



# JOLIET JUNIOR COLLEGE

---

1901

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

## **INSTRUCTIONS TO BIDDERS**

Sealed proposals are invited for **SUB C MCC REPLACEMENT MAIN CAMPUS** pursuant to specifications. Vendors who do not submit a bid or who do not respond with a "no bid" will be removed from our vendor list for this item.

### **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 14, 2012**

**FAXES ARE NOT ACCEPTABLE**

**TIME:** **10:00AM**

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:** **SUB C MCC REPLACEMENT MAIN CAMPUS**

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

A mandatory pre-bid meeting will be held on **JANUARY 31, 2012 AT 9:00 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 No bid shall be modified, withdrawn, or cancelled for sixty (60) days after the bid opening date without the consent of the College Board of Trustees.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:

B12011

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. Contractor 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.

#### **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.

B12011

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.



---

Judy L. Mitchell  
Director of Business & Auxiliary Services

JOLIET JUNIOR 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)

# **Project Manual**

## **Main Campus Sub C MCC Replacement**

**Joliet Junior College  
Joliet, Illinois**

**Final  
December 2011**



A Stanley Group Company  
Engineering, Environmental and Construction Services - Worldwide

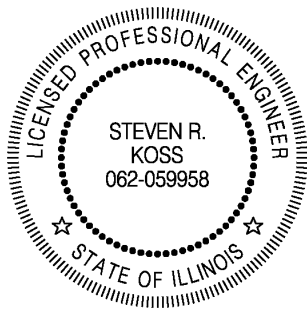
©Stanley Consultants, Inc. 2011  
00001.doc

# Project Manual

for

## Main Campus Sub C MCC Replacement

### Joliet Junior College Joliet, Illinois



  
Signature

December 16, 2011  
Date

License Expiration Date: 11-30-2013  
Illinois Firm Registration No. 184-001533



A Stanley Group Company  
Engineering, Environmental and Construction Services - Worldwide

MAIN CAMPUS  
SUB C MCC REPLACEMENT  
  
JOLIET JUNIOR COLLEGE  
JOLIET, ILLINOIS

| <u>TITLE</u>                                  | <u>PAGE</u>   |
|---|---|
| DIVISION 2<br>Section 02220                   | SITE CONSTRUCTION<br>Demolition                                     |
|   | 1 thru 3  |
| DIVISION 16<br>Section 16050<br>Section 16442 | ELECTRICAL<br>Basic Electrical Materials and Methods<br>Panelboards |
|   | 1 thru 19<br>1 thru 2   |

**This page intentionally left blank.**

**PART 1 GENERAL**

1.01 SECTION INCLUDES

- A. Removal and disposal of Sub C MCC and associated work.
- B. Inspect buildings and structures where demolition is required. Contractor shall also inspect existing Drawings of buildings and structures before bidding; Drawings are available from Owner. Contractor shall be familiar with items that require demolition and patching.
- C. Contractor is responsible for determining actual site conditions, extent to which demolition is required, and method of demolition.
- D. Schedule work with Owner and work in other parts of these Contract Documents.
- E. Perform work in accordance with Drawings and Specifications and as required for proper execution of work under this Contract. Conform to applicable requirements of state and other governmental agencies for demolition work.

1.02 SALVAGEABLE ITEMS

- A. All equipment and materials designated to be removed or demolished shall become property of Contractor.

1.03 QUALITY ASSURANCE

- A. Temporary electrical construction necessary to maintain existing system during construction shall comply with NEC Article 590.

1.04 SUBMITTALS

- A. Two weeks prior to any removal, Contractor shall submit demolition plan to Owner for review. Plans shall include sequence of performing proposed work, requirements for interruptions to public use of area, and requirements for Contractor use of public streets and facilities.

1.05 SCHEDULING

- A. Perform Work in manner which will provide least interference and most protection to public and existing construction. Contractor's operations subject to approval by Owner prior to commencement of Work.
- B. Carefully coordinate time and manner of demolition work with Owner to assure continued operation of existing facilities and to maintain construction schedule requirements.
- C. Schedule and perform work in accordance with following general sequence. Coordinate specific details of work with Owner. Owner's use of premises shall have priority over work in the Contract.
- D. Take care to minimize outages of electrical systems.
- E. Coordinate electrical system outages with Owner and service utility. Notify Owner in writing at least 24 hours prior to electrical outage. Indicate system to be disabled, areas affected, proposed date and time of outage, duration, and work to be performed.
- F. Outages of following electrical systems shall be performed only with written permission of Owner.
  - 1. Power distribution.
  - 2. Fire alarm.
  - 3. Telephone.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

3.01 PROTECTION

- A. Protect existing facilities from damage by falling debris, dust, and construction operations.

3.02 DEMOLITION - GENERAL

- A. Remove existing construction as specified and shown and as required to permit new construction.
- B. Perform removal in manner that will minimize dust, noise, and other nuisance. Maintain haul routes for disposal of material clean and free of debris.
- C. Remove existing construction carefully providing for neat and orderly junctions at construction to remain in place. Final appearance of exposed surfaces shall be similar and equal to that of adjacent existing work. Grind off rough surfaces to remove sharp projections.
- D. Perform demolition operations in manner that in no way endangers personnel, public, existing structures, utilities, roadways, or facilities not to be demolished.
- E. Any portion of existing construction whether structural, or accessory which has become unstable through removal of other parts of construction shall be removed as soon as practicable, and no such unstable part shall be left free-standing or inadequately braced against causes of collapse at end of each day's work.
- F. No demolition shall be performed on piping, electrical circuits, or equipment until system has been isolated by Owner. Contractor shall verify isolation of system.
- G. Contractor shall relocate existing active miscellaneous piping, conduit, and electrical circuits and devices not detailed on Drawings but required for installation of equipment and items installed by this Contract.
- H. To reduce fire hazards during demolition, Contractor shall:
  - 1. Maintain sufficient number of fire extinguishers to check and extinguish small fires in areas where Work is being performed.
  - 2. Wherever cutting torch or other equipment which might cause fire is being used, fire extinguishers shall be kept nearby and ready for instant use. Users of such equipment shall be instructed in proper method of preventing fires and extinguishing fire.

3.03 DEMOLITION OF ELECTRICAL ITEMS

- A. Examination:
  - 1. Verify that abandoned wiring and equipment serve only abandoned facilities.
  - 2. Demolition drawings are based on cursory field observation and existing record documents. Report discrepancies to Owner before disturbing existing installation.
- B. Preparation:
  - 1. Disconnect electrical systems in or on walls, floors, and ceilings scheduled for removal.
  - 2. Coordinate utility service outages with utility company.
- C. Demolition and extension of existing electrical work:
  - 1. Remove, relocate, and extend existing installations to remain to accommodate new construction.
  - 2. Remove abandoned wiring to source of supply.

3. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
4. Repair adjacent construction and finishes damaged during demolition and extension work.
5. Maintain safe access to existing electrical installations which remain active.

### 3.04 DISPOSAL OF MATERIALS

- A. Storage of materials to be removed not permitted to accumulate on site. Promptly remove and dispose of equipment and materials.
- B. Debris shall not be allowed to accumulate on roofs, floors, or in areas outside of and around any buildings being removed. Waste materials and debris resulting from Work shall be removed and disposed of daily by Contractor in disposal area obtained by Contractor.
- C. No material, obstructions, or debris shall be placed or allowed to accumulate within 15' of any fire hydrant. Fire hydrants shall be accessible at all times.

### 3.05 PATCHING

- A. Patch openings in walls and foundations caused by demolition. Use materials comparable to adjacent undisturbed surfaces for patching.
- B. Any new construction work that affects existing building structures shall be patched to match existing surrounding materials. This includes roofing, walls, walks, flooring ceilings, and any other materials that affect structural or architectural integrity of building.

### 3.06 REPAIR AND RESTORATION

- A. Contractor shall be responsible for damage to personnel, public, roadways, streets, structures, utilities, facilities, and equipment caused by operations and shall repair any damage at its own expense or replace items damaged beyond repair.
- B. Do not operate vehicles or equipment on existing construction or roadways that could be damaged.
- C. Backfill applicable excavated areas, open pits, and other depressions as work progresses. Backfill materials shall conform to requirements of Drawings and other specification sections.
- D. Grade areas disturbed by construction to smooth, uniform surfaces sloped to drain.
- E. Replace construction removed to facilitate operations with construction of equal quality to that removed.

### 3.07 CLEAN-UP

- A. Maintain public streets, alleys, or other thoroughfares used in carrying out disposal free of litter or soil attributable to this operation. Equip and load trucks or other vehicles to prevent leakage, blowing off, or other escape of any portion of whatsoever is being hauled. Cost incurred by Owner in cleaning up such litter will be charged to Contractor and deducted from monies due or to become due it under this contract.
- B. Upon completion of demolition work in each area, thoroughly clean area of materials not to remain.
- C. Remove materials (except paint) adhered to construction to remain.
- D. Leave areas in broom clean and vacuumed condition.

END OF SECTION

- 1) S. R. Koss
- 2) M. Zargar

**This page intentionally left blank.**

**PART 1 GENERAL**

1.01 SECTION INCLUDES

- A. General electrical requirements for equipment and services including, but not limited to:
  - 1. Factory wiring.
  - 2. Low voltage field wiring.
  - 3. Low voltage splices and terminations.
  - 4. Low voltage cabinets and electrical enclosures.
  - 5. Equipment safety grounding.
  - 6. Pushbuttons.
  - 7. Indicating lights.
  - 8. Alarm and trip contacts.
  - 9. Low voltage starters.
  - 10. Low voltage circuit breakers and disconnect switches.
  - 11. Outlet, pull, and junction boxes.
  - 12. Raceway systems and accessories
  - 13. Plates and covers.
  - 14. Wiring devices,
  - 15. Shop finish.
  - 16. Rust-inhibiting compounds.
  - 17. Galvanizing.
  - 18. Packaging, identification, and tagging.
  - 19. Nameplates.
  - 20. Trip setting coordination.
  - 21. Grounding and bonding.
  - 22. Fireproofing and fire ratings.
  - 23. Testing and demonstration.

1.02 DESIGN REQUIREMENTS

- A. Service conditions: Provide equipment and material suitable for intended service and installation at location indicated.
- B. Low-voltage auxiliary and control power.
  - 1. Electrical power for ac control and instrumentation equipment:
    - a. Provide devices necessary for proper operation and protection of equipment during electrical power supply and ambient temperature fluctuations specified.
    - b. Design for continuous operation at any voltage from 85% to 110% of nominal voltage. Dropout voltage shall be 60% of nominal for relays and 75% for contactors and starters.
  - 2. Electrical power for dc devices:
    - a. Design for continuous operation on ungrounded station battery system, capable of maintaining operation at any voltage from 80% to 112% of nominal voltage.
    - b. Electrical devices served shall not impose ground connection on supply.
- C. Auxiliary power: Design auxiliary equipment for low voltage service, with electrical power designed to operate from one of nominal electrical power sources as follows and as indicated on Drawings:

| Volts    | Phase  | Frequency |
|----------|--------|-----------|
| 480Y/277 | 3 or 1 | 60        |
| 208Y/120 | 3 or 1 | 60        |
| 120/240  | 1      | 60        |
| 125      | 1      | Dc        |

### 1.03 SUBMITTALS

- A. Submit with Bid: Description of manufacturer's standard factory test procedure for logic systems.
- B. Product Data:
  - 1. List of proposed material identifying manufacturer, type and model number for equipment to be provided for complete job.
  - 2. Manufacturer's catalog sheets marked to indicate specific type, model or catalog number of equipment to be provided.
  - 3. Equipment drawings, elementary diagrams, schematics, wiring, performance curves, instruction manuals, and all other documentation necessary for complete description of material being supplied and as required to support installation, commissioning and maintenance of equipment. Manufacturer's standard connection diagram or schematic showing more than one scheme of connection will not be accepted.
  - 4. Manufacturer's technical descriptions, product data sheets, and applicable manuals for use in protective device system coordination including:
    - a. Circuit breaker manufacturer, type, trip setting ranges, and protection curves.
  - 5. List of recommended spare parts required for equipment start-up, commissioning and operation.
  - 6. List of special maintenance tools required for installation and operation of equipment.
  - 7. If necessary, provide additional data to clearly demonstrate that proposed alternate equipment meets or exceeds equipment as specified.
  - 8. When requested by Engineer, submit system information, including but not limited to, utility feeders, existing relays, circuit breakers, fuses, and transformers.
- C. Operation and maintenance manuals. Provide at minimum:
  - 1. Itemized equipment list.
  - 2. General description and technical data.
  - 3. Receiving, storage, installation, and testing instructions.
  - 4. Operating and maintenance procedures.
  - 5. Complete set of final drawings requiring no further action.
  - 6. Complete documentation of inspections and tests performed, including logs, curves, and certificates. Documentation shall note any replacement of equipment or components that failed during testing.
  - 7. Spare parts list.
  - 8. Lubrication recommendations.
  - 9. Warranty information.

### 1.04 QUALITY ASSURANCE

- A. Manufacturer qualifications:
  - 1. Manufacturer of equipment specified shall be recognized in industry for normally supplying this type of equipment.
  - 2. Manufacturer shall be ISO certified.
  - 3. When requested by Engineer, provide list of similar equipment installations that have employed identical equipment from manufacturer.
- B. Installer qualifications:
  - 1. Installer shall be skilled in trade and shall have thorough knowledge of products and equipment specified.
  - 2. Cutting, drilling, trenching, or channeling necessary to properly install equipment shall be performed by competent skilled crafts people in safe, professional manner.
- C. Regulatory requirements: Perform electrical construction in accordance with NEC, local and state codes as applicable to job site.

- D. Materials and equipment furnished for permanent installation shall be new, unused, and undamaged.
- E. Asbestos not allowed.
- F. Parts shall be manufactured to American industry standard sizes and gages to facilitate maintenance and interchangeability. Metric sized components not allowed unless specifically requested and approved.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Pack, ship, handle, and store in accordance with manufacturer's requirements.
- B. Ship equipment completely factory assembled unless physical size, arrangement, configuration, or shipping and handling limitations make this impracticable. Shipping splits and required field assembly shall be identified with equipment submittals.
- C. Costs associated with sections, accessories, or appurtenances requiring field assembly shall be Contractor's responsibility.
- D. Separately packaged parts and accessories shall be consolidated and shipped together with equipment. Mark each container clearly to identify contents and as belonging with main equipment.
  - 1. Provide individual weatherproof itemized packing slips attached to outside of each container for contents included. Provide duplicate inside each container.
  - 2. Attach master packing list, covering accessory items for equipment, to main piece of equipment.
  - 3. Mark each container with project identification number for equipment and container number followed by total number of containers.
- E. Equipment shall be suitably protected during shipment, handling, and storage. Damage incurred during shipment shall be repaired at not cost to Owner.
- F. Protect coated surfaces against impact, abrasion, and discoloration.
- G. Electrical equipment and insulation systems shall be protected against ingress of moisture. Use space heaters if necessary to protect against moisture.
- H. Exposed threads shall be greased and protected.
- I. Pipe, tube, and conduit connections shall be closed with rough usage plugs. Seal and tape open ends of piping, tubing, and conduit.
- J. Equipment openings shall have covers, and taped to seal equipment.
- K. Store materials in clean, dry place. Protect from weather, dirt, water, construction debris, and physical damage in accordance with manufacturer's instructions.

#### 1.06 SCHEDULING

- A. Coordinate with Owner early and late shipping and delivery schedules for items requiring storage and handling at Site.

#### 1.07 WARRANTY

- A. Electrical equipment shall be provided with manufacturer's standard warranty, but not less than 1 year.

## 1.08 MAINTENANCE

- A. Extra materials: Provide touchup paint in same type and color to repair at least 25% of finish-painted equipment surface. Paint shall be sufficient to perform touch-up painting in accordance with shop-applied material instructions for repair painting.
- B. Each piece of equipment shall be furnished with special tools as required for installation, maintenance, and dismantling of equipment.
  - 1. Furnish in quantities as necessary to complete work on schedule.
  - 2. Tools shall be new and shall become property of Owner.
  - 3. Tools and intended use shall be identified in assembly instructions. Tools shall only be used for their intended purpose.

## PART 2 PRODUCTS

### 2.01 FACTORY WIRING

- A. Select cable for electrical and environmental conditions of installation, and suitable for unusual service conditions where encountered.
  - 1. Proper temperature application cable shall be used throughout, but shall be not less than 90°C rated.
  - 2. Conductors routed over hinges shall use extra-flexible stranding.
  - 3. Cable insulation shall be rated for maximum service voltage used, but not less than 600 volts.
  - 4. Splices not allowed.
- B. Panel, control cabinet, switchboard, motor control center, and switchgear wiring shall use flame retardant cross-linked polyethylene (XLP) or flame retardant ethylene-propylene rubber (EPR) insulation that meet or exceed requirements of UL 44 for XHHW.
  - 1. Minimum size: No. 14 AWG (1.5 mm<sup>2</sup>).
  - 2. Conductors: Annealed bare copper Class B stranding passing IEEE 1202 and UL VW-1 flame test.
- C. Instrumentation, thermocouple, and thermocouple extension wire shall use twisted shielded pairs/triads having flame retardant cross-linked polyethylene (XLPE) insulation, and chlorinated polyethylene (CPE) jacket.
  - 1. Minimum size: No. 16 AWG (1.0 mm<sup>2</sup>).
  - 2. Conductor type:
    - a. Instrument: Annealed copper Class B stranding.
    - b. Thermocouple: Solid alloy, ANSI MC 96.1.
  - 3. Provide each pair/triad with shield.
  - 4. Shielding shall consist of aluminum-polyester tape and flexible strand tin-coated No.18 AWG (0.75 mm<sup>2</sup>) copper drain wire.
  - 5. Drain wire for each instrument cable shall be insulated with spaghetti sleeve. One end of shield wire shall be terminated on grounded terminal.
  - 6. Cables shall pass IEEE 1202 and ICEA 70,000 Btu/Hr vertical tray flame test, and each conductor shall pass UL VW-1 flame test.
- D. Terminations:
  - 1. Conductor terminal connectors shall be insulated, ring tongue, compression type connectors properly sized for conductor and terminal.
    - a. Connectors shall be constructed of copper and shall be tin-plated.
    - b. Interior surface of connector wire barrel shall be serrated; exterior surface of connector wire barrel shall be furnished with crimp guides.
  - 2. Non-insulated terminal connectors shall be used for conductors terminated on devices equipped with individual fitted covers, such as, but not limited to, control switches and lockout relays.

3. Connections requiring disconnect plug and receptacle type devices shall be provided with factory-terminated conductors on each plug and receptacle.
  - a. Plugs and receptacles shall be factory wired into junction boxes containing terminal blocks for external connections.
  - b. Conductors on disconnect portion of plug-receptacle assemblies shall be in common jacket.
4. Prior to shipment of equipment, remove temporary wiring installed in factory for equipment testing.
5. Current transformers shall terminate on shorting type terminal blocks. Ship with shorting jumpers installed.

E. Identification and labeling:

1. Provide conductor identification sleeve on each end of each internal conductor. Mark each sleeve with opposite end destination identification with nonsmudging, permanent black ink. Sleeves shall be UV-resistant self-adhesive type or PVC, not less than 1/2" long.
2. Permanently label each terminal block, terminal, conductor, relay, breaker, fuse block, and other auxiliary devices to coincide with identification indicated on manufacturer's drawings.

## 2.02 FIELD WIRING

- A. Nationally or internationally recognized cable manufacturer shall produce cable provided.
  1. Metal-clad cable, NEC Type MC, may not be substituted in place of cable and conduit unless specified otherwise, or unless approved in writing.
  2. Comply with code and Project requirements directly associated with use of each cable type.
- B. Cables specified are for voltages 600 volts.
- C. Wiring shall be bare copper with not less than 98% conductivity, unless specified otherwise.
- D. General-purpose building conductor used on interior lighting circuits and general-purpose branch circuits routed entirely in conduit shall be single conductor.
  1. Voltage rating: 600-volt.
  2. Conductor: Class B, solid or stranded, annealed, uncoated copper, minimum size No. 12 AWG (4.0mm<sup>2</sup>).
  3. Insulation: PVC complying with physical and electrical requirements of UL for type THHN/THWN.
  4. Jacket: Overall clear nylon jacket applied over conductor insulation, UL-listed as gasoline and oil resistant.
  5. Provide conductor sizes No. 8 AWG and smaller in colors to match wire color-codes. Sizes No. 6 AWG and larger shall be color-coded with field-applied tape.
  6. Rated continuous operating temperature shall be 90°C in wet and dry locations for operation at maximum 75°C.
- E. Single-conductor, low-voltage power cable for motors, feeders, branch circuits, and dc circuits routed in conduit, duct bank, or cable tray:
  1. Voltage rating: 600-volt.
  2. Conductor: Annealed, bare copper, Class B, stranded, minimum size No. 12 AWG (4.0mm<sup>2</sup>).
  3. Insulation: Ethylene propylene rubber (EPR), complying with physical and electrical requirements for NEC Type RHH or RHW-2.
  4. Jacket: Flame-retardant, heat, moisture, and sunlight resistant; cross-linked low-smoke, nonhalogen polyolefin (XLPO).
  5. Conductor sizes No. 8 AWG and smaller shall be provided in colors to match wire color-codes. Sizes No. 6 AWG and larger may be color-coded with field applied tape.
  6. Wire shall be identified by surface marking indicating manufacturer, conductor size, conductor material, voltage rating, UL symbol, and listed type.
  7. Cables smaller than No. 1/0 AWG (50 mm<sup>2</sup>) shall be routed entirely in conduit and duct bank in. Sizes No. 1/0 AWG (50 mm<sup>2</sup>) and larger may be routed in cable tray, if so rated.
  8. Conductors shall pass IEEE 1202 70,000 Btu/hr, and ICEA T-29-520, 210,000 Btu/hr vertical tray flame tests, and UL VW-1 vertical flame test.

9. Temperature rating shall be 90°C for normal operation in wet or dry locations.
- F. Instrumentation cable installed indoor or outdoor routed in cable tray, conduit, and ducts:
  1. Voltage rating: 600-volt.
  2. Conductors: Annealed, bare copper, Class B, stranded, minimum size No. 16 AWG (1.0 mm<sup>2</sup>).
  3. Insulation: Flame-retardant, cross-linked polyethylene (XLPE) or cross-linked polyolefin (XLPO).
  4. Jacket: Flame-retardant, heat, moisture, and sunlight resistant; cross-linked, low-smoke, nonhalogen polyolefin (XLPO).
  5. Pairs/triads: Each twisted with lay not exceeding 2" (50 mm).
  6. Color code: Pairs black/white, Triads black/white/red.
  7. Assembly:
    - a. Each pair or triad shall be cabled together with aluminum/polyester tape shield helically wrapped with minimum lap of 15% of tape width and isolation tape. Entire cable assembly shall have overall aluminum/polyester tape shield helically wrapped.
    - b. Flexible strand tin-coated No.18 AWG (0.75 mm<sup>2</sup>) copper drain wire shall be helically wound between twisted conductors and tape shield.
  8. Each instrumentation cable shall be identified by means of surface ink printing indicating manufacturer, conductor size, and quantity, UL listing.
  9. Cables shall pass IEEE 1202 70,000 Btu/hr, and ICEA T-29-520, 210,000 Btu/hr vertical tray flame tests, and individual conductors UL VW-1 vertical flame test.
  10. Temperature rating shall be 90°C maximum continuous operating temperature in wet or dry locations.
- G. Provide high-temperature wire around process equipment operating at temperatures exceeding standard cable ratings.
  1. Voltage rating: 600-volt.
  2. Temperature rating: Up to 1000°C.
  3. Conductor: Stranded, "A" nickel.
  4. Insulation: Layers of ceramic fiber braids.
  5. Jacket: Overall metallic sheath.

## 2.03 SPLICES AND TERMINATIONS

- A. Splices, except as in lighting and general purpose power circuits specified below, not allowed unless specifically indicated on Drawings or required for connection to equipment.
- B. Temperature rating of splices and terminations shall be rated no less than 75°C.
- C. Splices allowed in lighting and general-purpose power circuits.
  1. Provide wire and cable connectors of high-conductivity, corrosion-resistant material with contact area equal to at least current carrying capacity of wire or cable.
  2. General lighting and general-purpose building power circuits:
    - a. Twist-type, insulated spring connectors for splices on solid or stranded conductors smaller than No. 6 AWG.
    - b. Use indent, hex screw, or bolt clamp-type connectors, with or without tongue for splices on solid or stranded conductors No. 6 AWG and larger.
    - c. Apply insulating 600-volt tape.
- D. Insulating tapes and compounds for terminations and splices shall be UL-listed for intended use, location, and voltage by manufacturer.
- E. Termination of conductors to equipment with bolted connections:
  1. Use compression type lugs:
  2. Compression lugs for cables 250 kcmil and larger shall have at least 2 clamping elements of compression indents, and provision for at least 2 bolts for joining to apparatus terminals.

3. Crimping hand tools used for securing conductors in compression type connectors or terminal lugs shall be made for purpose and conductor sizes involved.
  4. Crimping tools shall be ratchet-type preventing tool from opening until crimp action is completed.
  5. Tools shall be product approved by connector manufacturer.
- F. Terminals:
1. Conductors No. 10 AWG and smaller: Marathon 1500 Series.
  2. Conductors larger than No. 4/0 AWG: Terminate to tinned copper bus bar drilled and tapped with standard NEMA sized and spaced holes.
- G. Coordinate sizes and types of conductor terminals for 600-volt power cable terminations in equipment with furnished conductor and terminal connector data.
- H. Provide 600-volt rated terminal blocks for instrumentation and control conductors for connection to circuits external to specified equipment, and for internal circuits crossing shipping splits.
1. Use crimp-on terminals matching termination point terminations in manufacturer-furnished panels. Splices not allowed.
  2. Terminal blocks for thermocouple extension wire: Buchanan "Medium Duty" with thermocouple contacts or Marathon 200 Series with Omega Engineering, Inc. Type TL terminal lugs.
  3. Furnish with white marking strips.
  4. Where permitted by safety codes and standards, provide without covers. Neither step-type terminal blocks nor angle mounting of terminal blocks allowed.
  5. Fuses may be mounted on terminal blocks.
  6. Maximum 2 conductors in accordance with termination point.
- I. Terminal blocks for external connections shall leave from centrally mounted location, not from individual devices in enclosure.
1. Group-in instrument and control compartment for easy accessibility.
  2. Provide sufficient space on each side of each terminal block to allow orderly arrangement of leads to be terminated on block.
  3. Locate auxiliary equipment in compartments, enclosures, or junction boxes so service personnel will have direct access without interference from structural members and instruments without removal of barriers, cover plates, or wiring.
  4. Do not mount terminal blocks in compartments containing cables or buses operating at voltages above 600 volts.
  5. Size for wire sizes of incoming conductors as necessary.
- J. Install shorting-type terminal blocks nearest current transformer in accessible location for each set of CTs supplied with equipment furnished, no other shorting-type terminal blocks allowed, unless specified otherwise.
- K. Install din-rail mounted miniature circuit breakers (MCB) for protection of VT circuits on line and load side. Breakers shall have alarm contacts wired to terminal blocks.
- L. Terminate each conductor in multiconductor control cable or as shown on Drawings. Provide 10% spare terminals for circuit modifications.
- M. Each control switch and lockout relay shall have minimum of 4 spare normally open and 4 spare normally closed contacts wired out to terminal blocks.
- N. Circuit identification number listed on either circuit schedule or panel schedule shall be used to identify circuit, positioned as near as possible to end of each conductor on multiple single wire circuits and on cable jacket for multiconductor cables.
- O. Cable designations shall be visible after installation without requiring physical movement of cable.

## 2.04 ELECTRICAL ENCLOSURES

- A. Size junction boxes, pull boxes, and enclosures in accordance with requirements of NEC.
- B. Junction boxes and pull boxes 4" (100 mm) trade size or smaller in any dimension shall be galvanized malleable iron, or cast ferrous metal NEMA rated for installed location. Do not use concentric knockouts.
- C. Junction boxes, pull boxes, and electrical enclosures larger than 4" (100 mm) trade size in any dimension shall be as follows, unless required otherwise.
  - 1. NEMA rating for electrical enclosures installed in nonhazardous locations:
    - a. Indoor:
      - 1) Dry environmentally controlled area: NEMA 12.
      - 2) Noncorrosive wet or hose-down area: NEMA 4.
      - 3) Corrosive wet or hose-down area: NEMA 4X
    - b. Outdoor:
      - 1) Corrosive area: NEMA 4X.
      - 2) Noncorrosive area hose-down or spray area: NEMA 4.
      - 3) Noncorrosive area nonhose-down area NEMA 3R.
  - 2. Construct noncast-metal electrical enclosures from reinforced steel plate capable of supporting devices mounted on or within enclosure without deflection. Steel plate thickness shall conform to UL requirements.
  - 3. Enclosures shall be of adequate strength to support mounted components during shipment and installation.
  - 4. Conduit entrances shall be field drilled.

## 2.05 PULL AND JUNCTION BOXES

- A. Furnish junction boxes and pull boxes were shown on Drawings, and where necessary to facilitate pulling wires and cables without damage.
- B. Above ground boxes shall be formed from sheet steel, with corners folded in and securely welded with inward flange on each of 4 edges.
- C. Drill box for mounting and attachment of cover; galvanize after fabrication.
- D. Cover shall be made of one-piece galvanized steel and provided with stainless steel round head machine screws.
- E. Box and cover shall be made of code gage steel, or heavier if shown on Drawings.
- F. Boxes shall be minimum 4-1/2" (100 mm) deep. Size shall be in accordance with NEC. Use next larger standard size when necessary in accordance with manufacturer standard sizes.
- G. Pull and junction boxes shall be furnished without knockouts for field drilling.
- H. Enclosures shall be as required for areas in which installed and in accordance with requirements specified.
- I. If pull and junction boxes are exposed in and around architecturally finished surfaces, paint box to match finish of nearby surfaces, unless indicated otherwise.
- J. Bolt-on junction box covers 3'-0" square or larger, or heavier than 25 lb. shall have permanent rigid handles. Covers larger than 3'-0" x 4'-0" shall be split.

## 2.06 EQUIPMENT SAFETY GROUNDING

- A. Install exposed raceway electrically continuous. Conduit and tray shall not be considered to be only ground conductor.
- B. Furnish equipment that is part of integral shipping unit or assembly with bare copper ground conductor extending to central ground connection lug. Lug shall be suitable for field connection to local ground. Electrical equipment shall be considered any device that is energized.
- C. Single-point ground connections required for proper operation of electronic equipment shall be insulated from equipment safety ground. Such connections shall be extended, using insulated cable, to single insulated termination point suitable for field connection to appropriate ground system.
- D. Conduits that contain power circuits shall have ground conductor installed inside conduit. Ground conductor shall be bonded to equipment or tray or duct ground at both ends.
- E. Provide ground bushing on each conduit containing power circuit. Connect ground bushings together inside enclosure and to enclosure ground lug or ground bus.
  - 1. Use No. 8 AWG conductor for ground bushings trade size 1-1/2" (38 mm) and smaller.
  - 2. Ground bushings larger than 1-1/2" (38 mm) shall be sized in accordance with requirements of NEC, but in no case shall they be smaller than No. 8 AWG.
- F. Ground conductor: Uninsulated, Class B standard, round soft drawn uncoated copper as defined in ICEA S-19-81, unless specified otherwise.
- G. Hardware: Clamps, bolts, washers, nuts, and other hardware used with grounding conductor shall be copper, copper alloy, high copper alloy, or silicon bronze.

## 2.07 CONTROL RELAYS

- A. General service, industrial grade auxiliary relays rated 600-volt.
- B. Contacts shall be reversible from N.O. to N.C. in field.
- C. Timing relays for critical service: Agastat Series 7000.

## 2.08 CONTROL SWITCHES

- A. Multistage, rotary-type rated 120 volts ac or 125 volts dc, 3 amperes, as required.
- B. Handles shall be black, fixed, modern, pistol grip type. Provide engraved black plastic escutcheon plates with targets.
- C. Provide with colored LED lamps and nameplates as required.

## 2.09 PUSHBUTTONS

- A. Standard pushbuttons shall be heavy, industrial-type rated 120 volts ac or 125 volts dc, 3 amperes, as required.
- B. Provide with colored LED lamps and nameplates as required.

## 2.10 INDICATING LIGHTS

- A. Status indicating lights shall be high-intensity, cluster, LED-type for panel mounting.

- B. Coordinate indicating light colors with indicated conditions as follows. Indicating lights shall be energized when condition exists and shall be de-energized when condition does not exist:
  - 1. Red: Equipment energized: such as motor running, valve open, or breaker closed.
  - 2. Green: Equipment de-energized: such as motor stopped, valve closed, or breaker open.
  - 3. Amber: Equipment abnormality: such as motor trip, breaker trip, or relay trip.
  - 4. White: Monitoring of control power or trip coil: such as lockout relay trip coil monitor or breaker trip coil monitor. Light is on during normal circuit operation and off during loss of power or loss of coil.
  - 5. Blue: Loss of control power.

#### 2.11 ALARM AND TRIP CONTACTS

- A. Alarm contacts for remote annunciation shall be suitable for operation at 120 volts ac and 125 volts dc. Contacts shall be rated at least 0.5-ampere make and break, minimum.
- B. Alarm contacts shall be normally closed contacts that open to alarm condition.
- C. Trip contacts for remote trip shall be suitable for operation at 125 volts dc and shall be rated 5 amperes make or break, minimum.

#### 2.12 SEPARATELY MOUNTED COMBINATION MOTOR STARTERS

- A. Enclosed, 3-phase, full-voltage, nonreversing, unless indicated otherwise.
- B. Complete combination starter shall have minimum interrupting rating of 50 kA or greater if specified elsewhere or indicated on Drawings.
- C. Starter enclosures shall have enclosure NEMA rating specified herein.
- D. Provide combination starter with microprocessor-based contactor and integral electronic overload protection; minimum size shall be NEMA 1.
- E. Each phase shall have microprocessor-monitored current sensor for motor running overload, phase loss and phase unbalance protection.
  - 1. Provide Class II ground fault protection; set to 20% of maximum continuous ampere rating and have delay of 20 seconds and run delay of 1 second to prevent nuisance trip on start.
  - 2. Single-speed starters shall be furnished with 3 current sensors.
- F. Starters shall be furnished with motor circuit protectors (MCP) rated 600-volt.
  - 1. Each breaker shall be manually operated with quick-make, quick-break, trip-free toggle mechanism.
  - 2. Starters shall have external manual breaker-operating handle with provisions for up to 3 padlocks.
  - 3. Access door shall be interlocked with motor circuit protector, so door cannot be opened while breaker is closed except by interlock override.
  - 4. Starter contactor shall mechanically operate auxiliary contacts. Each starter shall include auxiliary contacts required for application, plus 2 spare NO and 1 spare NC contacts.
  - 5. Provide membrane-style pushbutton control module and LED lights, if indicated on drawings, to control starter functions and indication. Pushbuttons and LEDs shall be clearly identified.
  - 6. Verify and match control power transformers, overload protection, and sizes of starters to actual equipment furnished.
  - 7. Size control power transformers (CPT) to supply control circuit and any additional loading simultaneously. Minimum CPT size shall be 100 volts-amperes for Size 1 starters and 150 volts-amperes for Size 2 and larger starters.
  - 8. CPTs shall have primary leads protected, and one secondary lead protected and one secondary lead grounded. Provide DIN rail-mounted, miniature circuit breakers for protection. Fuses not allowed.

9. Starters for systems with system voltage of 120 volts or less shall not require CPT.
10. Two-speed starters and reversing starters shall be mechanically and electrically interlocked so only one set of contacts can be closed at any one time.

## 2.13 RACEWAY SYSTEM AND ACCESSORIES

### A. RIGID STEEL CONDUIT

1. Uses and limitations:
  - a. Use in general purpose areas except where other types are specified or optionally permitted.
2. Description:
  - a. Material: Mild steel with continuous welded seam.
  - b. External protective coating: Metallic zinc applied by hot-dip galvanizing or electrogalvanizing; coating shall not flake or crack when conduit is bent.
  - c. Interior surface: Protected by zinc, enamel, or other equivalent corrosion-resistant coating.
  - d. Manufacturer: Republic Steel "Galvite," Triangle PWC, Allied Tube and Conduit Corporation "GRC," or equal.
3. Couplings, unions, and fittings: Threaded-type, galvanized steel.
4. Conduit bodies:
  - a. Threaded-type, cast metal or malleable iron type with zinc or cadmium coating.
  - b. Equip covers with solid gaskets and captive screw fasteners.
  - c. Manufacturer: Crouse-Hinds "Condulets-Form 7," Appleton "Unilets," O.Z./Gedney Co., or equal.
5. Expansion fittings: O.Z./Gedney Co. Type EX, Crouse-Hinds Type XJ, or equal; provide bonding jumper.
6. Standards: ANSI C80.1 and NEMA FB1.

### B. INTERMEDIATE STEEL CONDUIT (IMC)

1. Uses and limitations:
  - a. Use in general purpose areas at CONTRACTOR's option instead of rigid steel conduit.
  - b. Limit use to conduits sized 2" and smaller.
2. Description:
  - a. Material: High-grade sheet steel with continuous welded seam.
  - b. External protective coating: Metallic zinc applied by hot-dip galvanizing or electrogalvanizing; coating shall not flake or crack when conduit is bent.
  - c. Internal coating of enamel or similar material in result in smooth surface.
  - d. Manufacturer: Allied Tube and Conduit Corporation, Triangle PWC, or equal.
3. Couplings, unions, and fittings: Threaded type, galvanized steel.
4. Conduit bodies:
  - a. Threaded-type, cast metal, or malleable-iron type, with zinc or cadmium coating.
  - b. Equip covers with solid gaskets and captive screw fasteners.
  - c. Manufacturer: Crouse-Hinds "Condulets-Form 7," Appleton "Unilets," O.Z./Gedney Co., or equal.
5. Expansion fittings: O.Z./Gedney Co. Type EX, Crouse-Hinds Type XJ, or equal; provide bonding jumper.
6. Standards: UL 1242 and NEMA FB1.

### C. ELECTRICAL METALLIC TUBING (EMT)

1. Material: Hot-dipped galvanized, high-grade steel with continuously welded seam.
2. External protective coating: Metallic zinc applied by hot-dip galvanizing or electro-galvanizing. Coating shall not flake or crack when conduit is bent.
3. Internal coating: Baked enamel or similar compound resulting in smooth surface.
4. Fittings: Rust-resistant steel or die-cast aluminum compression type. Connectors shall have insulated insert in throat. Die-cast aluminum material, and indent or set screw type, are not acceptable.
5. Conduit bodies: Malleable iron for use with compression type fittings or die-cast aluminum. Set screw type not acceptable.

D. WIREWAY

1. Metal gage thickness shall conform to NEC.
2. NEMA 1: Minimum 16-gage steel with baked enamel finish, hinged or removable covers with captive stainless steel screws.
3. Screws shall be guarded to prevent damage to wire installation.
4. Provide fittings, supports, end plates, and accessories as required.

2.14 PLATES AND COVERS

- A. Mark each plate and cover to show circuit and panel designation. Unless indicated to be engraved plate, use self-sticking, clear membrane, UV-resistant labels with typed black letters. Handwritten labels not allowed.
- B. Coordinate color with adjacent surfaces.
- C. For weatherproof installations, cover plates shall be gasketed and rated for NEMA Type 4 installation.
- D. Device plate mounting hardware shall be countersunk and finished to match plate.

2.15 CIRCUIT BREAKERS

- A. Molded-case, thermal-magnetic, bolt-in, individually front replaceable, and shall visibly indicate "On," "Off," and "Tripped" position.
- B. Branch circuit breakers used for lighting circuits shall be switch duty rated, "SWD."
- C. Breakers having multiple poles shall be manufactured as common trip type.
- D. Provide handle clips for 10%, or minimum of 2 whichever is greater, for breakers to prevent casual operation. If no breakers are indicated for installation, then provide on breakers labeled as spare.
- E. Breakers, and provisions for future breakers, shall be provided in quantities, poles, and ampere ratings shown on Drawings.

2.16 FINISHES

- A. Manufacturer's standard coating systems shall be factory-applied. Coating systems shall provide resistance to corrosion caused by weather and industrial environments.
  1. Surfaces inaccessible after factory or field assembly shall be protected for life of equipment.
  2. Painted surfaces shall be filled to provide smooth, uniform base for painting.
  3. Surfaces requiring field welds shall not be coated within 3" (75 mm) of field weld.
- B. Coating material and application techniques shall conform to regulations of air quality management agency having jurisdiction.
- C. Exterior surfaces of control and electrical equipment, including panels, cabinets, switchgear, transformers, and motors shall be manufacturer's standard colors unless specified otherwise.
- D. Apply high-temperature coating systems to uninsulated equipment operating at temperatures at or above 200°F.

2.17 RUST-INHIBITOR COMPOUNDS

- A. Uncoated machined and ferrous surfaces subject to corrosion shall be protected with rust-inhibitor compounds.

- B. Rust-inhibitor compounds used to protect surfaces of equipment and piping exposed to feedwater or steam shall be completely water-soluble.
- C. Surfaces to be field welded shall be coated with consumable rust-inhibitor compounds that will not affect quality of weld.
- D. External gasket surfaces, flange faces, couplings, rotating equipment shafts and bearings shall be thoroughly cleaned and coated with rust-inhibitor compounds.

## 2.18 GALVANIZING

- A. Galvanized structural steel members and steel assemblies shall be pickled after fabrication. Remove scale, rust, grease, and other impurities, then hot-dip galvanized in accordance with ASTM.
- B. If galvanized member is to be bolted, structural bolts shall be galvanized in accordance with ASTM.

## 2.19 IDENTIFICATION AND TAGGING

- A. Conduits inside manholes, hand holes, building entrance pull boxes, and junction boxes shall be provided with 19-gage stainless steel identification tags, with 1/2" (13 mm) stamped letters and numbers.
  - 1. Attach conduit Identification tags with stainless steel banding. Tag position shall be readily visible for inspection.
  - 2. Tags shall provide, as minimum:
    - a. Circuit origination and destination.
    - b. Voltage.
    - c. Number of conductors in accordance with phase.
    - d. Number of phase conductors.
- B. Cables passing through or terminating in manholes, hand holes, and pull boxes shall have 19-gage stainless steel identification tags with stamped lettering that provides circuit identification information.
- C. Provide power, control, and instrumentation cables with permanent type identification markers with typed cable numbers and from/to information at each point of termination. Cable numbers and from/to information will be provided for circuits not associated with low-voltage panelboards.
  - 1. Position cable markers to be readily visible for inspection.
  - 2. Cable numbers shall match those as shown on Drawings.
  - 3. Provide wire tags at each termination point for each conductor. Tags shall be permanent, wrap around, heat-shrinkable type with typewritten information.
- D. Color-code power conductors with electrical tape or provide with colored jacket.
  - 1. Source voltage of 208Y/120 volts:
    - a. Phase A: Black.
    - b. Phase B: Red.
    - c. Phase C: Blue.
    - d. Neutral: White.
  - 2. Source voltage of 120/240 volts:
    - a. Phase A: Black.
    - b. Phase B: Red.
    - c. Neutral: White.
  - 3. Source voltage of 480Y/277 volts:
    - a. Phase A: Brown.
    - b. Phase B: Orange.
    - c. Phase C: Yellow.
    - d. Neutral: Gray.

4. Source voltage of 240/120-volt delta: High-leg systems shall not be used without Engineer approval.
5. Service entrance and equipment ground conductors shall be bare copper or green insulated conductor. Equipment bonding conductors shall be bare copper.
6. Isolated ground conductors shall be insulated; green in color with integral yellow stripe. No substitutions.

## 2.20 EQUIPMENT NAMEPLATES

- A. Laminated white-over-black plastic such that face is white with black letters, with 1/8" (3 mm) engraved letters securely fastened with minimum of 2 self-tapping, stainless steel screws.
- B. Motor starters, either separately mounted or contained in motor control centers, shall have nameplates identifying related equipment. Where separate control and indicating lights are used, starters shall have engraved or etched legends ("start", "stop", etc.) as shown on Drawings.
- C. Provide control stations with nameplates identifying related equipment. Control and indicating lights shall have engraved or etched legends as shown on Drawings.
- D. Circuit breakers within main switchboards and distribution switchboards shall be provided with nameplates identifying related equipment being served.
- E. Nameplates shall meet requirements of NFPA 70E

## 2.21 HARDWARE

- A. Provide hardware including, but not limited to, anchor bolts, nuts, washers, expansion anchors, wire nuts needed for installation.
- B. Hardware smaller than 3/4" (19 mm) shall match NEMA standard size bolt holes on motors and electrical equipment.

# PART 3 EXECUTION

## 3.01 EXAMINATION OF SITE

- A. Contractor shall be responsible for familiarity with Project Site conditions. Equipment furnished and installed shall be capable of withstanding most severe conditions that will be encountered.

## 3.02 PROTECTION OF WORK

- A. Protect installed Work and provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- B. Damage occurring to building or equipment during installation shall be repaired or replaced to conditions existing prior to damage at no additional cost or delay to project or Owner.

## 3.03 INSTALLATION

- A. Install equipment and materials in accordance with manufacturer's recommendations and Drawings.
- B. Details for equipment and systems installed in accordance with industry standard techniques will not be furnished.
- C. Installation details furnished on Drawings shall be followed unless found to be unsafe, inappropriate for equipment specified, or unachievable due to site conditions.

- D. Install equipment indicated on Drawings as furnished by others, unless noted as installed by others, including but not limited to:
  - 1. Low voltage motor control center.
- E. Except as otherwise specified or indicated on Drawings, equipment shall be installed plumb, square, and level.
- F. Sheet metal junction boxes, equipment enclosures, sheet metal raceways, and similar items mounted on earth-bearing walls shall be separated from wall not less than 1/4" (6 mm) by corrosion-resistant spacers.
- G. Substations, switchgear, motor control centers, and similar equipment located outdoors shall be permanently sealed at base. Openings into equipment shall be screened or sealed as to prevent entrance of birds, rodents, and insects the size of wasps and mud daubers.
  - 1. Sealing material at base shall be concrete grout.
  - 2. Small cracks and openings shall be sealed from inside with silicone sealant.
  - 3. Large openings shall use galvanized screen mesh.

#### 3.04 TRIP SETTING COORDINATION

- A. Motor overload protection shall be selected and set by Contractor based on final motor nameplate information. Size motor circuit protectors to coordinate with motor starting characteristics and overload protection. Submit summary of settings to Owner, list:
  - 1. Equipment project identification number.
  - 2. Nameplate information.
  - 3. Overload device trip range.
  - 4. Overload device setting.
  - 5. Trip device rating.
  - 6. Trip device setting if different from rated value.
- B. Set trip devices and verify devices are operating within manufacturer's tolerances. Make changes to settings not complying with requirements furnished by Engineer. Device settings will be furnished for following equipment:
  - 1. 800A panelboard.

#### 3.05 CABLE

- A. Prior to installation of each cable or cable group into assigned raceway, verify that raceway has been correctly sized.
  - 1. Where raceway is not indicated in circuit schedule or on Drawings, size in accordance with requirements of NEC.
  - 2. If raceway size indicated on Contract Documents is inadequate, notify Engineer.
- B. Replace cables pulled into wrong raceway or cut too short to rack and train.
- C. Do not reinstall cables installed in wrong raceway and removed. Discard cables unless inspected and accepted by Owner's Representative in writing.
- D. Protect cables from dirt, water, oil, damaging chemicals, and from physical injury prior to, and during installation.
- E. Cables shall be cut sufficiently long to conform to contour of trays, with particular attention paid to vertical inside bends.
- F. Fasten cables to cable tray with rated nylon ties to hold cables in place.

- G. Perform fishing and pulling with flexible round metal tape, CO<sub>2</sub> propelled polyethylene cord, nylon rope, or manila rope.
- H. Cable damage caused by improper pulling tension and excessive sidewall pressures shall be considered for any cable pulls that require use of mechanized cable pulling machine, whether installed underground or overhead.
  - 1. NEC requirements shall be used as guideline.
  - 2. Monitor pulling tension during installation of cable. Tension shall not exceed maximum recommended by cable manufacturer.
  - 3. To avoid damage from excessive sidewall pressure at bends, pulling tension shall not exceed cable manufacturer's recommendation.
  - 4. Pulling mechanisms, manual or power type, shall have rated capacity in tons legibly marked on mechanism.
  - 5. During installation, observer shall constantly watch dynamometer and record maximum tension achieved during pull.
    - a. If excessive strain develops, stop pulling operation at once. Determine difficulty and correct.
    - b. Provide records of dynamometer readings to Engineer.
    - c. Inform Owner prior to cable pulls.
  - 6. Do not use woven wire cable grips. Use only pulling eyes for pulling cables.
  - 7. As soon as cable is pulled into place, remove pulling eyes and reseal cable.
- I. Insert reliable nonfreezing type of swivel or swivel connection between pulling rope and eye to prevent twisting under strain.
- J. Only use lubricants as recommended by cable manufacturer. Water-based lubricants not allowed.
- K. Outside of each cable reel shall be carefully inspected. Remove protruding nails, fastenings, or other objects that might damage cable.
  - 1. Perform visual inspection for flaws, breaks, or abrasions in cable sheath as cable leaves reel. Pulling speed shall be slow enough to permit inspection.
  - 2. Damage to sheath or finish of cable shall be sufficient cause for rejecting cable.
  - 3. Cable damaged during installation shall be replaced at no expense to Owner.
- L. Permanent radius of each bend after cable installation shall be in accordance with manufacturer's recommendations.
- M. Cable supports and securing devices shall have bearing surfaces located parallel to surfaces of cable sheath. Install to provide adequate support without deformation of cable jackets or insulation.
- N. Provide adequate cable end lengths. Properly install in junction boxes and manholes to avoid longitudinal strains and distorting pressures on cable at conduit bushings and duct end bells.
- O. Final inspection shall be made after cables are in place. Where supports, bushings, and end bells deform cable jacket, provide additional supports.
- P. Splices, joints, and connections shall be made only in accessible junction boxes in accordance with methods specified and instructions of cable manufacturer. Splices not allowed unless shown on Drawings.
- Q. Rough-in wiring terminated in junction boxes shall have at least 8" (200 mm) of free conductor coiled in box for connection to equipment and receptacles.

### 3.06 WIRING DEVICES, BOXES, AND FITTINGS

- A. Install galvanized or cadmium plated, threaded, malleable iron boxes and fittings in:
  - 1. Embedded in concrete walls, ceiling, and floors.

2. Outdoor exposed faces of masonry walls.
  3. Locations where weatherproof cover is required by code or this specification.
- B. Install galvanized or cadmium plated sheet steel boxes in:
1. Indoor exposed faces of masonry walls.
  2. Interior partition walls.
  3. Joist supported ceilings.
- C. Finish openings so standard sized cover plates can be used. Oversized plates not allowed.

### 3.07 RACEWAY SYSTEMS LIMITATIONS

- A. Refer to NEC for guidelines regarding use, and limitation of each type of conduit. Follow NEC except as specified otherwise herein, or as shown on Drawings.
- B. IMC: Use only for circuits rated 600 volts or less. Do not use in areas deemed corrosive. IMC shall be used in mechanical and electrical rooms unless noted otherwise on drawings.
- C. EMT: Use for concealed wiring in finished areas associated with lighting and small power circuits rated 600 volts or less. Do not use outdoors in concrete, or in damp or wet locations. Acceptable for use in nonhazardous, indoor, unfinished areas for lighting and communication, and specialty wiring.

### 3.08 RIGID CONDUIT

- A. Conduits not shown on Drawings shall be sized in accordance with NEC.
- B. Conceal conduit in finished areas.
- C. Drainage: Avoid water pockets in conduit runs; provide suitable fittings at low spots in exposed conduit where pockets cannot be avoided. Weep holes not permitted in conduit.
- D. Conduit ends:
1. Cap spare conduits with fittings designed for intended use.
  2. Conduit terminating in panels or enclosures where exposed to entrance of foreign material shall be plugged with commercial duct-sealing compound around conductors.
  3. Cap conduit ends during construction to prevent entrance of foreign material.
- E. Clean and swab inside of conduit by mechanical means to remove foreign materials and moisture before wires or cables are installed. Cleaning method shall not damage interior surface of conduit.
- F. Bushings: Provide at termination of conduit not terminated in hubs and couplings. Insulating bushings with 150°C rated insulating inserts in metal housings shall be provided on conduit 1-1/4" (31 mm) and larger. Insulating bushings shall be grounding type. Standard bushings shall be galvanized.
- G. Apply coat of zinc chromate to zinc-coated conduits where protective coating is damaged.
- H. Couplings and unions:
1. Threaded conduit couplings shall join metal conduit with conduit ends butted. Where standard threaded couplings cannot physically be used, join metal conduit using conduit unions or split couplings.
  2. Use ground-seat type, watertight unions where union may be submerged.
  3. Install coupling nut in upper-most union to prevent entrance of water into union when used in vertical or inclined conduit runs.

- I. Bends: Run of conduit shall not contain more than equivalent of three 90° bends, including offsets at outlets or fittings. Use only manufacturer-approved conduit bending equipment. Do not use deformed or crushed conduits.
- J. Threads: Cut ends of conduit with saw; do not use wheel cutter. Conduit end shall have same number of threads as present from factory. Apply coat of zinc chromate to steel conduit threads and apply anti-seize compound containing powdered zinc or lubricating graphite to aluminum conduit threads.
- K. Use expansion joints as required such that no more than 6" (152 mm) allowance for expansion or contraction of conduit occurs.

### 3.09 WIREWAY AND BOXES

- A. Installed in accordance with manufacturer's recommendations.
- B. Connections shall be made such that they maintain NEMA rating of enclosure and system.
- C. Locations and quantities shown on Drawings are approximate. Make adjustments as required to eliminate field interferences or to meet requirements of NEC.
- D. To access interior, locate to permit full removal of covers, or such that doors can be opened more than 100°. Mount at height as indicated, or as required by NEC, whichever is more restrictive.
- E. Support wireways and boxes independently of conduits by means of bolts, screws, rod hangers, and other suitable means.

### 3.10 GROUNDING AND BONDING

- A. Electrical system and equipment grounding shall be installed in accordance with NEC and shall conform to following, where applicable:
  - 1. Ground conductors shall be bare or green-insulated in accordance with NEC.
  - 2. Cable shall be soft-drawn copper or copper bar, sized in accordance with drawings and NEC, but not smaller than No. 12 AWG.
  - 3. Ground cable splices and joints inaccessible upon completion of construction shall meet requirements of IEEE 837 and shall be exothermic weld or compression system type.
  - 4. Ground cable through exterior building walls not in conduit shall enter within 3' (1 m) below finished grade and shall be provided with water stop. Installation of water stop shall include filling space between strands with solder and soldering 12" (300 mm) copper disc over cable.
  - 5. Ground cable near base of structure shall be in undisturbed earth and as far from structure as excavation permits, but not closer than 6" (150 mm).
  - 6. Copper ground conductor in addition to conduit connection shall ground each piece of electrical equipment.
  - 7. Copper or high-conductivity copper alloy ground lugs or clamps shall make ground connections to equipment and ground buses. Connections to enclosures not provided with ground buses or ground terminals shall be made by clamp-type lugs added under permanent assembly bolts or under new bolts drilled and added through enclosures other than explosionproof, or by grounding locknuts or bushings. Ground cable connections to anchor bolts; against gaskets, paint, or varnish; or on bolts holding removable access covers not permitted.
  - 8. Bond grounding system to water piping by connection to first flange inside building from main that will form good ground connection. Make connection with copper bar or strap by drilling and tapping flange and providing bolted connection.
  - 9. Ground conductors on equipment shall be formed to contour of equipment and firmly supported.
  - 10. Ground rods not described elsewhere shall be minimum 5/8" (16 mm) diameter by 10' (3.0 m) long, with copper jacket bonded to steel core.
  - 11. Make connections to ground grid where shown on Drawings.

12. Verify connections by performing continuity checks.

3.11 FIRE PROOFING AND FIRE RATINGS

- A. Maintain fire-resistive integrity during construction.
- B. Penetrations through fire-resistive structures shall be sealed with fire-resistive material compatible with construction penetration.
- C. Where required by codes, local building officials, or fire marshal, furnish UL fire sealing systems and install in accordance with manufacturer's recommendations.

3.12 STARTUP AND TESTING

- A. Clean equipment interiors and exteriors prior to start-up and testing.
- B. Unless specified otherwise, tests performed shall be standard tests listed by ANSI/IEEE for intended equipment.
- C. Equipment shall be checked and placed in service ready for operation.
- D. Circuits shall be electrically tested after installation. Test power and motor circuits prior to final connection to equipment. Splices shall be complete prior to testing.
  - 1. Provide equipment and labor required for testing.
  - 2. Circuit failing to test satisfactorily shall be replaced or repaired, and retested at no additional cost to Owner.
  - 3. Check power and motor circuits, dc power, and control circuits for:
    - a. Correct terminations.
    - b. Continuity.
    - c. Unintentional shorts and grounds.
  - 4. Check power conductors for correct phasing.
  - 5. Motor circuits shall be checked for proper rotation and motors "bumped" to verify correct machine rotation.
  - 6. Control, instrumentation, and thermocouple wire shall be checked for correct termination, continuity, freedom from shorts or grounds, and identification.
  - 7. Current transformer wiring shall be loop checked by injecting current at one end of loop and checking with clip-on ammeter at each field termination point to assure continuity and phase identification.
  - 8. Voltage transformer wiring shall be tested by applying voltage at one point and checking with voltmeter phase rotation meter and phase angle meter at each field termination point to assure continuity, identification and phase shift.

3.13 DEMONSTRATION

- A. Final start-up and check out shall be completed prior to Owner acceptance of project.
- B. Electrical installation shall be complete in every detail and capable of normal operation in presence of Owner or Owner's Representative to verify its readiness.

END OF SECTION

- 1) S. R. Koss
- 2) M. Zargar

**This page intentionally left blank.**

## **PART 1 GENERAL**

### 1.01 SECTION INCLUDES

- A. Distribution and branch circuit panelboards.

### 1.02 INFORMATIONAL SUBMITTALS

- A. Product Data: Submit catalog data showing specified features of standard products.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.
- C. Source Quality control submittals: Indicate results of factory tests and inspections.
- D. Field Quality Control Submittals: Indicate results of Contractor furnished tests and inspections.

### 1.03 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of panelboards and record actual circuiting arrangements.
- B. Operation and Maintenance Data: Submit spare parts listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

## **PART 2 PRODUCTS**

### 2.01 DISTRIBUTION PANELBOARDS

- A. Manufacturer List:
  - 1. Schneider Electric.
  - 2. Eaton PRL4B.
  - 3. GE.
  - 4. Siemens.
- B. Substitution Limitations: No substitutions permitted.
- C. Description: NEMA PB 1, circuit breaker type panelboard.
- D. Operation:
  - 1. Minimum integrated short circuit rating: as indicated on Drawings.
- E. Materials:
  - 1. Panelboard Bus: Copper, current carrying components, ratings as indicated on Drawings. Furnish copper ground bus in each panelboard.
  - 2. Molded Case Circuit Breakers: UL 489, circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Furnish circuit breakers UL listed as Type HACR for air conditioning equipment branch circuits.
  - 3. Molded Case Circuit Breakers with Current Limiters: UL 489, circuit breakers with replaceable current limiting elements, in addition to integral thermal and instantaneous magnetic trip in each pole.
  - 4. Circuit Breaker Accessories: Trip units and auxiliary switches as indicated on Drawings.
  - 5. Enclosure: NEMA PB 1, Type 1, sized as indicated on drawings, cabinet box.
  - 6. Cabinet Front: Surface door-in-door type, fastened with hinge and latch.

- F. Metering: Provide PowerLogic PM820 (complete with PMAECC Ethernet card) panelboard-mounted meter and CTs.
- G. Finishes: Manufacturer's standard gray enamel.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Install panelboard in accordance with NEMA PB 1.1.
- B. Install panelboard plumb.
- C. Height: As indicated on drawings.
- D. Install filler plates for unused spaces in panelboards.
- E. Install engraved plastic nameplates, black letters on white, 3/8" high.
- F. Ground and bond panelboard enclosure according to N.E.C. Connect equipment ground bars of panels in accordance with NFPA 70.
- G. Provide arc flash hazard warning label in accordance with NEC 110.16.
- H. Provide available fault current label in accordance with NEC 110.24.

**3.02 FIELD QUALITY CONTROL**

- A. Inspect and test in accordance with NETA ATS, except Section 4.
- B. Perform circuit breaker inspections and tests listed in NETA ATS, Section 7.6.
- C. Perform switch inspections and tests listed in NETA ATS, Section 7.5.

END OF SECTION

- 1) S. R. Koss
- 2) M. Zargar

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.

**Preconstruction Conference Checklist**

Revision-B September 17, 2010

- 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.

**Preconstruction Conference Checklist**

Revision-B September 17, 2010

**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.

**Preconstruction Conference Checklist**

Revision-B September 17, 2010

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.

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.

**Preconstruction Conference Checklist**

Revision-B September 17, 2010

- 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 15<sup>th</sup> of every month for review and approval. Final invoicing shall be in by the third week of the month for processing and board approval. No invoice will be processed without lien waiver(s) and certified payroll.

**Preconstruction Conference Checklist**

Revision-B September 17, 2010

- 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 are allowed on site in areas that can be disruptive to students or staff.
- 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.

Print name: \_\_\_\_\_

Sign name: \_\_\_\_\_

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

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

JJC CM: \_\_\_\_\_

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

August 2008

# **Safety Requirements for Contractors and Subcontractors**

Environmental Health and Safety

Facility Service Department

(815) 280-2384

Environmental Health and Safety

---

# **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)

## Table of Contents

|   |           |
|---|-----------|
| <b>INTRODUCTION</b> .....   | <b>1</b>  |
| EHS Information .....   | 1         |
| Purpose .....   | 1         |
| Application .....   | 1         |
| Scope.....  | 1         |
| <b>GENERAL REQUIREMENTS</b> .....                                     | <b>2</b>  |
| Contractual Obligations .....   | 2         |
| Submittals .....  | 2         |
| Control of Fugitive Emissions.....                                    | 3         |
| Accidental Spills and Releases .....                                  | 3         |
| Emergency Phone Numbers .....   | 3         |
| <b>SPECIFIC PROGRAM REQUIREMENTS</b> .....                            | <b>5</b>  |
| <b>Non Capital Projects</b> .....                                     | <b>5</b>  |
| Asbestos and Suspect Asbestos Containing Building Materials .....     | 6         |
| Lead-containing Building Materials .....                              | 6         |
| Confined Spaces.....  | 7         |
| Hazard Communication .....  | 7         |
| Electrical Safety and Lockout/Tagout .....                            | 9         |
| Trenching and Excavations .....                                       | 9         |
| Hot Work.....   | 10        |
| <b>Capital Projects</b> .....   | <b>10</b> |
| Asbestos and Suspect Asbestos Containing Building Materials .....     | 10        |
| Lead-containing Building Materials .....                              | 10        |
| Confined Spaces.....  | 10        |
| Hazard Communication .....  | 11        |
| Electrical Safety and Lockout/Tagout .....                            | 12        |
| Trenching and Excavations .....                                       | 13        |
| Hot Work.....   | 13        |
| <b>Agencies/Firms With No Contractual Relationship WITH JJC</b> ..... | <b>13</b> |
| <b>WORK SITE INSPECTIONS</b> .....                                    | <b>14</b> |
| Non-Capital Projects .....  | 14        |
| Capital Projects .....  | 14        |
| Agencies/Firms Where No Formal Contractual Relationship Exists .....  | 15        |
| <b>DEFINITIONS</b> .....  | <b>16</b> |

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

*This page left intentionally blank.*

# 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

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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 |

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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 confirm, at a minimum, to the OSHA requirements detailed in 29 CFR 1926 Subpart P requirements.

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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.

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

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.

## SAFETY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

***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





















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:




Firm: Joliet Junior College

Title: Director of Facility Services

Date: 4-15-09

Address: 1215 Houbolt Road  
Joliet, Illinois 60431

SIGNED FOR THE UNION:




 Building Trades Council

Title: President

Date: 4-15-09

Address: 2082 Oakleaf St.  
Joliet IL 60436

SIGNED FOR THE ALLIANCE:



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 15<sup>th</sup> day of April, 2009, by and between Joliet Junior College (hereinafter called the "Owner"); and Gilbane (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 August 2013 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 Prault*  
JOLIET JUNIOR COLLEGE  
TITLE: *President*  
DATE: *4-15-09*

**FOR THE PROJECT CONTRACTOR:**

*Michael C. Brown*  
GILBANE  
TITLE: *Vice President*  
DATE: *4/15/09*

**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*

# Will County Prevailing Wage for February 2012

| Trade Name           | RG | TYP | C | Base   | FRMAN  | *M-F>8 | OSA | OSH | H/W   | Pensn | Vac   | Trng  |
|----------------------|----|-----|---|--------|--------|--------|-----|-----|-------|-------|-------|-------|
| ASBESTOS ABT-GEN     |    | ALL |   | 35.200 | 35.700 | 1.5    | 1.5 | 2.0 | 12.18 | 8.820 | 0.000 | 0.450 |
| ASBESTOS ABT-MEC     |    | BLD |   | 32.850 | 0.000  | 1.5    | 1.5 | 2.0 | 10.82 | 10.66 | 0.000 | 0.720 |
| BOILERMAKER          |    | BLD |   | 43.450 | 47.360 | 2.0    | 2.0 | 2.0 | 6.970 | 12.61 | 0.000 | 0.350 |
| BRICK MASON          |    | BLD |   | 39.780 | 43.760 | 1.5    | 1.5 | 2.0 | 9.300 | 11.17 | 0.000 | 0.730 |
| CARPENTER            |    | ALL |   | 40.770 | 44.850 | 2.0    | 2.0 | 2.0 | 10.09 | 15.82 | 0.000 | 0.530 |
| CEMENT MASON         |    | ALL |   | 41.000 | 43.000 | 2.0    | 2.0 | 2.0 | 9.250 | 13.18 | 0.000 | 0.250 |
| CERAMIC TILE FNSHER  |    | BLD |   | 33.600 | 0.000  | 2.0    | 1.5 | 2.0 | 9.200 | 6.680 | 0.000 | 0.580 |
| COMMUNICATION TECH   |    | BLD |   | 32.200 | 33.700 | 1.5    | 1.5 | 2.0 | 11.62 | 10.29 | 0.000 | 0.320 |
| ELECTRIC PWR EQMT OP |    | ALL |   | 41.850 | 46.850 | 1.5    | 1.5 | 2.0 | 10.27 | 13.01 | 0.000 | 0.320 |
| ELECTRIC PWR GRNDMAN |    | ALL |   | 32.640 | 46.850 | 1.5    | 1.5 | 2.0 | 8.000 | 10.12 | 0.000 | 0.240 |
| ELECTRIC PWR LINEMAN |    | ALL |   | 41.850 | 46.850 | 1.5    | 1.5 | 2.0 | 10.27 | 13.01 | 0.000 | 0.320 |
| ELECTRICIAN          |    | BLD |   | 39.500 | 43.060 | 1.5    | 1.5 | 2.0 | 12.47 | 14.50 | 0.000 | 1.200 |
| ELEVATOR CONSTRUCTOR |    | BLD |   | 48.560 | 54.630 | 2.0    | 2.0 | 2.0 | 11.03 | 11.96 | 2.910 | 0.000 |
| GLAZIER              |    | BLD |   | 38.500 | 40.000 | 1.5    | 2.0 | 2.0 | 11.49 | 14.64 | 0.000 | 0.840 |
| HT/FROST INSULATOR   |    | BLD |   | 43.800 | 46.300 | 1.5    | 1.5 | 2.0 | 10.82 | 11.86 | 0.000 | 0.720 |
| IRON WORKER          |    | ALL |   | 39.000 | 40.000 | 2.0    | 2.0 | 2.0 | 8.890 | 19.77 | 0.000 | 0.700 |
| LABORER              |    | ALL |   | 35.200 | 35.950 | 1.5    | 1.5 | 2.0 | 12.18 | 8.820 | 0.000 | 0.450 |
| LATHER               |    | ALL |   | 40.770 | 44.850 | 2.0    | 2.0 | 2.0 | 10.09 | 15.82 | 0.000 | 0.530 |
| MACHINIST            |    | BLD |   | 43.160 | 45.160 | 1.5    | 1.5 | 2.0 | 7.980 | 8.950 | 0.000 | 0.000 |
| MARBLE FINISHERS     |    | ALL |   | 29.100 | 0.000  | 1.5    | 1.5 | 2.0 | 9.300 | 11.17 | 0.000 | 0.660 |
| MARBLE MASON         |    | BLD |   | 39.030 | 42.930 | 1.5    | 1.5 | 2.0 | 9.300 | 11.17 | 0.000 | 0.730 |
| MATERIAL TESTER I    |    | ALL |   | 25.200 | 0.000  | 1.5    | 1.5 | 2.0 | 12.18 | 8.820 | 0.000 | 0.450 |
| MATERIALS TESTER II  |    | ALL |   | 30.200 | 0.000  | 1.5    | 1.5 | 2.0 | 12.18 | 8.820 | 0.000 | 0.450 |
| MILLWRIGHT           |    | ALL |   | 40.770 | 44.850 | 2.0    | 2.0 | 2.0 | 10.09 | 15.82 | 0.000 | 0.530 |
| OPERATING ENGINEER   |    | BLD | 1 | 45.100 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 2 | 43.800 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 3 | 41.250 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 4 | 39.500 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 5 | 48.850 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 6 | 46.100 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | BLD | 7 | 48.100 | 49.100 | 2.0    | 2.0 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | FLT | 1 | 51.300 | 51.300 | 1.5    | 1.5 | 2.0 | 11.70 | 8.050 | 1.900 | 1.150 |
| OPERATING ENGINEER   |    | FLT | 2 | 49.800 | 51.300 | 1.5    | 1.5 | 2.0 | 11.70 | 8.050 | 1.900 | 1.150 |
| OPERATING ENGINEER   |    | FLT | 3 | 44.350 | 51.300 | 1.5    | 1.5 | 2.0 | 11.70 | 8.050 | 1.900 | 1.150 |
| OPERATING ENGINEER   |    | FLT | 4 | 36.850 | 51.300 | 1.5    | 1.5 | 2.0 | 11.70 | 8.050 | 1.900 | 1.150 |
| OPERATING ENGINEER   |    | HWY | 1 | 43.300 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 2 | 42.750 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 3 | 40.700 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 4 | 39.300 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 5 | 38.100 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 6 | 46.300 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| OPERATING ENGINEER   |    | HWY | 7 | 44.300 | 47.300 | 1.5    | 1.5 | 2.0 | 14.40 | 9.550 | 1.900 | 1.250 |
| PAINTER              |    | ALL |   | 38.000 | 42.750 | 1.5    | 1.5 | 1.5 | 9.750 | 11.10 | 0.000 | 0.770 |
| PAINTER SIGNS        |    | BLD |   | 33.920 | 38.090 | 1.5    | 1.5 | 1.5 | 2.600 | 2.710 | 0.000 | 0.000 |
| PILEDRIIVER          |    | ALL |   | 40.770 | 44.850 | 2.0    | 2.0 | 2.0 | 10.09 | 15.82 | 0.000 | 0.530 |
| PIPEFITTER           |    | BLD |   | 44.050 | 47.050 | 1.5    | 1.5 | 2.0 | 8.460 | 13.85 | 0.000 | 1.820 |
| PLASTERER            |    | BLD |   | 39.250 | 41.610 | 1.5    | 1.5 | 2.0 | 10.60 | 10.69 | 0.000 | 0.550 |
| PLUMBER              |    | BLD |   | 44.000 | 46.000 | 1.5    | 1.5 | 2.0 | 10.65 | 11.00 | 0.000 | 1.310 |
| ROOFER               |    | BLD |   | 37.650 | 40.650 | 1.5    | 1.5 | 2.0 | 7.750 | 6.570 | 0.000 | 0.430 |
| SHEETMETAL WORKER    |    | BLD |   | 41.660 | 43.660 | 1.5    | 1.5 | 2.0 | 9.540 | 11.57 | 0.000 | 0.780 |

|                     |       |        |        |     |     |     |       |       |       |       |
|---------------------|-------|--------|--------|-----|-----|-----|-------|-------|-------|-------|
| SPRINKLER FITTER    | BLD   | 49.200 | 51.200 | 1.5 | 1.5 | 2.0 | 9.750 | 8.200 | 0.000 | 0.450 |
| STONE MASON         | BLD   | 39.780 | 43.760 | 1.5 | 1.5 | 2.0 | 9.300 | 11.17 | 0.000 | 0.730 |
| TERRAZZO FINISHER   | BLD   | 35.150 | 0.000  | 1.5 | 1.5 | 2.0 | 9.200 | 9.070 | 0.000 | 0.430 |
| TERRAZZO MASON      | BLD   | 39.010 | 42.010 | 1.5 | 1.5 | 2.0 | 9.200 | 10.41 | 0.000 | 0.510 |
| TILE MASON          | BLD   | 40.490 | 44.490 | 2.0 | 1.5 | 2.0 | 9.200 | 8.390 | 0.000 | 0.640 |
| TRAFFIC SAFETY WRKR | HWY   | 28.250 | 29.850 | 1.5 | 1.5 | 2.0 | 4.896 | 4.175 | 0.000 | 0.000 |
| TRUCK DRIVER        | ALL 1 | 35.650 | 36.200 | 1.5 | 1.5 | 2.0 | 6.670 | 4.725 | 0.000 | 0.250 |
| TRUCK DRIVER        | ALL 2 | 35.800 | 36.200 | 1.5 | 1.5 | 2.0 | 6.670 | 4.725 | 0.000 | 0.250 |
| TRUCK DRIVER        | ALL 3 | 36.000 | 36.200 | 1.5 | 1.5 | 2.0 | 6.670 | 4.725 | 0.000 | 0.250 |
| TRUCK DRIVER        | ALL 4 | 36.200 | 36.200 | 1.5 | 1.5 | 2.0 | 6.670 | 4.725 | 0.000 | 0.250 |
| TUCKPOINTER         | BLD   | 39.950 | 40.950 | 1.5 | 1.5 | 2.0 | 8.180 | 10.57 | 0.000 | 0.790 |

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.)

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

## 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; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; 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; 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; 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; 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; Bobcats (up to and including  $\frac{3}{4}$  cu yd.) .

Class 4. Bobcats and/or other Skid Steer Loaders (other than bobcats up to and including  $\frac{3}{4}$  cu yd.); Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall .

Class 7. Mechanics.

#### 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: Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell Machine with Air Compressor; Dredges; 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; Hydraulic Backhoes; Backhoes with shear attachments; 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; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; 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; All Locomotives, Dinky; Off-Road Hauling Units (including articulating)/2 ton capacity or more; 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; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling 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.; Fireman on Boilers; 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); Hydro- Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders.

Class 7. Gradall and machines of like nature.

#### OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Diver/Wet Tender; and Engineer (hydraulic dredge).

Class 2. Crane/Backhoe Operator; 70 Ton or over Tug Operator; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender; Friction and Lattice Boom Cranes.

Class 3. Deck Equipment Operator, Machineryman; Maintenance of Crane (over 50 ton capacity); Tug/Launch Operator; Loader/Dozer and like equipment on Barge; and Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks (2 ton capacity or more); Deck Hand, Tug Engineer, Crane Maintenance 50 Ton Capacity and Under or Backhoe Weighing 115,000 pounds or less; and Assistant Tug Operator.

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.

**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.**

We have included herewith, the Security Deposit as required by the Instructions to Bidders.

**PART 2 ACCEPTANCE**

B12011

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:

---

---

---

### **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

B12011

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.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---



---



---



---



---

**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:

---

(Bidder – please print the full name of your Proprietorship, Partnership, or Corporation)

Was hereunto affixed in the presence of:

|                              |         |
|------------------------------|---------|
| <hr/>                        | <hr/>   |
| (Authorized signing officer) | (Title) |

(Seal)

|                              |         |
|------------------------------|---------|
| <hr/>                        | <hr/>   |
| (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