inspection is a prerequisite for the submission of a bid. During the black-out period, any such visitation, solicitation or sales call by any representative of a prospective vendor in violation of this provision may cause the disqualification of such bidder's response.

**OTHER:**

This contract is subject to and governed by the rules and regulations of the Illinois Human Rights Act. The Customer reserves the right to request additional information after your proposal has been submitted.

**BID QUANTITIES:**

The College Board will reserve the right to increase or decrease, within reasonable limits, such quantities as need requires and at the unit price stated.

**BID AWARDS:**

The successful contractor, and/or any contractor shall not proceed on this bid until it receives a purchase order from the college. Failure to comply is the risk of that contractor.

**TERMINATION OF FUNDING:**

JJC's contractual obligations will be subject to termination and cancellation without penalty, accelerated payment, or other recoupment mechanism as provided herein in any fiscal year for which the Illinois General Assembly or other legally applicable funding source fails to make an appropriation to make payments under the terms of this Contract. In the event of termination for lack of appropriation, the Vendor shall be paid for services performed under this Contract up to the effective date of termination. JJC shall give notice of such termination for funding as soon as practicable after JJC becomes aware of the failure of funding.

**CHANGES TO CONTRACT AFTER BID AWARD:**

There shall be no deviations from any work without a written change order. All change orders must be approved by the Director of Business & Auxiliary Services or Vice President of Administrative Services as well as executed by the successful contractor.

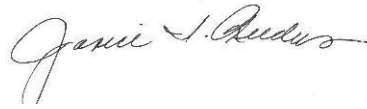
If a change order or aggregate of change orders are 10% or more of the contract price, and such change orders are not approved, in writing, by either the Director of Business & Auxiliary Services or Vice President of Administrative Services, the successful contractor shall not be entitled to any type of compensation for services or materials provided.

**GENERAL:**

Joliet Junior College is committed to a policy of non-discrimination on the basis of sex, handicap, race, color, and national or ethnic origin in the admission, employment, educational programs, and

activities it operates. Inquiries should be addressed to the Director of Human Resources.

The contractor (or vendor) shall agree to save and hold harmless the Joliet Junior College District #525, the members of its College Board, its agents, servants and employees, from any and all actions or causes of action, or claim for damages, including the expense of defending suit, arising or growing out of the performance of, or failure to perform its contract.



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Janice Reedus  
Director of Business & Auxiliary Services

JOLIET JUNIOR COLLEGE  
ILLINOIS COMMUNITY COLLEGE DISTRICT #525  
(Business & Auxiliary Services)  
1215 Houbolt Road  
Joliet, Illinois 60431-8938  
Telephone: (815) 280-6640  
Fax: (815) 280-6631

**INFORMATION PERTAINING TO OUR BIDS CAN BE FOUND AT THE FOLLOWING WEBSITE:**  
**<http://www.jjc.edu/info/purchasing>**

**QUESTIONS PERTAINING TO OUR BIDS CAN BE EMAILED TO:**  
**[purchasing@jjc.edu](mailto:purchasing@jjc.edu)**

**SECTION 00 01 01  
PROJECT TITLE PAGE**

**PROJECT MANUAL**

**FOR**

**Physics Room Renovations**

**1215 Houbolt Road**

**Joliet, Illinois 60431**

**OWNER**

**Joliet Junior College**

**1215 Houbolt Road**

**Joliet, Illinois 60431**

**ARCHITECT/ENGINEER**

**KLUBER ARCHITECTS + ENGINEERS**

**10 S. SHUMWAY AVE.**

**BATAVIA, ILLINOIS 60510**

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**END OF SECTION**

## SECTION 06 10 00 ROUGH CARPENTRY

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Fire retardant treated wood materials.
- B. Concealed wood blocking, nailers, and supports.

#### 1.02 RELATED REQUIREMENTS

- A. Section 12 35 53.19 - Wood Laboratory Casework: Wall-mounted casework components requiring support.

#### 1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- C. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2012.
- D. PS 1 - Structural Plywood; 2009
- E. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology, Department of Commerce; 2010.
- F. WWPA G-5 - Western Lumber Grading Rules; Western Wood Products Association; 2011.

#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. General: Support stacked products to prevent deformation and to allow air circulation.
- B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

### PART 2 PRODUCTS

#### 2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
  - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
  - 2. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
  - 3. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee ([www.alsc.org](http://www.alsc.org)) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

B. Lumber fabricated from old growth timber is not permitted.

## **2.02 DIMENSION LUMBER**

A. Grading Agency: Western Wood Products Association (WWPA).

B. Sizes: Nominal sizes as indicated on drawings, S4S.

C. Moisture Content: S-dry or MC19.

D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

1. Lumber: S4S, No. 2 or Standard Grade.
2. Boards: Standard or No. 3.

## **2.03 CONSTRUCTION PANELS**

A. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

1. Plywood Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.

## **2.04 ACCESSORIES**

A. Fasteners and Anchors:

1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

## **2.05 FACTORY WOOD TREATMENT**

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.

B. Fire Retardant Treatment:

1. Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
  - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
  - b. All interior rough carpentry items are to be fire retardant treated.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION - GENERAL**

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.



- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

### **3.02 BLOCKING, NAILERS, AND SUPPORTS**

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- D. Provide the following specific non-structural framing and blocking:
  - 1. Cabinets and shelf support standards.
  - 2. Chalkboards and marker boards.

### **3.03 CLEANING**

- A. Comply with applicable regulations.
- B. Do not burn scrap on project site.
- C. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.

**END OF SECTION**

## **SECTION 07 84 00 FIRESTOPPING**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Firestopping systems.
- B. Firestopping of all joints and penetrations in fire resistance rated and smoke resistant assemblies, whether indicated on drawings or not.
- C. Smoke-stopping of all penetrations of and joints in smoke partitions, whether indicated on drawings or not, and other openings indicated.

#### **1.02 REFERENCE STANDARDS**

- A. FM 4991 - Approval Standard for Firestop Contractors; Factory Mutual Research Corporation; 2013.
- B. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

#### **1.03 DEFINITIONS**

- A. Assembly: Particular arrangement of materials specific to given type of construction described or detailed in referenced documents.
- B. Barriers: Time rated fire walls, smoke barrier walls, time rated ceiling/floor assemblies and structural floors.
- C. Firestopping: Methods and materials applied in penetrations and unprotected openings to limit spread of heat, fire gasses and smoke.
- D. Penetration: Opening or foreign material passing through or into barrier or structural floor such that full thickness of rated materials is not obtained.
- E. Joint: Interruption to a fire-rated assembly occurring at interface between 1) adjacent sections of wall, 2) intersecting walls, 3) top of wall and ceiling, structural floor or roof deck, 4) wall and edge of structural floor, 5) adjacent sections of structural floor.
- F. System: Specific products and applications, classified and numbered by Underwriters Laboratories, Inc. to close specific barrier penetrations and joints.
- G. Sleeve: Metal fabrication or pipe section extending through thickness of barrier and used to permanently guard penetration. Sleeves are described as part of penetrating system in other sections and may or may not be required.

#### **1.04 SYSTEM DESCRIPTION**

- A. Design Requirements:
  - 1. Smoke barrier construction: Maintain barrier and structural floor resistance to cold smoke at all penetrations, connections with other surfaces and types of construction and at all separations required to permit building movement and sound or vibration absorption, and at other construction gaps.

## 1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
  - 1. Provide manufacturer's qualified engineering judgements for non-standard applicaitons.
- C. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- D. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

## 1.06 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
  - 1. Listing in the current-year classification or certification books of UL will be considered as constituting an acceptable test report.
  - 2. Submission of actual test reports is required for assemblies for which none of the above substantiation exists.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section and:
  - 1. Approved by Factory Mutual Research Corporation under FM 4991, or meeting any two of the following requirements:.
  - 2. With minimum 3 years documented experience installing work of this type.
  - 3. Able to show at least 5 satisfactorily completed projects of comparable size and type.
  - 4. Licensed by authority having jurisdiction.

## 1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original, unopened packaging with legible manufacturer's identification.
- B. Coordinate delivery with scheduled installation date to minimize storage time at site.
- C. Store materials in a clean, dry, ventilated location. Protect materials from freezing if required by manufacturer.

## 1.08 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Maintain minimum temperature before, during, and for 3 days after installation of materials.
- B. Provide ventilation in areas where solvent-cured materials are being installed.

## **PART 2 PRODUCTS**

### **2.01 FIRESTOPPING - GENERAL REQUIREMENTS**

- A. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.

### **2.02 FIRESTOPPING SYSTEMS**

- A. Firestopping: Any material meeting requirements.
  - 1. Fire Ratings: Use any system listed by UL or that has F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and that meets all other specified requirements.
- B. Acceptable Manufacturers: As listed in UL (FRD) for specific UL Design Number.
- C. Fill, Void or Cavity Materials: Conform to UL (FRD) - XHHW.
- D. Firestop Devices: Conform to UL (FRD) - XHJI.
- E. Forming Materials: Conform to UL (FRD) - XHKU.
- F. Mechanical Joint Assemblies: Conform to UL (FRD) - XHLP.
- G. Packing Material: As required by specific UL Design Number for joint system or through-penetration firestop system.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify openings are ready to receive the work of this section.
  - 1. Verify barrier joints and penetrations are properly sized and in suitable condition for application of materials.

### **3.02 PREPARATION**

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping material.
- B. Remove incompatible materials that could adversely affect bond.

### **3.03 INSTALLATION**

- A. Install materials in manner described in UL (FRD) or fire test report and in accordance with manufacturer's instructions, completely closing openings.
- B. Do not cover installed firestopping until inspected by authority having jurisdiction.

### **3.04 CLEANING**

- A. Clean adjacent surfaces of firestopping materials.

### **3.05 PROTECTION**

- A. Protect adjacent surfaces from damage by material installation.

B. Patch or replace firestopping damaged by work of other sections.  
**END OF SECTION**

## SECTION 07 92 00 JOINT SEALANTS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Joint backings and accessories.

#### 1.02 RELATED REQUIREMENTS

#### 1.03 REFERENCE STANDARDS

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.
- C. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; [www.aqmd.gov](http://www.aqmd.gov).

#### 1.04 SUBMITTALS

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
  - 5. Substrates for which use of primer is required.
  - 6. Substrates for which laboratory adhesion and/or compatibility testing is required.
  - 7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
  - 8. Sample product warranty.
- B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- D. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect/Engineer and submit at least two physical samples for verification of color of each required sealant.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience and approved by manufacturer, employing skilled workmen thoroughly trained and experienced in the proper performance of the work of this Section.

## 1.06 WARRANTY

- A. Correct defective work within a five year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Nonsag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
1. BASF Construction Chemicals-Building Systems: [www.buildingsystems.basf.com](http://www.buildingsystems.basf.com).
  2. Bostik Inc: [www.bostik-us.com](http://www.bostik-us.com).
  3. Dow Corning Corporation: [www.dowcorning.com/construction](http://www.dowcorning.com/construction).
  4. Momentive Performance Materials, Inc (formerly GE Silicones): [www.momentive.com](http://www.momentive.com).
  5. Pecora Corporation: [www.pecora.com](http://www.pecora.com).
  6. Tremco Global Sealants: [www.tremcosealants.com](http://www.tremcosealants.com).

### 2.02 JOINT SEALANT APPLICATIONS

- A. Scope:
1. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
    - a. Joints between door and other frames and adjacent construction.
    - b. Joints between countertop back and side splashes and adjacent wall construction.
    - c. Joints between plumbing fixtures and adjacent construction.
    - d. Other joints indicated below.
  2. Do not seal the following types of joints.
    - a. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
    - b. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
    - c. Joints where installation of sealant is specified in another section.
    - d. Joints between suspended panel ceilings/grid and walls.
- B. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic-Urethane sealant; Type S-3.
  2. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; clear; Type S-1.
  3. Joints at Perimeters of Countertop Back and Side Splashes: Mildew-resistant silicone sealant; clear; Type S-1.

### 2.03 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in South Coast Air Quality Management District (SCAQMD); Rule 1168.

## 2.04 NONSAG JOINT SEALANTS

- A. Type S-1 - Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
  - 1. Color: Clear.
- B. Type S-2 - Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
- C. Type S-3 - Acrylic-Urethane Sealant: Water-based; ASTM C920, Grade NS, Uses M and A; single component; paintable; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 12-1/2 percent, minimum.
  - 2. Color: White.

## 2.05 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  - 1. Open Cell: 40 to 50 percent larger in diameter than joint width.
  - 2. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

### 3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.



### 3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

**END OF SECTION**

**SECTION 09 21 16  
GYPSUM BOARD ASSEMBLIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Metal stud wall framing.
- B. Acoustic insulation.
- C. Gypsum wallboard.
- D. Joint treatment and accessories.

**1.02 REFERENCE STANDARDS**

- A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2012.
- B. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2014.
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.
- D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2015.
- E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.
- F. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- G. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2014.
- H. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.
- I. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2013.

**1.03 SUBMITTALS**

- A. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- B. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

**1.04 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum 5 years of documented experience.

## **PART 2 PRODUCTS**

### **2.01 GYPSUM BOARD ASSEMBLIES**

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

### **2.02 METAL FRAMING MATERIALS**

- A. Manufacturers - Metal Framing, Connectors, and Accessories:
1. Clarkwestern Dietrich Building Systems LLC: [www.clarkdietrich.com](http://www.clarkdietrich.com).
  2. Marino: [www.marinoware.com](http://www.marinoware.com).
  3. The Steel Network, Inc: [www.SteelNetwork.com](http://www.SteelNetwork.com).
  4. Tracloc North America; Product Trakloc: [www.traklocmw.com](http://www.traklocmw.com).
- B. Non-Loadbearing Framing System Components: ASTM C645; sheet steel galvanized to G60 class, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
1. Studs: "C" shaped with flat or formed webs with knurled faces.
  2. Runners: U shaped, sized to match studs.
  3. Furring: Hat-shaped sections, minimum depth of 7/8 inch.
- C. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings.

### **2.03 BOARD MATERIALS**

- A. Manufacturers - Gypsum-Based Board:
1. CertainTeed Corporation: [www.certainteed.com](http://www.certainteed.com).
  2. Georgia-Pacific Gypsum: [www.gpgypsum.com](http://www.gpgypsum.com).
  3. Lafarge North America Inc: [www.lafargenorthamerica.com](http://www.lafargenorthamerica.com).
  4. National Gypsum Company: [www.nationalgypsum.com](http://www.nationalgypsum.com).
  5. USG Corporation: [www.usg.com](http://www.usg.com).
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Use for vertical surfaces, unless otherwise indicated.
  2. Thickness:
    - a. Vertical Surfaces: 5/8 inch.

### **2.04 ACCESSORIES**

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3 inch.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.

1. Tape: 2 inch wide, creased paper tape or coated glass fiber tape for joints and corners, except as otherwise indicated.
  2. Ready-mixed vinyl-based joint compound.
- D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- E. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion resistant.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that project conditions are appropriate for work of this section to commence.

#### **3.02 FRAMING INSTALLATION**

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Studs: Space studs at 16 inches on center.
1. Extend partition framing to structure in all locations.
  2. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- C. Blocking: Install wood blocking for support of:
1. Wall mounted cabinets.
  2. Wall-mounted specialties.

#### **3.03 ACOUSTIC ACCESSORIES INSTALLATION**

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

#### **3.04 BOARD INSTALLATION**

- A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Installation on Metal Framing: Use screws for attachment of gypsum board.

#### **3.05 INSTALLATION OF TRIM AND ACCESSORIES**

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
1. Not more than 30 feet apart on walls and ceilings over 50 feet long.

- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### **3.06 JOINT TREATMENT**

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  - 1. Level 5: Walls and ceilings to receive paint finish and other areas specifically indicated.
  - 2. Level 2: In areas behind cabinetry.
  - 3. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
  - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
  - 2. Taping, filling and sanding is not required at base layer of double layer applications.
- C. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

### **3.07 TOLERANCES**

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

**END OF SECTION**

**SECTION 09 51 00**  
**SUSPENDED ACOUSTICAL CEILINGS**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

**1.02 RELATED REQUIREMENTS**

- A. Section 23 37 00 - Air Outlets and Inlets: Air diffusion devices in ceiling.
- B. Section 26 51 10 - Interior Luminaires: Light fixtures in ceiling system.

**1.03 REFERENCE STANDARDS**

- A. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2013a.
- B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2013.
- C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2014.
- D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2014.
- E. CAL (CHPS LEM) - Low-Emitting Materials Product List; California Collaborative for High Performance Schools (CHPS); current edition at [www.chps.net/](http://www.chps.net/).
- F. GEI (SCH) - GREENGUARD "Children and Schools" Certified Products; GREENGUARD Environmental Institute; current listings at [www.greenguard.org](http://www.greenguard.org).
- G. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

**1.05 SUBMITTALS**

- A. Product Data: Provide data on suspension system components.
- B. Samples: Submit two samples 6 x 6 inch in size illustrating material and finish of acoustical units.
- C. Samples: Submit two samples each, 12 inches long, of suspension system main runner.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

## **1.06 QUALITY ASSURANCE**

- A. Fire-Resistive Assemblies: Complete assembly listed and classified by UL (FRD) for the fire resistance indicated.
- B. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

## **1.07 FIELD CONDITIONS**

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Acoustic Panels:
  1. USG: [www.usg.com](http://www.usg.com).
  2. Substitutions: Not permitted.

### **2.02 ACOUSTICAL UNITS**

- A. Acoustical Units - General: ASTM E1264, Class A.
  1. Units for Installation in Fire-Rated Suspension System: Listed and classified for the fire-resistive assembly as part of suspension system.
- B. Acoustical Tile: Painted mineral fiber, ASTM E1264 Type III, with the following characteristics:
  1. VOC Content: Certified as Low Emission by one of the following :
    - a. GreenGuard Children and Schools; [www.greenguard.org](http://www.greenguard.org).
    - b. Product listing in the CHPS Low-Emitting Materials Product List at; [www.chps.net/manual/lem\\_table.htm](http://www.chps.net/manual/lem_table.htm).
  2. Size: 24 by 24 inches.
  3. Thickness: 5/8 inches.
  4. Composition: Water felted.
  5. Light Reflectance: 86 percent, determined in accordance with ASTM E1264.
  6. NRC Range: 0.55 to 0.55, determined in accordance with ASTM E1264.
  7. Ceiling Attenuation Class (CAC): 35, determined in accordance with ASTM E1264.
  8. Edge: SLT (Shadow Line Taper).
  9. Surface Color: White.
  10. Surface Pattern: Fine Texture.
  11. Suspension System: Concealed grid Type SS1.
  12. Products: USG ASTRO Clima Plus #8223.

### **2.03 SUSPENSION SYSTEM(S)**

- A. Manufacturers:

1. ROCKFON, LLC: [www.rockfon.com](http://www.rockfon.com).
  2. USG: [www.usg.com](http://www.usg.com).
  3. Substitutions: Not Permitted.
- B. Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, and perimeter moldings as required.
- C. Exposed Steel Suspension System Type SS1: Formed steel, commercial quality cold rolled; heavy-duty.
1. Profile: Tee; 15/16 inch wide face.
  2. Construction: Double web.
  3. Finish: White painted.
  4. Products:
    - a. ROCKFON Chicago Metallic 200 Snap Grid 15/16" Exposed.
    - b. USG DXLA 15/16" Tee System.
- D. Concealed Suspension System: Formed steel, commercial quality cold rolled; light-duty.

## **2.04 ACCESSORIES**

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
1. Provide L-shaped molding for mounting at same elevation as face of grid.
- C. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

### **3.02 INSTALLATION - SUSPENSION SYSTEM**

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.



- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.
- I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
  - 1. Use longest practical lengths.
  - 2. Overlap and rivet corners.

### **3.03 INSTALLATION - ACOUSTICAL UNITS**

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
  - 1. Make field cut edges of same profile as factory edges.
- G. Where round obstructions occur, provide preformed closures to match perimeter molding.
- H. Install hold-down clips on each panel to retain panels tight to grid system; comply with fire rating requirements.

### **3.04 TOLERANCES**

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

**END OF SECTION**

**SECTION 09 65 00  
RESILIENT FLOORING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Resilient base.
- B. Installation accessories.

**1.02 REFERENCE STANDARDS**

- A. ASTM F1861 - Standard Specification for Resilient Wall Base; 2008 (Reapproved 2012)e1.
- B. BAAQMD 8-51 - Bay Area Air Quality Management District Regulation 8, Rule 51, Adhesive and Sealant Products; www.baaqmd.gov; 2002.
- C. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

**1.03 DELIVERY, STORAGE, AND HANDLING**

- A. Protect roll materials from damage by storing on end.

**1.04 FIELD CONDITIONS**

- A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- B. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

**PART 2 PRODUCTS**

**2.01 RESILIENT BASE**

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove.
  - 1. Height: 4 inch.
  - 2. Thickness: 0.125 inch thick.
  - 3. Finish: Satin.
  - 4. Length: Roll.
  - 5. Color: 40 Black.
  - 6. Manufacturer:
    - a. Johnsonite, a Tarkett Company: www.johnsonite.com.
    - b. Substitutions: Not permitted.

**2.02 ACCESSORIES**

- A. Adhesives: Waterproof; types recommended by flooring manufacturer.
  - 1. Provide only products having lower volatile organic compound (VOC) content than required by the more stringent of the South Coast Air Quality Management District Rule No.1168 and the Bay Area Air Quality Management District Regulation 8, Rule 51.
- B. Filler for Coved Base: Plastic.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

### **3.02 PREPARATION**

- A. Clean substrate.

### **3.03 INSTALLATION**

- A. Starting installation constitutes acceptance of conditions.
- B. Install in accordance with manufacturer's instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.

### **3.04 RESILIENT BASE**

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold.
- C. Install base on solid backing. Bond tightly to wall surfaces.
- D. Scribe and fit to door frames and other interruptions.

### **3.05 CLEANING**

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's instructions.

**END OF SECTION**

**SECTION 09 67 00  
FLUID-APPLIED FLOORING**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Fluid-applied flooring.
- B. Divider strips and accessories.
- C. Integral colored patterns.

**1.02 SUBMITTALS**

- A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available .
- B. Samples: Submit two samples, 4 x 4 inch in size illustrating color and pattern for each floor material for each color specified.
- C. Manufacturer's Installation Instructions: Indicate special procedures.
- D. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

**1.03 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section.
  - 1. Minimum five years of documented experience.
  - 2. Approved by manufacturer.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Store resin materials in a dry, secure area.
- B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

**1.05 FIELD CONDITIONS**

- A. Maintain minimum temperature in storage area of 55 degrees F.
- B. Store materials in area of installation for minimum period of 24 hours prior to installation.
- C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

**PART 2 PRODUCTS****2.01 MANUFACTURERS**

- A. Fluid-Applied Flooring:
  - 1. Crossfield Products Corp: [www.crossfieldproducts.com](http://www.crossfieldproducts.com).

2. Crown Polymers, LLC: [www.crownpolymers.com](http://www.crownpolymers.com).
3. Dur-A-Flex, Inc.: [www.dur-a-flex.com](http://www.dur-a-flex.com).
4. Sika Corporation: [www.sikafloorusa.com](http://www.sikafloorusa.com).
5. The Stonhard Group: [www.stonhard.com](http://www.stonhard.com).

## 2.02 MATERIALS

- A. Fluid-Applied Flooring: Epoxy base coat(s) with embedded vinyl flakes.
1. Top Coat: Polyurethane.
  2. Thickness: 1/8 inch, nominal, when dry.
  3. Texture: Orange peel.
  4. Sheen: Matte.
  5. Color: As selected by Owner.
  6. Products:
    - a. Crossfield Products Corp; Dex-O-Tex Colorflake L: [www.crossfieldproducts.com](http://www.crossfieldproducts.com).
    - b. Crown Polymers; CrownFlake No. 307: [www.crownpolymers.com](http://www.crownpolymers.com).
    - c. Dur-A-Flex; Dur-A-Chip: [www.dur-a-flex.com](http://www.dur-a-flex.com).
    - d. Sika Corporation; Sikafloor DecoFlake System: [www.sikafloorusa.com](http://www.sikafloorusa.com).
    - e. Stonhard; Stontec UTF: [www.stonhard.com](http://www.stonhard.com).

## 2.03 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by flooring material manufacturer.
- B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of materials to sub-floor surfaces.
- D. Verify that concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by flooring materials manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.
- F. Verify that in-floor drains are installed at the correct elevation.

### 3.02 PREPARATION

- A. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor filler.

- B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.
- C. Roughen surface by means of grinding or shotblasting, or other method recommended by flooring manufacturer.
- D. Vacuum clean substrate.
- E. Apply primer to surfaces required by flooring manufacturer.

### **3.03 INSTALLATION - FLOORING**

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness required by manufacturer.
- C. Finish to smooth level surface.

### **3.04 PROTECTION**

- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. Barricade area to protect flooring until fully cured.

**END OF SECTION**

**SECTION 09 90 00  
PAINTING AND COATING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
  - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
  - 5. Floors, unless specifically so indicated.
  - 6. Wood doors having transparent finish.
  - 7. Glass.
  - 8. Concealed pipes, ducts, and conduits.

**1.02 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. GreenSeal GS-11 - Paints and Coatings; 2013.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

#### 1.04 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide primer, undercoater and finish coat for paint and other coating products from a single manufacturer for consideration of warranty and Owner maintenance.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- C. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 5 years documented experience and approved by manufacturer.
- D. Conform to federal, state and local regulations, including VOC rules, at the time of application.
- E. Equipment: Comply with current OSHA regulations.
- F. Products: Maintain at Project Site a copy of Material Safety Data Sheets for each product used.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

#### 1.06 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  1. Benjamin Moore & Co: [www.benjaminmoore.com](http://www.benjaminmoore.com).
  2. PPG Architectural Finishes, Inc: [www.ppgaf.com](http://www.ppgaf.com).



3. Sherwin-Williams Company: [www.sherwin-williams.com](http://www.sherwin-williams.com).

C. Substitutions: Not permitted.

## 2.02 PAINTS AND COATINGS - GENERAL

A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.

1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Supply each coating material in quantity required to complete entire project's work from a single production run.
3. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

B. Primers: As follows unless other primer is required or recommended by manufacturer of top coats; where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

1. Gypsum Board: Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.
2. Concrete: Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.
3. Plaster: Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.

C. Volatile Organic Compound (VOC) Content:

1. Provide coatings that comply with the most stringent requirements specified in the following:
  - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

## 2.03 PAINT SYSTEMS - INTERIOR

A. Interior Surfaces Indicated to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, plaster, and shop primed steel.

1. Two top coats and one coat primer.
2. Top Coat(s): Institutional Low Odor/VOC Interior Latex; MPI #143-148.
3. Satin: MPI gloss level 4; use this sheen for wall surfaces.
4. Semi-Gloss: MPI gloss level 5; use this sheen for items subject to frequent touching by occupants, including door frames and railings.
5. Primer(s): As recommended by manufacturer of top coats, subject to compliance with requirements of this Section.

## 2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  - 1. Gypsum Wallboard: 12 percent.
  - 2. Plaster and Stucco: 12 percent.
  - 3. Concrete: 12 percent.

### **3.02 PREPARATION**

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing coatings that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Concrete Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- H. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.
- I. Plaster Surfaces to be Painted: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- J. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- K. Metal Doors to be Re-painted: Prime metal door top and bottom edge surfaces.

### **3.03 APPLICATION**

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance.
- D. Sand metal surfaces lightly between coats to achieve required finish.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### **3.04 CLEANING**

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

### **3.05 PROTECTION**

- A. Protect finished coatings until completion of project.
- B. Touch-up damaged coatings after Substantial Completion.

### **3.06 SCHEDULE - COLORS**

- A. Wall Surfaces Unless Scheduled or Noted Otherwise: Sherwin Williams #SW7004 "Snowbound".
- B. South Markerboard Wall of Classroom E2007: Benjamin Moore #840 "Kensington Blue".
- C. Steel Doors and Steel Door Frames: Sherwin Williams #B66T354 "Architectural Brown".

**END OF SECTION**

**SECTION 10 11 01  
VISUAL DISPLAY BOARDS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Markerboards and Tackboards.

**1.02 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Blocking and supports.
- B. Section 09 21 16 - Gypsum Board Assemblies: Concealed supports in metal stud walls.

**1.03 REFERENCE STANDARDS**

- A. ANSI A208.1 - American National Standard for Particleboard; 2009.
- B. ASTM A424/A424M - Standard Specification for Steel, Sheet, for Porcelain Enameling; 2009a.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- D. ASTM F793 - Standard Classification of Wall Covering by Use Characteristics; 2010a.
- E. FS L-P-1040 - Plastic Sheets and Strips (Polyvinyl Fluoride); Federal Specifications and Standards; Revision B, 1977.

**1.04 SUBMITTALS**

- A. Product Data: Provide manufacturer's data on markerboard, tackboard, trim, and accessories.
- B. Shop Drawings: Indicate wall elevations, dimensions, joint locations, special anchor details.
- C. Samples: Submit two samples 2 by 2 inch in size illustrating materials and finish, color and texture of tackboard and tackboard surfacing.
- D. Manufacturer's printed installation instructions.
- E. Maintenance Data: Include data on regular cleaning, stain removal .

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

**1.06 WARRANTY**

- A. Provide five year warranty for markerboard to include warranty against discoloration due to cleaning, crazing or cracking, and staining.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Visual Display Boards:
  - 1. MooreCo, Inc: [www.moorecoinc.com](http://www.moorecoinc.com).

2. Claridge Products and Equipment, Inc: [www.claridgeproducts.com](http://www.claridgeproducts.com).
3. Platinum Visual Systems: [www.pvusa.com](http://www.pvusa.com)

## 2.02 VISUAL DISPLAY BOARDS

- A. Markerboards: Porcelain enamel on steel, laminated to core.
  1. Color: White.
  2. Steel Face Sheet Thickness: 24 gage, 0.0239 inch .
  3. Core: Particleboard, manufacturer's standard thickness, laminated to face sheet.
  4. Backing: Aluminum foil, laminated to core.
  5. Size: As indicated on drawings.
  6. Frame: Extruded aluminum, with concealed fasteners.
  7. Frame Profile: 1½ inch wide x ¾ inch deep.
  8. Frame Finish: Anodized, natural.
  9. Accessories: Provide chalk tray and map rail.
- B. Tackboards: Fine-grained, homogeneous natural cork.
  1. Cork Thickness: 1/4 inch.
  2. Fabric: Vinyl coated fabric.
  3. Color: As selected from manufacturer's full range.
  4. Backing: Hardboard, 1/4 inch thick, laminated to tack surface.
  5. Surface Burning Characteristics: Flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.
  6. Size: As indicated on drawings.
  7. Frame: Same type and finish as for chalkboard.

## 2.03 MATERIALS

- A. Porcelain Enameled Steel Sheet: ASTM A424/A424M, Type I, Commercial Steel, with fired-on vitreous finish.
- B. Vinyl Coated Fabric: ASTM F793 Category VI; clear top overcoat of polyvinyl fluoride in accordance with FS L-P-1040 Type 1, Grade B, Class 2, 0.0005 inch thick.
- C. Particleboard: ANSI A208.1; wood chips, set with waterproof resin binder, sanded faces.
- D. Foil Backing: Aluminum foil sheet, 0.005 inch thick.
- E. Aluminum Sheet Backing: 27 gage, 0.014 inch thick.
- F. Adhesives: Type used by manufacturer.

## 2.04 ACCESSORIES

- A. Map Rail: Extruded aluminum, manufacturer's standard profile, with cork insert and runners for accessories; 1 inch wide overall, full width of frame.
- B. Chalk Tray: Aluminum, manufacturer's standard profile one piece full length of chalkboard, molded, closed plastic insert ends; concealed fasteners, same finish as frame.
- C. Mounting Brackets: Concealed.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that field measurements are as indicated.
- B. Verify that internal wall blocking is ready to receive work and positioning dimensions are as indicated on shop drawings.

### **3.02 INSTALLATION**

- A. Install boards in accordance with manufacturer's instructions.
- B. Install with bottom of perimeter frame at 36 inches above finished floor.
- C. Secure units level and plumb.
- D. Butt Joints: Install with tight hairline joints.

### **3.03 CLEANING**

- A. Clean board surfaces in accordance with manufacturer's instructions.
- B. Remove temporary protective cover at Date of Substantial Completion.

**END OF SECTION**

**SECTION 12 35 53.19**  
**WOOD LABORATORY CASEWORK**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Wood cabinets and cabinet hardware.
- B. Wood table frames.
- C. Service fittings and outlets.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 92 00 - Joint Sealants: Sealing joints between casework and countertops and adjacent walls, floors, and ceilings.
- B. Section 12 36 00 - Countertops: Additional requirements for countertops.

**1.03 DEFINITIONS**

- A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.
- B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.
- C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

**1.04 REFERENCE STANDARDS**

- A. ANSI A135.4 - American National Standard for Basic Hardboard; 2012.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.
- C. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2009 (ANSI/HPVA HP-1).
- D. SEFA 2.3 - Installation of Scientific Laboratory Furniture and Equipment; 2010.
- E. SEFA 3 - Work Surfaces; 2010.
- F. SEFA 7 - Laboratory and Hospital Fixtures; 2010.
- G. SEFA 8W - Laboratory Grade Wood Casework; 2010.

**1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Large Components: Ensure that large components can be moved into final position without damage to other construction.
- B. Service Fixtures: Coordinate location and characteristics of service connections.

## 1.06 SUBMITTALS

- A. Product Data: Component dimensions, configurations, construction details, joint details, attachments; manufacturer's catalog literature on hardware, accessories, and service fittings, if any.
- B. Shop Drawings: Casework locations, large scale plans, elevations, cross sections, rough-in and anchor placement dimensions and tolerances, clearances required, and utility locations, if any. Indicate relationship of units to windows, doors, surrounding walls and other building components.
- C. Samples For Color Selection: Wood samples, 3 x 5 inches, fully finished, for color and species selection.
- D. Samples For Verification:
  - 1. Hardware: Pulls, slides, hinges and locks.
- E. Test Reports: From independent laboratory indicating compliance with referenced chemical-resistance standards for cabinet finish and liner materials.
- F. Documentation from the manufacturer identifying VOC and chemical component limits for all wood glues and sealants.
- G. Documentation from the manufacturer showing that all composite wood products provided do not contain urea-formaldehyde resin.
- H. Manufacturer's Installation Instructions.
- I. Maintenance Data: Manufacturer's recommendations for care and cleaning.
- J. Manufacturer's Warranty.

## 1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years of documented experience.
- B. Single Source: Provide wood laboratory casework components from a single casework manufacturer.
- C. Installer Qualifications: Certified by the manufacturer.

## 1.08 DELIVERY, STORAGE AND HANDLING

- A. Schedule delivery so rooms are sufficiently complete that material can be installed immediately upon delivery.
- B. Protect finished surfaces from soiling and damage during handling and installation.

## 1.09 FIELD CONDITIONS

- A. Deliver and install wood laboratory casework only after the following conditions are met:
  - 1. Windows and doors are installed and the building is secure and weathertight.
  - 2. Ceilings, overhead ductwork and lighting are installed in spaces to receive wood laboratory casework.



3. Painting and flooring work are complete in spaces to receive wood laboratory casework.
4. Interior building temperature is maintained at 65 to 80 degrees F, and ambient relative humidity is maintained at 25% to 55% prior to delivery, and during and after installation of wood laboratory casework.

## 1.10 WARRANTY

- A. Manufacturer's one-year warranty against defects in materials and workmanship.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Wood Laboratory Casework:
  1. Diversified Woodcrafts, Inc. [www.diversifiedwoodcrafts.com](http://www.diversifiedwoodcrafts.com).
  2. Hamilton Scientific LLC: [www.hamiltonscientific.com](http://www.hamiltonscientific.com).
  3. Institutional Casework, Inc.: [www.iciscientific.com](http://www.iciscientific.com).
  4. ISEC, Inc.: [www.isecinc.com](http://www.isecinc.com).
  5. Lab Crafters, Inc.: [www.lab-crafters.com](http://www.lab-crafters.com).
  6. Leonard Peterson & Co., Inc.: [www.lpc.com](http://www.lpc.com).
  7. Kewaunee Scientific Corp: [www.kewaunee.com](http://www.kewaunee.com).
  8. Mott Manufacturing Ltd.: [www.mott.ca](http://www.mott.ca).
  9. Westmark Products, Inc: [www.westmarkproducts.com](http://www.westmarkproducts.com).
  10. Wood-Metal Industries: [www.wood-metal.com](http://www.wood-metal.com).

### 2.02 WOOD LABORATORY CASEWORK

- A. Cabinets, General: Solid wood and composite wood panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels.
  1. Style: Flush overlay. Square edged doors and drawer fronts, with 1/8" gaps between doors and between drawer fronts, and a 1/16" offset from doors and drawer fronts to cabinet body edges.
  2. Joinery Method: Case body joints doweled using 8mm laterally fluted hardwood dowels spaced per AWI/AWMAC/WI (AWS) and glued and screwed (except that drawers may be lock shoulder jointed and pinned or multiple-dovetailed), with interior of units smooth and flush; cabinet bottom flush with top of face frame; without gaps or inaccessible spaces or areas where dirt or moisture could accumulate.
  3. Structural Performance: In addition to the requirements of SEFA 3, 7 and 8W, components safely support the following minimum loads:
    - a. Base Units: 500 lbs/linear ft across the cabinet ends.
    - b. Suspended Units: 300 lbs static load.
    - c. Tables: 300 lbs, minimum, on four legs.
    - d. Drawers: 125 lbs, minimum.
    - e. Hanging Wall Cases: 300 lbs (136 kg).
    - f. Shelves: 100 lbs, minimum.
  4. Unit Dimensions: Widths and depths of individual units within 1/2 inch of what is shown on Drawings. Manufacturer's "standard" unit sizes are acceptable only if meeting this requirement.
  5. Glazing: With gasket and removable stops; minimize rattling and vibration.

6. Scribes and Fillers: Where cabinets do not fit tight to adjacent construction, provide filler panels of matching construction and finish.

B. Countertops and Tabletops: As specified in Section 12 36 00.

1. Backing: Pressure glued to plywood core backing, without visible joints.

## 2.03 MATERIALS

A. VOC-Content-Restricted Products: VOC content not greater than required by the following:

1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
2. Aerosol Adhesives: GreenSeal GS-36.
3. Joint Sealants: SCAQMD 1168 Rule.
4. Stains and Coatings: Most stringent of the following:
  - a. 40 CFR 59, Subpart D.
  - b. SCAQMD 1113 Rule.
  - c. CARB (SCM).

B. Wood-Based Materials:

1. Solid Wood: Air-dried to 4.5 percent moisture content, then tempered to 6 percent moisture content before use.
  - a. Exposed Material: Red Oak, FAS Grade.
  - b. Semi-Exposed Material: Red Oak, Select Grade.
2. Composite Wood Panels: Containing no urea-formaldehyde resin binders.
  - a. Partical Board Core Panels: 3-ply particle board, grade 1-M-2 minimum, 48 lb. density.
  - b. Veneer Core Panels: 7-ply minimum (3/4 inch thick panels), 9-ply minimum (1 inch thick panels) and 13-ply minimum (1½ inch thick panels) with cross and face plies bonded with Type II water-resistant glue.
  - c. Exposed Surfaces: Plain sliced select white maple (no heartwood) veneer, HPVA HP-1 Grade AA; clear, compatible grain and color, no defects; book matched, running matched, vertical grain.
  - d. Semi-Exposed Surfaces: Same species as exposed, plain sliced; HPVA HP-1, Grade B.
  - e. Edgebanding: 3mm hardwood; same species as panel face veneers; on all edges of doors and drawer fronts, front edges of shelves and vertical divider panels, and front edges of base, wall and tall cabinet cases.
3. Concealed Solid Wood or Composite Wood Panels: Any species and without defects affecting strength or utility.

C. Finish For Wood-Based Materials: Water-based, high-performance acrylic urethane complying with SEFA 8W requirements for chemical resistance when tested in both horizontal and vertical orientation.

1. Finish Performance: Provide finish on all surfaces having chemical resistance of Level 0 (no change) or Level 1 (slight change of gloss or slight discoloration) according to SEFA 8W and no visible effect when surface is exposed to:
  - a. Hot water at temperature between 190 degrees F and 205 degrees F trickled down the test surface at 45 degree angle for 5 minutes.
  - b. Constant moisture in the form of 2 by 3 by 1 inch thick cellulose sponge kept continually saturated with water and in contact with test surface for 100 hours.

2. Appearance: Clear satin sheen; not cloudy or muddy. Provide stain color to approximate color of Owner's existing wood laboratory casework control sample.

D. Hardboard: ANSI A135.4, Class 1, tempered.

E. Cabinet Hardware: Manufacturer's standard styles, exposed components stainless steel.

1. Finish of Exposed Components: Satin chrome finish.
2. Locks: Lock with 5 pin cylinder and 2 keys per lock; ANSI/BHMA A156.11, Grade 1.
  - a. Lock For Paired Cabinet Doors: CompX Timberline Double Door Lock Type 250: [www.compx.com](http://www.compx.com). Provide for cabinets of any height having paired doors.
  - b. Slide Bolt Lock For Tall Cabinets: CompX Timberline System 260 Wardrobe Lock: [www.compx.com](http://www.compx.com). Provide for all cabinets over 48 inches tall. Install on right-hand leaf of cabinets with paired doors.
  - c. Latch For Paired Doors on Tall Cabinets: CompX Timberline DL series Double Door Latch: [www.compx.com](http://www.compx.com). Provide DL-200 at top and DL-300 at bottom of cabinet.
3. Shelves:
  - a. Shelf Standards and Brackets: Vertical steel standards with rubber button fitted steel brackets; epoxy-coated, complying with BHMA A156.9, Types B04102 and B04112,
  - b. Cabinet Shelf Supports: Metal pins in holes bored at 32mm centers.
4. Swinging Doors:
  - a. Hinges: Offset pin, 5-knuckle, institutional style, hospital tipped. Provide two hinges for doors up to 48 inches high; three hinges for doors over 48 inches high.
  - b. Catches: Magnetic.
  - c. Pulls: Satin chrome or brushed nickel 10 mm (3/8 inch) dia wire pulls, 4 inches wide.
5. Drawers:
  - a. Pulls: Satin chrome or brushed nickel 10 mm (3/8 inch) dia. wire pulls, 4 inches wide.
  - b. Slides: Steel, full extension arms, ball bearings; capacity as recommended by manufacturer for drawer height and width.
6. Label Holders: Steel; anachrome finish; for 2 inch x 1 inch label cards; Knape & Vogt #701 ANO. Provide on each door and drawer.
7. Pullboard Slides: Epoxy-coated steel; 3/4 extension, open roller, 75 lb. dynamic load, with hold open feature.
8. Table Leg Casters: Heavy-duty, 100 lb. min. load; swivel stem type, 4 inch diameter solid urethane wheel; locking brake.

## 2.04 SERVICE FITTINGS AND FIXTURES

- A. Provide units that comply with SEFA 7, complete with washers locknuts, nipples, and other installation accessories. Include wall and deck flanges, escutcheons, handle extension rods and similar items.
  1. Natural Gas Outlet: Model L4100-132AWSA manufactured by WaterSaver Faucet Co.: [www.wsflab.com](http://www.wsflab.com).
  2. Water Outlet: Model L414VB-BH manufactured by WaterSaver Faucet Co.: [www.wsflab.com](http://www.wsflab.com).

## 2.05 ACCESSORIES

- A. Electrical Outlet Covers: Stainless steel.

B. Tote Trays: 19 x 13-3/4 x 4-3/8 inches; model FB1030 manufactured by Flinn Scientific, Inc.:  
www.flinnsci.com.

C. Sealant For Use in Casework Construction: Manufacturer's recommended type.

## 2.06 FABRICATION

### A. Base Cabinet Units:

1. End Panels: 3/4 inch thick particle board or veneer core panel; bore interior faces, as appropriate, for security panels, rails, and shelf support holes; provide levelers unless leveling will be accomplished by shimming units in field.
2. Full Top Frame:
  - a. Horizontal Front Top Rail: 1 inch x 3 inch exposed solid wood or edge banded 9-ply minimum veneer core plywood.
  - b. Vertical Back Top Rail: 3/4 inch x 3¾ inch solid wood or veneer core panel.
  - c. Top side rails: 3/4 inch x 1½ inch solid wood between front horizontal and back vertical rails.
3. Front Horizontal Intermediate Rail: 3/4 inch x 1½ inch exposed solid wood; provide between doors and drawers.
4. Intermediate Rear Rails: 3/4 inch x 1½ inch solid wood rail; provide where security panels are specified.
5. Toe Space Rails: 3/4 inch x 3¾ inch solid wood or veneer core panel, mounted between end panels, forming a 4" high x 2½ inch deep toe space, closed to cupboard bottom.
6. Bottom Panels: 3/4 inch thick particle board core or veneer core panel, set flush with cabinet end panels. Fabricate suspended unit bottoms of 1 inch thick panel material. Removable bottoms are not acceptable.
7. Back Panels:
  - a. Cupboard Units: One-piece 1/4 inch thick hardboard, rabbetted into rear top rail for easy removal from inside of cabinet.
  - b. Drawer Units: Removable 1/4 inch thick hardboard split back panels, rabbetted into top rail.
  - c. Sink units: Half height, one-piece 1/4 inch thick hardboard, rabbetted into rear rail for easy removal from inside of cabinet.
8. Vertical Dividers In Combination Cabinets: 1½ inch thick veneer core panels; frames not acceptable.
9. Security panels: 1/4 inch thick hardboard panel rabbetted into front and rear rails and end panels; provide between drawers with locks and above doors on units with locks.
10. Shelves: 1 inch thick veneer core plywood; adjustable on 32mm centers.
  - a. Depth: 17¾ inches.
11. Drawer construction:
  - a. Box: Four-sided drawer box with back, front and sides of 12mm (1/2 inch nominal) 9-ply birch plywood with chemical resistant finish and finished top edges. Three-sided drawer box attached to outer drawer front is not acceptable.
  - b. Box Corner Joinery: Manufacturer's option.
    - a) Lock joint, glued and pinned.
    - b) Multiple dovetail.

- c. Bottom: Manufacturer's option; nominal 1/4 inch thick material, inset into all four sides of drawer box and sealed with hot melt glue process around entire drawer bottom perimeter. Staples are not acceptable.
    - a) White coated MDF board.
    - b) Tempered hardboard, smooth side up.
    - c) White PVC clad MDF board.
  - d. Divider Grooves: As indicated on Drawings.
12. Door Panels and Removable Drawer Front Panels: 3/4 inch thick particleboard core panel.
13. Fillers, Kneespace Panels, Scribes, etc.: 3/4 inch thick; same species and grade as adjacent exposed surfaces; veneer core panel or solid wood.
14. Pullboards: 1 inch thick veneer core panel with balanced laminated faces; front constructed same as a drawer front with gaps and grain as specified for cabinet face exterior.
- B. Wall, Upper and Tall Case Units: Fabricate of materials specified for base units, except as noted below:
- 1. Top Panels: 1 inch thick, veneer core panel.
  - 2. Bottom Panels:
    - a. Wall and Upper Case Units: 1 inch thick veneer core panel.
    - b. Tall Case Units: 1 inch thick veneer core panel.
  - 3. Exposed Back Panels: 1/4 inch thick veneered MDF plywood with backs recessed 7/8" and set into top, bottom and end panels, sealed with hot melt glue process around entire perimeter.
  - 4. Semi-Exposed Back Panels: Manufacturer's option; recessed 7/8" and set into top, bottom and end panels, sealed with hot melt glue process around entire perimeter.
    - a. 1/4 inch thick veneered MDF plywood.
    - b. 1/4 inch thick hardboard.
  - 5. Shelves: 1 inch thick veneer core panel; adjustable on 32mm centers.
  - 6. Fixed Shelves In Tall Case Units: 1 inch thick veneer core panel.
  - 7. Framed Glass Doors: Solid wood, 3/4 inch x 2<sup>3</sup>/<sub>4</sub> inch frame stock, machined to accept glass, mitered joints, extruded vinyl retaining molding to allow glass to be replaced without tools.
- C. Table Frames:
- 1. Perimeter Rails: 3/4 inch x 4-5/16 inch solid wood or veneer core panel with attached steel corner braces, grooved and screwed into both rails at each corner.
  - 2. Reinforcing Cross Rails: 3/4 inch veneer core panel, doweled, glued and pinned into perimeter rails at intervals not more than 33 inches on center in tables without drawers.
  - 3. Separate Cross Rails: 3/4 inch x 4-5/16 inch solid wood or veneer core panel with attached steel brackets at both ends.
  - 4. Legs: 2<sup>1</sup>/<sub>2</sub> inch x 2<sup>1</sup>/<sub>2</sub> inch solid wood, with 3/8-16 x 3-1/2 inch hanger bolt inserted 1<sup>3</sup>/<sub>4</sub> inches into leg and fastened to perimeter rail corner brace.
  - 5. Leg rails (if required): 1<sup>1</sup>/<sub>4</sub> inch x 2<sup>1</sup>/<sub>2</sub> inch solid wood mortised into legs and secured with a 3/8-16 x 5 inch long stove bolt.
  - 6. Leg Shoes: Black rubber or vinyl with provision for floor clip.
- D. Finish: Factory-finish all exposed and semi-exposed surfaces with the same finish.
- 1. Preparation: Wood sanded smooth, free from dust and mill marks.
  - 2. Stain: Single application of clean, manufacturer-recommended stain of selected color; tinted coating not acceptable.

3. Coating: Apply in accordance with manufacturer instructions, force-dry, sand and wipe clean.
  4. Coats: Multiple coats as required to achieve minimum 1.5 mil dry film thickness.
  5. Appearance: Clear satin gloss; not cloudy or muddy.
- E. Fixture Locations: Cut and drill counter tops, backs, and other components for service outlets and fixtures.
- F. Access Panels: Provide access panels for maintenance of utility service and mechanical and electrical components.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify adequacy of support framing and anchors.
- B. Verify that service connections are correctly located and of proper characteristics.

### **3.02 INSTALLATION**

- A. Perform installation in accordance with manufacturer's instructions and with SEFA 2.3.
- B. Use anchoring devices to suit conditions and substrate materials encountered.
- C. Set casework items plumb and square, securely anchored to building structure.
- D. Align cabinets to adjoining components, install filler panels where necessary to close gaps.
- E. Fasten continuous cabinets together with joints flush, tight and uniform.
- F. Secure wall cabinets to solid supporting material.
- G. Install accessories and service fittings in accordance with manufacturer's recommendations. Turn screws to seat flat; do not drive.
- H. Replace units that are damaged, including those that have damaged finishes.

### **3.03 TOLERANCES**

- A. Maximum variation from alignment of adjacent casework units: 1/32 inch.

### **3.04 ADJUSTING**

- A. Adjust operating parts, including doors, drawers, hardware, and fixtures, to function smoothly.

### **3.05 CLEANING**

- A. Clean all components and remove dust and debris from all drawer boxes and cabinet compartments.

### **3.06 PROTECTION**

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Repair damage that occurs prior to Date of Substantial Completion, including finishes, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

**END OF SECTION**



**SECTION 12 36 00  
COUNTERTOPS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Countertops for laboratory casework and table frames.
- B. Shelves for standards and brackets.
- C. Sinks molded into countertops.
- D. Epoxy resin sinks.

**1.02 RELATED REQUIREMENTS**

- A. Section 12 35 53.19 - Wood laboratory Casework: Cabinets, table frames, shelf standards and brackets.

**1.03 REFERENCE STANDARDS**

- A. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2014.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.

**1.04 SUBMITTALS**

- A. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.
- B. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
- C. Installation Instructions: Manufacturer's installation instructions and recommendations.
- D. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

**1.05 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Same fabricator as for cabinets on which tops are to be installed.
- B. Installer Qualifications: Certified by Fabricator.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

**1.07 FIELD CONDITIONS**

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.



## PART 2 PRODUCTS

### 2.01 COUNTERTOP ASSEMBLIES

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS).
- B. Epoxy Resin Countertops: Filled epoxy resin molded into homogenous, non-porous sheets; no surface coating and color and pattern consistent throughout thickness; with integral or adhesively seamed components.
  - 1. Flat Surface Thickness: 1 inch, nominal.
  - 2. Flammability: Self-extinguishing, when tested in accordance with ASTM D635.
  - 3. Surface Finish: Smooth, non-glare.
  - 4. Color: Black.
  - 5. Exposed Edge Shape: 1/8 inch bevel chamfer.
  - 6. Drip Edge: Drip groove 1/8 inch wide and deep, located 1/2 inch back from edge on underside of all exposed edges.
  - 7. Back and End Splashes: Same material, same thickness; separate for field attachment.
  - 8. Sinks: Same material, same color; integrally molded with counter; bottom sloped to outlet; molded outlets; drain outlet located in back corner.
    - a. Basin Size: 16 x 16 inches x 12 inches deep.
    - b. Sides and Ends: 1/2 inch minimum thickness.
    - c. Bottoms: 5/8 inch minimum thickness.
    - d. Interior Corners: 1 inch minimum radius.
    - e. Clamping collars for 1-1/2 or 2 inch diameter waste pipe, for sealed but not permanent connection.
    - f. Steel channel supports front to back on each side, fastened to underside of top to support twice full sink weight.
  - 9. Manufacturers:
    - a. Durcon, Inc.: [www.durcon.com](http://www.durcon.com).
    - b. LOC Scientific, Inc.: [www.locscientific.com](http://www.locscientific.com).
    - c. OnePointe Solutions (ChemTops): [www.chemtops.com](http://www.chemtops.com).
    - d. Prime Industries, Inc.: [www.piilab.com](http://www.piilab.com).
    - e. Total Laboratory Solutions: [www.duratop-epoxy.com](http://www.duratop-epoxy.com).
  - 10. Fabricate in accordance with AWI/AWMAC/WI (AWS), Section 11 - Countertops, Premium Grade.

### 2.02 ACCESSORY MATERIALS

- A. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- B. Joint Sealant: Mildew-resistant silicone sealant, clear.
- C. Grommets for Holes in Countertops: Molded plastic; matching caps with slots for wire passage. Color(s) as selected by Owner from manufacturer's fill line.

### 2.03 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.

1. Join lengths of tops using best method recommended by manufacturer.
  2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
  3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
  2. Height: 4 inches, unless otherwise indicated.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect/Engineer of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

### **3.02 PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### **3.03 INSTALLATION**

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Attach epoxy resin countertops using compatible adhesive.
- C. Seal joint between back/end splashes and vertical surfaces.

### **3.04 TOLERANCES**

- A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.
- C. Field Joints: 1/8 inch wide, maximum.

### **3.05 CLEANING**

- A. Clean countertop surfaces thoroughly.

### **3.06 PROTECTION**

- A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.  
**END OF SECTION**

**SECTION 22 05 53  
IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Pipe Markers.

**1.02 REFERENCE STANDARDS**

- A. ASME A13.1 - Scheme for the Identification of Piping Systems; The American Society of Mechanical Engineers; 2007.

**PART 2 PRODUCTS**

**2.01 IDENTIFICATION APPLICATIONS**

- A. Piping: Pipe markers.

**2.02 PIPE MARKERS**

- A. Manufacturers:
  - 1. Kolbi Pipe Marker Co..
  - 2. Seton Identification Products.
  - 3. Brimer Industries.
  - 4. Craftmark Identification Systems.
- B. Comply with ASME A13.1.
- C. Plastic Pipe Markers: Factory fabricated, flexible, semi- rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
- D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

**PART 3 EXECUTION**

**3.01 PREPARATION**

- A. Degrease and clean surfaces to receive adhesive for identification materials.

**3.02 INSTALLATION**

- A. Install plastic pipe markers in accordance with manufacturer's instructions.
- B. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
- C. Identify pipe markers indicating service, flow direction, and pressure.
- D. Install pipe markers in clear view and align with axis of piping.

- E. Location of pipe identification not to exceed 20 feet on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.

**END OF SECTION**

**SECTION 22 07 19**  
**PLUMBING PIPING INSULATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Piping insulation.
- B. Jackets and accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 84 00 - Firestopping.
- B. Section 22 10 05 - Plumbing Piping: Placement of hangers and hanger inserts.

**1.03 REFERENCE STANDARDS**

- A. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus; 2013.
- B. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2015.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- D. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.
- E. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

**1.04 QUALITY ASSURANCE**

- A. Applicator Qualifications: Company specializing in performing the type of work specified in this section with minimum three years of experience.
- B. Comply with the Midwest Insulation Contractors Association "National Commercial and Industrial Insulation Standards".

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

**1.06 FIELD CONDITIONS**

- A. Maintain ambient conditions required by manufacturers of each product.
- B. Maintain temperature before, during, and after installation for minimum of 24 hours.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

## 2.02 GLASS FIBER

- A. Manufacturers:
  1. CertainTeed Corporation.
  2. Johns Manville Corporation.
  3. Knauf Insulation.
  4. Owens Corning Corp.
- B. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
  1. 'K' Value: ASTM C177, 0.24 at 75 degrees F.
  2. Maximum Service Temperature: 650 degrees F.
  3. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches.
- D. Vapor Barrier Lap Adhesive: Compatible with insulation.

## 2.03 JACKETS

- A. PVC Plastic.
  1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
    - a. Minimum Service Temperature: 0 degrees F.
    - b. Maximum Service Temperature: 150 degrees F.
    - c. Moisture Vapor Permeability: 0.002 perm inch, maximum, when tested in accordance with ASTM E96/E96M.
    - d. Thickness: 10 mil.
    - e. Connections: Brush on welding adhesive.
  2. Covering Adhesive Mastic: Compatible with insulation.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that piping has been tested before applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.
- D. Insulated pipes conveying fluids below ambient temperature: Insulate entire system including fittings, valves, unions, flanges, strainers, flexible connections, and expansion joints. All hangers, supports, anchors and other projections that are in contact to cold surfaces shall be insulated and vapor sealed to prevent condensation.
- E. Glass fiber insulated pipes conveying fluids below ambient temperature:

1. Provide vapor barrier jackets, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.
  2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- F. For hot piping conveying fluids 140 degrees F or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.
- G. Glass fiber insulated pipes conveying fluids above ambient temperature:
1. Provide standard jackets, with or without vapor barrier, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples.
  2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- H. Inserts and Shields:
1. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
  2. Insert Location: Between support shield and piping and under the finish jacket.
  3. Insert Configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
  4. Insert Material: Hydrous calcium silicate insulation or other heavy density insulating material suitable for the planned temperature range.
- I. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions. At fire separations, refer to Section 07 84 00.
- J. Apply insulation at pipe hangers and supports according to National Commercial and Industrial Standards Plate Numbers 5, 6 and 7.

### 3.03 SCHEDULES

- A. Plumbing Systems:
1. Domestic Hot Water Supply:
    - a. Glass Fiber Insulation:
      - a) Pipe Size Range: Up to and including 2 inch.
        - (a) Thickness: 1 inch.
  2. Domestic Cold Water:
    - a. Glass Fiber Insulation:
      - a) Pipe Size Range: All sizes.
        - (a) Thickness: 1 inch.

**END OF SECTION**



## **SECTION 22 10 05 PLUMBING PIPING**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Pipe, pipe fittings, valves, and connections for piping systems.
  - 1. Domestic water.
  - 2. Gas.
  - 3. Flanges, unions, and couplings.
  - 4. Pipe hangers and supports.

#### **1.02 RELATED REQUIREMENTS**

- A. Section 22 05 53 - Identification for Plumbing Piping and Equipment.
- B. Section 22 07 19 - Plumbing Piping Insulation.

#### **1.03 REFERENCE STANDARDS**

- A. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; The American Society of Mechanical Engineers; 2011.
- B. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2012 (ANSI B16.18).
- C. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; The American Society of Mechanical Engineers; 2013.
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.
- E. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).
- F. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2014.
- G. ASTM B813 - Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube; 2010.
- H. ASTM B828 - Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings; 2002 (Reapproved 2010).
- I. AWWA C651 - Disinfecting Water Mains; American Water Works Association; 2005 (ANSI/AWWA C651).
- J. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2009.
- K. NSF 61 - Drinking Water System Components - Health Effects; 2014 (Errata 2015).
- L. NSF 372 - Drinking Water System Components - Lead Content; 2011.

- M. Safe Drinking Water Act, Section 1417 - Lead Free: Refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content  $\leq 0.25\%$ , Amended January 4, 2011.

#### **1.04 QUALITY ASSURANCE**

- A. Perform work in accordance with applicable codes.  
 B. Perform Work in accordance with City plumbing ordinances.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.  
 B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

### **PART 2 PRODUCTS**

#### **2.01 GENERAL REQUIREMENTS**

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

#### **2.02 DOMESTIC WATER PIPING, ABOVE GRADE**

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).  
 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.  
 2. Joints: ASTM B32, alloy Sn95 solder.  
 3. Mechanical Press Sealed Fittings: Double pressed type, NSF 61 approved or certified, utilizing EPDM, non toxic synthetic rubber sealing elements. Sealing elements shall be factory installed by fitting manufacturer. Press ends shall have means to indicate non-pressed fitting during pressure testing.  
 a. Manufacturers:  
 a) Viega LLC.  
 b) Nibco.

#### **2.03 NATURAL GAS PIPING, ABOVE GRADE**

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.  
 1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, wrought steel welding type.  
 2. Joints: Threaded or welded to ASME B31.1.

#### **2.04 FLANGES, UNIONS, AND COUPLINGS**

- A. Unions for Pipe Sizes 3 Inches and Under:  
 1. Ferrous pipe: Class 150 malleable iron threaded unions.  
 2. Copper tube and pipe: Class 150 bronze unions with soldered joints.  
 B. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

## 2.05 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
  - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
  - 2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
  - 3. Trapeze Hangers: Welded steel channel frames attached to structure.
  - 4. Vertical Pipe Support: Steel riser clamp.
- B. Plumbing Piping - Water:
  - 1. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
  - 2. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.
- C. Plumbing Piping - Gas:
  - 1. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.

### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Provide access where valves and fittings are not exposed.
- G. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.
- H. Sleeve pipes passing through partitions, walls and floors.
- I. Pipe Hangers and Supports:
  - 1. Support horizontal piping as scheduled.
  - 2. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
  - 3. Place hangers within 12 inches of each horizontal elbow.

4. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
5. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
6. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
7. Provide copper plated hangers and supports for copper piping.

### **3.03 APPLICATION**

- A. Use grooved mechanical couplings and fasteners only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.

### **3.04 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM**

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Ensure Ph of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- C. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual.
- D. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.
- E. Maintain disinfectant in system for 24 hours.
- F. If final disinfectant residual tests less than 25 mg/L, repeat treatment.
- G. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.
- H. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

### **3.05 SCHEDULES**

- A. Pipe Hanger Spacing:
  1. Metal Piping:
    - a. Pipe size: 1/2 inches to 1-1/4 inches:
      - a) Maximum hanger spacing: 6.5 ft.
      - b) Hanger rod diameter: 3/8 inches.

**END OF SECTION**

## SECTION 22 66 00 PROCESS PIPING

### PART 1 GENERAL

#### 1.01 SUMMARY

- A. Section Includes:
  - 1. Acid waste piping system.
- B. Related Sections:
  - 1. Section 12 36 00 - Countertops.

#### 1.02 SUBMITTALS

- A. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.
- B. Provide manufacturer's Installation Instructions.
- C. Record actual locations of piping, equipment, cleanouts, etc.
- D. Operation and Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

#### 1.03 REFERENCES

- A. ANSI/ASHRAE 90A - Energy Conservation in New Building Design.

#### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, protect and handle products to site.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

#### 1.05 PROJECT/SITE CONDITIONS

- A. Verify that field measurements are in accordance with the manufacturer recommendations.

### PART 2 PRODUCTS

#### 2.01 ACID WASTE PIPING AND VENT PIPING ABOVE GRADE (ABOVE RETURN AIR PLENUM CEILINGS)

- A. Polyvinylidene Fluoride Pipe: Schedule 40, ASTM D3222, ATSM F1673. Pipe shall be marked with UL to indicate compliance with UL 723 (ASTM E84)
  - 1. Manufacturer:
    - a. Orion Kynar PVDF.
    - b. Enfield.
    - c. Zurn.
  - 2. Fittings: Polyvinylidene Fluoride Schedule 40, ASTM D3222, ATSM F1673
  - 3. Joints:

- a. Mechanical: 300 Series stainless steel bolt and nut compression coupling system.
- b. Fusion: hermetically sealed with heat tool and meets ASTM D2657.

### **PART 3 EXECUTION**

#### **3.01 PREPARATION**

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

#### **3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install components level and plumb.
- C. Route piping in orderly manner and maintain gradient.
- D. Install piping to conserve building space and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

#### **3.03 ERECTION TOLERANCES**

- A. Establish invert elevations, slopes for drainage to 1/8 inch per foot unless otherwise noted on the drawings. Maintain gradients.

#### **3.04 INTERFACE WITH OTHER PRODUCTS**

- A. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.

**END OF SECTION**

**SECTION 23 05 93**  
**TESTING, ADJUSTING, AND BALANCING FOR HVAC**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Testing, adjustment, and balancing of air systems.

**1.02 REFERENCE STANDARDS**

- A. AABC MN-1 - AABC National Standards for Total System Balance; Associated Air Balance Council; 2002.
- B. ASHRAE Std 111 - Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems; American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.; 2008.
- C. NEBB (TAB) - Procedural Standard for Testing Adjusting and Balancing of Environmental Systems; National Environmental Balancing Bureau; 2005, Seventh Edition.
- D. SMACNA (TAB) - HVAC Systems Testing, Adjusting, and Balancing; Sheet Metal and Air Conditioning Contractors' National Association; 2002.

**1.03 SUBMITTALS**

- A. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
  - 1. Revise TAB plan to reflect actual procedures and submit as part of final report.
  - 2. Include actual instrument list, with manufacturer name, serial number, and date of calibration.
  - 3. Form of Test Reports: Where the TAB standard being followed recommends a report format use that; otherwise, follow ASHRAE Std 111.
  - 4. Units of Measure: Report data in both I-P (inch-pound) and SI (metric) units.

**PART 2 PRODUCTS - NOT USED****PART 3 EXECUTION****3.01 GENERAL REQUIREMENTS**

- A. Perform total system balance in accordance with one of the following:
  - 1. AABC MN-1, AABC National Standards for Total System Balance.
  - 2. ASHRAE Std 111, Practices for Measurement, Testing, Adjusting and Balancing of Building Heating, Ventilation, Air-Conditioning, and Refrigeration Systems.
  - 3. NEBB Procedural Standards for Testing Adjusting Balancing of Environmental Systems.
  - 4. SMACNA (TAB).
- B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.
- C. TAB Agency Qualifications:
  - 1. Company specializing in the testing, adjusting, and balancing of systems specified in this section.

### **3.02 EXAMINATION**

- A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
  1. Systems are started and operating in a safe and normal condition.
  2. Duct systems are clean of debris.
  3. Air outlets are installed and connected.
  4. Duct system leakage is minimized.

### **3.03 ADJUSTMENT TOLERANCES**

- A. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design.

### **3.04 RECORDING AND ADJUSTING**

- A. Ensure recorded data represents actual measured or observed conditions.
- B. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.
- C. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.

### **3.05 AIR SYSTEM PROCEDURE**

- A. Measure air quantities at air inlets and outlets.
- B. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.

### **3.06 SCOPE**

- A. Test, adjust, and balance the following:
  1. Air Inlets and Outlets

**END OF SECTION**



## SECTION 23 07 13 DUCT INSULATION

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Duct insulation.

#### 1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- B. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.
- C. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

#### 1.03 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labelled with manufacturer's identification, including product density and thickness.
- B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

#### 1.04 FIELD CONDITIONS

- A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.
- B. Maintain temperature during and after installation for minimum period of 24 hours.

### PART 2 PRODUCTS

#### 2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

#### 2.02 GLASS FIBER, FLEXIBLE

- A. Manufacturer:
  - 1. Knauf Fiber Glass.
  - 2. Johns Manville Corporation.
  - 3. Owens Corning Corp.
  - 4. CertainTeed Corporation.
- B. Vapor Barrier Jacket:
  - 1. Kraft paper with glass fiber yarn and bonded to aluminized film.
  - 2. Moisture Vapor Permeability: 0.04 perm inch, when tested in accordance with ASTM E96/E96M.
  - 3. Secure with pressure sensitive tape.

C. Vapor Barrier Tape:

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber based adhesive.

D. Tie Wire: Annealed steel, 16 gage, 0.0508 inch diameter.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that ducts have been tested before applying insulation materials.
- B. Verify that surfaces are clean, foreign material removed, and dry.

#### **3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Insulated ducts conveying air below ambient temperature:
  1. Provide insulation with vapor barrier jackets.
  2. Finish with tape and vapor barrier jacket.
  3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.
  4. Insulate entire system including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.
- D. Insulated ducts conveying air above ambient temperature:
  1. Insulate fittings and joints. Where service access is required, bevel and seal ends of insulation.
- E. External Duct Insulation Application:
  1. Secure insulation with vapor barrier with wires and seal jacket joints with vapor barrier adhesive or tape to match jacket.
  2. Secure insulation without vapor barrier with staples, tape, or wires.
  3. Install without sag on underside of duct. Use adhesive or mechanical fasteners where necessary to prevent sagging. Lift duct off trapeze hangers and insert spacers.
  4. Seal vapor barrier penetrations by mechanical fasteners with vapor barrier adhesive.
  5. Stop and point insulation around access doors and damper operators to allow operation without disturbing wrapping.

#### **3.03 SCHEDULES**

- A. Supply Ducts:
  1. Flexible Glass Fiber Duct Insulation: 2 inches thick.

**END OF SECTION**

**SECTION 23 31 00  
HVAC DUCTS AND CASINGS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Metal ductwork.
- B. Duct cleaning.

**1.02 RELATED REQUIREMENTS**

- A. Section 23 07 13 - Duct Insulation: External insulation.
- B. Section 23 37 00 - Air Outlets and Inlets.

**1.03 REFERENCE STANDARDS**

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- D. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; National Fire Protection Association; 2015.
- E. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; Sheet Metal and Air Conditioning Contractors' National Association; 2005.

**1.04 REGULATORY REQUIREMENTS**

- A. Construct ductwork to NFPA 90A standards.

**1.05 FIELD CONDITIONS**

- A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.
- B. Maintain temperatures within acceptable range during and after installation of duct sealants.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Galvanized Steel for Ducts: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS Type B, with G90/Z275 coating.
- B. Joint Sealers and Sealants: Non-hardening, water resistant, mildew and mold resistant.
  - 1. Type: Heavy mastic or liquid used alone or with tape, suitable for joint configuration and compatible with substrates, and recommended by manufacturer for pressure class of ducts.
  - 2. VOC Content: Not more than 250 g/L, excluding water.

3. Surface Burning Characteristics: Flame spread index of zero and smoke developed index of zero, when tested in accordance with ASTM E84.
  4. For Use With Flexible Ducts: UL labeled.
- C. Hanger Rod: ASTM A36/A36M; steel, galvanized; threaded both ends, threaded one end, or continuously threaded.
- D. Ducts: Galvanized steel, unless otherwise indicated.
- E. Low Pressure Supply (System with Cooling Coils): 2 inch w.g. pressure class, galvanized steel.
- F. Ductmate or WDCI duct connection systems are acceptable. Ductwork constructed using these systems shall refer to manufacturer's recommendations for sheet metal gage intermediate and joint reinforcement.

## 2.02 DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA (DCS) and as indicated.
- B. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- C. Construct T's, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows must be used, provide air foil turning vanes of perforated metal with glass fiber insulation.
- D. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
- E. Fabricate continuously welded round and oval duct fittings in accordance with SMACNA (DCS).
- F. Where ducts are connected to exterior wall louvers and duct outlet is smaller than louver frame, provide blank-out panels sealing louver area around duct. Use same material as duct, painted black on exterior side; seal to louver frame and duct.

## 2.03 MANUFACTURED DUCTWORK AND FITTINGS

- A. Flexible Ducts: Multiple layers of aluminum laminate supported by helically wound spring steel wire.
  1. Insulation: Fiberglass insulation with aluminized vapor barrier film.
  2. Pressure Rating: 10 inches WG positive and 1.0 inches WG negative.
  3. Maximum Velocity: 4000 fpm.
  4. Temperature Range: Minus 20 degrees F to 210 degrees F.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Install, support, and seal ducts in accordance with SMACNA (DCS).
- B. Duct sizes indicated are inside clear dimensions. For lined ducts, maintain sizes inside lining.
- C. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.
- D. Use double nuts and lock washers on threaded rod supports.

- E. Connect diffusers or light troffer boots to low pressure ducts directly or with 5 feet maximum length of flexible duct held in place with strap or clamp.

**END OF SECTION**

**SECTION 23 37 00  
AIR OUTLETS AND INLETS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Diffusers.
- B. Registers/grilles.

**1.02 REFERENCE STANDARDS**

- A. ASHRAE Std 70 - Method of Testing the Performance of Air Outlets and Inlets; American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.; 2006 (R2011).

**1.03 SUBMITTALS**

- A. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

**1.04 QUALITY ASSURANCE**

- A. Test and rate air outlet and inlet performance in accordance with ASHRAE Std 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Price Industries.
- B. Titus.
- C. Tuttle & Bailey.
- D. Nailor.

**2.02 SQUARE CEILING DIFFUSERS**

- A. Type: Provide square, stamped, multi-core diffuser to discharge air in 360 degree pattern.
- B. Connections: As scheduled on drawings.
- C. Frame: Provide inverted T-bar type.
- D. Fabrication: Steel with baked enamel finish.
- E. Color: As selected by Architect/Engineer from manufacturer's standard range.
- F. Accessories: Provide radial opposed blade volume control damper; removable core with damper adjustable from diffuser face.
- G. Titus Model TMS.

## **2.03 PERFORATED FACE CEILING RETURN REGISTERS/GRILLES**

- A. Type: Perforated face.
- B. Frame: Inverted T-bar type.
- C. Color: As selected by Architect with manufacturer's standard range.
- D. Titus Model PXP.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Check location of outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.
- C. Install diffusers to ductwork with air tight connection.
- D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers, despite whether dampers are specified as part of the diffuser, or grille and register assembly.

**END OF SECTION**

**SECTION 26 05 00**  
**BASIC ELECTRICAL REQUIREMENTS**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.02 SECTION INCLUDES**

- A. Basic Electrical Requirements specifically applicable to Division 26 Sections, in addition to Division 1 - General Requirements.

**1.03 REGULATORY REQUIREMENTS**

- A. Conform to NFPA 70 - National Electrical Code, latest edition with amendments as adopted by the City of Joliet, IL.
- B. Install electrical Work in accordance with the NECA Standard of Installation.

**1.04 DELIVERY, STORAGE AND HANDLING**

- A. Store and protect all materials as specified under the provisions of Section 01 60 00 and as specified herein.
- B. Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.
- C. Ship products to the job site in their original packaging. Receive and store products in a suitable manner to prevent damage or deterioration. Keep equipment upright at all times.
- D. Investigate the spaces through which equipment must pass to reach its final destination. Coordinate with the manufacturer to arrange delivery at the proper stage of construction and to provide shipping splits where necessary.

**1.05 PROJECT/SITE CONDITIONS**

- A. Install work in locations shown on Drawings, unless prevented by Project conditions. Drawings have omitted certain branch circuitry in areas for ease of reading. All branch circuitry is to be provided by Contractor.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission from Architect/Engineer before proceeding as specified under modification procedures.

**1.06 QUALITY ASSURANCE**

- A. Provide Work as required for a complete and operational electrical installation.
- B. All products shall be designed, manufactured, and tested in accordance with industry standards. Standards, organizations, and their abbreviations as used hereafter, include the following:
  - 1. American National Standards Institute, Inc (ANSI).
  - 2. American Society for Testing and Materials (ASTM).



3. National Electrical Manufacturers Association (NEMA).
4. Underwriters Laboratories, Inc. (UL).

C. Install all Work in accordance with the NECA Standard of Installation.

#### **1.07 PROJECT MANAGEMENT AND COORDINATION**

- A. Proper project management and coordination is critical for a successful project. Manage and coordinate the Work with all other trades. Reliance on the Drawings and Specifications only for exact project requirements is insufficient for proper coordination.

#### **PART 2 PRODUCTS**

**2.01 Not used.**

#### **PART 3 EXECUTION**

**3.01 Not used.**

**END OF SECTION**

**SECTION 26 05 01  
MINOR ELECTRICAL DEMOLITION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Electrical demolition.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Electrical demolition: Remove electrical systems shown on drawings.

**PART 2 PRODUCTS**

**2.01 MATERIALS AND EQUIPMENT**

- A. Materials and equipment for patching and extending work: As specified in individual sections.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Verify circuit arrangements to master and zone gas valve systems prior to demolition. Reinstall devices and reconnect for a complete and operational system.
- C. Beginning of demolition means installer accepts existing conditions.
- D. Demolition Drawings are based on casual field observation and are intended to identify the limits of the construction site. Remove all electrical systems in their entirety in proper sequence with the Work.

**3.02 PREPARATION**

- A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
- B. Existing Electrical Service and Emergency Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner and Architect at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.
- C. Existing Fire Alarm System: Maintain existing system in service. Disable system only to make switchovers and connections. Notify Owner, Architect/Engineer and local fire service at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

**3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK**

- A. Remove, relocate, and extend existing installations to accommodate new construction.
- B. Remove abandoned wiring to source of supply.

- C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
- E. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- F. Repair adjacent construction and finishes damaged during demolition and extension work.
- G. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
- H. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.
- I. Relocate existing fire alarm devices affected by wall, ceiling and floor demolition.
- J. Properly dispose of all ballast to approved ballast recycler. Do not land fill ballasts.

### **3.04 CLEANING AND REPAIR**

- A. Clean and repair existing materials and equipment that remain or that are to be reused.
- B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

**END OF SECTION**

**SECTION 26 05 19  
CONDUCTORS AND DEVICES**

**PART 1 GENERAL****1.01 SUMMARY**

- A. Section Includes:
1. Wiring Methods.
  2. Wire and Cable
  3. Wiring Devices and Wall Plates
  4. Motion Sensors.
  5. Wiring Connections.
  6. Cords and Caps.
  7. Multi Outlet Assemblies
  8. Circuit Breakers

**1.02 SUBMITTALS**

- A. Product Data: Provide data on wiring devices and cover plates.

**1.03 QUALITY ASSURANCE**

- A. Perform Work in accordance with NECA Standard of Installation.
- B. Products: Listed and classified by Underwriters Laboratories Inc. as a suitable for purpose specified as shown.

**PART 2 PRODUCTS****2.01 WIRING METHODS**

- A. All locations: Building wire in raceway.
- B. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 14 AWG for control wiring.
1. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 100 feet.  
Use minimum #10 AWG conductor wire in all the following locations:
    - a. All programmable panel branch circuits (larger where indicated).
    - b. All emergency lighting and exit branch circuits.

**2.02 WIRE AND CABLE**

- A. Manufacturers:
1. Okonite.
  2. Southwire.
  3. Collyer.
- B. Building Wire:
1. Feeders and Branch Circuits Larger Than 6 AWG: Copper, stranded conductor, 600 volt insulation.

2. Feeders and Branch Circuits 6 AWG and Smaller: Copper conductor, 600 volt insulation. 6 and 8 AWG, stranded conductor; smaller than 8 AWG, stranded conductor (solid for device terminations).
3. Control Circuits: Copper, stranded conductor, 600 volt insulation.
4. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
5. Use 10 AWG conductors for 20 ampere, 277 volt branch circuits longer than 200 feet.
6. Use conductor not smaller than 12 AWG for power and lighting circuits.
7. Use conductor not smaller than 16 AWG for control circuits.

C. Locations:

1. Concealed Dry Interior Locations: Use only building wire with Type THHN insulation in raceway.
2. Exposed Dry Interior Locations: Use only building wire with Type THHN insulation in raceway.
3. Above Accessible Ceilings: Use only building wire with Type THHN insulation in raceway.
4. Wet or Damp Interior Locations: Use only building wire with Type THWN insulation in raceway.
5. Exterior Locations: Use only building wire with Type XHHW insulation in raceway.
6. Underground Installations: Use only building wire with Type XHHW insulation in raceway.

## 2.03 WIRING DEVICES AND WALL PLATES

A. Three-way Switch: Specification grade.

1. Hubbell Model 1123.
2. P & S Model 523.
3. Leviton Model 1123.
4. Color: Ivory.

B. Three-way 0-10V LED Dimmer Switch: Specification grade.

1. Lutron Diva Series or equal.
2. Description: Linear slide LED dimmer, compatible with driver.
3. Voltage: 120/277 volt.
4. Power Rating: Match load shown on drawings.

C. Duplex Convenience Receptacle: Nema 5-20R, duplex, specification grade.

1. Hubbell.
2. Bryant.
3. Leviton.
4. Color: Ivory.

D. GFCI Receptacle: Nema 5-20R, duplex, GFCI, specification grade.

1. Hubbell Model GF-5362.
2. Slater Model SIR-20-F.
3. Eagle Model 647.
4. Color: Ivory.

E. Decorative Cover Plate:

1. Hubbell.
2. Bryant.
3. Leviton.
4. Description: Stainless Steel, metal.

## 2.04 MOTION SENSORS

- A. Manufacturers:
  1. Leviton
  2. Hubbell
  3. Approved Equal
- B. Ceiling Mounted.
  1. Dual technology (passive infrared and ultrasonic), 24VDC sensor with unobtrusive appearance and 360 degrees of coverage.
    - a. Provide type/quantity of motion sensors to meet square foot coverage requirements.
  2. Provide power pack for 24VDC controls and switching of 120/277V circuits. Minimum quantity of sensors per power pack: 2.
  3. Sensor shall continuously monitor space to identify usage patterns. Unit shall automatically adjust time delay and sensitivity settings for optimal performance and energy efficiency.
  4. Time delay settings: Auto, fixed (5,10,15,20 or 30 minutes).
  5. Sensitivity settings: Auto, reduced sensitivity (passive infrared) variable (ultrasonic).
  6. (1) N/O and (1) N/C output.

## 2.05 WIRING CONNECTIONS:

- A. Make permanent splice connections to achieve no measurable temperature rise:
  1. Wire size up to #6 AWG: Spring wire cap.
  2. Over #6 AWG: Crimp type Compression connector. Rubber under wrap with insulated plastic tape over wrap.
- B. Make terminations to achieve no measurable temperature rise:
  1. Wire size upto #6 AWG: Set screw type compression terminal lug.
  2. Wire size over #6 AWG: Crimp type compression connector to spade lug.

## 2.06 CORDS AND CAPS

- A. Manufacturers:
  1. Carol.
  2. Substitutions: Or Equal.
- B. Attachment Plug Construction: Conform to NEMA WD 1.
- C. Configuration: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
- D. Cord Construction: ANSI/NFPA 70, Type SO multiconductor flexible cord with identified equipment grounding conductor.
- E. Cord Construction: ASTM B-8 or B-174, annealed stranded bare copper with PVC insulation and jacket. Resistant to oils, lubricants, water, acids alkalies, ozone or abrasion.
- F. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection (3 conductor #12 unless otherwise noted.)
- G. Accessories: Strain-relief at cap and junction box.

H. Accessories: Provide cord grip next to ceiling junction box to support cord. Mount cord grip to structure.

## **2.07 MULTIOUTLET ASSEMBLIES**

A. Manufacturer:

1. Legrand Plugmold.
  - a. S20GBA606TRGFI
2. Substitution: Or Approved Equal.

B. Description: Steel six (6') foot multioutlet assembly

1. Wiring: 4-wire #12 THHN (2 hot, 1 neutral and 1 ground), 2 circuits;
2. Single outlets, six (6") inches on center.
3. Stainless steel finish
4. Ground fault circuit interrupter module
5. Accessories: Two-gang device box, with cover
6. Accessories: Ground Clamp.

## **2.08 CIRCUIT BREAKERS**

A. Underwriter Laboratories listed for intended branch circuit:

1. Lighting: SWD.
2. Heating, Ventilating and Air Conditioning: HACR rated.

B. Provide new breakers matching manufacturer of existing breakers.

C. Provide accessories as scheduled.

D. Shunt Trip Device: 120 volts, AC.

E. Auxiliary Switch: 120 volts, AC.

F. Handle Lock: Include provisions for sealing.

G. Provide mechanical trip device.

H. Provide insulated grounding lug in each enclosure.

I. Provide products suitable for use as service entrance equipment where so applied.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION AND PREPARATION**

- A. Verify that interior of building is physically protected from weather.
- B. Verify that mechanical work which is likely to injure conductors has been completed.
- C. Completely and thoroughly swab raceway system before installing conductors.

### **3.02 INSTALLATION**

- A. Neatly train and secure wiring inside boxes, equipment, and panelboards.
- B. Use wire pulling lubricant for pulling 4 AWG and larger wires.

- C. Route wire and cable as required to meet project conditions.
  - 1. Wire and cable routing indicated is approximate unless dimensioned.
  - 2. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.
- D. Pull all conductors into raceway at same time.
- E. Protect exposed cable from damage.
- F. Neatly train and lace wiring inside boxes, equipment and panelboards.
- G. Support cables above accessible ceilings to keep them from resting on ceiling tiles.
- H. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.
- I. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- J. Terminate spare conductors with electrical tape.
- K. Do not share neutral conductor on load side of dimmers.
- L. Install wiring devices in accordance with manufacturer's instructions.
  - 1. Install wall switches at height shown on drawings, OFF position down.
  - 2. Install convenience receptacles at height shown on drawings grounding pole on bottom.
  - 3. Install specific purpose receptacles at heights shown on Drawings.
- M. Install wall plates flush and level.
  - 1. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
  - 2. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface-mounted outlets.

**END OF SECTION**



## SECTION 26 05 35 RACEWAYS AND BOXES

### PART 1 GENERAL

#### 1.01 SUMMARY

- A. Section Includes:
  - 1. Raceway Requirements.
  - 2. Metallic Conduit and Fittings.
  - 3. Electrical Boxes.
  - 4. Electrical Ceiling Boxes.
  - 5. Penetration Sealants.

#### 1.02 REFERENCES

- A. American National Standards Institute (ANSI)
  - 1. ANSI C80.1 - Specification for Rigid Steel Conduit, Zinc-Coated.
  - 2. ANSI C80.3 - Specification for Electrical Metallic Tubing, Zinc-Coated.
- B. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- C. NECA "Standard of Installation"
- D. Underwriter's Laboratory Fire Resistance Directory.

#### 1.03 QUALITY ASSURANCE

- A. Install all raceways in accordance with applicable building codes and NECA "Standard of Installation."

#### 1.04 SUBMITTALS

- A. Shop Drawings: Submit intended routing of all conduits exposed in rooms or under slab. Due to the exposed nature of this Work, careful lay-out procedures are necessary to provide an acceptable aesthetic appearance and to avoid crossing of conduits.
- B. Project Record Documents:
  - 1. Accurately record actual locations and mounting heights of outlet, pull, and junction boxes.
  - 2. Accurately record re-arrangement of panel schedule at panelboards.
  - 3. Accurately record within a tolerance of 6 inches the location of all conduits greater than 3/4" trade size, all conduit homeruns, all underground and all in-slab conduits.

#### 1.05 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Verify routing and termination locations of conduit prior to rough-in.
- C. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

- D. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at locations required for box to serve intended purpose. Include in base bid, installation within 10 feet of location shown.

## **PART 2 PRODUCTS**

### **2.01 RACEWAY REQUIREMENTS**

- A. Use only specified raceway in the following locations:
1. Branch Circuits and Feeders:
    - a. Concealed Dry Interior Locations: Electrical metallic tubing.
    - b. Exposed Dry Interior Finished Locations: Not allowed.
    - c. Exposed Dry Interior Unfinished Locations: Electrical metallic tubing.
    - d. Utility Primary and Site Lighting: Sch 40 PVC, concrete encased under road ways and parking lots.
    - e. Natatorium Mechanical Room: Sch 40 PVC.
    - f. All other locations: Galvanized Rigid Metallic Conduit.
- B. Size raceways for conductor type installed.
1. Minimum Size Conduit Homerun to Panelboard: 3/4-inch.

### **2.02 METALLIC CONDUIT AND FITTINGS**

- A. Conduit:
1. Rigid Steel Conduit: ANSI C80.1.
  2. Electrical metallic tubing: ANSI C80.3.
  3. Flexible Conduit: UL 1, zinc-coated steel.
    - a. Liquidtight Flexible Conduit: UL360. Fittings shall be specifically approved for use with this raceway.
- B. Conduit Fittings:
1. Metal Fittings and Conduit Bodies: NEMA FB 1.
    - a. EMT fittings: Use set-screw indentor-type fittings.

### **2.03 ELECTRICAL BOXES**

- A. Manufacturers:
1. Raco.
  2. Steel City.
  3. Appleton.
  4. Substitutions: Or Approved Equal.
- B. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel, suitable for installation in masonry:
- C. Equipment Support Boxes: Rated for weight of equipment supported; include 2 inch male fixture studs where required.
- D. Wet Location Outlet Boxes: Cast aluminum: Cast alloy, deep type, gasket cover, threaded hubs.

**2.04 ELECTRICAL CEILING BOXES.**

- A. Manufacturers:
  1. Panduit.
  2. Leviton.
  3. Walker.
- B. Description: Two gang, separated power/data surface metallic box. Combination duplex receptacle with two port data faceplate, compatible with data jacks. Ivory.

**2.05 PENETRATION SEALANTS**

- A. Fire-rated assemblies: Provide firestopping of all penetrations made by Work under this Contract in accordance with provisions of Section 07 84 00 requirements.
- B. Thermal and Moisture Protection: Provide thermal and moisture protection made by Work under this Contract of all exterior wall, floor and roof penetrations in accordance with Division 7 requirements.

**2.06 WIREWAY**

- A. Manufacturers:
  1. Hoffman.
  2. Cooper Industries.
  3. Approved Equal.
- B. Description:
  1. NEMA Type 1 Lay-In Galvanized Wireway, UL 870. Flat cover design. Size as shown on drawings.
  2. Provide hinged covers where noted on drawings.
  3. Provide all elbows, tee's, covers and fittings as required
- C. Finish:
  1. To be selected by Architect/Engineer.

**PART 3 EXECUTION****3.01 EXAMINATION AND PREPARATION**

- A. Verify that interior of building is physically protected from weather.
- B. Verify that mechanical work which is likely to injure conductors has been completed.
- C. Completely and thoroughly swab raceway system before installing conductors.
- D. Verify that supporting surfaces are ready to receive work.
- E. Electrical boxes are shown on Drawings, in approximate locations, unless dimensioned.
  1. Obtain verification from Architect/Engineer for locations of outlets throughout prior to rough-in.
- F. Degrease and clean surfaces to receive wire markers.

### 3.02 INSTALLATION

- A. Arrange conduit to maintain headroom and to present neat appearance.
  - 1. Route raceway parallel and perpendicular to walls and adjacent piping.
  - 2. Maintain minimum 6 inch clearance to piping and 12 inch clearance to heat surfaces such as flues and heating appliances.
  - 3. Maintain required fire, acoustic, and vapor barrier rating when penetrating walls, floors, and ceilings.
  - 4. Use conduit hangers and clamps; do not fasten with wire or perforated pipe straps.
  - 5. Use conduit bodies to make sharp changes in direction.
  - 6. Terminate conduit stubs with insulated bushings.
  - 7. Use suitable caps to protect installed raceway against entrance of dirt and moisture.
  - 8. Install expansion joints where raceway crosses building expansion joints.
- B. Install electrical boxes as shown on the drawings, and as required for splices, taps, wire pulling, equipment connections and regulatory requirements.
  - 1. Locate and install electrical boxes to allow access. Provide access panels if required.
  - 2. Locate and install electrical boxes to maintain headroom and to present neat mechanical appearance.
  - 3. Install pull boxes and junction boxes above accessible ceilings or in unfinished areas.
  - 4. Provide knockout closures for unused openings.
  - 5. Coordinate mounting heights and locations of outlets above counters, benches, backsplashes and furniture.
- C. Use recessed outlet boxes in finished areas and where indicated.
  - 1. Secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness.
  - 2. Use stamped steel stud bridges for flush outlets in hollow stud wall, and adjustable steel channel fasteners for flush ceiling outlet boxes.
  - 3. Locate boxes in masonry walls to require cutting corner only. Coordinate masonry cutting to achieve neat openings for boxes.
  - 4. Do not install boxes back-to-back in walls; provide 6 inches separation, minimum; except provide 24 inches separation, minimum in acoustic-rated walls.
  - 5. Do not damage insulation.
- D. Install conduit to preserve fire resistance rating of walls, floors, partitions and other elements, using materials and methods recognized by Underwriters Laboratory Fire Resistance Directory.
- E. Provide anchors, fasteners, and supports in accordance with NECA "Standard of Installation".
- F. Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.
- G. Do not use powder-actuated anchors.
- H. Cut or core structural members and thermal and moisture barriers only upon receiving permission from Architect. Each Contractor shall be responsible for making necessary penetrations for the completion of it's Work.

- I. Fabricate supports from structural steel or steel channel. Rigidly weld members or use hexagon head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.
- J. Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

**END OF SECTION**

**SECTION 26 51 00  
INTERIOR LUMINAIRES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Interior luminaires.

**1.02 REFERENCE STANDARDS**

- A. IES LM-79 - Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products; Illuminating Engineering Society; 2008.
- B. IES LM-80 - Approved Method: Measuring Lumen Maintenance of LED Light Sources; Illuminating Engineering Society; 2008.
- C. NECA 1 - Standard for Good Workmanship in Electrical Construction; National Electrical Contractors Association; 2010.
- D. NEMA LE 4 - Recessed Luminaires, Ceiling Compatibility; National Electrical Manufacturers Association; 2012.
- E. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. NFPA 101 - Life Safety Code; National Fire Protection Association; 2015.
- G. UL 924 - Emergency Lighting and Power Equipment; Current Edition, Including All Revisions.
- H. UL 1598 - Luminaires; Current Edition, Including All Revisions.
- I. UL 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products; Current Edition, Including All Revisions.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate the installation of luminaires with mounting surfaces installed under other sections or by others. Coordinate the work with placement of supports, anchors, etc. required for mounting. Coordinate compatibility of luminaires and associated trims with mounting surfaces at installed locations.
  - 2. Coordinate the placement of luminaires with structural members, ductwork, piping, equipment, diffusers, fire suppression system components, and other potential conflicts installed under other sections or by others.
  - 3. Coordinate the placement of exit signs with furniture, equipment, signage or other potential obstructions to visibility installed under other sections or by others.
  - 4. Notify Architect/Engineer of any conflicts or deviations from the contract documents to obtain direction prior to proceeding with work.

**1.04 SUBMITTALS**

- A. Shop Drawings:
  - 1. Indicate construction, installation and mounting details for products.

2. Wiring Diagrams: Submit wiring diagrams for all exit sign, night light, self-contained back-up battery lighting, battery ballasts and associated circuit breakers, programmable circuit breakers and/or emergency circuit breakers.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, installed accessories, and ceiling compatibility; include model number nomenclature clearly marked with all proposed features.
    1. LED Luminaires:
      - a. Include estimated useful life, calculated based on IES LM-80 test data.
    2. Wiring diagrams: Provide wiring diagrams for dimmable ballasts and dimmable switches.
  - C. Certificates for Dimming Ballasts: Manufacturer's documentation of compatibility with dimming controls to be installed.
  - D. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
  - E. Operation and Maintenance Data: Instructions for each product including information on replacement parts.
  - F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
    1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - G. Project Record Documents: Record actual connections and locations of luminaires and any associated remote components.

### **1.05 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

### **1.06 DELIVERY, STORAGE, AND PROTECTION**

- A. Receive, handle, and store products according to NECA/IESNA 500 (commercial lighting), NECA/IESNA 502 (industrial lighting), and manufacturer's written instructions.
- B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

### **1.07 FIELD CONDITIONS**

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

### **1.08 WARRANTY**

- A. Provide three year manufacturer warranty for all LED luminaires, including drivers.

## PART 2 PRODUCTS

### 2.01 LUMINAIRE TYPES

- A. Furnish products as specified below.
- B. Substitutions: Not Permitted.
- C. Type A: 2' x 2' lay-in troffer.
  - 1. Products:
    - a. Truly Green Solutions LED Eco Panel Light.  
882240-40-L-F.
    - b. Substitutions: Not Permitted.
  - 2. Nominal Size: 2 by 2 feet.
  - 3. Ceiling Trim: NEMA type G (grid).
  - 4. Lamp(s): 4,400 lm-40 W LED.
    - a. Correlated Color Temperature: 4,000 K.
  - 5. Voltage: Universal 120-277 V.
  - 6. Controls: 0-10V Dimming .
  - 7. Mounting: Lay-in, grid ceiling.

### 2.02 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Provide products complying with Federal Energy Management Program (FEMP) requirements.
- E. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- F. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.
- G. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- H. Recessed Luminaires:
  - 1. Ceiling Compatibility: Comply with NEMA LE 4.
  - 2. Luminaires Recessed in Insulated Ceilings: Listed and labeled as IC-rated, suitable for direct contact with insulation and combustible materials.
  - 3. Luminaires Recessed in Sloped Ceilings: Provide suitable sloped ceiling adapters.
- I. Fluorescent Luminaires:
  - 1. Provide ballast disconnecting means complying with NFPA 70 where required.
- J. LED Luminaires:



1. Components: UL 8750 recognized or listed as applicable.
2. Tested in accordance with IES LM-79 and IES LM-80.
3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

K. LED Luminaire Components: UL 8750 recognized or listed as applicable.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that field measurements are as shown on the drawings.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.
- C. Verify that suitable support frames are installed where required.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.
- E. Verify that conditions are satisfactory for installation prior to starting work.
- F. Examine substrate and supporting grids for luminaires.
- G. Examine each fixture to determine suitability for lamps specified.

### **3.02 PREPARATION**

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

### **3.03 INSTALLATION**

- A. Coordinate locations of outlet boxes provided under Section 26 05 35 as required for installation of luminaires provided under this section.
- B. Install products according to manufacturer's instructions.
- C. Install luminaires securely, in a neat and workmanlike manner, as specified in NECA 1 (general workmanship), NECA 500 (commercial lighting), and NECA 502 (industrial lighting).
- D. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
- E. Locate recessed ceiling luminaires as indicated on reflected ceiling plan.
- F. Install wall mounted luminaires, emergency units and exit signs at height as indicated on Drawings and directed in the field by Architect. Obtain final approval from Architect prior to commencement of this portion of work.
- G. Install accessories furnished with each luminaire.
- H. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.
- I. Suspended Ceiling Mounted Luminaires:

1. Do not use ceiling tiles to bear weight of luminaires.
2. Support luminaires larger than 2 foot by 4 foot size independent of ceiling framing.
3. Secure lay-in luminaires to ceiling support channels using listed safety clips at four corners.
4. See appropriate Division 9 section where suspended grid ceiling is specified for additional requirements.

J. Recessed Luminaires:

1. Install trims tight to mounting surface with no visible light leakage.
2. Install recessed luminaires to permit removal from below.
3. Install recessed luminaires using accessories and firestopping materials to meet regulatory requirements for fire rating.
4. Install clips to secure recessed grid-supported luminaires in place.

K. Suspended Luminaires:

1. Install using the suspension method indicated, with support lengths and accessories as required for specified mounting height.
2. Unless otherwise indicated, support pendants from swivel hangers.

L. Bond products and metal accessories to branch circuit equipment grounding conductor.

M. Install lamps in each luminaire.

N. Lamp Burn-In: Operate lamps at full output for prescribed period per manufacturer's recommendations prior to use with any dimming controls. Replace lamps that fail prematurely due to improper lamp burn-in.

### 3.04 FIELD QUALITY CONTROL

- A. Inspect each product for damage and defects.
- B. Operate each luminaire after installation and connection to verify proper operation.
- C. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect/Engineer.
- D. Energy Code Commissioning: The electrical contractor shall program, test, calibrate and confirm the proper operation and placement of all lighting controls in accordance with the International Energy Code, 2012 Edition Paragraph C408.3 "Lighting system functional testing".

### 3.05 CLEANING

- A. Clean surfaces according to NECA 500 (commercial lighting), NECA 502 (industrial lighting), and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

### 3.06 PROTECTION

- A. Protect installed luminaires from subsequent construction operations.

### 3.07 ATTACHMENTS

- A. Luminaire cutsheets.

## END OF SECTION



## LED ECO PANEL LIGHT



**DESCRIPTION:** LED Eco Panel Light 2'x2' 40W  
**ITEM NUMBER:** 882240-XX-L-F

### FEATURES

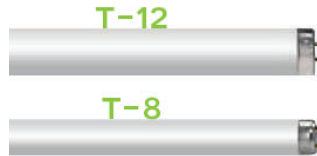
Designed for drop-in ceilings, high performance Edge-Lit LED flat panels are the ideal energy efficient replacement for fluorescent fixtures in offices, schools, hospitality, healthcare and other commercial and industrial applications. Available in 1'x4', 2'x2' and 2'x4' models. Energy savings of 60%+, minimum guaranteed 50,000 hour life, impact and vibration resistant, no flickering, instant-on technology. Edge-lit panels are 0-10V dimmable. UL and DLC approved.

### APPLICATIONS

- |               |                  |
|---------------|------------------|
| Offices       | Bus Stations     |
| Classrooms    | Train Stations   |
| Lobbies       | Medical Facility |
| Back of house | Malls            |
| Restaurants   | Hotel            |



### REPLACES



20-72 W T8 or T12 Fluorescent



2x2 Troffer T-8 Fluorescent

### TECHNICAL PARAMETERS

- Life Span:** 50,000
- Fixture Material:** Aluminum & PC Cover
- IP Rating:** Suitable for damp locations
- Dimensions:** 23.62x23.62x0.47in
- Weight:** 9 lbs
- Dimmable:** Yes (0-10V Dimming)
- Thermal Layer Material:** Aluminum & PC Cover
- Working Temperature:** -20°C~50°C (-4°F~122°F)

### OPTICAL PARAMETERS

- LED Chip Type:** SMD
- LED Chip Quantity:** SMD
- Lumens:** 4400
- Color Temperature:** 5000K (50)  
4000K (40)  
3500K (35)  
3000K (30)
- CRI:** > 80
- Beam Angle:** 120°
- Socket:** Full Fixture
- Cover:** Frosted

### ELECTRICAL PARAMETERS

- Input Voltage:** 100-277V AC  
\*347V/480V AC (Non-Dimming)
- Panel Input Voltage:** 36V DC
- Total Power Consumption:** 40W
- Power Factor:** > 0.9

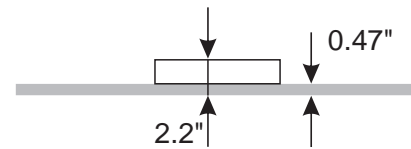
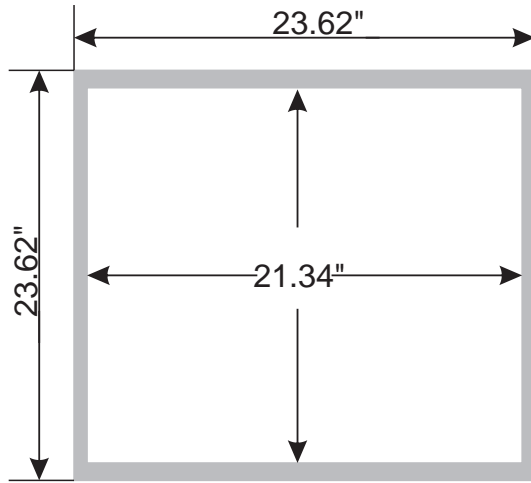


Due to advancements in technology, specifications are subject to change without notice.  
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WARNING: READ INSTRUCTIONS BEFORE INSTALLING  
 Disconnect all power sources to the fixtures before installing.



**2x2**



## Ordering Information - LED Eco Panel Light 40W 2'x2'

- 882240-50-L-F LED Eco Panel Light - 2 x 2 - 40W - 5000K - Day White-DLC-Dimmable
- 882240-40-L-F LED Eco Panel Light - 2 x 2 - 40W - 4000K - Natural White-DLC-Dimmable
- 882240-35-L-F LED Eco Panel Light - 2 x 2 - 40W - 3500K - Warm White-DLC-Dimmable
- 882240-30-L-F LED Eco Panel Light - 2 x 2 - 40W - 3000K - Warm White-DLC-Dimmable

## Ordering Information - LED Eco Panel Light 60W 2'x2'

- 882260-50-L-F LED Eco Panel Light - 2 x 2 - 60W - 5000K - Day White-DLC-Dimmable
- 882260-40-L-F LED Eco Panel Light - 2 x 2 - 60W - 4000K - Natural White-DLC-Dimmable
- 882260-35-L-F LED Eco Panel Light - 2 x 2 - 60W - 3500K - Warm White-DLC-Dimmable
- 882260-30-L-F LED Eco Panel Light - 2 x 2 - 60W - 3000K - Warm White-DLC-Dimmable

Due to advancements in technology, specifications are subject to change without notice.

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WARNING: READ INSTRUCTIONS BEFORE INSTALLING

Disconnect all power sources to the fixtures before installing.

**SECTION 28 31 00  
FIRE DETECTION AND ALARM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Expansion of existing fire alarm notification appliance circuits and power supplies (as necessary) to add horn/strobe notification appliance as indicated.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 84 00 - Firestopping: Materials and methods for work to be performed by this installer.

**1.03 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. Provide all materials and labor in conformance with the following codes and standards:
  1. City of Joliet - Code of Ordinances.
  2. ANSI/NFPA 70 - National Electrical Code 2005 Edition as adopted and Amended by the City of Joliet, Illinois.
  3. IBC International Building Code, 2003 Edition, with local amendments.
  4. IECC International Energy Conservation Code, 2006 Edition with local amendments.
  5. International Fire Code, First Edition, 2003, with local amendments.
  6. NFPA 72 - National Fire Alarm Code ; 2003.
  7. Code for Safety to Life from Fire in Buildings and Structures (Life Safety Code, NFPA 101, 2003 edition).
  8. Automatic Fire Detectors, 2005 Edition (NFPA 72E).
  9. ADA-AG - American with Disabilities Act - Accessibility Guidelines.
  10. Illinois Accessibility Code, 1997 Edition (Illinois Administrative Code, Title 71, Chapter I, Subchapter b, Part 400).
  11. Underwriter's Laboratory.
  12. IEEE C62.41 - IEEE Recommended Practice on Surge Voltages in Low-Voltage Power Circuits; 1991 (R1995).

**1.04 QUALITY ASSURANCE**

- A. Manufacturer: Qualified company specializing in smoke detection and fire alarm systems with five years documented experience.
- B. Installer: Qualified firm with minimum 5 years documented experience installing fire alarm systems of the specified type and providing contract maintenance service as a regular part of their business.
  1. Authorized representative of control unit manufacturer; submit manufacturer's certification that installer is authorized; include name and title of manufacturer's representative making certification.
  2. Installer Personnel: At least 2 years of experience installing fire alarm systems.

3. Supervisor: NICET level III or IV (3 or 4) certified fire alarm technician; furnish name and address.

C. Qualified personnel includes those persons that are:

1. Factory trained and certified; OR
2. NICET Level III or IV (3 or 4) Fire Alarm certified; OR
3. International Municipal Signal Association Fire Alarm certified; OR
4. Certified by state (Illinois Department of Professional Regulation); OR
5. Trained, qualified, and employed by an organization listed by a national testing laboratory.

## 1.05 WARRANTY

- A. Provide installer's warranty that the installation is free from defects and will remain so for 1 year after date of Substantial Completion.
- B. Contractor shall, as condition precedent to final payment, execute a written guaranty to the Owner. Materials and equipment furnished by him under this Contract shall remain in satisfactory operating condition for a period of one year from the date of the final acceptance of the Work by the Owner. The guaranty shall also include prompt emergency service. All defects or damages due to faulty materials or workmanship shall be repaired or replaced without delay to the Owner's satisfaction and at the Contractor's expense.

## 1.06 EXISTING CONDITIONS

- A. The existing fire alarm system control panel is a Honeywell Addressible System.
1. The existing control panel will be modified and expanded to feed new devices as shown on the floor plans.
  2. Provide new equipment compatible with existing devices and system at site.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Initiating Devices, and Notification Appliances:
1. Same manufacturer as control units.
  2. Provide all initiating devices and notification appliances made by the same manufacturer.

### 2.02 FIRE ALARM SYSTEM

- A. Fire Alarm System: Provide modifications and extensions to the existing automatic fire detection and alarm system:
1. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
    - a. ADA Standards.
    - b. The requirements of the local authority having jurisdiction, which is City of Joliet.
    - c. Applicable local codes.
    - d. The contract documents (drawings and specifications).
    - e. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.
  2. Existing Control Panel: Make modifications to the existing panel:

- a. Verification of Adequate Power Supplies: Adequate to serve existing fire alarm system plus the addition of devices contemplated in this Project.

B. Circuits:

- 1. Initiating Device Circuits (IDC): Class B, Style A.
- 2. Notification Appliance Circuits (NAC): Class B, Style W.
- 3. All cabling shall be plenum rated.

C. Power Sources:

- 1. Primary: Dedicated branch circuits of the facility power distribution system.
- 2. Secondary: Storage batteries.
- 3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.
- 4. Each Computer System: Provide uninterruptible power supply (UPS).

### 2.03 EXISTING COMPONENTS

- A. Existing Fire Alarm System: Remove existing components indicated and incorporate remaining components into new system, under warranty as if they were new; do not take existing portions of system out of service until new portions are fully operational, tested, and connected to existing system.
- B. Clearly label components that are "Not In Service."
- C. Remove unused existing components and materials from site and dispose of properly.

### 2.04 COMPONENTS

A. General:

- 1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.
- 2. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.

- B. Fire Alarm Power Supplies, Initiating Devices, and Notification Appliances: Analog, addressable type; listed by Underwriters Laboratories as suitable for the purpose intended.

C. Initiating Devices:

- 1. Smoke Detectors (Existing) Addressable photoelectric smoke detector compatible with control panel. Each sensor shall be capable of being set at four sensitivity settings.
  - a. Automatic and manual functional sensitivity and performance tests shall be possible without the need for generating smoke.
  - b. Sensor shall have two LED visual indicators providing local 360 degree visibility of operating status and alarm indication. The LED shall pulse periodically indicating the sensor is receiving power and communication is being supplied.
  - c. Each sensor shall allow for the setting of two different sensitivity levels. These two levels shall be capable of being programmed with different sensitivities for occupied and unoccupied mode. This feature shall also incorporate programmable weekend days, where the sensor remain at an unoccupied sensitivity level all day.
  - d. Each sensor screen and cover shall be easily removable for field cleaning. Wire connections shall be made by clamping plate and screw.

e. Detector shall be a two-piece head and base unit.

D. Notification Appliances:

1. Horn/Strobes: NFPA 72 and UL 1971; electronic horn rated 90 dBA average at 10 feet. Provide integral 110 candela strobe lamp and flasher. Provide red trim ring for semi-flush mounting. Synchronize strobes within site of each other. Compatible with control panel.
2. Strobes: NFPA 72 and UL 1971; Provide integral 110 candela strobe lamp and flasher. Provide red trim ring for semi-flush mounting. Synchronize strobes within site of each other. Compatible with control panel.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION AND PREPARATION**

- A. Field inspect existing fire alarm system installation to determine all required interface components necessary for fire alarm system replacement and relocation. Do not modify system until verification of all affected circuits is complete.

### **3.02 INSTALLATION**

- A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.
- B. Install fire alarm system in accordance with manufacturer's instructions.
- C. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.

### **3.03 INSPECTION AND TESTING FOR COMPLETION**

- A. Notify Owner 7 days prior to beginning completion inspections and tests.
- B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
- C. Provide the services of the installer's supervisor or person with equivalent qualifications to supervise inspection and testing, correction, and adjustments.
- D. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.
- E. Provide all tools, software, and supplies required to accomplish inspection and testing.
- F. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
  1. Include description of testing and results in test report.
  2. Perform acceptance test to NFPA 72 standards on system of affected circuits and power supplies.
- G. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.

### **3.04 CLOSEOUT**

- A. Substantial Completion of the project cannot be achieved until inspection and testing is successful and:



1. Spare parts, extra materials, and tools have been delivered.
2. Final acceptance of the fire alarm system has been given by authorities having jurisdiction.

**END OF SECTION**



# CONTRACT AGREEMENT

Purchase Order#: XXXXXX Account #: XXX-XXX-XXX.XXX

Date: XXXXXX

Project: XXXXX

Between:

Joliet Junior College  
1215 Houbolt Road  
Joliet, Illinois 60431

AND

Contractor  
Address  
Address

In the amount of \$ xxxxxxxxxxxxxxxxxxxxxxxxxxxx and 00/100

## ARTICLE 1

### THE WORK

1.1 The Trade Contractor and JJC agree that the materials and equipment to be furnished and the work to be done by the Trade Contractor are as follows:

The Contract Sum includes, but is not limited to the following:

- 110% Performance and payment bond to Joliet Junior College, Illinois Community College District No. 525
- Insurance in accordance with Schedule "A" Insurance Requirements.

The Contract Sum excludes the following:

- All sales, consumer, use and other similar taxes on equipment and materials incorporated into the work for this project. Tax Exempt No E9992-4773-06 for Joliet Junior College, Illinois Community College District No. 525

1.2 The Trade Contractor shall be held accountable for the following Project related responsibilities: furnish all labor and supervision; furnish, supply and install all equipment, material supplies, tools, scaffolding, hoisting, transportation, unloading and handling; do all things required to complete the work described above on the Project all in accordance with the drawings, documents and specifications prepared by the Architect/Engineer/Owner; and furnish all necessary information, shop drawings, details, samples, brochures,

etc. for Owner/Architect approval, as may be required.

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**ARTICLE 2**

**TIME OF COMMENCEMENT AND COMPLETION**

2.1 Trade Contractor shall start the work upon notice to proceed and shall execute the work with diligence and so as to maintain such schedules and milestones as established by JJC’s Construction Manager. The Trade Contractor agrees to complete portions and the whole of the work by the following anticipated dates:

2.2 The Trade Contractor is cautioned that schedules and milestones are subject to review and revision. It is the sole responsibility of the Trade Contractor to attend job meetings, keep itself informed of any revisions, and conform to any such revisions.

2.3 In the event that the Trade Contractor should fail to maintain JJC’s progress schedule or the schedule as established above, the JJC Construction Manager reserves the right, after 48 hours formal notice, either by letter or confirmed email to the Trade Contractor, to procure the materials, equipment, and labor necessary to proceed with, or to complete the work, or any portion thereof from other sources and charge the cost thereof to the Trade Contractor.

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**ARTICLE 3**

**THE CONTRACT SUM**

3.1 JJC agrees to pay the Trade Contractor for the satisfactory performance of his work the total sum of:

Contract Amount: \$ .00

Contract amount is made up of the following:

- Base Bid .....\$
- Alternate Bid No. ....\$
- Total Contract Amount.....\$

Allowances (if applicable):

Unit Prices (furnished and installed unless stated otherwise)

**In current funds subject to additions and deductions for changes, as may be agreed upon, and to make payments on account thereof as follows:**

- 3.2 On the established day of each month, the Trade Contractor shall deliver to the JJC Construction Manager (2) completed copies of the JJC Payment Application Package showing values of all materials delivered and work completed up to the established billing date for which payment is being requested. It is specifically understood and agreed that prior to submission of the first statement the Trade Contractor will deliver to the JJC Construction Manager, for review and approval, a detailed breakdown of this contract sum showing a schedule of values for the various parts of the work. Once accepted, this schedule of values will be used as a basis for checking the Trade Contractor's monthly statement.
- 3.3 The Trade Contractor shall, with the second and each succeeding monthly request for payment, submit a waiver of lien showing all payments made for labor and materials and on account for all work covered in the previous months request for payment. Affidavit and waiver of liens may be required to be submitted from Trade Contractors, suppliers, and/or Trade-Trade Contractors (all tier).
- 3.3.1 The Trade Contractor shall, with the second and each succeeding monthly request for payment, submit certified payroll for all labor and sub labor.
- 3.4 Ten percent (10%) of each payment shall be retained, unless specific provisions to the contrary are indicated in the contract documents.
- 3.5 No payment made under this Agreement, including the final payment, shall be conclusive evidence of the performance of the work, either wholly or in part, and no payment shall be construed as an acceptance of defective work or improper materials.
- 3.6 The Trade Contractor shall save and keep JJC's property free from all mechanics' and material liens and all other liens and claims, legal or equitable, arising out of the Trade Contractors work hereunder. In the event any such lien or claim is filed by anyone claiming by, through, or under the Trade Contractor, the Trade Contractor shall remove and discharge same, by bonding or otherwise, within five (5) days of the filing thereof.

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**ARTICLE 4**

**THE CONTRACT DOCUMENTS**

- 4.1 The contract documents consist of this Agreement and any exhibits attached hereto; general conditions, supplementary, special and other conditions, the drawings, specifications, general instructions to bidders, supplements to bidder's documents, form of proposal, all addenda issued prior to and all modifications issued after execution of the Agreement. Any post bid review and/or pre-construction document shall be considered part of this Agreement.
- 4.2 The Trade Contractor agrees to perform the work under the general direction of the JJC Construction Manager.
- 4.3 If there is a provision for liquidated damages in the contract documents, the Trade Contractor shall be liable for any liquidated damages by reason of the failure of the Trade Contractor to prosecute the work diligently and properly.
- 4.4 No extra work shall be performed under this Agreement, except upon receipt of a written change

order from JJC. Should the Trade Contractor proceed with any work they consider extra to this contract without a fully executed JJC change order form, it is considered at their own risk and cost.

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## ARTICLE 5

### INSURANCE AND INDEMNITY

5.1 The Trade Contractor agrees to at the time of execution of this Agreement furnish the Construction Manager with certificates of an insurance company (or other source). These certificates should certify that the Trade Contractor is protected on the work with worker's compensation and employer's liability, public liability and bodily injury, property damage insurance, and any other insurance as required by the contract documents and in accordance with the attachment to this Agreement entitled "Insurance Specifications". The Trade Contractor will not be permitted to start work at the site until these certificates are filed with the JJC Construction Manager. Compliance by the Trade Contractor with the foregoing requirements, as to carrying insurance and furnishing certificates, shall not relieve the Trade Contractor of its liabilities and obligations.

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## ARTICLE 6

### PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

6.1 The Trade Contractor agrees to furnish and pay for a 110% Performance Bond and a 110% Labor and Material Payment Bond. The bonds are to be delivered within 10 days of receipt of a purchase order and execution of this agreement.

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## ARTICLE 7

### WARRANTY

7.1 The Trade Contractor agrees to promptly make good, without cost to the JJC, any and all defects, due to faulty workmanship and/or materials, which may appear within the guarantee or warranty period so established in the contract documents. If no such period be stipulated in the contract documents, then such guarantee shall be for a period of one (1) year from date of completion and acceptance of the work by JJC. The Trade Contractor further agrees to provide any and all guarantees as required by the terms of the contract documents, as a condition precedent to final payment.

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## ARTICLE 8

### CHANGES IN THE WORK

- A. 8.1 The Trade Contractor may be ordered in writing by JJC, without invalidating this Agreement, to make changes in the work within the general scope of this Agreement. These changes may consist of additions, deletions, or other revisions, the contract sum and the contract time being adjusted accordingly. The Trade Contractor, prior to the commencement of such changed or revised work, shall submit promptly to the JJC Construction Manager written copies of any claim for adjustment

to the contract sum and contract time for such revised work in a manner consistent with the contract documents. Any extra work done by the Contractor will be considered performed at no extra cost to JJC unless a written JJC change order form has been fully executed and signed by the Director of Business and Auxiliary Services. A contractor shall not be entitled to any compensation for extra work/material based on verbal conversations or email exchanges (the contractor is considered proceeding with extra work at their own risk without a fully executed JJC change order form). It is the contractor's responsibility to obtain a fully executed change order form from JJC. A change order or a combination of multiple change orders may not exceed 10% of the original contract without JJC seeking approval from the Board of Trustees.

8.2 Where changes in the work involve both additions and deletions, percentages for overhead and profit shall be applied to the net increase only of such values for labor and materials.

8.3 The amount to be paid by the Owner for changes in the work, as outlined in paragraph 8.1 above, shall be made on the basis of one of the following methods:

(a) by mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation and agreed upon by the JJC Construction Manager and the Trade Contractor, or

(b) by unit prices stated in the contract documents, or

(c) if no such unit prices are set forth and if the parties cannot agree upon a lump sum, then the actual net cost in money to the Trade Contractor of materials and labor (including insurance and applicable taxes) required, plus rental of plant equipment (other than small tools and small equipment) plus compensation for overhead and for profit as noted in Article 12, field overhead will not be considered as part of actual net cost, or

(d) by the method provided in subparagraph 8.4.

8.4 If none of the above methods set forth in clauses 8.3 (a), 8.3 (b), 8.3 (c) is agreed upon, the Trade Contractor, provided he receives a written order signed by JJC shall promptly proceed with the work involved. The cost of such work shall be determined by the JJC Construction Manager on the basis of reasonable expenditures and savings of those performing the work attributable to the change, including, in the case of an increase in the contract sum, a reasonable allowance for overhead and profit as set forth in the bid documents. In such case, and also under clauses 8.3 (c) and 8.3 (d) above, the Trade Contractor shall keep and present, in such form as the JJC Construction Manager may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a change order. Unless otherwise provided in the contract documents, cost shall be limited to the following: cost of materials including sales tax and cost of delivery, cost of labor including social security, old age and unemployment insurance and fringe benefits required by Agreement or custom; workers or workmen's compensation insurance; bond premiums; rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change. Pending final determination of cost, payments, on account shall be made as determined by the JJC. The amount of credit to be allowed by the Trade Contractor for any deletion or change which results in a net decrease in the contract sum will be the amount of the actual net cost as confirmed by JJC when both additions and credits covering related work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any with respect to that

change.

8.5 For work performed by a Trade-Trade Contractor, the Trade Contractor will be allowed to add 5% only and said Trade-Trade Contractor mark-up shall not exceed the agreed upon percentages noted in Article 11 for overhead and profit.

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## ARTICLE 9

### TRADE CONTRACTOR RESPONSIBILITIES

9.1 The Trade Contractor shall provide sufficient, safe, and proper facilities at all times for the inspection of the work by JJC. The Trade Contractor shall, within a 24-hour notice from the JJC Construction Manager, proceed to take down all portions of the work and remove from the grounds or buildings, all materials, whether worked or unworked, which the JJC Construction Manager shall condemn as unsound or improper, or as in any way failing to conform to the contract documents. The Trade Contractor shall make good at its own expense, all work damaged or destroyed thereby.

9.2 The Trade Contractor agrees, in the performance of this Agreement, to comply with all federal, state, municipal, and local laws, ordinances, codes and governing regulations, to pay all costs and expenses required thereby; to pay all fees, charges, assessments, and taxes, including sales and use taxes, and to pay all fringe and other benefits required by Agreement or law.

9.3 The Trade Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save JJC harmless from loss on account thereof, except that JJC shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Trade Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the JJC Construction Manager.

9.4 Should the Trade Contractor become insolvent, or at any time, refuse or neglect to supply a sufficiency of properly skilled workers, or equipment and materials of the proper quality, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the Agreements herein contained, JJC shall be at liberty, after 48 hours written notice to the Trade Contractor, to provide any such labor, equipment, and materials and deduct the cost thereof, from any money then due or thereafter to become due to the Trade Contractor, under this Agreement if such refusal, neglect, or failure is sufficient ground for such actions, JJC shall also be at liberty to terminate the employment of the Trade Contractor. Consequently, JJC may enter upon the premises to take possession, for the purpose of completing the work included under this Agreement, of all materials, tools, and appliances thereon, and to employ any other person or persons to finish the work and provide the materials therefore. In case of such discontinuance of the employment, the Trade Contractor shall not be entitled to receive any further payment under this Agreement until the said work shall be wholly finished. If such expense shall exceed such unpaid balance, the Trade Contractor shall pay the difference to JJC. The expense incurred by JJC, as herein provided, either for furnishing materials, or finishing the work, and any damage incurred through such default, shall be chargeable to the Trade Contractor. In the event that a Termination for Cause is not upheld by a properly empowered judicial or arbitral authority, then the Termination for Cause shall be deemed a Termination for Convenience and construed under Section 9.4.1. hereof.

9.4.1 Notwithstanding the above paragraph, JJC reserves the right to terminate this Agreement for its convenience upon written notice to the Trade Contractor. In such instance the Trade Contractor will be paid

its share of the contract amount proportionate to the percentage of its work completed and other reasonable cancellation costs incurred as a result of said termination. No payments shall be made for anticipated overhead and profit. Prior to making any payments under this clause, JJC shall have the right to audit the records of the Trade Contractor.

9.5 The Trade Contractor agrees to adhere to the federal occupational safety act, state and local safety regulations and JJC's safety and health program so as to avoid injury or damage to persons or property, and to be directly responsible for damage to persons and property resulting from failure to do so.

9.6 In the event the Trade Contractor after a 24-hour written notice from JJC fails to take corrective action to insure compliance with said safety regulations or removal of rubbish and debris resulting from his work, JJC shall undertake these obligations and charge the cost of same to the Trade Contractor's account without further notice to the Trade Contractor.

9.7 The Trade Contractor agrees to notify the JJC Construction Manager of all accidents which may occur to persons or property and shall provide a copy of all accident reports on appropriate forms. All reports shall be signed by the Trade Contractor or his authorized representative and submitted within five (5) days of occurrence.

9.8 The Trade Contractor shall procure its materials from such sources, and employ such labor subject to contract terms and conditions in order to ensure harmonious labor relations on the site and prevent strikes or labor disputes by its employees or other trade employees. The Trade Contractor, in the event of a labor dispute including strikes, shall take whatever action is required in order to prevent the disruption of work on the Project site.

9.9 The Trade Contractor will not assign this Agreement or any moneys due or to become due under this Agreement, or sublet the whole or any part of the work to be performed hereunder, without the written consent of the Owner. In the event of such consent, a Trade-Trade Contractor must comply with all the requirements of this Agreement.

9.10 The Trade Contractor agrees that all disputes concerning the jurisdiction of trades shall be adjusted in accordance with any plan for the settlement of jurisdictional disputes which may be in effect either nationally or in the locality in which the work is being done. The Trade Contractor shall be bound by, and shall abide by, all such adjustments and settlements of jurisdictional disputes, whether or not the Trade Contractor is signature bound by the Agreement establishing the impartial jurisdictional disputes board and/or its successors. The Trade Contractor agrees not to cause work stoppage, due to the jurisdictional assignment of work.

9.11 The Trade Contractor shall submit to the JJC Construction Manager upon request, copies of orders placed for the various materials required for the Project or authentic stock lists if such material is normally a stock item. Order copies need not reflect prices but should indicate type of material, quantity, vendor name, and address, etc. The Trade Contractor shall be required to submit to the JJC Construction Manager a monthly material status report, or more often if required by the JJC Construction Manager, as a prerequisite for the monthly progress payment. The Trade Contractor shall notify the JJC Construction Manager immediately upon learning of a change of status of any material, equipment, or supplies.

9.12 The Trade Contractor shall continuously and adequately protect all his work and will immediately replace all damaged and defective work.



9.13 The Trade Contractor agrees to maintain an adequate force of experienced workers and the necessary materials, supplies, and equipment to meet the requirements of the JJC Construction Manager and other trades in order to maintain construction progress schedules, as established by the JJC Construction Manager. In the event that his force is, in the judgment of the JJC Construction Manager, inadequate to meet the established schedules during the regular working hours, the Trade Contractor agrees to work sufficient overtime hours or increase his work force to meet such schedules at no extra cost to JJC. If for reasons not already stated, the JJC Construction Manager requires and directs the Trade Contractor to work overtime, including Saturdays, Sundays or Holidays, the Trade Contractor will be reimbursed the net premium rate only. The net premium rate is understood to mean the actual premium labor cost, including applicable taxes and wage additives required by trade Agreement or by law, but without additives for overhead, labor efficiency, or profit.

9.14 The Trade Contractor agrees to employ competent administrative, supervisory, and field personnel to accomplish the work, including layout, engineering, and preparation and checking of shop drawings. If required, the Trade Contractor shall substantiate this employment of competent personnel to JJC's Construction Manager's satisfaction before initiating any work.

9.15 The Trade Contractor shall insure that all construction tools, equipment, temporary facilities, and other items used in accomplishing the work, whether purchased, rented, or otherwise provided by the Trade Contractor or provided by others, are in a safe, sound, and good condition, must be capable of performing the functions for which they are intended and must be maintained in conformance with applicable laws and regulations.

9.16 If the Trade Contractor is delayed at any time in the progress of the work by any act or neglect of JJC, the Architect/Engineer, or by any employee of either, or by any separate contractor employed by JJC, or by changes ordered in the work, or by labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties or any causes beyond the Trade Contractor's control, or by delay authorized by JJC, or by any other cause which the JJC Construction Manager determines may justify the delay, then the contract time shall be extended by amendment for such reasonable time as the JJC Construction Manager may determine. In the event that a conflict exists between this section (9.16) and a like clause contained in a document having higher precedence, such like clause shall have preference to the extent of the conflict.

9.17 Right-To-Know- each Trade Contractor is required to implement the provisions of the right-to-know law, if any, as enacted by the state in which the work is being performed. Before using on site any material listed in the right-to-know substance list, each Trade Contractor will furnish the Construction Manager a copy of the material safety data sheet for that substance.

9.18 In the event the Trade Contractor employs independent contractors, as well as payroll labor, to discharge its obligations hereunder, the Trade Contractor acknowledges and understands that it does so at its own risk and that federal, state and/or local agencies may dispute the independent contractor status and assess penalties, fines, and costs should there be a determination to reclassify such workers. In that event, the Trade Contractor agrees that it will defend, indemnify and hold JJC harmless from any fines, costs, damages, penalties, attorneys fees, and causes of action, including without limitation, personal injury or property damage, arising out of or relating in any way to such a determination.

9.19 The Trade Contractor will have competent supervision on site at all times when work is proceeding. No subcontractor should be working on site without representation/supervision by this Trade Contractor. The JJC Construction Manager reserves the right to hire proper supervision of subcontractors, and fully back charge

this Trade Contractor for such services.

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## ARTICLE 10

### EQUAL OPPORTUNITY

10.1 During the performance of this Agreement, the Trade Contractor agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Trade Contractor will take affirmative action to insure that applicants are employed without regard to their race, color, religion, sex, or national origin. The Trade Contractor will comply with all provisions of Executive Order No. 11246, Section 503 of the Rehabilitation Act of 1973, as Amended, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as Amended, (38 U.S.C. 4212) and their implementing regulations at 41 CFR Chapter 60.

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## ARTICLE 11

### ALTERATIONS

11.1 The overhead and profit allowable under Article 8.3. A, 8.3 B, 8.3 C is:

- For the Trade Contractor, for any Work performed by the Trade Contractor's own forces- 12 percent of the cost
- For the Trade Contractor, for Work performed by his Subcontractor - 5 percent of the amount due the Subcontractor

11.2 All proposals, except those less than \$200 shall be accompanied by a complete itemization of costs including, labor, materials and subcontractors. Labor and material shall be itemized in the manner prescribed in Article 11.1. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over \$200 be approved without such itemization.

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## ARTICLE 12

### COMPLETE AGREEMENT

12.1 This Agreement, together with all documents, specifications, drawings, incorporated herein by reference, constitutes the entire Agreement between JJC and Trade Contractor. There are no terms, conditions, or provisions, either oral or written, between the parties hereto, other than those contained herein. This Agreement supersedes any and all written representations, inducements, or understandings of any kind or nature between the parties hereto, relating to the particular Project involved herein.

12.2 The said parties for themselves, their heirs, successors, executors, administrators and assigns, do hereby agree to the full performance of the covenants herein contained.

12.3 Governing Law; Venue - The validity, construction and interpretation of this Agreement shall be governed by the laws of the State of Illinois. The parties hereto irrevocably agree that all actions or proceedings in any way, manner or respect arising out of or from or related to his Agreement shall be litigated only in the Circuit Court, Twelfth Judicial Circuit, Will County, Illinois. Each party hereby consents and submits to personal jurisdiction in the State of Illinois and waives any rights such party may have to transfer the venue of any such action or proceeding.

In witness whereof they have hereunder set their hands the day and date first above written.  
In the presence of

Trade Contractor

Accepted by: \_\_\_\_\_ (Signature)

Name: \_\_\_\_\_ (Print name)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Joliet Junior College  
Owner

By: \_\_\_\_\_ (Signature)

Joliet Junior College

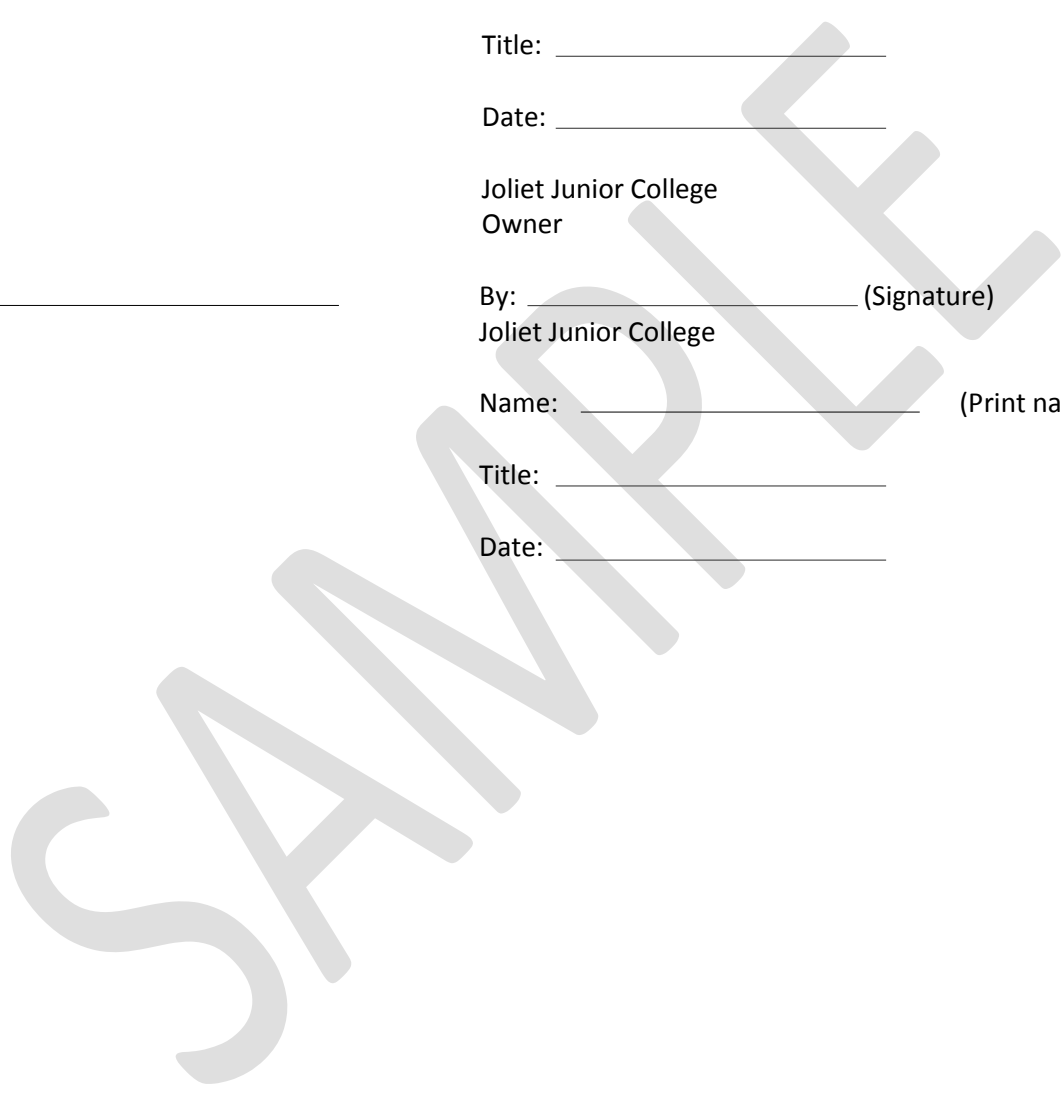
Name: \_\_\_\_\_ (Print name)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness



Date:  
Time:  
Project Title / Location:  
Project Number:



FOR  
**(Contractor's name)**

1. **Introductions:** All project members are to introduce themselves including their name, organization, title, and role on the project.

A. Joliet Junior College Personnel:

1. Construction Manager:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

2. Alternate Contact:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

B. Contractor Personnel

1. Project Manager:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

2. Construction Superintendent:

- a. Phone:
- b. Cell:
- c. Fax:
- d. Email:

2. **Communications:**

A. Communications related to the project between Joliet Junior College and the Contractor shall be conducted through the Joliet Junior College Construction Manager (CM) only, unless directed otherwise.

- B. In the event of an emergency the Contractor is to contact Campus Police at 815-280-2234, or may pick-up any campus phone and dial 2911.
- C. RFI's: Requests for Information (RFI's): All Requests for Information shall be in written form to JJC's CM with a copy to the A/E when required. All responses will come from JJC or the A/E in writing addressed to the Contractor's Project Manager
- D. Weekly Construction Reports: Contractor is to provide a weekly construction report to JJC CM. This report is to be inclusive of daily activities, potential delays, stoppage, problems, accidents, near misses, significant decisions, meetings, requests by JJC, etc.
- E. Correspondence: All correspondence shall be directed to the Construction Manager

Joliet Junior College  
Facilities Services Department  
ATTN: \_\_\_\_\_  
1215 Houbolt Road  
Joliet, IL 60431

Include Project Title, Project Number, Purchase Order Number on ALL correspondence.

### 3. Construction Schedule:

- A. Schedule of Values: Contractor is to provide a schedule of values (AIA document recommended) broken down into each division of the work as a minimum. The schedule of values will include as a minimum a listing of the work elements or branch values, the cost of each work element, and the percentage of total project "award" cost that the work element represents. The schedule of values will become the basis for "work elements" a.k.a. "branch values" of the Construction Schedule. These same "work elements" shall be used as the basis for the "branch values" of the Construction Progress Report as listed in item #2D above.
- B. Construction Schedule: Contractor is to submit within one week of pre-construction meeting, a fully developed gantt chart type construction schedule.
  - 1. Provide a task for each construction activity or "work element".
  - 2. No progress payment will be processed until the construction schedule is submitted and approved.
  - 3. Provide a revised, updated schedule with each progress payment request.

**Performance:****A. Commencement, Prosecution & Completion of Work**

1. Purchase order/notice to proceed received: \_\_\_\_\_
2. Contract Amount: \_\_\_\_\_
3. Total Amount of Alternates Accepted: \_\_\_\_\_
4. Proposed start/mobilization date : \_\_\_\_\_
5. Preconstruction Submittals Received: Check one Y \_\_\_\_\_ N \_\_\_\_\_
6. Bonding & Insurance Requirements Received: Check one Y \_\_\_\_\_ N \_\_\_\_\_
7. Completion date: \_\_\_\_\_
8. Delays and time extensions: The Contractor is responsible for the completion of project work within the time designated above and in the construction schedule. Justified change orders may qualify a delay and require a time extension which must be discussed and approved by the JJC CM. Failure to complete the project on time will result in a negative evaluation of Contractor performance on the JJC project close-out documents.
9. All shop drawings will be submitted to the JJC CM or A/E when required. Material samples shall be submitted for approval when required.
10. The JJC CM and/or the A/E will provide a list of punch list items. The final punch list shall be completed within 2 weeks upon substantial completion. 10% of the contract amount will be withheld until all punch list items are completed.
11. Construction status meetings between the Contractor and JJC CM shall be held on a weekly basis in the JJC CM's office. At the JJC CM's discretion, this weekly meeting may be held via conference telephone call as the project dictates.
12. As-built drawings shall be maintained and kept on-site daily. Final as-built drawings are required to be turned over to the JJC CM at project completion. When AutoCAD drawings are available from the A/E, the Contractor will revise the drawings to reflect as-built conditions. Final payment will not be processed until all as-built drawings are received.

**B. Coordination of Work:**

1. The Contractor is responsible for coordination of all elements of the work and every aspect of the coordination of his subcontractors work.
2. The Contractor is required to have a competent construction supervisor in charge of the work at all times. Construction supervisor may be a working foreman.

3. When the shut down of utilities is required, the Contractor shall coordinate with the JJC CM to schedule the shut down process. Allow a minimum of 5 days notice to allow for a shut down. Unless otherwise stated during the bidding process, a utility shut down will be required between the hours of 10:00 p.m. to 6:00 a.m.
  4. The contractor is to consider any loud construction noise that may be disruptive to classes, faculty, students and staff (including but not limited to loud demolition, hammer drilling, concrete cutting/drilling, rock breaking, shooting of metal stud track into floors and ceilings, etc.). Such work shall be performed during the maintenance hours of 10:00 p.m. to 6:00 a.m.
  5. The contractor will be responsible for providing and maintaining portable toilet facilities when the scope of work is an outdoor project. Location of the portable toilet(s) shall be coordinated with JJC.
  6. Any project requiring excavation with remaining spoils shall be hauled off site as part of the contractors base scope of work. Leaving/spreading spoils on site shall not be permitted.
- C. Contractor Evaluation:  
At the completion of the project, the JJC CM will complete a contractor evaluation. This evaluation is kept on file and is taken into consideration when considering the Contractor for future projects.
- 13. Mobilization:** Prior to the Contractor mobilizing on site, the following requirements must be met and reviewed.
- A. Pre-mobilization requirements:
1. Safety plan submitted and approved.
  2. Schedule of Values and Construction Schedule submitted and approved.
  3. Review Contractor's plan for mobilizing on site, including phasing, timing elements, crane operations, dumpster locations, gang box locations, deliveries, parking, storage of material, etc.
  4. The Contractor's safety plan shall be submitted to the JJC CM addressing issues of excavation, crane lifts, hot work and other construction hazards.
  5. Contractor check-in with Facility Services. The Contractor's employees are required to obtain vehicle tags and I.D. badges. Any ticketing by Campus Police as a result of no vehicle tag will be the responsibility of the Contractor.

**14. Housekeeping and Clean-up:** The Contractor is primarily responsible for housekeeping in its respective work areas, and for work performed by its employees and subcontractors. This means the Contractor's work area is required to be maintained in an orderly, safe and productive condition at all times.

- A. Accumulation of combustibles, flammable liquids, chemical products, tools not in use, trash and/or refuse is not acceptable and will not be allowed.
- B. Parking, staging and storage of materials and equipment shall be confined to designated areas only.
- C. When a Contractor's work material may be dislodged by wind and could create a hazard when left in an open area, it shall be secured by the Contractor.
- D. The Contractor will police its work area(s) at the end of the shift and leave the area in a condition that is acceptable to the JJC CM.
- E. In the event that housekeeping in a Contractor's work area is found to be in an unacceptable condition by the JJC CM, the CM will give notice once verbally to the Contractor's on-site supervisor or foreman. If the deficiency is not corrected in a timely manner (and no later than the end of the day's work shift), the JJC Facility Services Department may make provisions for clean-up (which may or may not be done by outside services), and fully back charged to the Contractor. The Contractor will be liable for all costs associated with clean-up at a minimum rate of \$100/man hour plus materials.
- F. The Contractor shall provide and install safety fencing or barricades around areas requiring protecting (including but not limited to trees, plantings, etc.). This includes installing cyclone fencing for outdoor projects to prevent anyone from entering the construction zone.
- G. The Contractor will be responsible for daily cleaning of mud off roadways where required, or caused by this Contractor.
- H. The Contractor will provide tree protection and install silt fencing when working in areas that such protection or erosion control is required.
- I. The Contractor will provide berms around storm drains to prevent mud run-off from entering the lake.



**15. Conduct and Behavior:**

The Contractor's employees must take into consideration the environment around them when holding conversations with fellow employees as well as JJC staff as to not interrupt classes that may be in session, or students in concourses that may be studying. Profanity/foul language, derogatory remarks or harassment of students will not be tolerated and will be an immediate means for the employee dismissal from the project.

**16. Progress Payments/Invoicing and Change Orders:**

- A. A "pencil" copy of progress invoicing shall be submitted to the JJC CM & the A/E by the 1st of every month for review and approval. Final invoicing shall be in by the second week of the month for processing and board approval. No invoice will be processed without lien waiver(s) and certified payroll.
- B. Any extra work done by the Contractor will be considered performed at no extra cost to JJC unless a written JJC change order form has been fully executed and signed by the Director of Business and Auxiliary Services. A contractor shall not be entitled to any compensation for extra work/material based on verbal conversations or email exchanges (the contractor is considered proceeding with extra work at their own risk without a fully executed JJC change order form). It is the contractor's responsibility to obtain a fully executed change order form from JJC. A change order, or a combination of multiple change orders may not exceed 10% of the original contract without JJC seeking approval from the Board of Trustees.

**17. Miscellaneous:**

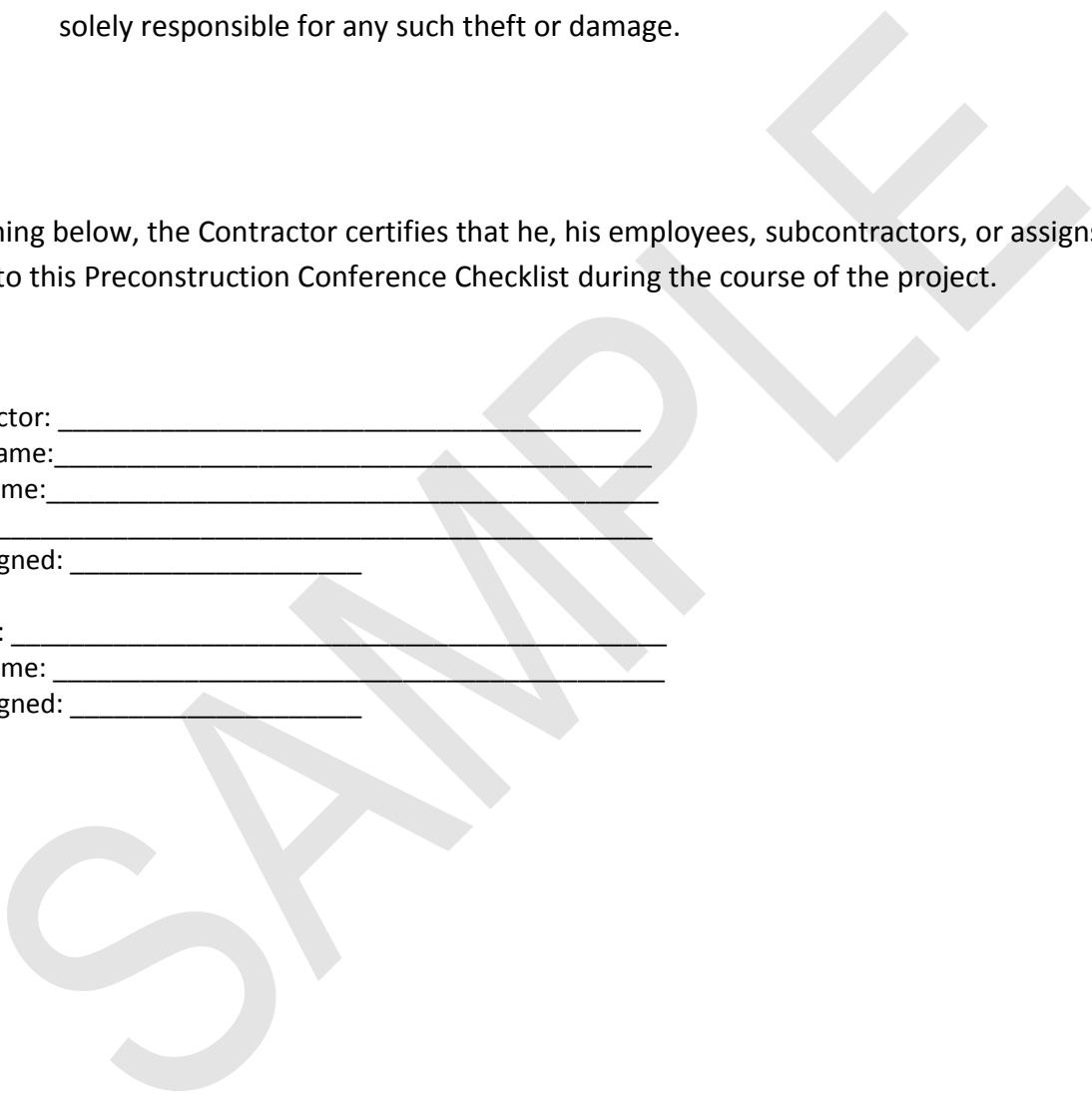
- A. Soliciting or canvassing and posting or distributing printed material (except as permitted by law) is prohibited.
- B. Smoking is restricted to designated signed areas outside. The use of any tobacco products (including chewing) indoors is prohibited, and must be done in the designated outdoor smoking areas during break time.
- C. Drinking, using, possessing or being under the influence of alcohol or controlled substances are prohibited, and a cause for immediate dismissal.
- D. No radios, CD Players or MP3 players shall be used during normal working hours.

- E. The Contractor shall perform his/her work in accordance to no less than the minimum requirements as established by the Occupational Safety and Health Association. Personal Protection equipment shall be provided by the Contractor and worn at all times.
  
- F. The Contractor will be responsible for securing materials and tools and shall be solely responsible for any such theft or damage.

By signing below, the Contractor certifies that he, his employees, subcontractors, or assigns will abide to this Preconstruction Conference Checklist during the course of the project.

Contractor: \_\_\_\_\_  
Print name: \_\_\_\_\_  
Sign name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date signed: \_\_\_\_\_

JJC CM: \_\_\_\_\_  
Sign name: \_\_\_\_\_  
Date signed: \_\_\_\_\_



August 2008

# **Safety Requirements for Contractors and Subcontractors**

Environmental Health and Safety

Facility Service Department

(815) 280-2384

Environmental Health and Safety

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# **Safety Requirements for Contractors And Subcontractors**

Environmental Health and Safety

Facility Services Department

1215 Houbolt Rd.

Joliet, IL 60431

Phone: (815) 280-2384 Fax (815) 280-6673

[http: // www.jjc.edu/ehs](http://www.jjc.edu/ehs)

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# Introduction

## EHS Information

The mission of Environmental Health and Safety (EHS) is to:

- Work toward providing a safe and healthful living, learning, and working environment for every member of the greater college community by assuring safe work practices through educating, training, and assisting individuals and departments;
- Help individuals and departments achieve compliance with all health and safety state and federal regulations and college policies as economically as possible and
- Act as liaison with external regulatory agencies, and to monitor college compliance with mandatory health and safety standards whenever necessary.

## Purpose

Joliet Junior College developed *Safety Requirements for Contractors and Subcontractors* to assure the safety of college employees and the public who may be in proximity to renovation, demolition, installation, or maintenance operations performed by Contractors or Subcontractors. Every Contractor is expected to take steps as necessary to protect the safety and health of college employees, students, and visitors during the performance of their work. Each Contractor that coordinates the work of Subcontractors shall assure that they abide by the requirements outlined herein.

## Application

Each department that coordinates or uses the services of a Contractor to perform maintenance, repair, installation, renovation or construction-related operations is expected to designate one or more persons to coordinate this program within his or her department. These coordinators are expected to assure that the Contractor is:

- Informed of the presence of hazards in or near the work area.
- Informed about JJC's requirements related to lead, confined space entry, lockout/tagout, hot work, and excavation operations.
- Aware of the colleges' expectations regarding safety compliance and the control of worksite hazards.

A representative from EHS will serve as the coordinator for the purposes of this program on capital renovation and construction projects.

## Scope

This program applies to all JJC properties, and to all work performed by Contractors and Subcontractors in or on property owned, leased or occupied by JJC or employees of JJC.

# General Requirements

## Contractual Obligations

A copy of this document shall be made available upon request to prospective bidders/offerors at the pre-bid/pre-proposal conference for the work. This document shall be either included with, or referenced in, the contract documents.

Contractors performing building, facilities or equipment-related construction, repair, installation, renovation or maintenance activities shall attend a safety orientation as follows:

- On capital projects, this orientation will be conducted during the pre-construction conference or as determined by the Project Manager.
- For non-capital construction/renovation work, the Project Coordinator shall arrange the safety orientation with EHS and the Contractor prior to the start of work by contacting EHS at (815) 280-2384. Contractors retained on a term contract need only attend one safety orientation held prior to the award of the first project under that contract.

The Contractor shall provide the Project Manager/Coordinator with emergency contact phone number(s), usable 24 hours a day, for the Contractor's representative. These phone numbers shall be copied to EHS and the JJC Police Department prior to the work.

The Contractor bears sole responsibility for the safety of his or her employees. The Contractor is expected to take all steps necessary to establish, administer, and enforce safety rules that meet the regulatory requirements of the Illinois Department of Labor (IDOL) and the Occupational Safety and Health Administration (OSHA). These regulations include, but are not limited to:

- Title 29 of the Code of Federal Regulations (CFR) Parts 1910, Occupational Safety and Health Administration (OSHA) Standards for General Industry,
- Title 29 of the Code of Federal Regulations (CFR) Parts 1926, Occupational Safety and Health Administration (OSHA) Standards for the Construction Industry.

The Contractor bears sole responsibility for communication of safety-related information and requirements to his or her Subcontractors. Contractors shall assure that their Subcontractors comply with the requirements outlined herein.

## Submittals

Submittals, where required from the Contractor by this document, shall be made in writing, directly to the Project Manager/Coordinator and copied to EHS. Submittals shall be made sufficiently in advance to avoid delay of the project. Where review, approval, or coordination of submittals is required, submittals shall be made at least ten (10) working days prior to the start of the project unless prior arrangements have been made. Post-job submittals, where required



as outlined in this document, shall be made no later than fifteen (15) working days after completion of the project or as specified herein.

## Control of Fugitive Emissions

The Contractor shall take all reasonable precautions necessary to control fugitive emissions from the job site. Fugitive emissions include, but are not limited to: nuisance dust, chemical odors/vapors/gases, hazardous materials (such as lead dust or asbestos), and noise.

Where the product(s) or material(s) to be used by the Contractor has a permissible exposure limit (PEL) established by OSHA or IDOL and where college employees or the public may be exposed to the product or material, the Contractor shall take all reasonable steps to maintain exposures below the PEL where an exposure condition during use exceeding the PEL could reasonably be anticipated. In such instances, the Contractor shall monitor, or shall contract to have monitored, work area exposure conditions. Monitoring shall occur, at a minimum, during the start of work and whenever there is a change in procedure, process, or chemical or material used. If it is deemed not practicable to maintain exposures below the PEL, the Contractor shall restrict access to all areas where exposures exceed the PEL to authorize personnel only.

## Accidental Spills and Releases

In the event of an accidental release or spill of chemicals or other hazardous materials the Contractor shall:

- Immediately take action as appropriate to contain the spill if this action can be taken without jeopardizing the health or safety of employees,
- Notify the fire department, campus police, or other entities as needed or required,
- Contact EHS, and
- Contact the Project Manager/Coordinator.

EHS emergency response personnel may be reached after normal business hours by contacting the Campus Police Department at (815) 280-2234 or 2811 from a house phone.

The following phone numbers may be used in the event of an emergency during normal working hours:

	Outside	On-Campus
Joliet Fire Department and Ambulance		911
JJC Campus Police	(815) 280-2911	Extension 2911
North Campus-Romeoville Fire/Ambulance	911	911
Morris Fire/Ambulance	911	911
Environmental, Health and Safety	(815) 280-2384	Extension 2384
East Joliet Fire/Ambulance	(815) 723-1504	911
Facility Services	(815) 280-2332	Extension 2332

All college costs associated with responding to or remediation of a chemical or hazardous material spill or release may be assessed by the Contractor.

## **General Work Requirements**

The Contractor shall abide by the requirements of any sign posted in a building that requires the use of specific personal protective equipment, that restricts access to qualified or authorized persons only, or that establishes other requirements for entry.

The Contractor shall not conduct work or operations that obstruct exits or the means of egress from an occupied building without the prior approval of EHS and the Project Manager/Coordinator. Equipment and materials are not to be stored in exits or exit stairwells at any time, and may not be stored in the means of egress without prior approval. Fire rated doors shall not be chocked or blocked open except temporarily and event of a building fire alarm or similar emergency.

Compressed gases shall be stored, used and transported in accordance of the NFPA, OSHA and DOT. New compressed gas installations shall comply with these agency requirements.

All tents, stages and temporary structures shall comply with the requirements of the NFPA.

Contractors shall not use College equipment or vehicles nor shall the Contractor allow college employees to use the Contractors' equipment or vehicles without the approval of Risk Management and EHS. If an employee of a Contractor needs to use specialized equipment owned by JJC, such as powered industrial trucks, the Contractor must provide suitable documentation that the employee has been trained and certified (if required) to use such equipment.

# Specific Program Requirements

## Non-capital Projects

### Asbestos and Suspect Asbestos Containing Building Materials

It is the responsibility of the Contractor to provide his or her own asbestos awareness program which shall include, but is not limited to, the information contained in this section and the OSHA asbestos-related regulations (29 CFR 1926.1101). Verification that this training has been conducted shall be supplied to the college upon request.

Contractors employed by the college to perform building or facilities-related maintenance, repair or renovation shall be informed by the Project Coordinator of the location of suspect and known asbestos-containing materials (ACM) in the work area(s) to which they are assigned by one of the following means:

- The Project Coordinator shall provide the Contractor with a copy of a completed "Work Order Review Form" or an asbestos inspection report specific to their work and the materials that are to be distributed, or
- Where the construction documents for a project clearly detail asbestos material locations within the work area, these documents may serve in lieu of the "Work Order Review Form" or inspection report.

The "Work Order Review Form" is used internally at the College to document that the proposed scope of work has been reviewed for the presence of suspect or known ACM. The "Work Order Review Form" will be completed by either EHS or the individual within the Department approved by EHS to perform this review. Questions related to this issue should be addressed to EHS at (815) 280-2384. An asbestos inspection report may, at the discretion of the Contracting Department, be prepared by an asbestos consultant licensed in Illinois to perform the duties of Asbestos Inspector and Asbestos Management Planner, this report shall be copied to EHS upon receipt.

Contractors shall, under no circumstances, damage or disturb suspect or known *friable* ACM unless they are a licensed Illinois Asbestos Abatement Contractor and have been specifically employed to perform asbestos repair or removal. Contractors may remove *non-friable* ACM, or perform work that will potentially disturb non-friable ACM, only with prior approval by EHS of the Contractors proposed work methods, employee training and waste disposal site. If suspect asbestos materials are discovered during the course of the work, the Contractor shall stop work immediately and notify the Project Coordinator or other person as indicated in the contract documents.

The Contractor shall not proceed with any change in work which requires a material to be disturbed that the "Work Order Review Form", asbestos inspection report, or construction documents show has not previously been tested (e.g., "suspect" ACM). If a change in the scope of work becomes necessary, the revised scope of work shall be reviewed and pre-approved by EHS or other authorized person.

Asbestos materials may not be used or installed in College facilities.

## Lead-Containing Building Materials

Contractors employed by the college to perform building or facilities-related maintenance, repair or renovation shall be informed by the Project Coordinator of the location of lead-containing building materials in the work area(s) to which they are assigned by one of the following means:

- The Project Coordinator shall provide the Contractor with a copy of the completed “Work Order Review Form” or a lead inspection report specific to their work and the materials that are to be disturbed, or
- Where the construction documents for a project clearly detail the location of lead-containing building materials within the work area, these documents may serve in lieu of the “Work Order Review Form” or inspection report.

The Project Coordinator may obtain information regarding the location of lead materials within a work site from the Department Safety Representative or by contacting EHS at (815) 280-2384. A lead inspection report may, at the discretion of the Contracting Department, be prepared by a lead consultant licensed in Illinois to perform the duties of Lead Inspector, this report shall be copied to EHS upon receipt. Contractors that will disturb lead-containing building materials during the course of work shall take all necessary precautions to protect college employees and the public from exposure to lead dust or contamination. These measures shall conform, at a minimum, to the OSHA requirements detailed in 29 CFR 1926.62 and applicable local, state and federal regulation. The Contractor shall submit a copy of his or her lead compliance program, as required by 29 CFR 1926.62(e), with required supporting documentation for prior review and approval to EHS. This submittal shall be made sufficiently in advance of construction to avoid delay of the project. Where the Contractor is engaged in work in child-occupied facilities (as defined by 40 CFR Part 745), such work shall be performed in accordance with 40 CFR Part 745, and clearance testing shall be performed by EHS or a licensed consultant at the conclusion of the project in accordance with the requirements of this regulation.

A copy of the analytical report(s) for any personal air samples taken during the course of the work shall be provided to EHS.

The Contractor shall not proceed with any change in work that requires a material be disturbed that the “Work Order Review Form”, lead inspection report, or construction documents shows has not previously been tested unless pre-approved work procedure will be followed.

On projects where lead-containing materials will be disturbed or removed during the course of work, the Project Designer shall contact EHS at (815) 280-2384 to determine disposal requirements. If the lead-containing materials will constitute a hazardous waste, disposal of these materials shall be coordinated with EHS. The disposal requirements must be established during the design of the project.

## Confined Spaces

When the College arranges to have a Contractor perform work that involves entry into a confined space, the Project Coordinator shall:

- Inform the Contractor that the workplace contains confined spaces and that the entry is allowed only through compliance with a confined space program meeting the requirements set forth by the DOL and the OSHA.
- Apprise the Contractor of the elements, including the hazard(s) identified and the college's experience with the space.
- Apprise the Contractor of any precautions or procedures that the college has implemented for the protection of college employees in or near confined spaces where contractor personnel will be working.
- Coordinate entry operations with the Contractor when both College personnel and contractor personnel will be working in or near confined spaces.
- Debrief the Contractor at the conclusion of the entry operations regarding the confined space program followed and any hazards confronted or created in confined spaces during entry operations
- Provide a copy of JJC Confined Space Entry Program to the Contractor upon request.

Information on JJC Confined Space Program and information on specific confined spaces on JJC Properties may be obtained by contacting EHS at (815) 280-2384.

Each Contractor who is retained to perform work that will require permit space entry operations shall:

- Coordinate entry operations with the Project Coordinator when both the Contractor and College personnel will be working in or near permit spaces;
- Inform the Project Coordinator in writing of the permit space program the Contractor will follow;
- Inform the Project Coordinator of any hazards confronted or created in permit spaces during entry operations;
- Provide a copy of the Contractor's Confined Space Program to the College upon request;
- Inform the Project Coordinator in writing of the rescue services/team they will be using during permit entry; and
- Provide a copy of the canceled permit(s) to the Project Coordinator and EHS at the conclusion of entry operation.

## Confined Spaces

The Contractor shall maintain, on-site, Material Safety Data Sheets (MSDS's) for all chemicals used or stored at his or her job site as required by IDOL/OSHA regulations and the contract documents. The Contractor shall provide copies of MSDS's to the Project Coordinator and EHS upon request.

Chemicals are used extensively on the JJC campus. Chemicals use and/or storage is routine in, but not limited to, the following areas or locations:

- Laboratories
- Fume hood exhausts on the roofs of laboratory buildings. (In general, signs have been posted on the roof access hatch or door restricting access to the roofs of buildings where fume hood exhausts are located).
- Chemical stock rooms.
- Agricultural Shops, Areas, and Chemical Storage.
- Chemical waste accumulation areas.
- Facility Services and Kitchen, paint and chemical storage areas.
- Custodial Closets.

The Project Coordinator shall inform the Contractor of the following:

- Known hazards and any required safety procedures that must be followed in the Contractor's work area.
- Methods for obtaining access to Material Safety Data Sheets (MSDS) for hazardous chemicals present in the Contractor's work area.
- Information about the labeling system used in the work area (NFPA 701).
- Emergency procedures that the Contractor is to follow in the event of accidental exposures or releases of hazardous chemicals.

If the work will be conducted on the roof of a building where fume hood exhausts are located, the Project Coordinator shall coordinate access with Facility Services, the departments within the building, and EHS, as necessary to ensure that:

- Fume hoods within, or adjacent to, the work area are shut down,
- No experiments are in-progress that would generate toxic or hazardous airborne contaminants;
- All chemicals stored within the fume hoods are capped or otherwise sealed; and
- The Contractor is informed of any special precautions that must be taken to prevent employee exposure to hazardous chemicals.

A minimum of seven days advance notice is generally required to coordinate fume hood shutdowns. In emergency situations (for example, when the Contractor's personnel must conduct work on, or in proximity to, active fume hood exhausts), the Contractor may access these roof areas if appropriate personal protective equipment is used. The Contractor shall be

informed in writing by the Project Coordinator of the precautions that should be taken to protect his or employees while conducting such work. This information may be obtained by contacting EHS at (815) 280-2384.

Given the number of chemicals used, and changing work within chemical laboratories, it is impractical for the college to provide the Contractor with a MSDS for any chemical potentially in-use within any given laboratory. However, MSDS's are required to be maintained and to be accessible to employees in each work area, and MSDS's for all chemicals may be obtained from Campus Police or EHS.

The Contractor shall assume that all hazardous chemicals or materials are handled and disposed of in accordance with federal and state regulations. Where a hazardous waste disposal manifest is required by these regulations, the Contractor shall contact EHS at (815) 280-2384 to assure that manifesting, storage, and the proposed disposal method and disposal site meet college and EPA requirements. The Contractor shall supply a copy of the completed waste manifest to EHS within 24 hours of receipt.

Where the Contractor has secured air samples documenting employee exposure to airborne chemical or particulate hazards during the course of his or her work, a copy of all air sample results shall be provided to EHS within 24-hours of receipt by the Contractor.

## **Electrical Safety and Lockout/Tagout**

If College employees will be present on the Contractors worksite, and employees of either JJC and/or the Contractor will be performing work that requires the use of lockout and/or tagout devices, the following requirements shall apply:

- The Project Coordinator and Contractor shall inform each other of their respective lockout/tagout procedures.
- The Project Coordinator and Contractor shall each inform their personnel regarding the energy control procedures that are to be followed on the project site.
- A copy of JJC 's Electrical Safety and Lockout/Tagout programs shall be provided to the Contractor upon request.
- A copy of the Contractors electrical safety and lockout/tagout program shall be made available to the college upon request.

## **Trenching and Excavations**

The Contractor shall coordinate trenching and excavation work with the Project Coordinator, Facility Services, and JULIE to assure the coordination of work and shutdown of utilities if necessary.

The design of sloping and benching systems, support systems, shield systems or other protective systems shall conform, at a minimum, to the OSHA requirements detailed in 29 CFR 1926 Subpart P requirements.

Trenching or excavations below the level of the base or footing of any foundation or retaining wall, or adjacent to any utility, sidewalk or roadway, will not be permitted unless:

- A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure, or
- The excavation is in stable rock, or
- A registered professional engineer has approved the determination that such excavation work will not pose a hazard to employees or the structure.

This determination is the responsibility of the Contractor except as permitted, required or otherwise allowed by the project specifications or drawings

The Contractor shall notify the Project Coordinator of the name of the individual that is to serve as the Contractor's competent person as defined by this program and the OSHA regulations. The Contractor's designated competent person shall maintain a written log of the daily inspections made of excavations, adjacent areas, and protective systems. A copy of this written log shall be made available to the college upon request.

Where the design of a sloping and benching system, support system, shield systems or other protective systems requires review and approval by a registered professional engineer, the Contractor shall submit a copy of the completed review to the Project Coordinator and EHS prior to the start of work.

## **Hot Work**

Contractors performing hot work shall maintain a Hot Work Permit Program and employee-training program that meets the OSHA requirements found in 29 CFR 1926.352 and ANSI Z49.1-88 and NFPA 51B. Examples of hot work include, but are not limited to, use of open flames, compressed gasses or supplied fuel burning, brazing, cutting, grinding, soldering, thawing, pipe, torch applied roofing, and welding.

A copy of the canceled permit(s) shall be provided to the Project Coordinator and EHS after completion of the work.

## **Capital Projects**

### **Asbestos and Suspect Asbestos Containing Building Materials**

It is the responsibility of the Contractor to provide his or her own asbestos awareness program which shall include, but is not limited to, the information contained in this section and the OSHA asbestos-related regulations (29 CFR 1926.1101). Verification that this training has been conducted shall be supplied to the Architect/Engineer of record for the project and/or the college upon request.

The location of asbestos materials, where present within the jobsite, will be detailed in the construction documents for that project.



Asbestos materials may not be used or installed in College facilities.

## Lead-containing Building Materials

The location of lead materials, where present, will be detailed in the construction documents for that project.

Contractors that will disturb lead-containing building materials during the course of work shall take all necessary precautions to protect college employees and the public from exposure to lead dust or contamination. These measures shall conform, at a minimum, to the OSHA requirements detailed in 29 CFR 1926.62 and applicable local, state and federal regulations related to health, safety, transportation and disposal.

## Confined Spaces

Where the work of the Contractor involves entry into confined spaces, the Contractor shall perform such entry in accordance with the OSHA (e.g., 29 CFR 1926.20 and/or 1910.146) requirements. Where the work involves an existing college permit-required confined space, the Project Manager and/or Field Engineer shall coordinate with EHS to assure that:

- The Contractor is apprised of the elements, including the hazard(s) identified and the college's experience with the space, that make it a permit-required confined space.
- The Contractor is apprised of any precautions or procedures that the college has implemented for the protection of college employees in or near permit spaces where contractor personnel will be working.
- The Contractor is debriefed at the conclusion of the entry operations regarding the permit space program followed and any hazards confronted or created in permit spaces during entry operations.

The Contractor shall provide at least 24-hours advance notice to the Field Engineer when both college personnel and the Contractor's personnel will be working in or near permit-required confined spaces. The Field Engineer shall notify EHS at (815) 280-2384, and EHS shall assure that the college personnel have been informed of the precautions and procedures to be followed during entry operations. Under these circumstances the Contractor shall:

- Inform EHS of the permit space procedures the Contractor will follow;
- Inform EHS of any hazards confronted or created in permit spaces during entry operations.

## Hazard Communication

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

The Contractor shall maintain, on-site, Material Safety Data Sheets (MSDS's) for all chemicals used or stored at the job site as required by IDOL/OSHA regulations and the contract documents.

Chemicals are used extensively on the JJC campus. Chemical use is routine in, but not limited to, the following areas or locations:

- Laboratories.
- Fume hood exhausts on the roofs of laboratory buildings. (In general, signs have been posted on the roof access hatch or door restricting access to the roofs of buildings where fume-hood exhausts are located).
- Chemical stock rooms.
- Agricultural shop, areas, and chemical storage.
- Chemical waste accumulation areas.
- Facility Services and Residential and Dining Programs paint and chemical storage areas.
- Custodial closets.

Where necessitated by the work, the Field Engineer and/or Project Manager shall coordinate with EHS to assure that the Contractor is informed of the following:

- Known hazards and any required safety procedures that must be followed in the Contractor's work area.
- Methods for obtaining access to Material Safety Data Sheets (MSDS) for hazardous chemicals present in the Contractor's work area.
- Information about the labeling system used in the work area (NFPA 701).
- Emergency procedures that the Contractor is to follow in the event of accidental exposures or releases of hazardous chemicals.

If work will be conducted on the roof of a building, where fume hood exhausts are located, the Field Engineer shall coordinate access with Facility Services, the departments within the building and EHS as necessary to ensure that:

- Fume hoods within, or adjacent to, the work area are shut down,
- No experiments are in-progress that would generate toxic or hazardous airborne contaminants;
- All chemicals stored within the fume hoods are capped or otherwise sealed; and,
- The Contractor is informed of any special precautions that must be taken to prevent employee exposure to hazardous chemicals.

A minimum of seven days advance notice is generally required to coordinate fume hood shutdowns. In emergency situations (for example, when the Contractor's personnel must conduct work on, or in proximity to, active fume hood exhausts), the Contractor may access these roof areas if appropriate personal protective equipment is used. The Contractor shall be informed in writing by EHS of the precautions that should be taken to protect his or her

employees while conducting such work. The Field Engineer may request this information by contacting EHS at (815) 280-2384.

Given the number of chemicals used, and changing work within chemical laboratories, it is impractical for the college to provide the Contractor with a MSDS for any chemical potentially in-use within any given laboratory. However, MSDS's are required to be maintained and to be accessible to employees in each work area, and MSDS's for all chemicals may be obtained from EHS.

The Contractor shall assure that all hazardous chemicals or materials are handled and disposed of in accordance with federal and state regulations and the contract requirements.

## **Electrical Safety and Lockout/Tagout**

If college employees will be present on the Contractors worksite, and employees of either JJC and/or the Contractor will be performing work that requires the use of lockout and/or tagout devices, the following requirements shall apply:

- The EHS representative and the Contractor shall inform each other of their respective lockout/tagout procedures.
- The Project Manager and/or Field Engineer will coordinate with the EHS representative to assure that college personnel understand the energy control procedures that are to be followed in the project site.
- The Contractor shall assure that his/her personnel understand the energy control procedures that are to be followed on the project site.
- A copy of JJC's Electrical Safety and Lockout/Tagout programs shall be provided to the Contractor upon request.
- A copy of the Contractors electrical safety and lockout/tagout procedures shall be made available to the college upon request.

## **Trenching and Excavations**

The Contractor shall coordinate trenching and excavation work with the Project Manager and/or Field Engineer and JULIE to assure the coordination of work and shutdown of utilities as necessary.

The design of sloping and benching systems, support systems, shield systems or other protective systems shall conform, at a minimum, to the OSHA requirements detailed in 29 CFR 1926 Subpart P, and the requirements of the contract.

## **Hot Work**

Contractors performing hot work shall maintain a Hot Work Permit Program and employee-training program that meets the OSHA requirements found in 29 CFR 1926.352 and ANSI Z49.1-88 and NFPA 51B. Examples of hot work include, but are not limited to, use of open

flames, compressed gases or supplied fuel burning, brazing, cutting, grinding, soldering, thawing pipe, torch applied roofing, and welding.

## **Agencies/Firms With No Contractual Relationship with JJC**

All agencies/firms conducting work on JJC property shall comply with the requirements of NFPA, EPA, DOL, OSHA and this program, even where no formal contractual relationship exists between JJC and the agency/firm. The agency/firm shall maintain appropriate insurance, including general liability, auto liability, and workers compensation insurance. Verification of insurance shall be coordinated with JJC's Director of Risk Management, who may be reached at (815) 280-2325, prior to the start of work. Such agencies/firms shall not, without prior written approval of EHS:

- Use a product(s) or material(s) that has a permissible exposure limit (PEL) established by OSHA.
- Perform work on JJC property that may damage or disturb known or suspect asbestos materials,
- Perform work on JJC property that may damage or disturb known or suspect lead-containing materials,
- Perform work on JJC property that involves entry into a permit-required confined space,
- Perform work on any electrical system or utility,
- Construct nor enter excavations, nor
- Perform hot work.

## **Work Site Inspections**

### **Non-capital Projects**

Work site inspections may be conducted by EHS or other designated college personnel. These inspections are conducted solely for the benefit of the college, and shall not relieve the contractor of responsibility for enforcement of, and compliance with, OSHA, NFPA or EPA regulations.

In the event that work site conditions exist that potentially impact the safety of college employees, students, or the public, the college inspector shall issue a verbal or written warning to the Contractor and shall notify the Project Coordinator. If the unsafe conditions cannot be immediately corrected and represent a danger or have a potential to hard college employees, students or the public, then the college inspector will:

- Detail the NFPA, EPA or OSHA violations that were noted, and explain the potential impact upon college employees, students or the public,
- Require that the Project Coordinator have the Contractor either stop work or implement measures to isolate the hazardous condition until the unsafe condition can be mitigated,
- Issue a formal written report of the violation(s) to the Contractor. This report shall be copied to the Project Coordinator.

Reports of deficiencies may be factored into the evaluation of the contract by the college, and may be included in a vendor complaint file that is available for review by other state agencies. Repeat safety violations of a similar nature and/or a single serious willful safety violation by a Contractor may warrant review and termination of the contract.

## **Capital Projects**

Work site inspections may be conducted by EHS or other designated college representatives. Such inspections shall be coordinated with the Field Engineer and/or Project Manager. These inspections are conducted solely for the benefit of college personnel who may be working on the site and shall not relieve the contractor of responsibility for enforcement of, and compliance with NFPA, EPA, and OSHA regulations.

In the event that work site conditions exist that potentially impact the safety of college employees or the public, EHS shall notify the college Field Engineer and the Contractor of the hazard, and will assure that other college personnel present on-site are warned to avoid the area of the hazardous condition. The Contractor shall take prompt action to correct the hazardous condition. If the hazardous condition cannot be immediately corrected, the Contractor shall take effective steps to isolate the hazardous condition and/or shall stop work that is causing the hazardous condition until the hazard can be mitigated.

In the event that work site conditions exist that present an immediate safety hazard for the Contractors personnel, EHS may, as a courtesy, notify the Field Engineer and the Contractor of the hazardous condition. The Contractor shall take prompt action to correct the hazardous condition as required by the *General Conditions of the Construction Contract*.

## **Agencies/Firms Where No Formal Contractual Relationship Exists**

When hazardous condition are identified by EHS related to work performed by agencies/firms conducting work on JJC property where no formal contractual relationship exists between JJC and the agency/firm, the hazardous condition shall be immediately corrected. If the hazardous condition cannot be immediately corrected, the agency/firm shall stop work and shall take effective steps to isolate the hazardous condition from personnel and the public. Repeat safety violations of a similar nature or willful disregard for the NFPA, EPA or OSHA requirements or the requirements outlined in this program will result in immediate removal from JJC property.

## Definitions

**Capital Project:** A capital project is one whose total project cost exceeds \$500,000.

**Competent Person:** As related to excavation, trenching or shoring work, the Contractor's "competent person" means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Confined Space:** A confined space is a space that is large enough for a person to enter, that has limited means for entry or exit, and that is not designed for continuous occupancy. Example include tanks, silos, storage bins or hopper, utility vaults and pits.

**Contracting Department:** The Department at the college that has contracted for work to be performed by a Contractor. In regards to agencies/firms conducting work on JJC property, where no formal contractual relationship exists between JJC and the agency/firm, the department that is coordinating or approving the work of the agency/firm is the Contracting Department.

**Contractor:** An entity or agency employed by the college to perform the installation or maintenance of equipment or the renovation or construction of a building, room or space on college property, or that provides services to the college on college property including, but not limited to, vending, supplies, erection of tents and other services.

**Field Engineer:** The representative from JJC's Facility Services department that oversees capital construction and/or renovation activities.

**Friable Asbestos:** An asbestos material that is capable of being reduced to powder by hand pressure when dry, or a nonfriable asbestos material that is subject to grinding, sanding, cutting or abrading or that is otherwise rendered by mechanical means.

**Lockout/Tagout:** A program used to ensure that employees are protected from sources of potentially hazardous energy. The program requires that hazardous energy sources be identified and locked and/or tagged-out before work is done on the system(s).

**Permit-required confined space:** A permit-required confined space is a confined space that contains potential or known safety hazards that must be dealt with prior to or during entry to assure the safety of those employees performing the work.

**Project Coordinator:** The individual(s) within a Department that has been assigned duties related to oversight or coordination of work performed by a Contractor as defined in this program.

**Project Manager:** The representative from JJC's Facility Services department that coordinates the work of the Field Engineer and the Architect/Engineer related to capital construction and/or renovation projects.

***Serious, willful safety violation:*** “Serious, willful safety violation” is defined, for the purposes of this program, as a work activity with a substantial probability that death or serious physical harm could result and where the hazard was known or should have been known, but where the work activity was continued regardless of the existence of the safety hazard.

## LABOR MANAGEMENT PROJECT AGREEMENT

This Agreement is entered into this \_\_\_\_ day of \_\_\_\_, 20\_\_ by and between Joliet Junior College, Illinois Community College District 525 of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston, and Cook, Illinois, (hereinafter called the "Owner"); and \_\_\_\_\_ (hereinafter called the "Project Contractor"); and the \_\_\_\_\_ Building Trades Council (hereinafter called the "Union"), acting in their own behalf and on behalf of their respective affiliates and members; and the THREE RIVERS CONSTRUCTION ALLIANCE, acting on their own behalf and on the behalf of their respective affiliates and members, with respect to all construction projects at Joliet Junior College, which includes the Master Plan and Capital Improvement Plans thru August 2013, located in Will County, Illinois.

### WITNESSETH:

WHEREAS, to accomplish the goals of quality, cost effectiveness and timelessness requires that all participants exhibit a positive attitude intent on success; and

WHEREAS, there must exist amongst all parties a willingness to cooperate fully in devoting themselves to the goals of the Project; and

WHEREAS, this program has no room for adverse relationships, but only a true spirit of cooperation and commitment; and

WHEREAS, it is essential that the work required to construct this Project be accomplished in an efficient and economical manner so as to provide productivity, the highest levels of quality and the total elimination of delays thereby fostering new plateaus in labor/management cooperation; and

WHEREAS, Joliet Junior College, Illinois Community College District 525 of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston, and Cook, Illinois, (hereinafter referred to as



the "Owner"), its general Contractor(s), its subcontractor(s) of whatever tier, the local Building Trades Council, the THREE RIVERS CONSTRUCTION ALLIANCE dedicate themselves to the goal that together, in full cooperation, local labor, and management will produce a project of excellent quality, as economically as possible, in a safe environment, under favorable working conditions; and

WHEREAS, nothing contained herein shall prevent the Owner from considering bids for the Project so long as the General Contractor and its Subcontractors agree to abide by the terms and provisions of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants above-contained and other good and valuable consideration, as hereinafter set forth, the parties do hereby agree as follows:

**SECTION 1. Introduction**

It is understood by the parties to this Agreement that other contractors awarded construction work directly or indirectly by the Owner will execute this Agreement and become signatory contractors for the purpose of this work.

The intent of the parties to this Agreement is to establish labor and management cooperation between the Owner, Project Contractor, all Contractors and Subcontractors performing construction work in this Project site, and the appropriate Unions signatory to this Agreement for the express purpose of producing a quality project on schedule, and, as economically as possible, in a safe environment under favorable working conditions.

**SECTION 2. Scope of the Agreement.**

A. This Project Agreement shall apply and is limited to the recognized and accepted historical definition of new construction work under the direction of and performed by the

Contractor(s), of whatever tier, which may include the Project Contractor, who have contracts awarded for such work on the Project. Such work shall include site preparation work and dedicated off-site work.

It is agreed that the Project Contractor shall require all Contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Agreement by executing the Letter of Assent (Attachment A) prior to commencing work. The Project Contractor shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except for all work performed under the NTL Articles of Agreement, and the National Stack/Chimney Agreement, the National Cooling Tower Agreement. All instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Section 4, 5 and 6 of this Agreement, which shall apply to such work.

B. Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work, or function which may occur at the Project site or be associated with the development of the Project.

C. This Agreement shall only be binding on the signatory parties hereto and shall not apply to their parents, affiliates or subsidiaries.

D. The Owner and/or the Project Contractor have the absolute right to select any qualified bidder for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such bidder and any party to this Agreement;

provided, however, only that such bidder is willing, ready and able to become a party to and comply with this Agreement, should it be designated the successful bidder.

E. The provisions of this Agreement shall not apply to Owner, and nothing contained herein shall be construed to prohibit or restrict Owner or its employees from performing work not covered by this Agreement on the Project site. As areas and systems of the Project are inspected and construction tested by the Project Contractor or Contractors and accepted by the Owner, the Agreement will not have further force or effect on such items or areas, except when the Project Contractor or Contractors are directed by the Owner to engage in repairs, modifications, check-out, and warranty functions required by its contract with the Owner during the term of this Agreement.

F. It is understood that the Owner, at its sole option, may terminate, delay and/or suspend any or all portions of the Project at any time.

G. It is understood that the liability of any employer and the liability of the separate unions under this Agreement shall be several and not joint. The unions agree that this Agreement does not have the effect of creating any joint employer status between or among the Owner, Contractor(s) or any employer.

### SECTION 3. Labor-Management Cooperation Committee

The parties to this Agreement hereby reaffirm the necessity for joint cooperation and participation by Labor and Management in interpreting and analyzing the effectiveness of management's application of this Agreement as well as Labor's response and any other matter affecting quality, safety, working conditions and productivity. Therefore, to secure this end, it is hereby agreed that a "Labor-Management Cooperation Committee" will be established composed of three representatives from Labor and three representatives from Management; one

representative from labor and one from Management shall be Co-Chairpersons of this Committee.

The Labor-Management Cooperation Committee shall meet a minimum of once each month, at the job site, and shall discuss the following; reports concerning any violation, dispute, questions or interpretation of the application of practices arising out of this Agreement; safety; working conditions; absenteeism; labor turnover; availability of qualified journeymen; need for training; and any other matter affecting productivity and efficiency on this project.

In the event a dispute is not resolved by the Labor-Management Cooperation Committee, such matter shall then be settled as outlined by the grievance procedure and/or arbitration provisions contained in Section 6 or 7 of this Agreement. The Labor-Management Cooperation Committee shall have no authority to render a decision involving a jurisdictional dispute.

#### SECTION 4. Contractor's Commitment

A Work assignments will be made in accordance with area practice, consistent with the efficient and economical performance of the work.

B. Before performing the work at the job site, the Contractor or Subcontractors of whatever tier actually performing the work will become signatory to the appropriate collective bargaining agreement.

C. The Contractors and Subcontractors shall exercise their management rights. These rights shall include planning, directing, hiring, dismissal, lay-off, transferring, appointing foremen and general foremen and otherwise directing the work force.

D. The Project Contractor agrees that neither it nor any of its contractors or subcontractors will subcontract any work to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor

working on the Project shall, as a condition to working on said Project, become signatory to and perform all work under the terms of this Agreement.

SECTION 5. Union (Craftsman) Commitment

A. Qualified and skilled craftsmen will be furnished as required by the Contractor in the fulfillment of its obligations of the Owner.

B. Craftsmen shall be at their place of work at the regular starting time and shall remain at their place of work until quitting time. There shall be no limit on production by Craftsmen nor restrictions on the use of tools or equipment other than that which may be required by safety practice.

C. Where stewards are appointed by respective unions, the steward shall be qualified craftsmen performing the work of his craft who shall exercise no supervisory functions. There shall be no non-working stewards.

SECTION 6. Disputes and Grievances

A. This Agreement is intended to provide close cooperation between management and labor. Each of the Unions will assign a representative to this Project for the purpose of completing the construction of the Project economically, efficiently, continuously, and without interruptions, delays, or work stoppages.

B. The Contractors, Unions, and the employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.

C. Any question or dispute arising out of and during the term of this Project Agreement (other than grievances not covered by a local Collective Bargaining Agreement or trade

jurisdictional disputes) shall be considered a grievance and subject to resolution under the following procedures:

Step 1. (a) When any employee subject to the provisions of this Agreement feels he or she is aggrieved by a violation of this Agreement, he or she, through his or her local union business representative or job steward, shall, within five (5) working days after the occurrence of the violation, give notice to the work-site representative of the involved Contractor stating the provision(s) alleged to have been violated. The business representative of the local union or the job steward and the work-site representative of the involved Contractor and the Project Contractor shall meet and endeavor to adjust the matter within three (3) working days after timely notice has been given. The representative of the Contractor shall keep the meeting minutes and shall respond to the Union representative in writing (copying the Project Contractor) at the conclusion of the meeting but not later than twenty-four (24) hours thereafter. If they fail to resolve the matter within the prescribed period, the grieving party may, within forty-eight (48) hours thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth the relevant information concerning the alleged grievance, including a short description thereof, the date on which the grievance occurred, and the provision(s) of the Agreement alleged to have been violated.

(b) Should the Local Union(s) or the Project Contractor or any Contractor have a dispute with the other party and, if after conferring, a settlement is not reached within three (3) working days, the dispute may be reduced to writing and proceed to Step 2 in the same manner as outlined herein for the adjustment of an employee complaint.

Step 2. The International Union Representative and the involved Contractor shall meet within seven (7) working days of the referral of a dispute to this second step to arrive at a

satisfactory settlement thereof. Meeting minutes shall be kept by the Contractor. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

Step 3. (a) If the grievance has been submitted but not adjusted under Step 2, either party may request in writing, within seven (7) calendar days thereafter, that the grievance be submitted to an Arbitrator mutually agreed by them. The Contractor and the involved Union shall attempt mutually to select an arbitrator, but if they are unable to do so, they shall request the American Arbitration Association to provide them with a list of arbitrators from which the Arbitrator shall be selected. The rules of the American Arbitration Association shall govern the conduct of the arbitration hearing. The decision of the Arbitrator shall be final and binding on all parties. The fee and expenses of such Arbitration shall be borne equally by the Contractor and the involved Local Union(s).

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The Arbitrator shall have the authority to make decisions only on issues presented to him or her, and he or she shall not have authority to change, amend, add to or detract from any of the provisions of this Agreement.

D. The Project Contractor and Owner shall be notified of all actions at Steps 2 and 3 and shall, upon their request, be permitted to participate in all proceedings at these steps.

#### SECTION 7. Jurisdictional Disputes

A. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the

Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

B. All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers, parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Unions parties to this Agreement.

C. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

D. Each Contractor will conduct a pre-job conference with the appropriate Building and Construction Trades Council prior to commencing work. The Project Contractor and the Owner will be advised in advance of all such conferences and may participate if they wish.

#### SECTION 8. Joint Commitment (Contractor/Union)

A. Utilization of Union apprentices will be maximized consistent with the best interest of the job in compliance with Local Union Agreements. The high level of union apprenticeship training will be maintained to provide the Industry with productive and knowledgeable craftsmen for the long term.

B. Every reasonable and practicable measure, consistent with the protection of human-dignity, will be taken to assure a work place free of alcohol and drugs. The use of liquor, drugs or any other illegal activities at the Project site, including parking lots, is strictly prohibited.



C. Employees will take their breaks only in their immediate work areas.

D. Acknowledging the safety concerns of Owner and its risk management professionals, we assure the Owner that the parties are committed to safe working practices on the project. The parties, drawing upon the comprehensive safety programs and resources developed by the union construction community, will comply with federal, state and local safety regulations. Both contractors and union craftsmen are well trained in safety practices and commit themselves to applying such practices on this job.

E. The Contractors and Unions agree that there will be no lockouts or work stoppages.

(1) The Contractors and Subcontractors shall not cause, incite, encourage or participate in any lockout of employees on the project during the term of this Agreement.

(2) The Union and its members, agents, representatives, and employees shall not allow, incite, encourage, condone or participate in any strike, walkout, slowdown, picketing, sympathy strike or other work stoppage of any nature whatsoever, whether jurisdictional or otherwise, or observe any picket of any nature during the term of this Agreement. Any such action by the Union or its members, agents, representatives or employees shall be considered a violation of this Agreement.

(3) All employees shall continue to work and to perform all their obligations on the project despite the expiration of any local or other collective bargaining agreement. Any future wage or fringe benefit increase, decrease or modification legally negotiated and established by appropriate local collective bargaining agreement of the Local Unions which are signatories to this Agreement shall be paid retroactively to the expiration date of the preceding local Agreement.

(4) Should any unauthorized strike, slowdown, stoppage of work or interference with construction occur, the Union shall take all necessary steps to bring such activity to a prompt resolution.

SECTION 9. Helmets To Hardhats

A. The Contractors and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

B. The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

SECTION 10. Term of Agreement.

A. This Agreement shall become effective on \_\_\_\_\_, 20\_\_\_\_, and shall remain in full force and effect as long as signatory contractors are working on this project.

B. Any of the undersigned parties shall have the right to terminate this Agreement by notifying all other parties in writing, within at least thirty (30) calendar days from the proposed termination date.

### SECTION 11. Notices

The address and telephone number of all of the undersigned shall be on file with Owner's Director of Facility Services at the Highland Building, 1215 Houbolt Road, Joliet, Illinois, 60431, Attention: Patrick VanDuyne. All notices, request and other communications under this Agreement shall be in writing and shall be personally served or sent by certified mail, postage prepaid, return receipt requested, facsimile, or by licensed overnight courier to the appropriate party at the address set forth below or as may otherwise be on file with the Director of Physical Plant as provided herein. Notice shall be deemed given at the time delivered, if personally delivered, at the time indicated on the duly completed postal service return receipt, if delivered, at the time indicated on the duly completed postal service return receipt, if delivered by certified mail, at the time the facsimile is transmitted, if delivered by facsimile, or on the next business day after such notice is sent, if delivered by overnight courier. If a person elects to change their address, they shall do so by notifying the Owner's Director of Facility Services in the manner as provided for herein for the delivery of a notice.

### SECTION 12. Miscellaneous Provisions.

A. Assignment. No party may assign its rights hereunder without the prior written consent of the other parties.

B. Entire Agreement. This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and may not be modified, except in writing signed by the parties hereto. Furthermore, the parties hereto specifically agree that all prior agreements, whether written or oral, relating to the subject matter hereof shall be of no further force or effect from and after the date hereof.

C. Non-Partnership. This Agreement shall not create a partnership, joint venture or other joint enterprises between the parties hereto.

D. Severability. If any phrase, clause or provision of this Agreement is declared invalid or unenforceable by a court of competent jurisdiction, such phrase, clause or provisions shall be deemed severed from this Agreement, but will not affect any other provision of this Agreement, which shall otherwise remain in full force and effect. If any restriction or limitation in this Agreement is deemed to be unreasonable, onerous and unduly restrictive by a court of competent jurisdiction, it shall not be stricken in its entirety and held totally void and unenforceable, but shall not be deemed rewritten and shall remain effective to the maximum extent permissible within reasonable bounds.

E. Prevailing Party. The prevailing party or parties in any litigation arising out of or from this Agreement shall be entitled to recover from the non-prevailing party or parties all costs and expenses reasonably incurred litigating such action, including without limitation, reasonable attorneys' and paralegals' fees and court cost.

F. Neutral Reading. It is the intent of the parties that this Agreement be deemed to have been prepared by all of the parties hereto.

G. Waiver. No waiver of any breach or default hereunder shall be considered valid unless in writing and signed by the party given such waiver and no such waiver shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

H. Headings. The section and subsection headings contained herein are for convenience of the parties only and are not intended to define or limit the context of said Sections and subsections.

I. Governing Law; Venue. The validity, construction and interpretation of this Agreement shall be governed by the State of Illinois. The parties hereto irrevocably agree that all actions or proceedings in any way, manner or respect arising out of or from or related to this Agreement shall be litigated only in the Circuit Court Twelfth Judicial Circuit, Will County, Illinois.

J. Counterparts. This Agreement may be executed in two or more counterparts, each of which may be deemed to be an original.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first above written.

SIGNED FOR THE OWNER:

*PK Day*

Firm: Joliet Junior College

Title: Director of Facility Services

Date: 4-15-09

Address: 1215 Houbolt Road  
Joliet, Illinois 60431

SIGNED FOR THE UNION:

*Ronald C. Fisi*

*Will County* Building Trades Council

Title: President

Date: 4-15-09

Address: 2082 Oakleaf St.  
Joliet IL 60436

SIGNED FOR THE ALLIANCE:

*Bob Boish*

Firm: Three River's Construction Alliance

Title: Co-Chair TRCA

Date: 4/15/09

Address: 2134 Maxim Dr.  
Rockdale IL 60436

SIGNED FOR BY THE CONTRACTOR:

Firm: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_



*Skilled Union Craftsmen  
Professional Union Contractors*

## **BLUEPRINT FOR SUCCESS**

### **A Labor-Management Project Agreement**

#### **I. Preamble**

To accomplish the goals of quality, cost effectiveness and timeliness requires that all participants exhibit a positive attitude intent on success. There must exist amongst all parties a willingness to cooperate fully in devoting themselves to the goals of the project.

This program has no room for adverse relationships, but only a true spirit of cooperation and commitment. It is essential that the work required to construct this project be accomplished in an efficient and economical manner so as to provide productivity, the highest levels of quality, and the total elimination of delays. This commitment will establish new plateaus in labor/management cooperation.

Therefore, Joliet Junior College, Illinois Community College District 525, of Will, Grundy, Kendall, LaSalle, Kankakee, Livingston and Cook, Illinois, (hereinafter referred to as the "Owner"), its subcontractor(s) of whatever tier, the Will & Grundy Counties Building Trades Council, and the THREE RIVERS' CONSTRUCTION ALLIANCE dedicate themselves to the goal that together, in full cooperation, local labor and management will produce a project of excellent quality, as economically as possible, in a safe environment, under favorable working conditions.

#### **II. Introduction**

This Agreement is entered into this        day of        by and between Joliet Junior College (hereinafter called the "Owner"); and        (hereinafter called and the "Project Contractor"; and the Will & Grundy Counties Building Trades Council (hereinafter called the "Union"), acting in their own behalf and on behalf of their respective affiliates and members; and the THREE RIVERS CONSTRUCTION ALLIANCE, acting on their own behalf and on behalf of their respective affiliates and members, with respect to all construction projects at Joliet Junior College, which includes the Master Plan and Capital Improvement Plan projects thru        located in Will County, Illinois.

It is understood by the parties to this Agreement that other contractors awarded construction work directly or indirectly by the "Owner" will execute this Agreement and become signatory contractors for the purpose of this work.

The intent of the parties to this Agreement is to establish labor and management cooperation between the Project Contractor, all Contractors and Subcontractors performing construction work on this project site, and the appropriate Unions signatory to this Agreement for the express purpose of producing a quality project on schedule and as economically as possible, in a safe environment under favorable working conditions.

### **III. Scope Of The Agreement**

**A.** This Project Agreement shall apply and is limited to the recognized and accepted historical definition of new construction work under the direction of and performed by the Contractor(s), of whatever tier, which may include the Project Contractor, who have contracts awarded for such work on the Project. Such work shall include site preparation work and dedicated off-site work.

It is agreed that the Project Contractor shall require all Contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Project Agreement by executing the Letter of Assent (Attachment A) prior to commencing work. The Project Contractor shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Project Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except for all work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article V, VI, and VII of this Project Agreement, which shall apply to such work.

**B.** Nothing contained herein shall be construed to prohibit, restrict or interfere with the performance of any other operation, work, or function which may occur at the Project site or be associated with the development of the Project.

**C.** This Agreement shall only be binding on the signatory parties hereto and shall not apply to their parents, affiliates or subsidiaries.

**D.** The Owner and/or the Project Contractor have the absolute right to select any qualified bidder for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such bidder and any party to this Agreement; provided, however, only that such bidder is willing, ready and able to become a party to and comply with this Project Agreement, should it be designated the successful bidder.

**E.** It is understood that the Owner, at its sole option, may terminate, delay and/or suspend any or all portions of the Project at any time.

**F.** It is understood that the liability of any employer and the liability of the separate unions under this Agreement shall be several and not joint. The unions agree that this Agreement does not have the effect of creating any joint employer status between or among the Owner, Contractor(s) or any employer.

### **IV. Labor-Management Cooperation Committee**

The parties to this Agreement hereby reaffirm the necessity for joint cooperation and participation by Labor and Management in interpreting and analyzing the effectiveness of management's application of this Agreement as well as Labor's response and any other matter affecting quality, safety, working conditions and productivity. Therefore, to secure this end, it is hereby agreed that a "Labor-Management Cooperation Committee" will be established composed of three representatives from Labor and three representatives from Management; one representative from Labor and one from Management shall be Co-Chairmen of this Committee.

The Labor-Management Cooperation Committee shall meet a minimum of once each month, at the jobsite, and shall discuss the following: reports concerning any violation, dispute, questions or interpretation of the application of practices arising out of this Agreement; safety; working conditions; absenteeism; labor turnover; availability of qualified journeymen; need for training; and any other matter affecting productivity and efficiency on this project.

In the event a dispute is not resolved by the Labor-Management Cooperation Committee, such matter shall then be settled as outlined by the grievance procedure and/or arbitration provisions contained in Articles VII or VIII of this Agreement. The Labor-Management Cooperation Committee shall not have authority to render a decision involving a jurisdictional dispute.

#### **V. Contractors' Commitment**

A. Work assignments will be made in accordance with area practice, consistent with the efficient and economical performance of the work.

B. Before performing work at the job site, the Contractor or Subcontractors of whatever tier actually performing the work will become signatory to the appropriate collective bargaining agreement.

C. The Contractors and Subcontractors shall exercise their management rights. These rights shall include planning, directing, hiring, dismissal, lay-off, transferring, appointing foremen and general foremen and otherwise directing the work force.

D. The Project Contractor agrees that neither it nor any of its contractors or subcontractors will subcontract any work to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor working on the Project shall, as a condition to working on said Project, become signatory to and perform all work under the terms of this Agreement.

#### **VI. Union (Craftsmen) Commitment**

A. Qualified and skilled craftsmen will be furnished as required by the Contractor in the fulfillment of its obligations to the Owner.

B. Craftsmen shall be at their place of work at the regular starting time and shall remain at their place of work until quitting time. There shall be no limit on production by Craftsmen nor restrictions on the use of tools or equipment other than that which may be required by safety practice.

C. Where stewards are appointed by respective unions, the steward shall be a qualified craftsman performing the work of his craft who shall exercise no supervisory functions. There shall be no non-working stewards.

#### **VII. Owner Commitment**

A. The Owner agrees that during the life of this agreement he shall assign construction work on this project only to contractors who are signatory to this agreement and applicable local collective bargaining agreements.

#### **VIII. Disputes & Grievances**

A. This Agreement is intended to provide close cooperation between management and labor. Each of the Unions will assign a representative to this Project for the purpose of completing the construction of the Project economically, efficiently, continuously, and without interruptions, delays, or work stoppages.

B. The Contractors, Unions, and the employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.



**C.** Any question or dispute arising out of and during the term of this Project Agreement (other than grievances not covered by a local Collective Bargaining Agreement or trade jurisdictional disputes) shall be considered a grievance and subject to resolution under the following procedures:

Step 1. (a) When any employee subject to the provisions of this Agreement feels he or she is aggrieved by a violation of this Agreement, he or she, through his or her local union business representative or job steward, shall, within five (5) working days after the occurrence of the violation, give notice to the work-site representative of the involved Contractor stating the provision(s) alleged to have been violated. The business representative of the local union or the job steward and the work-site representative of the involved Contractor and the Project Contractor shall meet and endeavor to adjust the matter within three (3) working days after timely notice has been given. The representative of the Contractor shall keep the meeting minutes and shall respond to the Union representative in writing (copying the Project Contractor) at the conclusion of the meeting but not later than twenty-four (24) hours thereafter. If they fail to resolve the matter within the prescribed period, the grieving party may, within forty-eight (48) hours thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth the relevant information concerning the alleged grievance, including a short description thereof, the date on which the grievance occurred, and the provision(s) of the Agreement alleged to have been violated.

(b) Should the Local Union(s) or the Project Contractor or any Contractor have a dispute with the other party and, if after conferring, a settlement is not reached within three (3) working days, the dispute may be reduced to writing and proceed to Step 2 in the same manner as outlined herein for the adjustment of an employee complaint.

Step 2. The International Union Representative and the involved Contractor shall meet within seven (7) working days of the referral of a dispute to this second step to arrive at a satisfactory settlement thereof. Meeting minutes shall be kept by the Contractor. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

Step 3. (a) If the grievance has been submitted but not adjusted under Step 2, either party may request in writing, within seven (7) calendar days thereafter, that the grievance be submitted to an Arbitrator mutually agreed upon by them. The Contractor and the involved Union shall attempt mutually to select an arbitrator, but if they are unable to do so, they shall request the American Arbitration Association to provide them with a list of arbitrators from which the Arbitrator shall be selected. The rules of the American Arbitration Association shall govern the conduct of the arbitration hearing. The decision of the Arbitrator shall be final and binding on all parties. The fee and expenses of such Arbitration shall be borne equally by the Contractor and the involved Local Union(s).

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The Arbitrator shall have the authority to make decisions only on issues presented to him or her, and he or she shall not have authority to change, amend, add to or detract from any of the provisions of this Agreement.

**D.** The Project Contractor and Owner shall be notified of all actions at Steps 2 and 3 and shall, upon their request, be permitted to participate in all proceedings at these steps.

## **IX. Jurisdictional Disputes**

**A.** The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

**B.** All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers, parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be

adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Unions parties to this Agreement.

**C.** All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

**D.** Each Contractor will conduct a pre-job conference with the appropriate Building and Construction Trades Council prior to commencing work. The Project Contractor and the Owner will be advised in advance of all such conferences and may participate if they wish.

#### **X. Joint Commitment (Contractor/Union)**

**A.** Utilization of Union apprentices will be maximized consistent with the best interest of the job in compliance with Local Union Agreements. The high level of union apprenticeship training will be maintained to provide the Industry with productive and knowledgeable craftsmen for the long term.

**B.** Every reasonable and practicable measure, consistent with the protection of human dignity, will be taken to assure a work place free of alcohol and drugs. The use of liquor, drugs or any other illegal activities at the Project site, including parking lots, is strictly prohibited.

**C.** Employees will take their breaks only in their immediate work areas.

**D.** Acknowledging the safety concerns of today's construction Owner and its risk management professionals, we assure the Owner that the parties are committed to safe working practices on the project. The parties, drawing upon the comprehensive safety programs and resources developed by the Union construction community, will comply with federal, state, and local safety regulations. Both contractors and union craftsmen are well trained in safety practices and commit themselves to applying such practices on this job.

**E.** The Contractors and Unions agree that there will be no lockouts or work stoppages.

(1) The Contractors and Subcontractors shall not cause, incite, encourage or participate in any lockout of employees on the project during the term of this Agreement.

(2) The Union and its members, agents, representatives, and employees shall not allow, incite, encourage, condone or participate in any strike, walkout, slowdown, picketing, sympathy strike or other work stoppage of any nature whatsoever, whether jurisdictional or otherwise, or observe any picket of any nature during the term of this Agreement. Any such action by the Union or its members, agents, representatives or employees shall constitute a violation of this Agreement.

(3) All employees shall continue to work and to perform all their obligations on the project despite the expiration of any local or other collective bargaining agreement. Any future wage or fringe benefit increase, decrease or modification legally negotiated and established by appropriate local collective bargaining agreements of the Local Unions which are signatories to this Agreement shall be paid retroactively to the expiration of the preceding local Agreement.

(4) Should any unauthorized strike, slowdown, stoppage of work or interference with construction occur, the Union shall take all necessary steps to bring such activity to a prompt resolution.

**XI. Helmets To Hardhats**

A. The Employers and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Employers and Unions agree to utilize the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

B. The Unions and Employers agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

**XII. Term of Agreement**

A. This Agreement shall become effective on April 15, 2009, and shall remain in full force and effect as long as signatory contractors are working on this project.

B. Either party shall have the right to terminate this Agreement by notifying all other parties, in writing, within at least thirty (30) calendar days from the proposed termination date.

**FOR THE OWNER:**

*Gene Pruehl*  
JOLIET JUNIOR COLLEGE  
TITLE: *President*  
DATE: *4-15-09*

**FOR THE PROJECT CONTRACTOR:**

\_\_\_\_\_  
TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

**FOR THE ALLIANCE:**

*Bob Bush*  
THREE RIVERS CONSTRUCTION  
TITLE: *CO-CHAIR TRCA*  
DATE: *4/15/09*

**FOR THE BUILDING TRADES:**

*Ronald C. Fier*  
WILL & GRUNDY BUILDING TRADES  
TITLE: *Presid.*  
DATE: *4-15-09*



*Skilled Union Craftsmen  
Professional Union Contractors*

## BLUEPRINT FOR SUCCESS

### A Labor-Management Project Agreement

#### Addendum To TRCA/JJC Project Labor Agreement Dated 4-15-09

1. It is agreed to by all parties that while the College has completed their Master Plan projects, the parties to the Agreement wish to continue on with the 'Blueprint for Success, A Labor-Management Project Agreement' signed on April 15, 2009. The conditions of the existing Agreement shall remain in effect thru April 2018 until such time as both parties have the opportunity to evaluate current and future construction projects at the College as explained in Article XII of the Agreement.
2. The pre-job conferences called for in Article IX Section D will apply to all bids with a gross value in excess of \$25,000.00. Bids less that the stated \$25,000.00 will be exempt from the pre-job conference but the OWNER agrees to notify TRCA of any such bid lettings in a timely manner.
3. This Agreement covers all new construction and improvement projects but is not intended to nor will it interfere with the OWNER's right to perform general routine maintenance on their facilities.

FOR THE OWNER:

*[Signature]*  
Joliet Junior College

*Judy Mitchell, Esq.*  
Printed Name

TITLE: *VP Administrative Svcs*

DATE: *3-9-15*

FOR THE BUILDING TRADES

*[Signature]*  
Will & Grundy Counties Building Trades Council

*Don Gregory*  
Printed Name

TITLE: *President*

DATE: *3-9-15*

FOR THE ALLIANCE:

*[Signature]*  
T.R.C.A.

*Thomas A. White*  
Printed Name

TITLE: *Executive Director*

DATE: *3-9-15*

# Will County Prevailing Wage for July 2015

(See explanation of column headings at bottom of wages)

Trade Name Trng	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====
=====											
ASBESTOS ABT-GEN 0.500		ALL		39.400	39.950	1.5	1.5	2.0	13.98	10.72	0.000
ASBESTOS ABT-MEC 0.720		BLD		36.340	38.840	1.5	1.5	2.0	11.47	10.96	0.000
BOILERMAKER 0.400		BLD		47.070	51.300	2.0	2.0	2.0	6.970	18.13	0.000
BRICK MASON 1.030		BLD		43.780	48.160	1.5	1.5	2.0	10.05	14.43	0.000
CARPENTER 0.630		ALL		44.350	48.790	2.0	2.0	2.0	11.99	18.47	0.000
CEMENT MASON 0.500		ALL		41.000	43.000	2.0	1.5	2.0	10.00	20.39	0.000
CERAMIC TILE FNSHER 0.770		BLD		36.810	0.000	1.5	1.5	2.0	10.55	9.230	0.000
COMMUNICATION TECH 0.720		BLD		32.250	33.750	1.5	1.5	2.0	13.42	11.32	0.000
ELECTRIC PWR EQMT OP 0.460		ALL		46.100	51.100	1.5	1.5	2.0	10.76	14.87	0.000
ELECTRIC PWR GRNDMAN 0.370		ALL		37.050	52.500	1.5	2.0	2.0	8.630	12.28	0.000
ELECTRIC PWR LINEMAN 0.460		ALL		47.500	52.500	1.5	2.0	1.5	10.76	14.87	0.000
ELECTRICIAN 1.200		BLD		40.000	43.600	1.5	1.5	2.0	14.77	16.39	0.000
ELEVATOR CONSTRUCTOR 0.600		BLD		50.800	57.150	2.0	2.0	2.0	13.57	14.21	4.060
GLAZIER 0.940		BLD		40.500	42.000	1.5	2.0	2.0	13.14	16.99	0.000
HT/FROST INSULATOR 0.720		BLD		48.450	50.950	1.5	1.5	2.0	11.47	12.16	0.000
IRON WORKER 0.850		ALL		41.500	43.580	2.0	2.0	2.0	10.04	22.81	0.000
LABORER 0.500		ALL		39.200	39.950	1.5	1.5	2.0	13.98	10.72	0.000
LATHER 0.630		ALL		43.350	47.690	2.0	2.0	2.0	11.85	17.47	0.000
MACHINIST 0.000		BLD		45.350	47.850	1.5	1.5	2.0	7.260	8.950	1.850
MARBLE FINISHERS 0.620		ALL		32.400	34.320	1.5	1.5	2.0	10.05	13.75	0.000
MARBLE MASON 0.780		BLD		43.030	47.330	1.5	1.5	2.0	10.05	14.10	0.000
MATERIAL TESTER I 0.500		ALL		29.200	0.000	1.5	1.5	2.0	13.98	10.72	0.000
MATERIALS TESTER II 0.500		ALL		34.200	0.000	1.5	1.5	2.0	13.98	10.72	0.000

MILLWRIGHT 0.630	ALL	44.350	48.790	2.0	2.0	2.0	11.99	18.47	0.000
OPERATING ENGINEER 1.250	BLD 1	48.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 2	46.800	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 3	44.250	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 4	42.500	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 5	51.850	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 6	49.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	BLD 7	51.100	52.100	2.0	2.0	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	FLT 1	53.600	53.600	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 2	52.100	53.600	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 3	46.400	53.600	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 4	38.550	53.600	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 5	55.100	53.600	1.5	1.5	2.0	17.10	11.80	1.900
OPERATING ENGINEER 1.250	FLT 6	35.000	35.000	1.5	1.5	2.0	16.60	11.05	1.900
OPERATING ENGINEER 1.250	HWY 1	46.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 2	45.750	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 3	43.700	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 4	42.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 5	41.100	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 6	49.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900
OPERATING ENGINEER 1.250	HWY 7	47.300	50.300	1.5	1.5	2.0	17.55	12.65	1.900
PAINTER 0.770	ALL	41.750	46.500	1.5	1.5	1.5	11.50	11.10	0.000
PAINTER SIGNS 0.000	BLD	33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000
PILEDRIVER 0.630	ALL	44.350	48.790	2.0	2.0	2.0	11.99	18.47	0.000
PIPEFITTER 1.780	BLD	46.000	49.000	1.5	1.5	2.0	9.000	15.85	0.000
PLASTERER 1.020	BLD	43.430	46.040	1.5	1.5	2.0	13.05	14.43	0.000
PLUMBER 0.880	BLD	46.650	48.650	1.5	1.5	2.0	13.18	11.46	0.000

ROOFER 0.530	BLD	41.000	44.000	1.5	1.5	2.0	8.280	10.54	0.000
SHEETMETAL WORKER 0.820	BLD	44.720	46.720	1.5	1.5	2.0	10.65	13.31	0.000
SPRINKLER FITTER 0.550	BLD	49.200	51.200	1.5	1.5	2.0	11.75	9.650	0.000
STONE MASON 1.030	BLD	43.780	48.160	1.5	1.5	2.0	10.05	14.43	0.000
<del>SURVEY WORKER</del> ----->	NOT IN EFFECT	ALL	37.000	37.750	1.5	1.5	2.0		
12.97 9.930 0.000 0.500									
TERRAZZO FINISHER 0.720	BLD	38.040	0.000	1.5	1.5	2.0	10.55	11.22	0.000
TERRAZZO MASON 0.940	BLD	41.880	44.880	1.5	1.5	2.0	10.55	12.51	0.000
TILE MASON 0.990	BLD	43.840	47.840	1.5	1.5	2.0	10.55	11.40	0.000
TRAFFIC SAFETY WRKR 0.500	HWY	32.750	34.350	1.5	1.5	2.0	6.550	6.450	0.000
TRUCK DRIVER 0.250	ALL 1	35.650	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 2	35.800	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 3	36.000	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TRUCK DRIVER 0.250	ALL 4	36.200	36.200	1.5	1.5	2.0	7.250	6.319	0.000
TUCKPOINTER 0.670	BLD	43.800	44.800	1.5	1.5	2.0	8.280	13.49	0.000

## Explanations

### WILL COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

### EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

#### CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

#### COMMUNICATIONS TECHNICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice, sound and vision production and reproduction, telephone and telephone interconnect, facsimile, equipment and appliances used for domestic, commercial, educational and entertainment purposes, pulling of wire through conduit but not the installation of conduit.

#### MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material,



mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

#### OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

#### OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu.

ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

#### OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000

pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or

machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

**CERTIFICATION OF CONTRACT/BIDDER**

The below signed contractor/bidder hereby certifies that it is not barred from bidding on this or any other contract due to any violation of either Section 33E-3 or 33E-4 of Article 33E, Public Contracts, of the Illinois Criminal Code of 1961, as amended. This certification is required by Public Act 85-1295. This Act relates to interference with public contracting, bid rigging and rotating, kickbacks and bribery.

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR/BIDDER

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

THIS FORM **MUST** BE RETURNED WITH YOUR BID TO:

Joliet Junior College District #525  
Office of Facility Services  
Main Campus L Building, L1005  
1215 Houbolt Road  
Joliet, IL 60431-8938

**CERTIFICATE OF COMPLIANCE WITH  
ILLINOIS DRUG-FREE WORKPLACE ACT**

\_\_\_\_\_, does hereby certify pursuant to the *Illinois Drug-Free Workplace Act* (30 ILCS 580/) that [he, she, it] shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the *Illinois Drug-Free Workplace Act* and, further certifies, that [he, she, it] is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

\_\_\_\_\_  
By Authorized Agent

\_\_\_\_\_  
Date

SUBSCRIBED AND SWORN TO before me  
This \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

**EXECUTE AND ATTACH TO PROPOSAL FORM**

**JOLIET JUNIOR COLLEGE – REQUEST FOR BID**

**DRAWINGS ARE AVAILABLE ON THE FOLLOWING WEBSITE:**

**[WWW.JJC.EDU/INFO/PURCHASING](http://WWW.JJC.EDU/INFO/PURCHASING)**

**BID FORM**

To: Joliet Junior College  
1215 Houbolt Road  
Joliet, IL 60431-8938

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Submitted by:

\_\_\_\_\_  
(Full Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City, State, Zip)

\_\_\_\_\_  
(Phone)

\_\_\_\_\_  
(Fax)

\_\_\_\_\_  
(Email)

**PART 1 OFFER**

Having examined the site and having familiarized itself with the conditions affecting the cost of the work associated with the \_\_\_\_\_, and with the bidding documents, Bidder hereby proposes to perform everything required and to furnish all labor, materials, necessary tools, expendable equipment and transportation services necessary to complete in a workmanlike manner the subdivision of work stated above in accordance with the bidding documents for the following sums:

**Base Bid:**

\_\_\_\_\_

Dollars(\$ \_\_\_\_\_)

Write amount in both alpha and numeric, in case of discrepancy the lesser amount shown will govern.

**Alternate Bid #1 (Fluid Applied Flooring):**

\_\_\_\_\_

Dollars(\$ \_\_\_\_\_)

Write amount in both alpha and numeric, in case of discrepancy the lesser amount shown will govern.

We have included herewith, the Security Deposit as required by the Instructions to Bidders.



**PART 2 ACCEPTANCE**

This offer shall be open to acceptance and is irrevocable for thirty (30) days from the Bid closing date.

If the bid is accepted by the Owner within the time period stated above, we will:

- A. Execute the Agreement within ten (10) days of receipt of Notice of Award.
- B. Furnish the required bonds within ten (10) days of receipt of Notice of Award in the form described in the Instruction to Bidders.
- C. Furnish the required Certificate of Insurance within ten (10) days of receipt of Notice of Award in the form and amounts described in the Instruction to Bidders.
- D. Commence work as established by the written Notice to Proceed.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bonds(s), the Security Deposit shall be forfeited as damages to the Owner by reason of our failures.

In the event our Bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

**PART 3 CONTRACT TIME**

If the Bid is accepted, we will:

- A. Complete the work in manner consistent to meet the requirements of the schedule (\_\_\_\_\_) consecutive calendar days from the date established as the Date of Commencement in the Notice to Proceed.
- B. Contractor has examined the Schedule included in these documents and takes no exception, or records the following exceptions:

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**PART 4 CONTRACTOR'S FEES FOR CHANGES IN THE WORK**

Lump Sum of Time and Materials Changes: We the undersigned bidder agree that the following percentages for overhead and profit shall be added to job costs for the

net amount of work added to or deleted from the contract by written lump sum or time and material change orders recommended by the Engineer and approved by the Owner:

Add to net extra for job costs for additional work performed by:

Our own forces 12%

Our subcontractor 5% (including assigned subcontractors)

Note: Insurance, bond, and taxes are considered as job cost items and are not included in the percentages listed above.

**PART 5      ADDENDA**

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs thereto are included in the Bid Sum.

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

Addendum # \_\_\_\_\_ Dated \_\_\_\_\_

**PART 6      SUBCONTRACTORS**

A. The following work will be performed (or provided) by the Subcontractors we have indicated below:

	<u>Name of Subcontractor</u>	<u>Work Performed</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____

B. We understand, and hereby agree, that we are obligated to use the indicated subcontractors, unless prior written permission to change has been obtained from the Owner.

**PART 7      RELATED WORK EXPERIENCE**

List a minimum of three jobs of similar type and scope performed in the last five years:

1. Client: \_\_\_\_\_  
Building: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Dollar Amount: \_\_\_\_\_

2. Client: \_\_\_\_\_  
Building: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Dollar Amount: \_\_\_\_\_

3. Client: \_\_\_\_\_  
Building: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Dollar Amount: \_\_\_\_\_

**PART 8 BID FORM ADDITION**

**Apprenticeship and Training Certification**

In accordance with the Illinois Procurement Code, the Bidder certifies that the work to be performed by it and/or its subcontractors shall, at the time of such bid opening and at the time of the performance of work pursuant to the terms of this Contract, shall have participated in the approved apprenticeship and training programs as provided for above. The bidder shall list, in the space below, the official name of the program sponsor holding the certificate of registration or all types of work or crafts in which the bidder is a participant and that will be performed by the bidder and its sub-contractor's employees. Work that will be sub-contracted shall be indicated to be subcontracted work as provided for herein. **Failure to list required information may result in disqualification of bid.**

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**PART 9 CONTRACTOR EVALUATION**

Upon completion of the project, a Construction Contractor Performance Evaluation form will be completed by the A/E and the JJC Project Coordinator. The contractor will be evaluated in the following categories:

- Professionally Administered and Supervised Work
- Business Practices
- Overall Performance
- Workmanship
- Timeliness
- Project Management

**PART 10 BID FORM SIGNATURES(S)**

The Corporate Seal of:

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(Bidder – please print the full name of your Proprietorship, Partnership, or Corporation)

Was hereunto affixed in the presence of:

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(Authorized signing officer) (Title)

(Seal)

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(Authorized signing officer) (Title)

If the bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF SECTION