



*Finance Department
Central Services Division*

PLEASE DO NOT USE STAPLES TO BIND THE BID RESPONSES.

City of Rockford, Illinois USA
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Section 1

Bid Instructions

and

Contract

Conditions

CITY OF ROCKFORD, ILLINOIS—BIDDING AND CONTRACT GENERAL CONDITIONS (LOCAL FUNDS)

The following shall be made part of the terms and conditions of the contract (“Contract”) entered into between the City of Rockford (City) and Vendor (also referred to herein as “bidder,” “awarded vendor,” and “contractor”) if awarded the contract. Vendor’s submission of a bid or proposal constitutes acceptance of these Conditions:

- 1. Pricing.** The bidder shall insert price for all bid items and all other information requested in these specifications. The price shall be the *full, delivered cost* to the City of Rockford with no additions.
- 2. Total versus "Per Item" Awards.** The City generally awards contracts on a lump sum basis to the lowest responsible and responsive bidder. However, the City may choose to award on a per item basis. Therefore, each bidder must submit pricing for each item indicated on the bid forms. Bidders must clearly indicate which items are bid and which are not.
- 3. Delivery of Merchandise.** Delivery terms will always be Freight-On-Board (FOB) Destination. The City of Rockford accepts no responsibility for the condition of any merchandise purchased prior to acceptance by City Personnel. Failure to comply with this requirement may constitute rejection of the bid.
- 4. Acceptance of Merchandise at Delivery.** The City of Rockford reserves the right to refuse acceptance of delivered merchandise that differs substantially from the specifications in the invitation to bid or as otherwise permitted by Illinois law.
- 5. Prompt Payment Act.** The City of Rockford intends to comply with the Local Government Prompt Payment Act (50 ILCS 505/1 *et seq.*). The awarded vendor will be paid upon submission of invoices to: City of Rockford Accounts Payable, 425 East State Street, Rockford, IL 61104.
- 6. W-9 Request for Taxpayer Identification Number.** Prior to issuance of a purchase order, the successful bidder will be required to supply the City of Rockford with a federal W-9 Request for Taxpayer Identification Number and Certification. Failure to comply with this requirement will be considered a violation of contract terms, for which the City may bar Vendor from bidding for a period of up to three (3) years.
- 7. Legal Compliance.** Vendor will at all times observe and comply, and will cause its subcontractors to observe and comply, with all applicable federal, state, and local laws, ordinances, rules, regulations, and executive orders, now existing or hereinafter in effect, which may in any manner affect the performance of this contract. Provisions required by law, ordinance, rules, regulations, or executive order to be inserted in this contract will be deemed inserted, whether or not they appear in it. In no event will failure to insert such required provisions prevent the enforcement of applicable law. Lack of knowledge of applicable law on the part of Vendor will in no way be cause for release of this obligation. If the City becomes aware of violation of any

laws, ordinances, rules and regulations on the part of Vendor or subcontractor, it reserves the right to reject any bid, cancel any contract, and pursue any other legal remedies deemed necessary.

Vendor must pay all required taxes and obtain all licenses, certificates, or other authorization required in connection with the performance of its obligation hereunder, and Vendor must require all subcontractors to also do so. Failure to do so may result in rejection of Vendor's bid, cancellation of an award to Vendor, or termination of this contract with Vendor.

By entering into a contract with the City, Vendor certifies that to the best of its knowledge, its principals and any subcontractor used in the performance of this contract meet City requirements and have not violated any City ordinance, code, state, federal, or local rules or regulations, and have not been subject to any debarment, suspension, or other disciplinary action by any government agency. Additionally, if at any time Vendor becomes aware of such information, it must immediately disclose it to the City.

8. Legal Requirements. This contract sets forth the entire final agreement between the City of Rockford and the bidder and shall govern the respective duties and obligations of the parties. The validity of this contract, and any disputes arising from the contract, shall be governed by the laws of the State of Illinois. Any litigation under this agreement shall be resolved in the trial courts of Winnebago County, State of Illinois. Should a provision of this contract be declared invalid by a court of competent jurisdiction, it shall not affect the validity of the remaining provisions of the contract.

9. Safety. Prevention of accidents at any project is the sole responsibility of Vendor and its subcontractors, agents, and employees. Vendor, its subcontractors, agents, and employees shall be fully and solely responsible for the safety of this project. Vendor shall retain exclusive and direct control over the acts or omissions of its subcontractors, agents and employees, and any other persons performing portions of the work and not directly employed by the awarded vendor.

10. Criminal Background Check. When necessary for the protection of citizens and/or City staff, the City may require an awarded vendor to conduct a criminal background check on all of its personnel who will have direct contact with City facilities or residents/businesses served under this contract. Personnel are defined as representatives, agents, employees, subcontractors, or anyone else who will be utilized to fulfill obligations under this contract. Criminal background checks, at a minimum, shall consist of a county level felony and misdemeanor check for each county in which the personnel resided in the last ten (10) years. The awarded vendor shall notify the City of any of its personnel who have been convicted of a felony or misdemeanor prior to commencing any work under this contract. At the City's discretion, personnel with any felony or misdemeanor convictions which raise a concern about the safety of building, property, or City staff/resident's personal security, or is otherwise job related (as determined by the City) shall not perform work under this contract. Once given notice that a background check(s) will be required, it must be completed within fourteen (14) calendar days so as to not delay work to be completed.

11. Control of the Work. With respect to Vendor's own work, the City shall not have contractual, operational, and/or supervisory control over and/or charge of the work and shall not be responsible for construction means, methods, techniques, sequences, procedures, and programs in connection with the awarded vendor's work, since these are solely the vendor's responsibility under the agreement. The City shall not be responsible for the awarded vendor's failure to carry out the work in accordance with the agreement's terms and conditions. The City shall not have control over and/or charge of acts or omissions of the awarded vendor, its subcontractors, and/or their agents or employees, or any other person performing portions of the work not directly employed by the awarded vendor. The awarded vendor shall be considered to be an "independent contractor" pursuant to Illinois law.

12. Bid Bond. When required on the cover sheet, a bid bond for not less than five (5) percent of the bid amount must accompany all bids as a guarantee that if the bid is accepted, the bidder will execute and file the proper contract. A bank cashier's check, bank draft, or certified check equal to the amount specified is acceptable in lieu of a bid bond. Bid bonds of the two lowest firms will be retained until the contract is awarded.

13. Performance and Payment Bond. When required by the specifications herein, the awarded vendor shall furnish a performance and payment bond equal to the amount of the contract, acceptable to the City, within fourteen (14) calendar days after notification of contract award. Failure to furnish the required bond within the time specified may be cause for rejection of the bid and any bid deposit may be retained by the City as liquidated damages and not as a penalty.

14. Taxes. No charge will be allowed for taxes from which the City of Rockford, Illinois is exempt. The City of Rockford, Illinois is not liable for the Illinois Retailers' Occupation Tax, the Service Occupation Tax or the Service Use Tax. The City is exempt from the Federal Excise and Transportation Tax.

15. Withdrawal of Bids. Firms may withdraw or cancel their bids at any time prior to the advertised invitation to bid opening. After the opening time, no bid shall be withdrawn or cancelled. All bids shall be firm and valid for a period of sixty (60) calendar days. If a bidder to whom a contract is awarded refuses to accept the award, the City may, at its discretion, suspend the bidder for a period of time up to three (3) years.

16. Subcontracting. The bidder shall provide information for all subcontractors and leased operators of equipment in the required Subcontractor Utilization Form. Information contained in this form must be complete and accurate, to the best of Vendor's estimating ability at the time of bid, and will be relied upon by the City in projecting Minority and Women Business Enterprise subcontractor utilization for awarded City contracts. Any changes in subcontractor utilization from that which is provided on the Subcontractor Utilization Form must be made immediately in writing by submitting a new form to the City's Equal Opportunity Compliance Officer and the City Project Manager or designee. When subcontractors are used, Vendor must pay subcontractors

for satisfactory performance no later than thirty (30) days after receipt of each payment from the City.

17. Termination of Contract. The City of Rockford reserves the right to terminate the contract in its entirety or in portions, upon written notice to Vendor for convenience, if the Rockford City Council does not appropriate sufficient funds to complete the contract, or in the event of default by Vendor. Default is defined as failure of the awarded vendor to perform any of the provisions of this contract or failure to make sufficient progress so as to endanger performance of this contract in accordance with its terms. The City's written notice of termination shall specify the effective date of termination. Vendor shall discontinue providing goods or services after such effective date, and the City shall not be liable for goods or services provided by Vendor thereafter. In the event of default, the City may purchase the product(s) and/or service(s) from other sources and hold the defaulting company responsible for any excess costs occasioned thereby. The City may require payment of liquidated damages for non-performance. Should default be due to failure to perform or because of a request for a price increase, the City reserves the right to remove the firm from the City's bidder list and place the firm on the City's debarred list for a period of up to three (3) years.

18. Late Bids and Proposals. Regardless of cause, late bids and proposals will not be accepted and will automatically be disqualified from further consideration. It shall be solely Vendor's risk to ensure delivery at the designated office by the designated time. Late bids and proposals will not be opened and may be returned to Vendor at their request and expense.

19. Equal Employment Opportunity. Vendor shall comply with all applicable equal employment opportunity statutes, regulations, and ordinances including but not limited to the City's Equal Opportunity Employment (EOE) Ordinance (City of Rockford Code of Ordinances, Chapter 11, Article IV); the Illinois Human Rights Act (775 ILCS 5/101 *et seq.*), the Illinois Department of Human Rights (IDHR) Rules and Regulations for Government Contracts (44 Ill. Admin. Code, Chapter X, Section 750), the Discrimination in Public Contracts Act (775 ILCS 10/0.01 *et seq.*), Title VII of the Civil Rights Act of 1964, as amended (§ 7, 42 U.S.C. § 2000e *et seq.*); the Age Discrimination in Employment Act of 1967, as amended (29 USC §.621 *et seq.*); Title I of the Americans with Disabilities Act of 1990, as amended (42 USC 12111-12117); the Equal Pay Act of 1963, as amended; and the Uniformed Services Employment and Reemployment Rights Act of 1994, as amended (38 USC §§ 4301-4335).

Pursuant to IDHR's Rules and Regulations and the City's EOE Ordinance, the awarded vendor shall comply with the following terms and conditions during the performance of this contract:

- a) Vendor will not discriminate against any employee, including apprentices, or applicant for employment, including training programs, because of race, color, religion, sex, sexual orientation, gender identity, marital status, order of protection status, status as a survivor of domestic violence or human trafficking, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or unfavorable discharge from military service; and, further, that Vendor will examine all job

classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any underutilization.

- b) If Vendor hires additional employees in order to perform this contract or any portion of this contract, Vendor will determine the availability (in accordance with Section 750) of minorities and women in the areas from which Vendor may reasonably recruit and will hire for each job classification for which employees are hired in a way that minorities and women are not underutilized.
- c) In all solicitations and advertisements for employees placed by Vendor on its behalf, Vendor will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, gender identity, marital status, order of protection status, status as a survivor of domestic violence or human trafficking, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service.
- d) Vendor will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising the labor organization or representative of the Vendor's obligations under the Illinois Human Rights Act and Section 750 of the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Vendor in its efforts to comply with the Act and Part 750, Vendor will promptly notify the Illinois Department of Human Rights and the City of Rockford and will recruit employees from other sources when necessary to fulfill its obligations under the contract.
- e) Vendor will submit reports as required by Part 750, furnish all relevant information that may be requested by the Illinois Department of Human Rights or the City of Rockford, and in all respects comply with the Act, the Department's Rules and Regulations, and the City of Rockford's Equal Opportunity Employment Ordinance. *Vendor's failure to complete the City's required Equal Employment Opportunity Certifications or Vendor and Subcontractor Workforce Data Forms will result in disqualification of Vendor's bid or proposal.*
- f) Vendor will permit access to all relevant books, records, accounts, and work sites by personnel of the City of Rockford and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Act, IDHR's Rules and Regulations, and City of Rockford EOE Ordinance.
- g) Vendor will include verbatim or by reference the Equal Employment Opportunity Clause (44 Ill. Admin. Code, Chapter X, Appendix A) in every subcontract awarded under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, Vendor will be liable for compliance with applicable provisions of this clause by subcontractors. Further, Vendor will promptly notify the City of Rockford and

the Illinois Department of Human Rights if any subcontractor fails or refuses to comply with the provisions of sections (a) through (f) of this paragraph. Vendor shall not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

20. Restrictive or Ambiguous Specifications. It is the responsibility of the bidding firm to review the invitation to bid specifications and to notify the Central Services Manager if the specifications are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the specifications or invitation to bid procedures must be received by the Central Services Division not less than seventy-two hours prior to the time set for the opening. In the event a contract term is not defined within the contract document, the term will be given its ordinary dictionary definition.

21. Bid Protest. Firms wishing to protest bids or awards shall notify the Central Services Manager in writing within seven (7) days after the invitation to bid opening. The notification should include the bid number, the name of the firm protesting, and the reason why the firm is protesting the bid. The Central Services Manager will respond to the protest within seven (7) calendar days. A successful protest may result in the reversal of a previously awarded contract.

22. Disputes. In case of disputes as to whether or not an item or service quoted or delivered meets specifications, the decision of the Central Services Manager or authorized representative shall be final and binding to all parties. The Central Services Manager has the right to waive technicalities as they see fit. The Central Services Manager may request a written recommendation from the head of the department using the equipment or service being procured.

23. Exceptions. Any deviations from these specifications shall be noted and submitted with the bid. Failure to address deviations from specifications may result in bid rejection.

24. Acceptance/Rejection of Bids. The City of Rockford reserves the right to accept or reject any or all bids or proposals at any time, for any reason, including but not limited to the Rockford City Council not appropriating sufficient funds to purchase equipment or complete the contract. The City may make awards in any manner deemed in the best interest of the City.

25. Prevailing Wage. When indicated on the cover page of the invitation to bid, this contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires awarded vendors and subcontractors to pay laborers, workers, and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. Prevailing wage rates are determined by the Illinois Department of Labor and posted on the Department's website at:

<https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx> .

- (a) The Act does apply to owner-operators.
- (b) When applicable, all awarded vendors and subcontractors rendering services under this contract must comply with all requirements of the Act, including but not limited to all wage, notice, recordkeeping, and filing of certified payroll requirements.
- (c) Under the Act, it is mandatory upon Vendor to insert into each subcontract a written stipulation to the effect that not less than the prevailing rate of wages shall be paid to all laborers, workers and mechanics performing work under this contract. It is also the Vendor's responsibility under the Act to verify and pay *current* wage rates, as the Department may change them from time to time.
- (d) It is Vendor's obligation to understand what the Act requires, and to comply accordingly. Failure on the part of the City to provide proper written notice regarding the applicability of the Prevailing Wage Act does not relieve Vendor or subcontractors of the obligation to comply with the Act when applicable, nor does it relieve them of their obligation to pay back wages when owed.
- (e) Vendor and all subcontractors shall make all records required under the Prevailing Wage Act available for inspection, copying, or transcription by authorized representatives of the City of Rockford or Department of Labor. Vendor shall further permit such representatives to interview employees during working hours on the job. If Vendor or subcontractor fails to submit the required records or make them available, the City may take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request may be grounds for debarment action.

26. Certified Payroll. All Certified Payroll reports required to be submitted under the Prevailing Wage Act, 820ILCS 130, as directed by the State of Illinois (<https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>).

No paper copies or non-conforming Certified Payroll reports will be accepted. A copy of proof of submission, including the reported wage information, must be submitted to the City with the request for payment. The City reserves the right to withhold payment due to the awarded vendor until the vendor complies with this or any other provision of the Act.

27. Substance Abuse Prevention. Before Vendor commences work on a public works project, it must have in place a written program which meets or exceeds the program requirements in the Substance Abuse Prevention on Public Works Projects Act (820 ILCS 265/1 et seq.), to be filed with the City and made available to the general public, for prevention of substance abuse among its employees. This program must include pre-hire, random, reasonable suspicion, and post-accident drug and alcohol testing, as required by the Substance Abuse Prevention on Public Works Projects Act.

28. Apprenticeship Requirement. For construction contracts over \$50,000, Vendor must participate in apprenticeship and training programs approved and registered with the United States Department of Labor's Bureau of Apprenticeship and Training for all Trades that will be in Vendor's (or his subcontractor's) employment, with each worker receiving the required apprenticeship/training appropriate to his trade. Owners or work performed by owners is not exempt from the apprenticeship and training requirement.

29. Indemnification. To the fullest extent permitted by law, Vendor shall indemnify and hold harmless the City, its officers, representatives, elected and appointed officials, agents, and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from Vendor's performance of work under this agreement, and indemnifies and agrees to defend and hold harmless the City against any and all losses, claims, damages, and expenses arising from the work performed hereunder of the erection, construction, placement, or operation of any scaffold, hoist, crane, stay, ladder, support, or other mechanical contrivance in connection with such work including but not limited to losses, claims, damages, and expenses arising pursuant to claims asserted against the City pursuant to theories premised upon sections 343 and 414 of the Restatement (Second) of Torts.

This indemnification agreement shall not be limited in any way by any limitations on the amount or type of damages, compensation, or benefits payable by or for Vendor under the Illinois Workers' Compensation Act (820 ILCS 305/1 *et seq.*), disability benefit acts, or other employee benefit acts, and serves as an express agreement to waive the protection of *Kotecki v. Cyclops Welding Corp.*, 146 Ill.2d 155, 585 N.E.2d 1023 (1991) in Illinois.

Further, Vendor agrees that it is solely responsible for compliance with all safety laws applicable to the work performed hereunder, including but not limited to the Occupational Safety and Health Act (29 USC Ch. 15 §651 *et. seq.*) and the Contract Work Hours and Safety Standards Act (40 USC Ch. 37 §3701 *et seq.*) and all standards and regulations which have been or shall be promulgated by the agencies which administer the Acts.

Under no circumstances shall Vendor, its subcontractors, agents, and employees be required to indemnify the City for its own negligence.

30. Insurance Requirements. Upon execution of the contract, and prior to Vendor commencing any work or services with regard to the project, Vendor shall carry commercial general liability insurance, umbrella liability insurance, and automobile liability insurance on ISO form CG 00 01 10 01 (or a substitute form providing equivalent coverage) and Vendor shall provide the City with a Certificate of Insurance and Additional Insured Endorsement on ISO form CG 20 10 11 85 (or substitute form providing equivalent coverage) or on the combination of ISO forms CG 20 IO 10 01 and CG 20 3 7 1001 (or substitute forms providing equivalent coverage) naming the City as

Additional Insured thereunder. Additional insured coverage shall apply as primary insurance and be noncontributory with respect to any other insurance afforded to the City. All coverage shall be placed with an insurance company duly admitted in the State of Illinois and shall be reasonably acceptable to the City. All awarded vendor insurance carriers must maintain an A.M. Best rating of "A-" or better. Coverage shall be afforded to the additional insured whether or not a claim is in litigation.

The insurance coverage required above shall be of sufficient type, scope and duration to ensure coverage for the City for liability related to any manifestation date within the applicable statutes of limitation and/or repose which pertain to any work performed by or on behalf of the City in relation to the contract. The following insurance requirement shall apply to the successful firm for the duration of the contract unless explicitly waived by the Central Services Manager:

- a) Commercial General Liability. The coverage available to the City, as Additional Insured, shall not be less than \$1 million each occurrence, \$2 million general aggregate (subject to a per project general aggregate provision applicable to the project), \$2 million products/completed operations aggregate and \$1 million personal and advertising injury limits. Such insurance shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
- b) Umbrella Liability. The coverage available to the City, as Additional Insured, shall not be less than \$2 million each occurrence, \$2 million general aggregate. Such insurance shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
- c) Automobile Coverage. The coverage available to the City, as Additional Insured, shall include comprehensive automobile bodily injury and property damage liability coverage for a minimum amount of \$1 million each occurrence, \$2 million general aggregate
- d) Workers Compensation. Vendor shall maintain during the life of this contract statutory workmen's compensation and employer's liability insurance for all his employees engaged in work on the job site.
- e) Insurance Certificates. Each Certificate of insurance shall provide that the insurer must give the City at least thirty (30) days' prior written notice of cancellation and termination of the City's coverage thereunder. Not less than two weeks prior to the expiration, cancellation or termination of any such policy, Vendor shall supply the City with a new and replacement Certificate of Insurance and Additional Insured endorsement as proof of renewal of said original policy. Said new and replacement endorsements shall be similarly endorsed in favor of the City as set forth above. All subcontractors to be utilized by Vendor shall provide Ownership with a Certificate of Insurance naming City of Rockford as additional insured prior to commencement of work by said subcontractor.

31. Conflict of Interest. Each bidder affirms, by submission of a response to this bid or request for proposals, it has no interest and will not acquire any interest in any enterprise, project, or contract that would conflict in any manner or degree with the performance of the work, services, or goods to be provided hereunder. Bidder further affirms that no person having such an interest will be employed to perform any work or services under the contract, and that no employee of the City of Rockford is directly or indirectly interested in the bid or proposal for any reason of personal gain.

32. Non-Waiver. The failure by the City to require performance of any provision shall not affect the City's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this contract constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

33. Professional Services Selection Act. The City of Rockford intends to comply with 50 ILCS 510/0.01 *et seq.* governing the selection of professional services. Any reference in these terms and conditions to supplying pricing or price as a determining factor in selection do not apply for services covered by said act.

34. Compliance with Stormwater Management Ordinance and IEPA General Construction Permit. Vendor must comply with the City's Stormwater Management Ordinance and Illinois EPA's General Construction Permit. For work performed on the stormwater system, including projects only requiring erosion and sediment control measures, acknowledgement of receipt of the Stormwater Management Ordinance and IEPA's General Construction Permit is required. It is also required that Vendor retain all invoices, work orders and/or other records of work performed in drainage areas for three (3) years beyond the end of the consent decree, 12/31/2023. These records are subject to audit and are to be made available immediately upon request by the City or the Federal and State Environmental Protection Agency (EPA). Additionally, there may be other records provided that Vendor will be required to keep on file upon request of the City. Violation of this section and with the City's Stormwater Management Ordinance may result in a fine. Additional information can be found at: <https://rockfordil.gov/274/stormwater-environmental-team/>

35. Acceptance or Rejection of Bids and Proposals. The City of Rockford reserves the right to accept or reject any and all proposals and to waive technicalities in submitted bids.

36. Minority and Women Business Enterprise Policy. It is the policy of the City of Rockford to strongly encourage and promote the award of subcontracts to ready, willing, and able Minority and Women Business Enterprises (MWBEs) certified with the City. The City strongly encourages bidders, when preparing bids or proposals, to contact certified MWBEs regarding potential subcontracting opportunities. The City requires information regarding Vendor's good faith efforts to identify MWBE subcontractors on the Subcontractor Utilization Form required to be completed and submitted with Vendor's bid or proposal. An up-to-date list of the City's certified MWBEs can be found at: <https://rockfordil.gov/279/purchasing/>.

37. Veterans Preference. Vendor shall comply with the Veterans Preference Act (330 ILCS 55/1 *et seq.*) in its employment to fill positions for the construction, addition to, or alteration of public works contracted for by the City. This Act requires that preference shall be given to veterans who possess the business capacity necessary for the proper discharge of the duties of employment. Vendor is not required to give preference to veterans who are not residents of the City of Rockford over City residents who are not veterans. A person who has been a member of the Illinois National Guard shall be given priority over a person who has been a member of the National Guard of any other state.

Veterans under the Act are defined as persons who have been members of the armed forces of the United States or who, while citizens of the United States, were members of the armed forces of allies of the United States in time of hostilities with a foreign country, and have served under one or more of the following conditions:

- a) The veteran served a total of at least six (6) months;
- b) The veteran served for the duration of hostilities regardless of the length of engagement;
- c) The veteran served in the theater of operations but was discharged on the basis of a hardship; or
- d) The veteran was released from active duty because of a service connected disability and was honorably discharged.

Vendor shall insure that the preceding provision is inserted in all subcontracts entered into to furnish labor for the construction, addition to, or alteration of public works in connection with this contract.

38. Non-barred Bidder. Vendors affirms, by submission of a response to this bid or request for proposals, that Vendor is not barred from bidding on this contract as a result of a conviction for violation of state law prohibiting bid rigging or rotating.

39. City Debarment. The City of Rockford reserves the right to bar Vendor from future bidding opportunities with the City if false information is submitted as part Vendor's bid response or proposal, Vendor has committed any violation of law, or Vendor fails to comply with the terms and conditions of this contract.

40. Non-Assignment. Neither this Contract nor any of the rights, interests or obligations under the Agreement shall be assigned, in whole or in part, by written agreement, merger, consolidation, operation of law, or otherwise by either party without the prior written consent of the other party.

41. Governing Law. This Contract shall be governed by and construed and enforced in accordance with the laws of the State of Illinois, excluding its choice of law rules and, to the extent

applicable, the copyright laws of the United States of America. In the event of a dispute under this Contract, the parties agree to submit to the exclusive jurisdiction of the state courts of, and federal courts sitting in, the State of Illinois.

42. Severability. In the event that any clause, provision, or portion of these General Conditions or any part thereof shall be declared invalid, void, or unenforceable by any court having jurisdiction, such invalidity shall not affect the validity or enforceability of the remaining portions.

43. Local Business Adjustment to Bid Award. For Public Works or Construction contracts the use of local business adjustment (up to a maximum 5 percent of the contract price, but not more than \$20,000 whichever is less) may be authorized. To receive the local business adjustment the bidder must meet the qualifications of a local bidder (described below) and request the local business adjustment be implemented for that bid. The downward adjustment shall then be applied automatically to the local bidder's bid if doing so will cause the local bidder's bid to match the bid of a non-local bidder who would otherwise be the lowest qualified bidder. Any bidder requesting application of the local bidder adjustment shall acknowledge and agree to the potential of the reduction in their overall bid at the time of its bid submission. Should a bidder requesting the local business adjustment be declared the lowest bidder and thereafter decline to be awarded the project, that bidder shall be prohibited from requesting the application of a local business adjustment for a period of one year. In instances where more than one local bidder requests local business adjustment, the adjustment will be applied to the next lowest local bidder only, however, if the next lowest bidder did not request the adjustment, then the local bidder who did elect would get the adjustment and award.

A local bidder is an individual or entity that (1) has established a place of business within Winnebago, Boone, Ogle, or Stephenson County; (2) has paid a minimum of \$5,000 in sales tax in Winnebago County during the 12 months prior to bid submission; and (3) can demonstrate that at least 50% of its employees reside within Winnebago, Boone, Ogle, or Stephenson County.

A bidder that requests local business adjustment is certifying that they are in compliance with the above description. If the City determines the bidder is not in compliance the bidder may be barred from bidding for a period of up to three years.

44. Sexual Harassment Policy Requirement. Every party to a public contract and every eligible bidder shall have a written sexual harassment policy in accordance with the Equal Employment Opportunities; Affirmative Action (775 ILCS 5/2-105). The written policy must include, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment, utilizing examples; (iv) the vendor's internal complaint process including penalties; (v) the legal recourse, investigative, and complaint process available through the Department and the Commission; (vi) directions on how to contact the Department and Commission; and (vii) protection against retaliation as provided by Sections 6-101 and 6-101.5 of the Act.

Instruction to Bidders

1. The bidder shall insert the price for all bid items and all other information requested in the Bid Form attached or a computer generated schedule of prices. All computer-generated schedule of prices submitted must be correct and correspond to the latest schedule of prices issued by the City of Rockford or the bid may be rejected. All prices shall be net and shall be the full, delivered cost to the City of Rockford, including all factors whatsoever. Failure to comply with this requirement will constitute rejection of bid.

2. The City requires the improvements specified to be completed under the following guidelines: Vendor must begin work within ten (10) days of the Notice to Proceed. Once notice to proceed has been given, Vendor will have until _____ to complete the project. If no project completion date is specified, Department to confirm completion date after contract award

3. Bidders bidding on any City of Rockford construction projects for CIP (Capital Improvement Projects) must be pre-qualified with the State of Illinois according to Section 102 of the Standard Specifications for Road and Bridge construction of the Illinois Department of Transportation. The bidder, prior to receiving a proposal form and being placed on the Bidders list must submit a certified copy of a "Certificate of Eligibility" issued by the Department of Transportation. An "Affidavit of Availability" issued by the Department of Transportation must accompany each sealed bid. Bids will be awarded upon approval of "Affidavit of Availability".

Anyone may secure a proposal marked "NOT FOR BIDDING" but will not be placed on the Bidders List and will not be allowed to submit a bid. Anyone securing a proposal marked "NOT FOR BIDDING" will be placed on a separate list for information purposes only.

4. It shall be mandatory that the awarded vendor and subcontractors comply with the Illinois Preference Act (IL Rev. Stat., Ch. 48, Par. 2201-2207) requires that on Illinois-resident workers be employed on Public Works Projects in times of excessive unemployment.

5. The bidder receiving award of this contract by the Rockford City Council shall submit the following information and be issued a notice to proceed prior to start of work:

- a. Construction schedule including starting date, project phasing controlling factors; and, estimated payment schedule (in Microsoft Projects format, one hard copy and one digital copy);
- b. Material suppliers including plant locations and State certification.
- c. A final, accurate Subcontractor Utilization Form and Subcontractor Workforce Data Forms for each subcontractor to be used. If the subcontractor fails to submit all required EEO compliance forms to Vendor or if the subcontractor is found to be in noncompliance, the City of Rockford may require that the subcontractor in question not be utilized on the project. The City of Rockford also reserves the right to take whatever action necessary to meet all EEO requirements.

6. Bidders are only required to return to the City the forms listed in the Required Forms section of the bid document, along with any special information that may be requested of firms as part of the general or special provisions. Sections 1, 3, and 4 of the bid document need not be returned to the City.

7. Bidder Questions during Bidding.

All questions regarding the bidder's preparation of his bid, pertaining to the drawings and specifications, shall be compiled in writing and e-mailed to Anne Wilkerson, (anne.wilkerson@rockfordil.gov) City of Rockford, Finance Department, at least 72 hours prior to bid time.

Questions received less than 72 hours before the designated bid time cannot be answered by addendum.

Oral statements will not be binding to City of Rockford or Vendor.

Any questions deemed by City as requiring a response will be answered by addendum issued to all bidders and will become a part of the Contract.

Subcontractors must direct their questions through Vendor only.

The consulting Architect and/or the consulting Engineer shall not be contacted direct without prior authorization from City.

8. These instructions are to be considered an integral part of any proposal.

9. Questions regarding EEOs should be addressed to: City of Rockford Equal Opportunity Compliance (EOC) Officer, at (779) 348-7264.

10. Questions regarding Bid/RFP specs should be addressed to analyst listed in specs section.

FINANCE AND PERSONNEL COMMITTEE

Anne Wilkerson

Central Services Manager

Section 2

Required Forms

City of Rockford
EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

All bidders seeking to do business with the City of Rockford must complete this certification. **Failure to sign this Certification will result in disqualification of Vendor's bid or proposal.** Questions regarding EEOs should be addressed to City of Rockford Equal Opportunity Compliance (EOC) Officer, at (779) 348-7264.

- 1. Compliance with EEO Law.** Vendor acknowledges and certifies that, if awarded a contract with the City of Rockford, it is subject to and will comply with all applicable equal employment opportunity statutes, regulations, and ordinances including but not limited to: the City's Equal Opportunity Employment (EOE) Ordinance (City of Rockford Code of Ordinances, Chapter 11, Article IV); the Illinois Human Rights Act (775 ILCS 5/101 *et seq.*), the Illinois Department of Human Rights Rules and Regulations for Government Contracts (44 Ill. Admin. Code, Chapter X, Section 750), and the Discrimination in Public Contracts Act (775 ILCS 10/0.01 *et seq.*), Title VII of the Civil Rights Act of 1964, as amended (§ 7, 42 U.S.C. § 2000e *et seq.*); the Age Discrimination in Employment Act of 1967, as amended (29 USC §.621 *et seq.*); Title I of the Americans with Disabilities Act of 1990, as amended (42 USC 12111-12117); the Equal Pay Act of 1963, as amended; the Uniformed Services Employment and Reemployment Rights Act of 1994, as amended (38 USC §§ 4301-4335); and, for federally-funded construction contracts (only), Executive Order 11246, as amended, and relevant U.S. Department of Labor regulations regarding equal employment opportunity for federally assisted construction contracts (see 41 CFR Part 60).
- 2. Discrimination Prohibited.** Vendor certifies that it is its policy to provide equal employment opportunity and that it prohibits discrimination against any employee or applicant for employment due to race, color religion, sex, sexual orientation, gender identity, marital status, order of protection status, status as a survivor of domestic violence or human trafficking, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or unfavorable discharge from military service. Further, Vendor will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any underutilization, as is required by the Illinois Department of Human Rights Rules and Regulations for Government Contracts.
- 3. Non-Segregated Facilities.** Vendor certifies that it provides facilities at its place of business without segregation except where separate facilities for a person of the opposite sex are required. Vendor also certifies that it will, to the greatest extent possible, not assign employees to work at any location where facilities are so segregated and that it will insert into its subcontracts the provisions of this paragraph for work performed under this contract and obtain the same certification from subcontractors.
- 4. Government Exclusion, Debarment, or Suspension.** Vendor certifies that it is not subject to any exclusion, debarment, suspension, or other disciplinary action by any government agency including but not limited to the U.S. Government, State of Illinois, Illinois Human Rights Commission, Illinois Department of Labor, or any other federal or state agency or political subdivision. Additionally, if at any time Vendor is subject to such exclusion, suspension, or debarment during the contract period, Vendor certifies that it will immediately disclose this information to the City's EOC Officer.

City of Rockford
EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

5. **Subcontracting.** Vendor certifies that, if awarded a public contract with the City of Rockford, it will include verbatim or by reference the provisions of the City's General Conditions *Equal Employment Opportunity* paragraph 19 in every subcontract awarded under which any portion of the contract obligations are undertaken or assumed. For federally funded construction contracts, the conditions described in paragraph (8) of the "Equal Opportunity Clause for Federally Assisted Construction Contracts" and paragraph (2) of the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" must also be included in every subcontract. Vendor acknowledges that it is responsible for the compliance of all of its subcontractors with this provision. Vendor also certifies it will not utilize any subcontractor excluded, debarred, suspended, or otherwise disciplined by any government agency including but not limited to the U.S. Government, State of Illinois, Illinois Human Rights Commission, Illinois Department of Labor, or any other federal or state agency or political subdivision, and that it will notify the City's EOC Officer if any subcontractor fails to comply with such provision.

6. **MWBE Procurement Policy.** Vendor understands that it is the policy of the City of Rockford to encourage and promote the award of subcontracts to ready, willing, and able Minority and Women Business Enterprises (MWBEs) certified with the City. The City strongly encourages bidders, when preparing bids or proposals, to contact certified MWBEs regarding potential subcontracting opportunities. Vendor certifies that it has worked in good faith to comply with this policy by contacting MWBE businesses for subcontracting opportunities when possible (list can be found at <https://rockfordil.gov/279/purchasing/>). For federally funded construction projects (only), Vendor further certifies it has demonstrated good faith efforts to meet the women and minority subcontracting goals set forth in the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity."

Signature of Vendor

Date

City of Rockford
SUBCONTRACTOR UTILIZATION FORM

**THIS FORM MUST BE COMPLETED EVEN IF YOU DO NOT PLAN TO USE
SUBCONTRACTORS**
(COMPLETE SECTIONS I, II, AND V IF YOU DO NOT PLAN TO USE SUBCONTRACTORS).

All Vendors seeking to do business with the City of Rockford must provide information about all subcontractors that will be used. **A Subcontractor is any person or business that supplies any of the work, transportation or labor services, supplies, equipment, or materials under a contract with Vendor.** **Failure to complete this form will result in disqualification of Vendor's bid or proposal.** Questions regarding EEOs should be addressed to City of Rockford Equal Opportunity Compliance (EOC) Officer at (779) 348-7264.

Section I—Vendor/Prime Contractor Information

Is this an update to a previously submitted Subcontractor Utilization Form? Yes No

| | |
|---|---|
| Vendor Name: | |
| Project Name: | Bid or RFP Number: |
| Total Proposal/Bid Amount (over the full term of the contract): | |
| Vendor Contact Name: | Contact Phone: Contact Email: |
| Vendor Certification Status: | Minority Business Enterprise Women Business Enterprise None |

Section II--Subcontractor Utilization

Will subcontractors be used? Yes (complete rest of form) No (proceed to Section V)

Section III—Subcontractor Selection

Please list information for **ALL** subcontractors Vendor *believes it will* use. Vendor may make changes or additions to its list of subcontractors by submitting an updated form to the City's EOC Officer after award, if needed.

| Subcontractor Name | MBE or WBE? (Y/N) | Amount | % of Total Proposal/Bid | Scope of Work |
|--------------------|-------------------------|--------|----------------------------|---------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

If more than six subcontractors will be used, please complete the [Subcontractor Utilization Form-Supplement](#).

City of Rockford
SUBCONTRACTOR UTILIZATION FORM

If Vendor plans to use subcontractors, but has not yet identified some or all of the subcontractors to be used, please explain why:

Section IV—MWBE Subcontractors Contacted

It is the policy of the City of Rockford to encourage and promote the award of subcontracts to qualified and available Minority and Women Business Enterprises (MWBEs) certified with the City. The City strongly encourages bidders, when preparing bids or proposals, to contact certified MWBEs regarding potential subcontracting opportunities (a list of MWBEs can be found at <https://rockfordil.gov/279/purchasing>). Please list the MWBEs Vendor has contacted regarding subcontractor opportunities for this proposal/bid (MWBE subcontractors selected and listed in Section III do not need to be listed again here):

| MWBE Business Name | Method of Contact (e.g. phone, email) | Why not used? |
|---------------------------|--|----------------------|
| | | |
| | | |
| | | |
| | | |

Section V—Signature

The undersigned certifies that the information provided herein is truthful, accurate, and complete. Further, Vendor acknowledges that if it is awarded the contract, this information must be kept up to date by Vendor. According to the City's General Conditions Paragraph 16, **any changes in subcontractor utilization must be immediately made in writing** by submitting a new form to the City's Equal Opportunity Compliance Officer (contact information provided at the top of this form). A complete and accurate list of subcontractors will be required prior to beginning work on the project, if awarded.

Signature

Date

Name

Title

City of Rockford
VENDOR WORKFORCE DATA FORM

The City must collect information in an effort to monitor Vendor's compliance with the Illinois Human Rights Act, Illinois Department of Human Rights Rules and Regulations, and City of Rockford Equal Employment Opportunity Ordinance. **Failure to complete this form will result in disqualification of Vendor's bid or proposal.** Questions regarding EEOs should be addressed to City of Rockford Equal Opportunity Compliance (EOC) Officer at (779) 348-7264.

Part I: Vendor Information

| | |
|----------------------------|-----------------------------|
| Vendor Name: | Bid or RFP Number: |
| Project Name: | IDHR Number ¹ : |
| Date: | Expiration: |
| Vendor's EEO Contact Name: | Estimated Duration of Work: |
| Title: | Contact Email: |
| | Contact Phone: |

Part II: Vendor Workforce Data

Please provide the *number* of individuals employed by Vendor in each category below (report all employees, not just those who will work under the contract). Definitions of the EEO Job Categories are included with this form.

W - White B - Black H – Hispanic/Latino A - Asian AI - American Indian, Alaskan or Hawaiian Native
Tw—Two or more race/ethnicity T – Total

| JOB CATEGORY | W | MALE | | | | | W | FEMALE | | | | | TOTAL |
|--------------------------------|---|------|---|---|----|----|---|--------|---|---|----|----|-------|
| | | B | H | A | AI | Tw | | B | H | A | AI | Tw | |
| Officials and Managers | | | | | | | | | | | | | |
| Professional Workers | | | | | | | | | | | | | |
| Technicians | | | | | | | | | | | | | |
| Sales Workers | | | | | | | | | | | | | |
| Administrative Support Workers | | | | | | | | | | | | | |
| Craft Workers | | | | | | | | | | | | | |
| Operatives | | | | | | | | | | | | | |
| Laborers and Helpers | | | | | | | | | | | | | |
| Service Workers | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | |

¹ Bidders must have an Illinois Department of Human Rights Eligibility Number if 1) bidder employs 15 or more persons, AND 2) if the bid or proposal will total more than \$100,000.

City of Rockford
SUBCONTRACTOR WORKFORCE DATA FORM

This form is **required** if Vendor will be using one or more subcontractors to complete work or perform services for the City. A Workforce Data Form must be completed for **each** subcontractor. Questions regarding EEOs should be addressed to City of Rockford Equal Opportunity Compliance (EOC) Officer at (779) 348-7264.

Part I: Identification

| | |
|-----------------------------------|----------------------------------|
| Subcontractor Name: | Bid Number: |
| Project Name: | IDHR Number: Expiration: |
| Date: | Estimated Duration of Work: |
| Subcontractor's EEO Contact Name: | Contact Email: Contact Phone: |

Part II: Subcontractor Workforce Data

Please provide the *number* of individuals employed by subcontractor in each category below (report all employees, not just those who will work under the contract). Definitions of the EEO Job Categories are included on the next page of this form.

W - White B - Black H - Hispanic/Latino A - Asian AI - American Indian, Alaskan or Hawaiian Native
Tw—Two or more race/ethnicity T – Total

| JOB CATEGORY | MALE | | | | | | | FEMALE | | | | | | | TOTAL |
|--------------------------------|------|---|---|---|----|----|---|--------|---|---|---|----|----|---|--------------|
| | W | B | H | A | AI | Tw | T | W | B | H | A | AI | Tw | T | |
| Officials and Managers | | | | | | | | | | | | | | | |
| Professional Workers | | | | | | | | | | | | | | | |
| Technicians | | | | | | | | | | | | | | | |
| Sales Workers | | | | | | | | | | | | | | | |
| Administrative Support Workers | | | | | | | | | | | | | | | |
| Craft Workers | | | | | | | | | | | | | | | |
| Operatives | | | | | | | | | | | | | | | |
| Laborers and Helpers | | | | | | | | | | | | | | | |
| Service Workers | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | |

Job Category Descriptions

Officials and Managers: Jobs occupied by administrative and managerial personnel who set broad policies, exercise overall responsibility for execution of these policies, and direct individual departments or special phases of a firm's operations. Includes: officials, executives, middle management, plant managers, department managers, superintendents, salaried supervisors who are members of management, and purchasing agents and buyers.

Professionals: Jobs requiring bachelor or graduate degree and/or professional certification or comparable experience. Includes: accountants and auditors, architects, chemists, computer programmers, designers, editors, engineers, lawyers, scientists, registered professional nurses, personnel and labor relations specialists, physicians, and surveyors.

Technicians: Jobs requiring a combination of basic scientific knowledge and manual skill which is often obtained through 2 years of post-high school education or through equivalent on-the-job training. Includes: drafters, surveying and mapping technicians, engineering aides, junior engineers, mathematical aides, emergency medical technicians, and licensed practical nurses.

Sales Workers: Jobs engaging wholly or primarily in direct selling. Includes: advertising agents and sales workers, insurance agents and brokers, real estate agents and brokers, stock and bond sales workers, securities, commodities, and financial services sales agents, demonstrators, sales workers and sales clerks, grocery clerks, and cashiers/checkers.

Administrative Support Workers: Jobs involving non-managerial tasks providing administrative and support assistance, primarily in office settings. Includes: office support, bookkeepers, accounting and auditing clerks, dispatchers, data entry workers, collectors (bills and accounts), messengers and office helpers, shipping and receiving clerks, typists and secretaries, telephone operators, and legal assistants.

Craft Workers: Jobs requiring higher skill in areas including: construction (building trades craft workers and their formal apprentices); natural resource extraction workers; installation, maintenance and part replacement of equipment, machines and tools; and some production occupations that are distinguished by the high degree of skill and precision. Includes: boilermakers; brick & stone masons; carpenters; electricians; painters; glaziers; plumbers, pipefitters & steam fitters; roofers; elevator installers; earth drillers; oil & gas rotary drill operators; blasters & explosive workers; mechanics; electric & electronic equipment repairers; millwrights; and tool & die makers.

Operatives: Jobs involving operation of machines, factory-related processing equipment, or equipment to facilitate the movement of people or materials. These occupations require intermediate skill level and usually do not require more than several months of training. Includes: machine operators; electrical & electronic equipment assemblers; semiconductor processors; testers; graders & sorters; bridge & lock tenders; truck, bus or taxi drivers; industrial truck & tractor (forklift) operators; conveyor operations; and hand packers & packagers.

Laborers and Helpers: Jobs requiring limited skills and brief training to perform tasks that require little or no independent judgment. Includes: production & construction worker helpers; construction laborers; refuse & recyclable materials collectors; landscapers, grounds maintenance workers, and laborers performing lifting, digging, mixing, loading and pulling operations.

Service Workers: Jobs in food service, personal service, cleaning service, and protective service occupations. Skill may be acquired through formal training, job-related training or direct experience. Includes: food service workers; medical assistants and other healthcare support occupations; transportation attendants; cleaners; janitors; porters; transit and railroad; police and fire fighters; guards; private detectives and investigators.

City of Rockford
ILLINOIS PREVAILING WAGE ACT NOTICE AND ACKNOWLEDGEMENT

Failure to sign this acknowledgement will result in disqualification of Vendor's bid or proposal.

Prevailing Wage. The work included in this bid/request for proposal calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers, and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. Prevailing wage rates are determined by the Illinois Department of Labor and up-to-date rates are posted on the Department's website at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>. This Act *does apply to owner/operators* (e.g. a business where the owner is an employee doing work on the job). If awarded this contract, Vendor must comply with all requirements of the Act, including but not limited to all wage, notice, recordkeeping, and filing of certified payroll requirements. *It is your responsibility, as a bidder, to understand the amount this law requires you to pay workers (including yourself as an owner, if applicable) while working on this City of Rockford project—and to bid accordingly.*

Certified Payroll. The Illinois Prevailing Wage Act requires any contractor and each subcontractor who participates in public works to file with the Illinois Department of Labor (IDOL) certified payroll for those calendar months during which work on a public works project has occurred. The Act requires certified payroll to be filed with IDOL no later than the 15th day of each calendar month for the immediately preceding month through the Illinois Prevailing Wage Portal—an electronic database IDOL has established for collecting and retaining certified payroll. The Portal may be accessed using this link: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>. *The City reserves the right to withhold payment to Vendor until Vendor displays compliance with this provision of the Act.*

By signing below, Vendor acknowledges the applicability of the Prevailing Wage Act to the work that will be performed for the City of Rockford and, if the contract is awarded to Vendor, agrees to comply with the Act.

Vendor Name: _____

Bid/RFP Number: _____

Bid/RFP Title: _____

Name of Authorized Representative: _____

Title of Authorized Representative: _____

Signature of Authorized Representative

Date

City of Rockford
LCPTRACKER VENDOR INFORMATION FORM

The City uses an online system called LCPtracker to collect the certified payrolls Vendor must file with the City in compliance with the Prevailing Wage Act (820 ILCS 130/5 (a)(2)). The City will use the information provided in this form to set up a project in the LCPtracker system, where Vendor will be required to file certified payroll (due the 15th of the month for the preceding month).

- 1. City's Bid Number or PO Number:**
- 2. City's Project Name:** _____
- 3. Company Name (Vendor):**
- 4. Vendor's Address:** _____
- 5. Vendor's City and State:** _____
- 6. Vendor's Zip Code:**
- 7. Vendor's 10 – Digit Phone Number:** _____
- 8. Federal Tax ID Number:**
- 9. Ethnicity of Vendor:** _____
- 10. Principal's Name:**
- 11. Principal's Title:**
- 12. Contact's Nameⁱ:**
- 13. Contact's Email Address:**
- 14. Prime Approver's Nameⁱⁱ:**
- 15. Prime Approver's Email Address:**
- 16. Union Status:** Union Non-Union
- 17. Owner Operator?** Yes No
- 18. City-Certified MBE or WBE?** Yes No
- 19. Start Date of Project:** _____
- 20. Bid or PO Amount:** _____
- 21. If you will employ apprentices for City work, please attach pay scale for them.**

For questions about EEOs, contact Contract and Grant Compliance Officer, at phone at (779) 348-7264.

ⁱ The Contact is the person who will manage Vendor's LCPtracker online account and who will use that account to *enter and certify payroll* information in the online system.

ⁱⁱ The Prime Approver is the person who will be responsible for *approving payroll* entered by Vendor and all subcontractors utilizing his or her LCPtracker prime approver online account. The Contact and Prime Approver may be the same person (who will utilize two different accounts to perform each function).

**Acknowledgement of Stormwater Management Ordinance and IEPA General Construction Permit
(ILR10) Requirements**

By indicating below, we acknowledge receipt of the Stormwater Management Ordinance and IEPA's General Construction Permit, if applicable. Both documents can be found on the City of Rockford website at:

<https://rockfordil.gov/274/stormwater-environmental-team/>

The IEPA General Construction permit can also be located at:

<https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/general-permits.aspx>

I have been provided access to the City of Rockford Stormwater Management Ordinance and the Illinois EPAs General Construction Permit and agree to comply with the terms outlined therein.

Person, Firm or Corporation

Authorized Signature

Acknowledgement of Addenda

By indicating below, we acknowledge receipt of the addenda listed.

| | |
|----------------|------------|
| Addendum _____ | Date _____ |

Person, Firm or Corporation

Authorized Signature

The City of Rockford may respond to requests for information or pro-actively provide more information by posting addenda to bid packages on the City website. The City and its personnel are not responsible for notifying potential vendors of any addenda to bid packages posted to the [City's website](#). The City may, but is not required to, provide notification of new addenda via one or more of the same methods by which the original bid request was posted. Vendors who fail to account for information or requests included in these addenda may have their bids disqualified. THEREFORE, IT IS EXTREMELY IMPORTANT THAT POTENTIAL VENDORS MONITOR THE [CITY WEBSITE](#) FOR ANY ADDENDA TO THE ORIGINAL BID PACKAGES.

Request for Taxpayer
Identification Number and CertificationGo to www.irs.gov/FormW9 for instructions and the latest information.Give form to the
requester. Do not
send to the IRS.Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

| | | | | | | | |
|---|---|--|--|--|--|--|---|
| Print or type. See <i>Specific Instructions</i> on page 3. | 1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.) | | | | | | |
| | 2 Business name/disregarded entity name, if different from above. | | | | | | |
| | 3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. | | | | | | 4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): |
| | <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C corporation <input type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____ Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) _____ | | | | | | Exempt payee code (if any) _____ |
| | 3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions _____ | | | | | | Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____ |
| | 5 Address (number, street, and apt. or suite no.). See instructions. | | | | | | Requester's name and address (optional) |
| | 6 City, state, and ZIP code | | | | | | |
| | 7 List account number(s) here (optional) | | | | | | |

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

| | | | | | | |
|--------------------------------|----------------------|---|----------------------|----------------------|----------------------|----------------------|
| Social security number | | | | | | |
| <input type="text"/> | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| or | | | | | | |
| Employer identification number | | | | | | |
| <input type="text"/> | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

| | | |
|--------------|-----------------------------|------|
| Sign Here | Signature of U.S. person | Date |
|--------------|-----------------------------|------|

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

must obtain your correct taxpayer identification number (TIN), which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid).
- Form 1099-DIV (dividends, including those from stocks or mutual funds).
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds).
- Form 1099-NEC (nonemployee compensation).
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers).
- Form 1099-S (proceeds from real estate transactions).
- Form 1099-K (merchant card and third-party network transactions).
- Form 1098 (home mortgage interest), 1098-E (student loan interest), and 1098-T (tuition).
- Form 1099-C (canceled debt).
- Form 1099-A (acquisition or abandonment of secured property).

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

Caution: If you don't return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued);
2. Certify that you are not subject to backup withholding; or
3. Claim exemption from backup withholding if you are a U.S. exempt payee; and
4. Certify to your non-foreign status for purposes of withholding under chapter 3 or 4 of the Code (if applicable); and
5. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting is correct. See *What Is FATCA Reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding. Payments made to foreign persons, including certain distributions, allocations of income, or transfers of sales proceeds, may be subject to withholding under chapter 3 or chapter 4 of the Code (sections 1441–1474). Under those rules, if a Form W-9 or other certification of non-foreign status has not been received, a withholding agent, transferee, or partnership (payor) generally applies presumption rules that may require the payor to withhold applicable tax from the recipient, owner, transferor, or partner (payee). See Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*.

The following persons must provide Form W-9 to the payor for purposes of establishing its non-foreign status.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the disregarded entity.
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the grantor trust.
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust and not the beneficiaries of the trust.

See Pub. 515 for more information on providing a Form W-9 or a certification of non-foreign status to avoid withholding.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person (under Regulations section 1.1441-1(b)(2)(iv) or other applicable section for chapter 3 or 4 purposes), do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515). If you are a qualified foreign pension fund under Regulations section 1.897(l)-1(d), or a partnership that is wholly owned by qualified foreign pension funds, that is treated as a non-foreign person for purposes of section 1445 withholding, do not use Form W-9. Instead, use Form W-8EXP (or other certification of non-foreign status).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a saving clause. Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if their stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first Protocol) and is relying on this exception to claim an exemption from tax on their scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include, but are not limited to, interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third-party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester;
2. You do not certify your TIN when required (see the instructions for Part II for details);
3. The IRS tells the requester that you furnished an incorrect TIN;
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only); or
5. You do not certify to the requester that you are not subject to backup withholding, as described in item 4 under "By signing the filled-out form" above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier.

What Is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all U.S. account holders that are specified U.S. persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you are no longer tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account, for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

• **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note for ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040 you filed with your application.

• **Sole proprietor.** Enter your individual name as shown on your Form 1040 on line 1. Enter your business, trade, or "doing business as" (DBA) name on line 2.

• **Partnership, C corporation, S corporation, or LLC, other than a disregarded entity.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

• **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. Enter any business, trade, or DBA name on line 2.

• **Disregarded entity.** In general, a business entity that has a single owner, including an LLC, and is not a corporation, is disregarded as an entity separate from its owner (a disregarded entity). See Regulations section 301.7701-2(c)(2). A disregarded entity should check the appropriate box for the tax classification of its owner. Enter the owner's name on line 1. The name of the owner entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For

example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2. If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, enter it on line 2.

Line 3a

Check the appropriate box on line 3a for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3a.

| IF the entity/individual on line 1 is a(n) . . . | THEN check the box for . . . |
|--|--|
| • Corporation | Corporation. |
| • Individual or | Individual/sole proprietor. |
| • Sole proprietorship | |
| • LLC classified as a partnership for U.S. federal tax purposes or | Limited liability company and enter the appropriate tax classification: P = Partnership, C = C corporation, or S = S corporation. |
| • LLC that has filed Form 8832 or 2553 electing to be taxed as a corporation | |
| • Partnership | Partnership. |
| • Trust/estate | Trust/estate. |

Line 3b

Check this box if you are a partnership (including an LLC classified as a partnership for U.S. federal tax purposes), trust, or estate that has any foreign partners, owners, or beneficiaries, and you are providing this form to a partnership, trust, or estate, in which you have an ownership interest. You must check the box on line 3b if you receive a Form W-8 (or documentary evidence) from any partner, owner, or beneficiary establishing foreign status or if you receive a Form W-9 from any partner, owner, or beneficiary that has checked the box on line 3b.

Note: A partnership that provides a Form W-9 and checks box 3b may be required to complete Schedules K-2 and K-3 (Form 1065). For more information, see the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

If you are required to complete line 3b but fail to do so, you may not receive the information necessary to file a correct information return with the IRS or furnish a correct payee statement to your partners or beneficiaries. See, for example, sections 6698, 6722, and 6724 for penalties that may apply.

Line 4 Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third-party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space on line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2).

2—The United States or any of its agencies or instrumentalities.

3—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities.

5—A corporation.

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or territory.

7—A futures commission merchant registered with the Commodity Futures Trading Commission.

8—A real estate investment trust.

9—An entity registered at all times during the tax year under the Investment Company Act of 1940.

10—A common trust fund operated by a bank under section 584(a).

11—A financial institution as defined under section 581.

12—A middleman known in the investment community as a nominee or custodian.

13—A trust exempt from tax under section 664 or described in section 4947.

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

| IF the payment is for . . . | THEN the payment is exempt for . . . |
|--|---|
| • Interest and dividend payments | All exempt payees except for 7. |
| • Broker transactions | Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012. |
| • Barter exchange transactions and patronage dividends | Exempt payees 1 through 4. |
| • Payments over \$600 required to be reported and direct sales over \$5,000 ¹ | Generally, exempt payees 1 through 5. ² |
| • Payments made in settlement of payment card or third-party network transactions | Exempt payees 1 through 4. |

¹ See Form 1099-MISC, Miscellaneous Information, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) entered on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37).

B—The United States or any of its agencies or instrumentalities.

C—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i).

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i).

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state.

G—A real estate investment trust.

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940.

I—A common trust fund as defined in section 584(a).

J—A bank as defined in section 581.

K—A broker.

L—A trust exempt from tax under section 664 or described in section 4947(a)(1).

M—A tax-exempt trust under a section 403(b) plan or section 457(g) plan.

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, enter "NEW" at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have, and are not eligible to get, an SSN, your TIN is your IRS ITIN. Enter it in the entry space for the Social security number. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/EIN. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or Form SS-4 mailed to you within 15 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and enter "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, you will generally have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon. See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier, for when you may instead be subject to withholding under chapter 3 or 4 of the Code.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.

You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third-party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

| For this type of account: | Give name and SSN of: |
|--|---|
| 1. Individual | The individual |
| 2. Two or more individuals (joint account) other than an account maintained by an FFI | The actual owner of the account or, if combined funds, the first individual on the account ¹ |
| 3. Two or more U.S. persons (joint account maintained by an FFI) | Each holder of the account |
| 4. Custodial account of a minor (Uniform Gift to Minors Act) | The minor ² |
| 5. a. The usual revocable savings trust (grantor is also trustee) | The grantor-trustee ¹ |
| b. So-called trust account that is not a legal or valid trust under state law | The actual owner ¹ |
| 6. Sole proprietorship or disregarded entity owned by an individual | The owner ³ |
| 7. Grantor trust filing under Optional Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A)) ^{**} | The grantor [*] |

| For this type of account: | Give name and EIN of: |
|---|---------------------------|
| 8. Disregarded entity not owned by an individual | The owner |
| 9. A valid trust, estate, or pension trust | Legal entity ⁴ |
| 10. Corporation or LLC electing corporate status on Form 8832 or Form 2553 | The corporation |
| 11. Association, club, religious, charitable, educational, or other tax-exempt organization | The organization |
| 12. Partnership or multi-member LLC | The partnership |
| 13. A broker or registered nominee | The broker or nominee |
| 14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments | The public entity |
| 15. Grantor trust filing Form 1041 or under the Optional Filing Method 2, requiring Form 1099 (see Regulations section 1.671-4(b)(2)(i)(B)) ^{**} | The trust |

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name on line 1, and enter your business or DBA name, if any, on line 2. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

* Note: The grantor must also provide a Form W-9 to the trustee of the trust.

** For more information on optional filing methods for grantor trusts, see the Instructions for Form 1041.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information, such as your name, SSN, or other identifying information, without your permission to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax return preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity, or a questionable credit report, contact the IRS Identity Theft Hotline at 800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 877-777-4778 or TTY/TDD 800-829-4059.

Protect yourself from suspicious emails or phishing schemes.

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Go to www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information.

Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and territories for use in administering their laws. The information may also be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payors must generally withhold a percentage of taxable interest, dividends, and certain other payments to a payee who does not give a TIN to the payor. Certain penalties may also apply for providing false or fraudulent information.



City of Rockford Apprenticeship Form

Return with Bid

All contractors are required to complete the following certification:

- For this contract proposal or for all groups in this deliver and install proposal.
- For the following deliver and install groups in this material proposal:

The City of Rockford, in accordance with the requirements set forth by the State of Illinois, requires that this contract to be awarded to the lowest responsive and responsible bidder. The award decision is subject to approval by the City of Rockford. In addition to all other responsibility factors, this contract or deliver and install proposal requires all bidders and all bidders' subcontractors to disclose participation in apprenticeship or training programs that are (1) approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training, and (2) applicable to the work of the above indicated proposals or groups. Therefore, all bidders are required to complete the following certification:

- I. Except as provided in paragraph IV below, the undersigned bidder certifies that it is a participant, either as an individual or as part of a group program, in an approved apprenticeship or training program applicable to each type of work or craft that the bidder will perform with its own employees.
- II. The undersigned bidder further certifies for work to be performed by subcontract that each of its subcontractors submitted for approval either (A) is, at the time of such bid, participating in an approved, applicable apprenticeship or training program; or (B) will, prior to commencement of performance of work pursuant to this contract, establish participation in an approved apprenticeship or training program applicable to the work of the subcontract.
- III. The undersigned bidder, by inclusion in the list in the space below, certifies the official name of each program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's employees. Types of work or craft that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category for which there is no applicable apprenticeship or training program available.

IV. Except for any work identified above, any bidder or subcontractor that shall perform all or part of the work of the contract or deliver and install proposal solely by individual owners, partners or members and not by employees to whom the payment of prevailing rates of wages would be required, check the following box, and identify the owner/operator workforce and positions of ownership.

The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. The City at any time before or after award may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. In order to fulfill the participation requirement, it shall not be necessary that any applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract or deliver and install proposal.

Bidder: _____

By: _____

(Signature)

Address: _____

Title: _____

Section 3

Bid/RFP

Specifications

FIRE STATION 4 HOOD REPLACEMENT
BID NO.: 625-FD-079

1.0 GENERAL SCOPE

These specifications describe the minimum requirements for the hood replacement at Fire Station 4, located at 2959 Shaw Woods Drive.

2.0 GENERAL REQUIREMENTS

2.1 Contractor Qualifications. No contract shall be awarded except to responsible firms capable of providing the specified product. Qualified companies include all capable of providing the equipment or service specified.

2.1.1 Proof of Qualifications. Prior to being considered for contract award, firms may be required to show evidence of the necessary capability, experience, facilities, equipment and financial resources to perform the work in a satisfactory manner and within the time stipulated.

2.2 Basis of Award. The contract will be awarded to the lowest responsive and responsible bidder that is able to meet the requirements and criteria set forth in this document. A “responsive bidder” is able to provide a product or service that conforms in all material respects to the specifications detailed in this document. A “responsible bidder” is a corporation, company, or person who has the ability in all respects to provide the product or service desired at the highest possible standards of quality. The City of Rockford may award the contract based on line item categories, or as a whole, whichever best serves the interest of the City.

2.3 Insurance Requirements. Please refer to Bidding and Contract General Conditions, Section 30, for insurance requirements.

2.4 Optional Site Visit. To schedule a site visit, please contact Mark Kalousek, Property Maintenance Supervisor, at Mark.Kalousek@rockfordil.gov. ****Appointments will be accepted ONLY on July 2nd & 3rd between 8:00am-3:00pm.**

NOTE: No questions will be answered at the site visit; all questions must be directed to the individual as specified in Section 2.5.

2.5 Contact Person. All questions shall be directed to Dajana Glisic, Sr. Financial Analyst, at Dajana.Glisic@rockfordil.gov. **Questions shall be received, in writing, until July 8th at 5:00pm; no questions may be submitted after this date. Questions will be answered via addendum no later than July 10th.** Any oral communications will be considered unofficial and non-binding.

2.6 Preconstruction Meeting. A preconstruction meeting will be conducted prior to the start of the project. The meeting shall be attended by the awarded vendor, a representative of the City and the vendor's designated foreman. The condition of the building and grounds areas shall be recorded, and the vendor shall be responsible for the correction and/or repair of any damage to the facilities resulting from the related project.

2.7 Project Completion. The vendor shall be prepared to commence work within 120 days after the award of contract, or as soon as weather conditions permit, unless otherwise specified by the City of Rockford. Failure to begin the project in an expeditious manner may result in the cancellation of this contract. The vendor shall advise the City of Rockford in writing three (3) working days prior to the start date. Should the vendor be unable to meet the scheduled start date, the City reserves the right to cancel all pending contracts with said vendor.

- 2.8 Additional Changes. Additional compensation for any labor or materials not clearly covered in the base bid will be allowed only when prior approval for such work is granted. Failure to receive such approval, in writing, shall indemnify the City from any costs associated with such request.
- 2.9 Warranty. Vendor shall provide a two (2) year warranty on all workmanship.
- 2.10 Install/Permit. The awarded vendor is responsible for any and all permits (no fee) and shall install to the specifications of attached print, with Federal standards in mind. All JULIE locates to be performed by the contractor, with the City of Rockford not responsible for any associated JULIE locates work.
- 2.11 Loss of Power to Building. Any work that will affect the current power status to the Fire Station affected areas must be scheduled in advance, as agreed to between the City of Rockford and awarded contractor.

3.0 SPECIFIC REQUIREMENTS

Under the direction of the City of Rockford Facility Maintenance Supervisor, the work to replace the Fire Station 4 Hood of 2959 Shaw Woods Drive shall consist of the following:

- 3.1 Prints/Plans. All work must be done according to the plans, hereto attached as '**Attachment A**'.
- 3.2 There is to be no disruption to building wide workflow including but not limited to: construction sounds (jack-hammer, cutting, build, etc.), use of elevators during working hours, and dust/construction mess control. Any work deemed a disruption will have to be scheduled/planned for after-hours, based on operating schedules.
- 3.3 Water can be turned off in one (1) hour increments Fire Station wide, notification to be made prior to turnoff.
- 3.4 Any needed staging area to be agreed upon with the City of Rockford Facilities Maintenance Supervisor before the project start date (including use of main lot for drop off/employee parking/etc.).
- 3.5 It is the responsibility of the vendor to immediately notify the City of Rockford Facility Maintenance Supervisor of any mechanical failures and/or any other circumstance, including inclement weather, which may delay or prevent the vendor from completing the work as scheduled.
- 3.6 Equipment/Safety. The vendor shall remove equipment at the completion of the workday. The City of Rockford does not assume any responsibility, at any time, for the protection of or loss of equipment or supplies either at the work site or elsewhere. In addition, all best management practices and adherence to all applicable OSHA and ANSI standards shall be observed while performing this work. All measures shall be taken to protect workers and citizens from injury as well as any damage to surrounding buildings or landscape.
- 3.7 Final Inspection. A final inspection will be conducted by the vendor and a representative of the City of Rockford. Such inspection shall be conducted immediately after notification of completion by the vendor. All items noted during the final inspection shall be completed within seven (7) working days from the date of inspection. Working days are considered to be regular business days, excluding all holidays, Saturday and Sunday.
- 3.8 Invoicing/Payment. All invoices shall be submitted within 30 days of completion of work to the City of Rockford Facility Maintenance Supervisor for review and approval that the work was satisfactorily completed.

BID FORM

FIRE STATION 4 HOOD REPLACEMENT
BID NO.: 625-FD-079

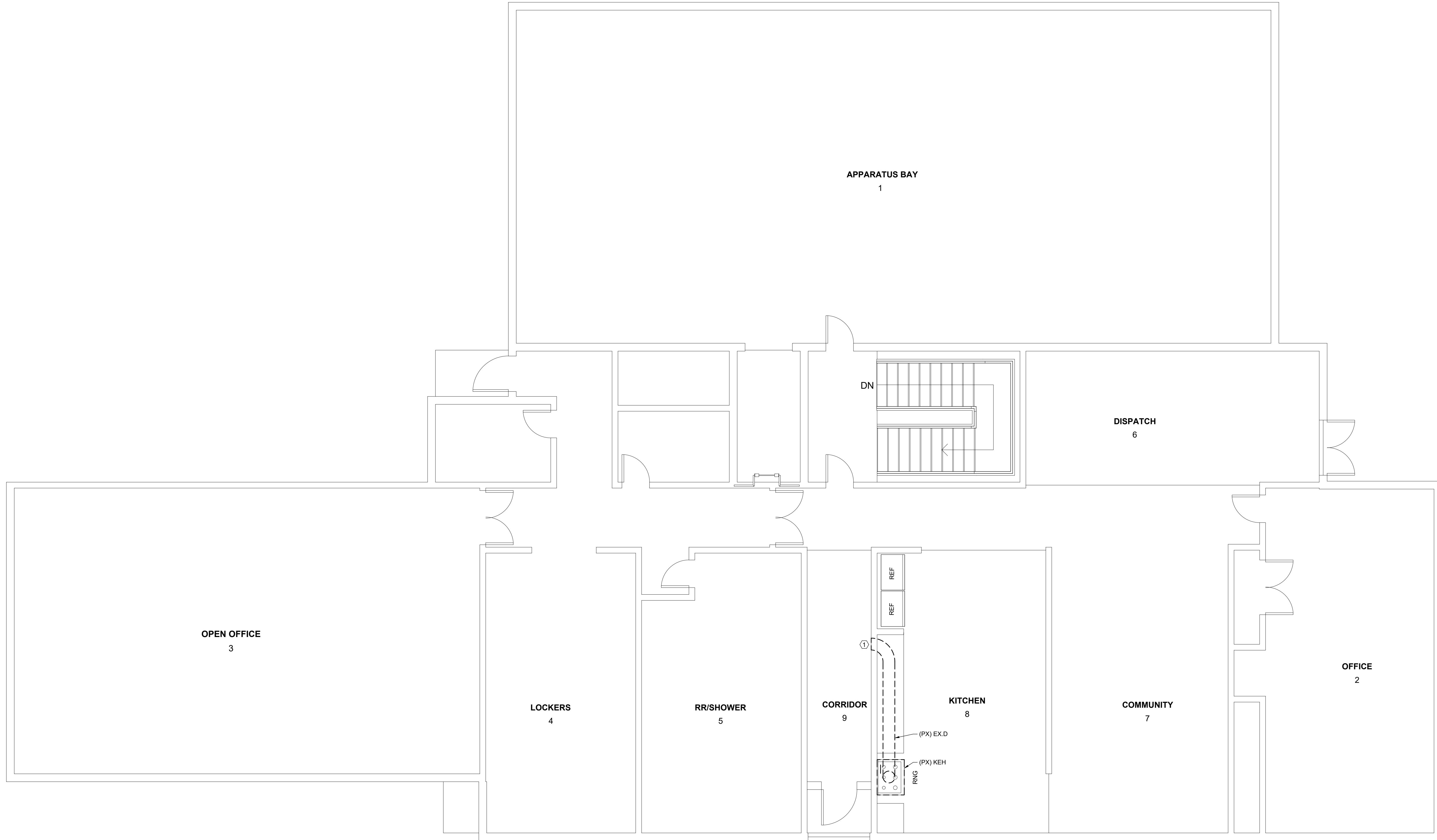
We bid as follows:

Fire Station 4 hood replacement according to specifications listed herein.

FIRE STATION 4 HOOD REPLACEMENT TOTAL: **\$** _____

Person, Firm or Corporation

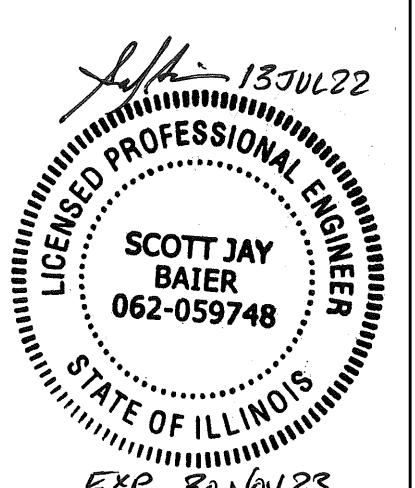
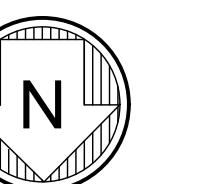
Authorized Signature and Title



DEMOLITION FLOOR PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

① REMOVE DUCT BACK TO WALL PENETRATION. INFILL OPENING IN WALL IN ATTIC.



MECHANICAL DEMOLITION FLOOR PLAN

PROJECT NUMBER:

SDSE 22-020

DATE: July 13, 20

July 18, 2013

BY: SD

M1

IV

The logo for SDS, featuring the letters 'SDS' in a bold, italicized, lowercase font, enclosed within a stylized diamond shape with rounded corners. The diamond is partially cut by a thick, curved line that sweeps from the bottom left towards the top right, creating a sense of motion.

**SYSTEMS DESIGN SERVICE
ENGINEERING LP**

3600 EAST STATE STREET SUITE 215
ROCKFORD, ILLINOIS 61108

PHONE (815) 399-3381 FAX (815) 399-3383
WWW.SDSEGROUP.COM
IL PROF DESIGN FIRM #184.004999

2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 61111

ROCKFORD FIRE DEPARTMENT
STATION NO. 4

FOR QUESTIONS, CALL THE
Chicago Foodservice Division
REGION 55
PHONE: (630) 377-2611
EMAIL: reg55@econair.com

HOOD INFORMATION - JOB#5534764

| HOOD NO | TAG | MODEL | MANUFACTURER | LENGTH | MAX COOKING TEMP | TYPE | APPLIANCE DUTY | DESIGN CFM/FT | TOTAL EXH CFM | EXHAUST PLENUM RISER(S) | | | | TOTAL SUPPLY CFM | HOOD CONSTRUCTION | HOOD CONFIG | | | | |
|---------|-------|--------------------|--------------|--------|------------------|------|----------------|---------------|---------------|-------------------------|------|--------|-----|------------------|-------------------|-------------|------------|-------------------------|-------|-------|
| | | | | | | | | | | WIDTH | LENG | HEIGHT | DIA | CFM | VEL | SP | END TO END | ROW | | |
| 1 | KEH-1 | 4824 EX-2-PSP-F | ECON-AIR | 4' 0" | 450 DEG | I | MEDIUM | 225 | 900 | 9" | 9" | 4" | | 900 | 1600 | -0.360" | 750 | 430 SS WHERE EXPOSED | ALONE | ALONE |

HOOD INFORMATION

| HOOD NO | TAG | FILTER(S) | | | | LIGHT(S) | | | | UTILITY CABINET(S) | | | | FIRE SYSTEM | ELECTRICAL | SWITCHES | FIRE SYSTEM PIPING | HOOD HANGING WEIGHT | |
|---------|-------|------------------------|-----|--------|--------|------------------------|-----|----------------|------------|--------------------|-------------|---------|------|-------------|------------------|----------|--------------------|---------------------|--|
| | | TYPE | QTY | HEIGHT | LENGTH | EFFICIENCY @ 7 MICRONS | QTY | TYPE | WIRE GUARD | LOCATION | SIZE | TYPE | SIZE | MODEL # | QUANTITY | | | | |
| 1 | KEH-1 | SS BAFFLE WITH HANDLES | 2 | 16" | 20" | 30% | 2 | RECESSED ROUND | NO | RIGHT | 12"x48"x24" | TANK FS | 4.0 | SC-211110MA | 1 LIGHT 1 FAN | YES | 495 LBS | | |

HOOD OPTIONS

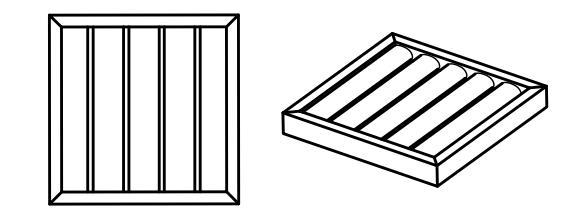
| HOOD NO | TAG | OPTION | |
|---------|-------|---|--|
| 1 | KEH-1 | FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT. | |
| | | BACKSPLASH 80.00" HIGH X 60.00" LONG 430 SS VERTICAL. | |
| | | RISER SENSOR INSTALL 6IN PLEN. | |

PERFORATED SUPPLY PLENUM(S)

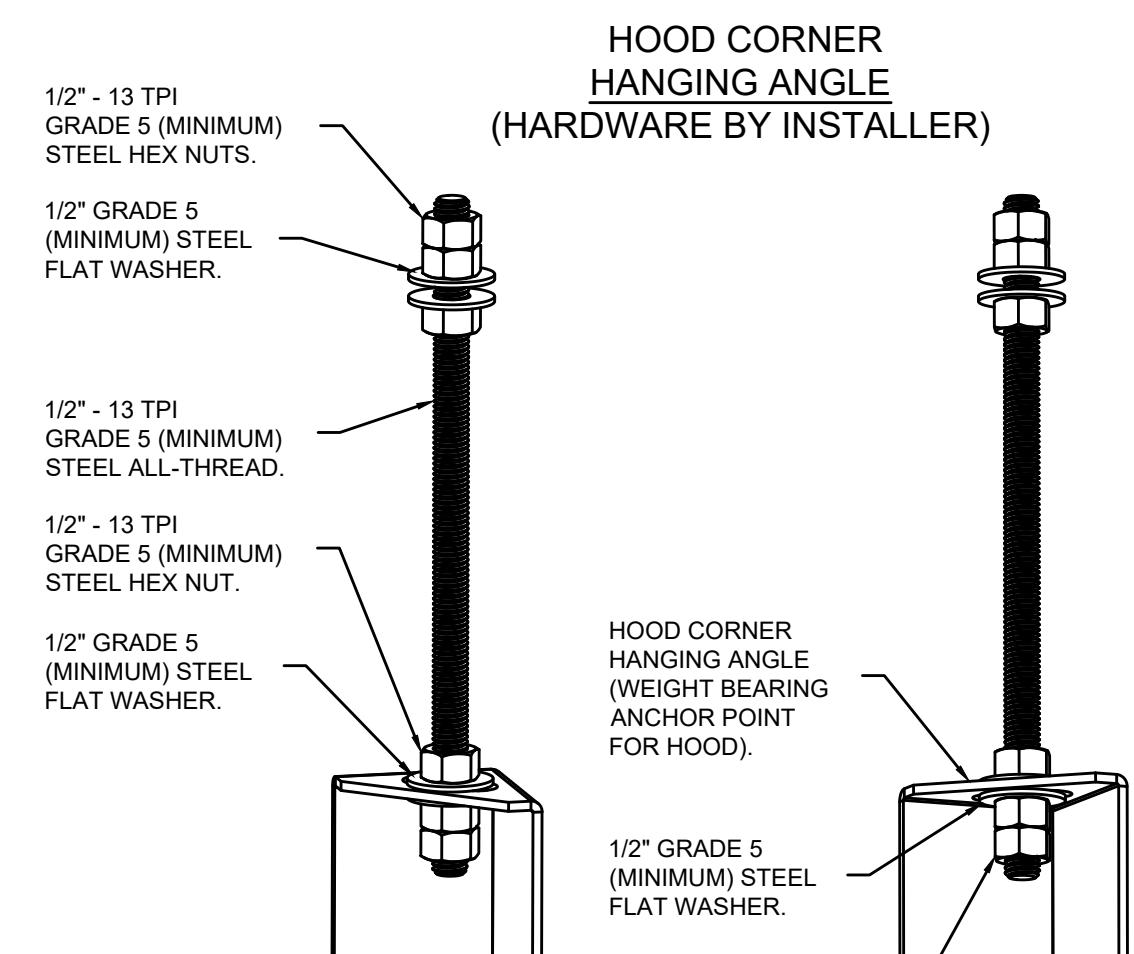
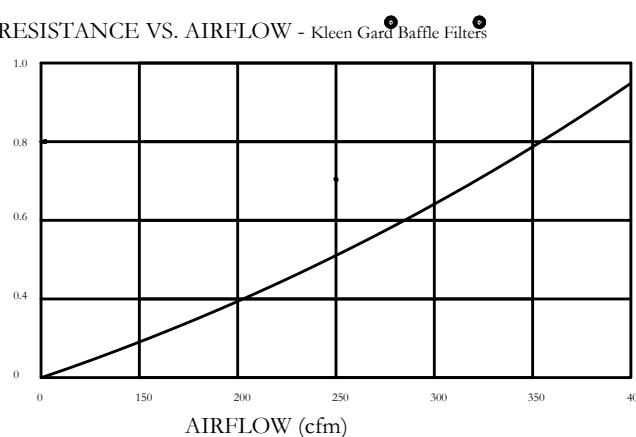
| HOOD NO | TAG | POS | LENGTH | WIDTH | HEIGHT | TYPE | RISER(S) | | | | | |
|---------|-------|-------|--------|-------|--------|------|----------|------|-----|-----|--------|--|
| | | | | | | | WIDTH | LENG | DIA | CFM | SP | |
| 1 | KEH-1 | Front | 60" | 14" | 6" | MUA | 10" | 28" | | 750 | 0.218" | |

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.



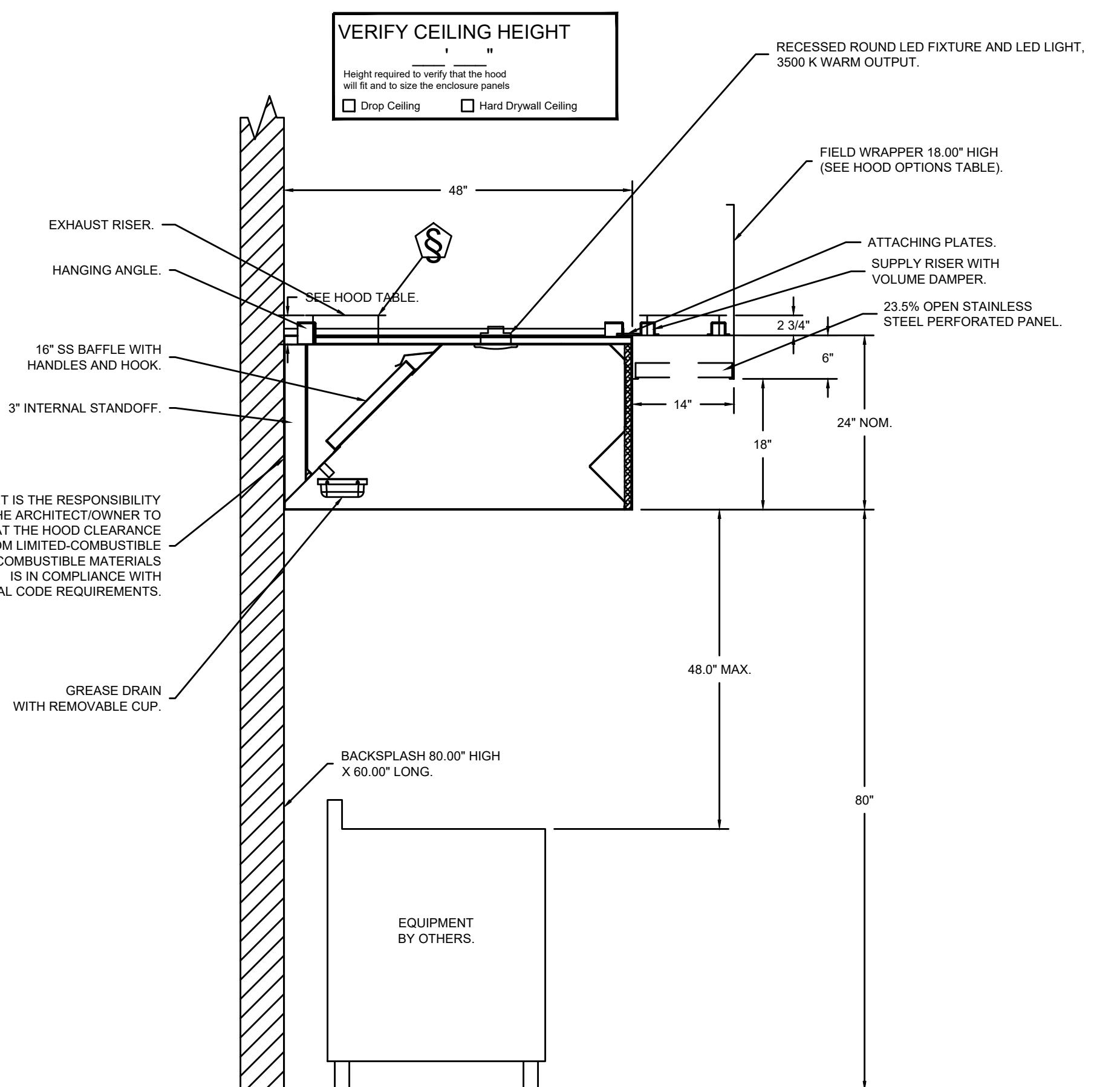
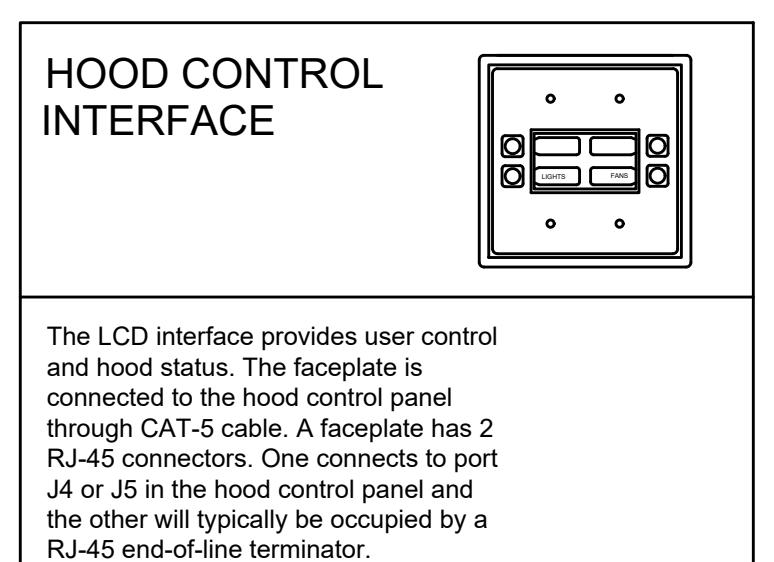
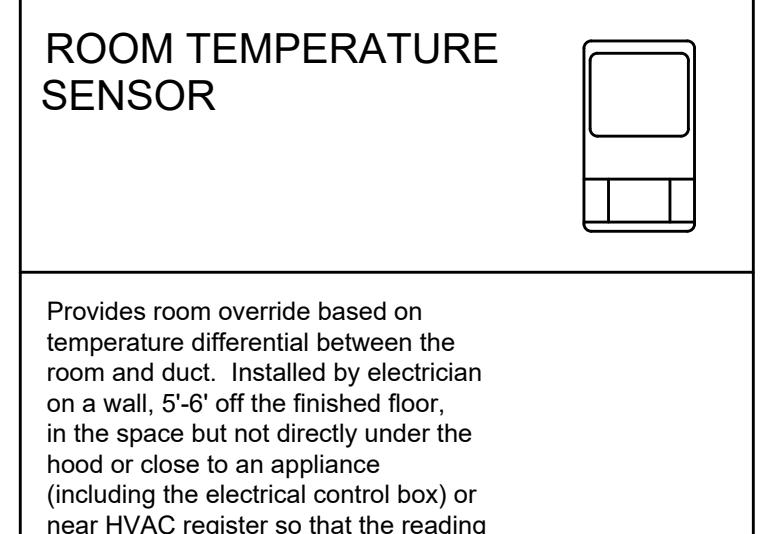
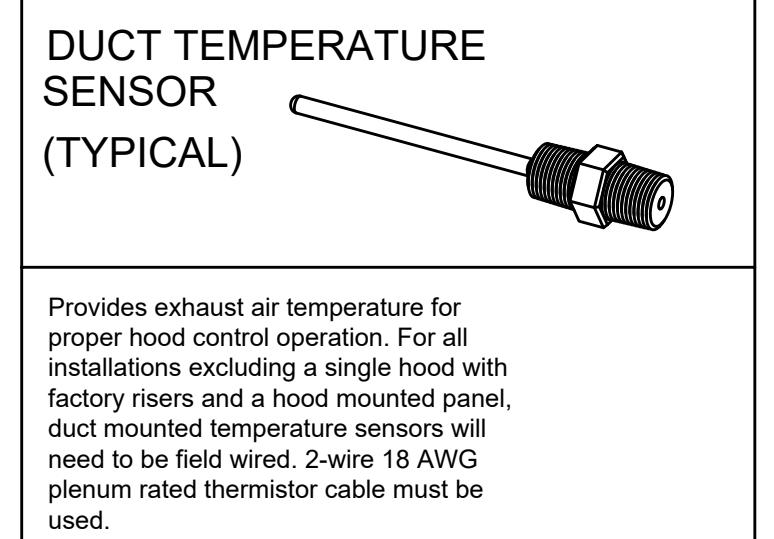
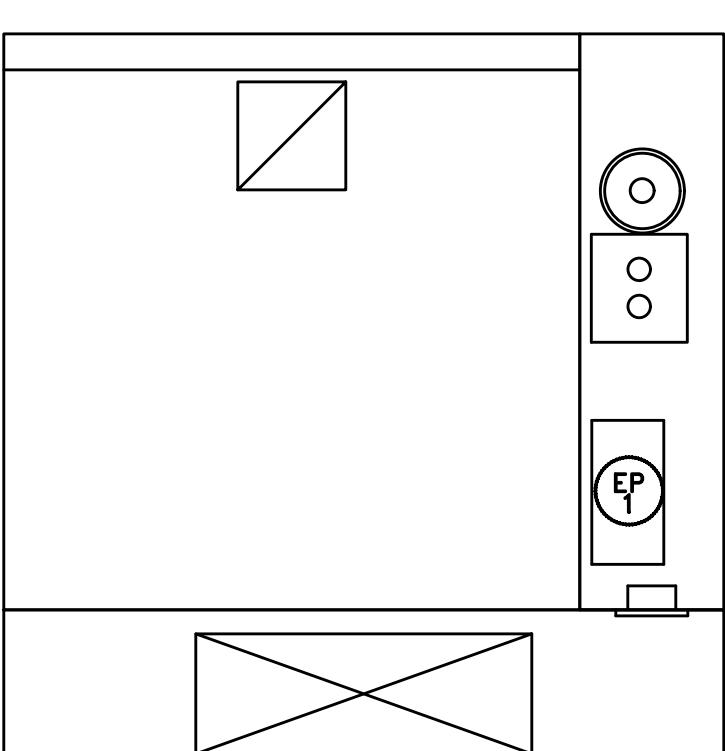
Kleen-Gard filters by Research Products
Kleen-Gard Baffle Filters are UL Classified
grease extracting filters



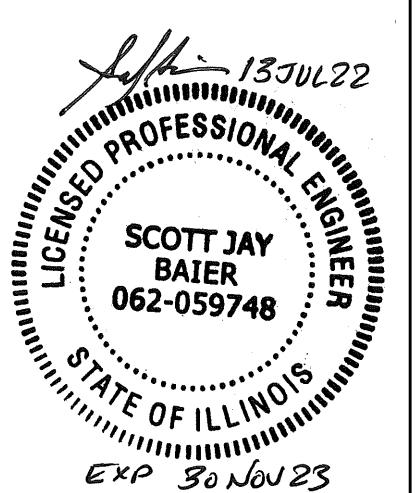
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BEHIND HOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BEHIND BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

ECON-AIR HOODS ARE
BUILT IN COMPLIANCE WITH
NSF
BUILT
ACCORDING
N.F.P.A.
TESTED
N.F.P.A. #96
NSF
E.T.L. LISTED 3054804-001 TO
UL 710 & ULC710 STANDARDS



**SECTION VIEW - MODEL 4824EX-2-PSP-F
HOOD - #1**



EXHAUST HOOD SCHEDULE AND DETAILS

| | |
|-----------------|-----------------|
| PROJECT NUMBER: | SDSE 22-020 |
| DATE: | July 13, 2022 |
| DR BY: | SDS |
| CK BY: | SDSE |
| M4 | SCALE: AS NOTED |

**ROCKFORD FIRE DEPARTMENT
STATION NO. 4**

**2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 61114**

**SYSTEMS DESIGN SERVICE
ENGINEERING**

3600 EAST STATE STREET SUITE 215
ROCKFORD, ILLINOIS 61108
PHONE: (815) 399-3381 FAX: (815) 399-3383
WWW.SDSEGROUP.COM
IL PROF DESIGN FIRM #184.00499

FIRE SYSTEM INFORMATION - JOB#5534764

| FIRE SYSTEM NO | TAG | TYPE | SIZE | FLOW POINTS | INSTALLATION | |
|----------------|------|---------|------|-------------|--------------------|------------------|
| | | | | | SYSTEM | LOCATION ON HOOD |
| 1 | FS-1 | TANK FS | 4.0 | 18 | FIRE CABINET RIGHT | RIGHT, HOOD 1 |

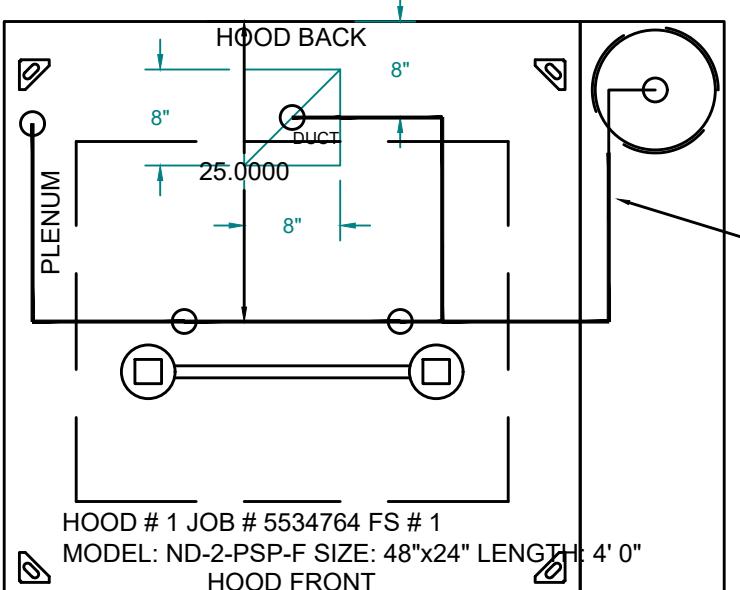
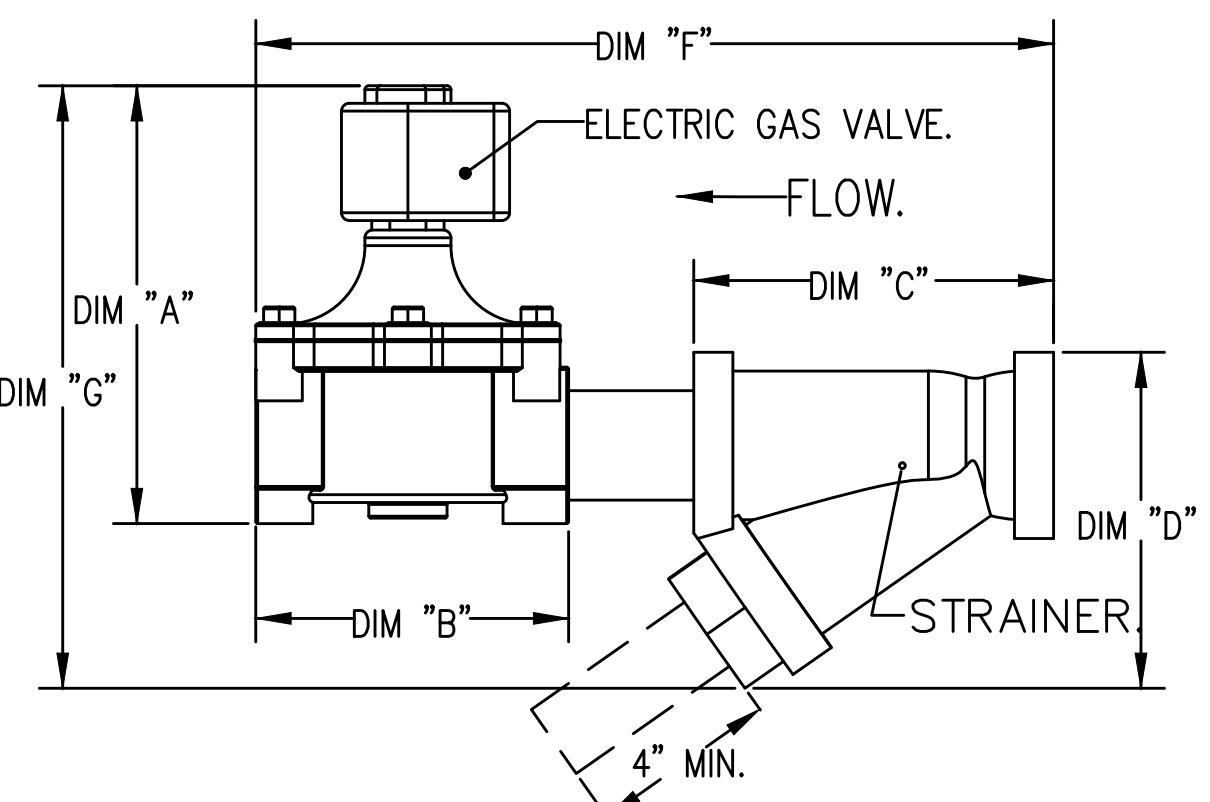
GAS VALVE(S)

| FIRE SYSTEM NO | TAG | TYPE | SIZE | SUPPLIED BY |
|----------------|------|---------------|-------|-------------|
| 1 | FS-1 | SC ELECTRICAL | 1.000 | ECON-AIR |

| GAS VALVES AND STRAINERS | | | | | | | | | | | | | | | |
|--------------------------|------|---------|---------------------|---------------------|----------------------|-------------------|----------|----------|---------|--------------|-----------|----------------------|-----------------------|----------------------|------------------------|
| GAS VALVE SIZING | | | | | GAS VALVE DIMENSIONS | | | | | INSTALLATION | | | PART NUMBERS | | |
| TYPE | SIZE | VOLTAGE | MIN. INLET PRESSURE | MAX. INLET PRESSURE | FLOW AT 1 IN.W.C. | FLOW AT 1 IN.W.C. | DIM "A" | DIM "B" | DIM "C" | DIM "D" | DIM "F" | MOUNTING ORIENTATION | GAS VALVE PART NUMBER | STRAINER PART NUMBER | GAS VALVE/STRAINER KIT |
| ELECTRICAL | 1" | 120 VAC | 0 PSI (0 IN.W.C.) | 5 PSI (138 IN.W.C.) | 1,132,300 BTU/HR | 734,733 BTU/HR | 6-15/16" | 5-15/16" | 4-7/8" | 5-3/16" | 12-13/16" | 10-11/16" | 8214250 | 4417K65 | (SC)EGVA1 |

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS. THE STRAINERS ARE TO BE FIELD INSTALLED.
PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING. SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) / (NEW PRESSURE DROP)
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)^{0.5}.



JOB #: 5534764
JOB NAME: ROCKFORD FIRE HOUSE.

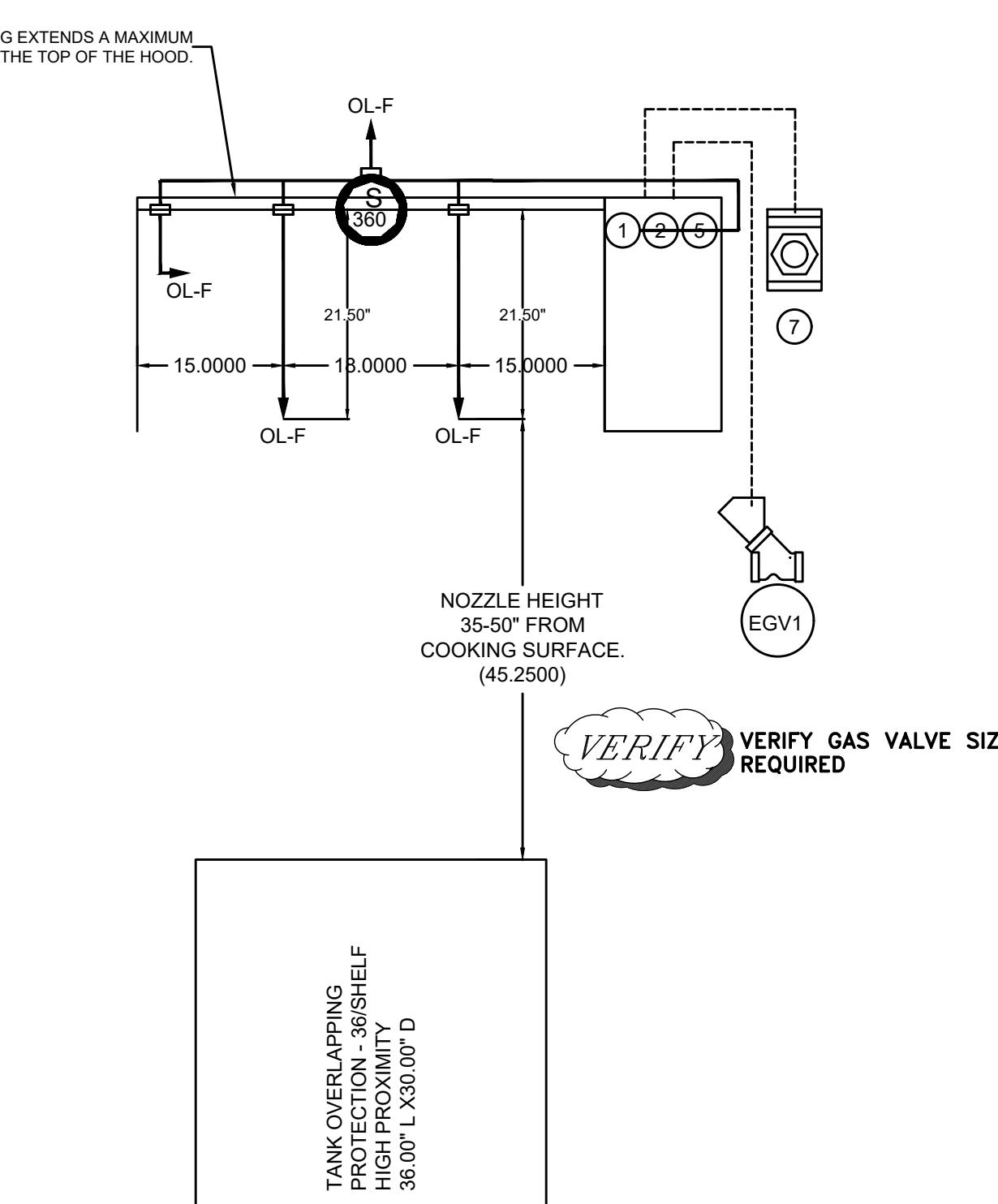
SYSTEM SIZE: TANK-SP-1 TOTAL FP REQUIRED: 18.
HOOD #1 4' 0.00" LONG x 48" WIDE x 24" HIGH.
RISER #1 SIZE: 8" x 8".
HOOD #1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

NOTES
- PIPE PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROPS: FACTORY WILL PROVIDE OTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING.
- SALTWANERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.
- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

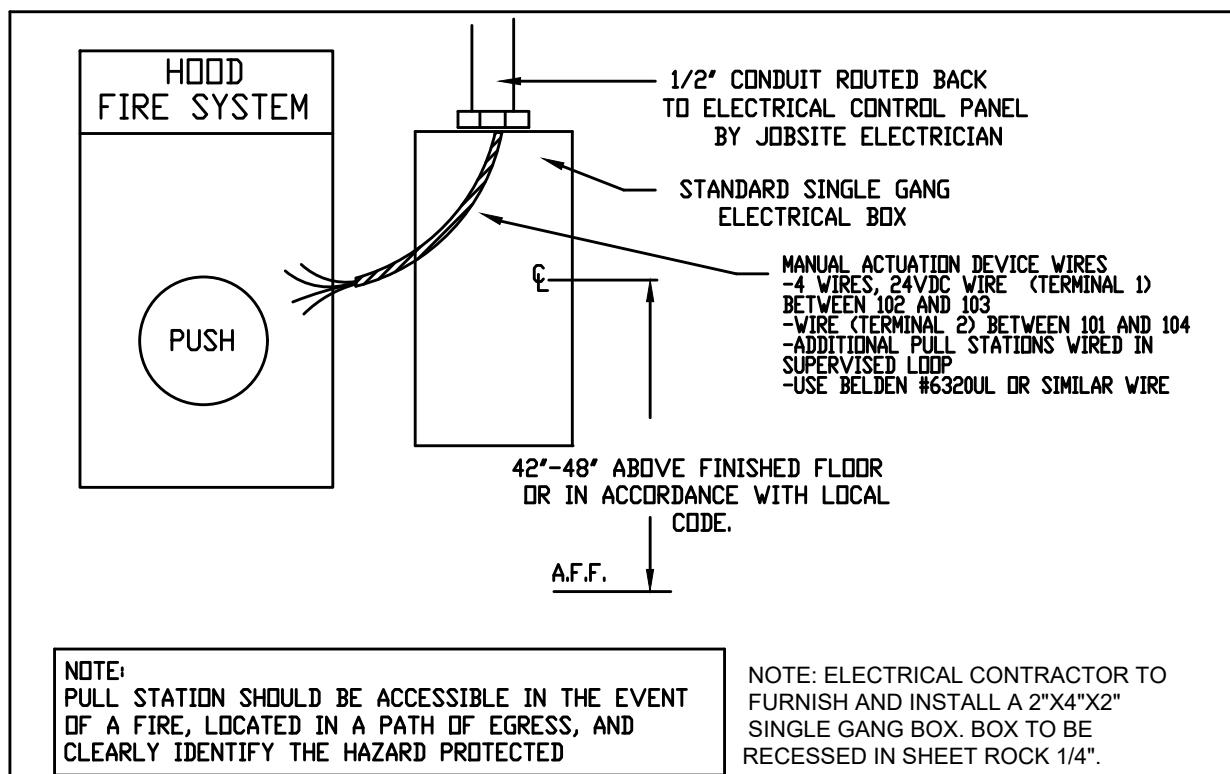
LEGEND - FIRE CABINET TANK SYSTEM

- 1 4 GALLON TANK
- 2 PRIMARY ACTUATOR RELEASE
- 3 SECONDARY ACTUATOR RELEASE
- 4 PRESSURE SUPERVISION SWITCH
- 5 PRIMARY HOSE ASSEMBLY
- 6 SECONDARY HOSE ASSEMBLY
- 7 REMOTE MANUAL ACTUATION DEVICE



VERIFY

GAS VALVE SIZE
REQUIRED

TANK MANUAL ACTIVATION STATION DETAIL


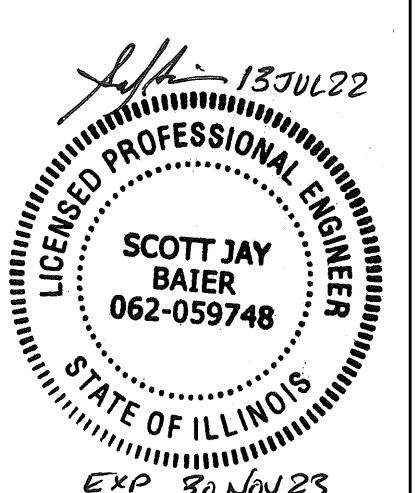
NOTE: PULL STATION SHOULD BE ACCESSIBLE IN THE EVENT OF A FIRE, LOCATED IN A PATH OF EGRESS, AND CLEARLY IDENTIFY THE HAZARD PROTECTED

NOTE: ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 2"X4"X2" SINGLE GANG BOX, BOX TO BE RECESSED IN SHEET ROCK 1/4".

| No. | Description | Date |
|-----|-------------------|----------|
| 1 | ISSUED FOR PERMIT | 07-13-22 |
| 2 | | |
| 3 | | |
| 4 | | |

ANSUL SYSTEM SCHEDULE AND DETAILS

| | |
|-----------------|---------------|
| PROJECT NUMBER: | SDSE 22-020 |
| DATE: | July 13, 2022 |
| DR BY: | SDS |
| CK BY: | SDSE |
| M5 | |
| SCALE: AS NOTED | |


ROCKFORD FIRE DEPARTMENT STATION NO. 4

2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 61114



SYSTEMS DESIGN SERVICE
ENGINEERING
3600 EAST STATE STREET SUITE 215
ROCKFORD, ILLINOIS 61108
PHONE: (815) 399-3381 FAX: (815) 399-3383
WWW.SDSEGROUP.COM
IL PROF DESIGN FIRM #184.00499

EXHAUST FAN INFORMATION - JOB#5534764

| FAN UNIT NO | TAG | QTY | FAN UNIT MODEL # | MANUFACTURER | CFM | ESP | RPM | MOTOR ENCL | HP | BHP | PHASE | VOLT | FLA | DISCHARGE VELOCITY | WEIGHT (LBS) | SONES |
|-------------|------|-----|------------------|--------------|-----|-------|------|------------|-------|--------|-------|------|-----|--------------------|--------------|-------|
| 1 | EF-1 | 1 | DU50HFA | CAPTIVEAIRE | 900 | 0.700 | 1302 | TEAO-ECM | 0.500 | 0.2230 | 1 | 208 | 3.8 | 342 FPM | 82 | 12.2 |

FAN OPTIONS

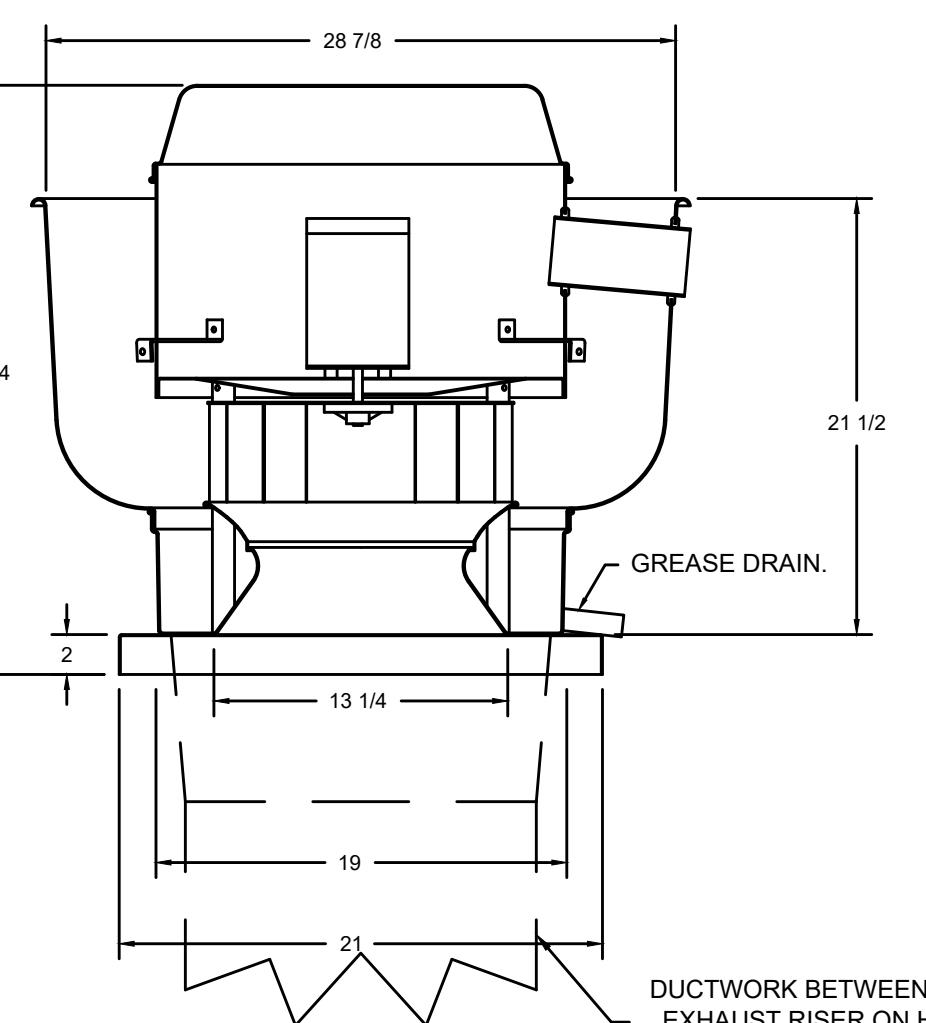
| FAN UNIT NO | TAG | QTY | DESCRIPTION |
|-------------|-------|-----|--|
| 1 | EF-1 | 1 | GREASE BOX |
| | | 1 | WALL MOUNT CONSTRUCTION FOR FAN |
| | | 1 | FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS |
| | | 1 | ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION |
| | | 1 | 2 YEAR PARTS WARRANTY |
| 2 | MUA-1 | 1 | INLET PRESSURE GAUGE, 0-35" |
| | | 1 | MANIFOLD PRESSURE GAUGE, -5 TO 15" WC |
| | | 1 | ECM WIRING PACKAGE-SUPPLY - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CW ROTATION |

FAN ACCESSORIES

| FAN UNIT NO | TAG | EXHAUST | | | SUPPLY | | |
|-------------|-------|------------|----------------|------------|----------------|----------------|------------------|
| | | GREASE CUP | GRAVITY DAMPER | WALL MOUNT | SIDE DISCHARGE | GRAVITY DAMPER | MOTORIZED DAMPER |
| 1 | EF-1 | YES | | | | | |
| 2 | MUA-1 | | | | | | |

CURB ASSEMBLIES

| NO | ON FAN | TAG | WEIGHT | ITEM | SIZE |
|----|--------|-------|--------|------|--|
| 1 | #1 | EF-1 | 53 LBS | CURB | 19.500"W X 19.500"L X 24.000"H ALONG LENGTH, RIGHT INSULATED VENTED HINGED 16 GAUGE. |
| 2 | #2 | MUA-1 | 50 LBS | CURB | 19.500"W X 52.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED. |

FAN #1 DU50HFA - EXHAUST FAN (EF-1)

FEATURES:

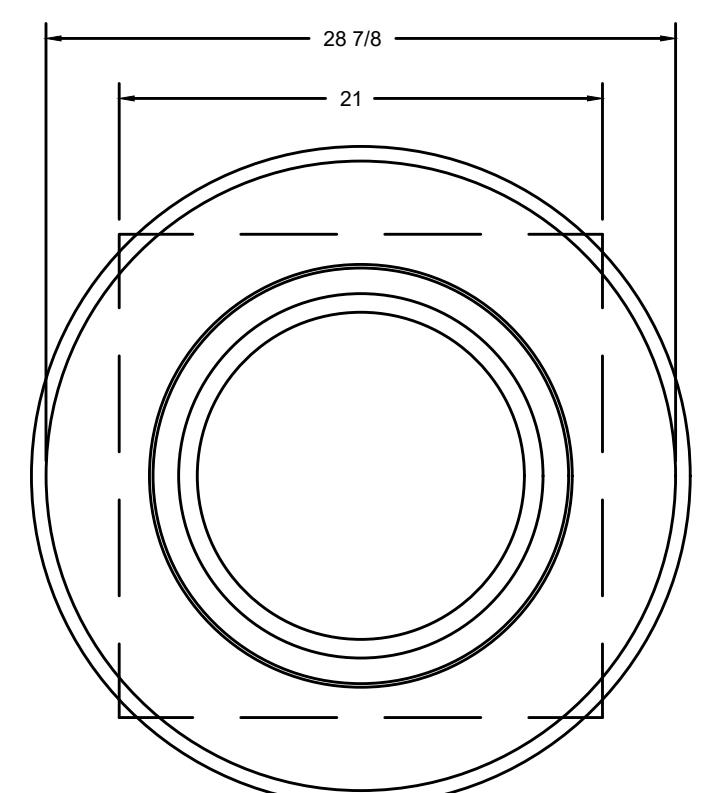
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING
- NEMA 3R SAFETY DISCONNECT SWITCH

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

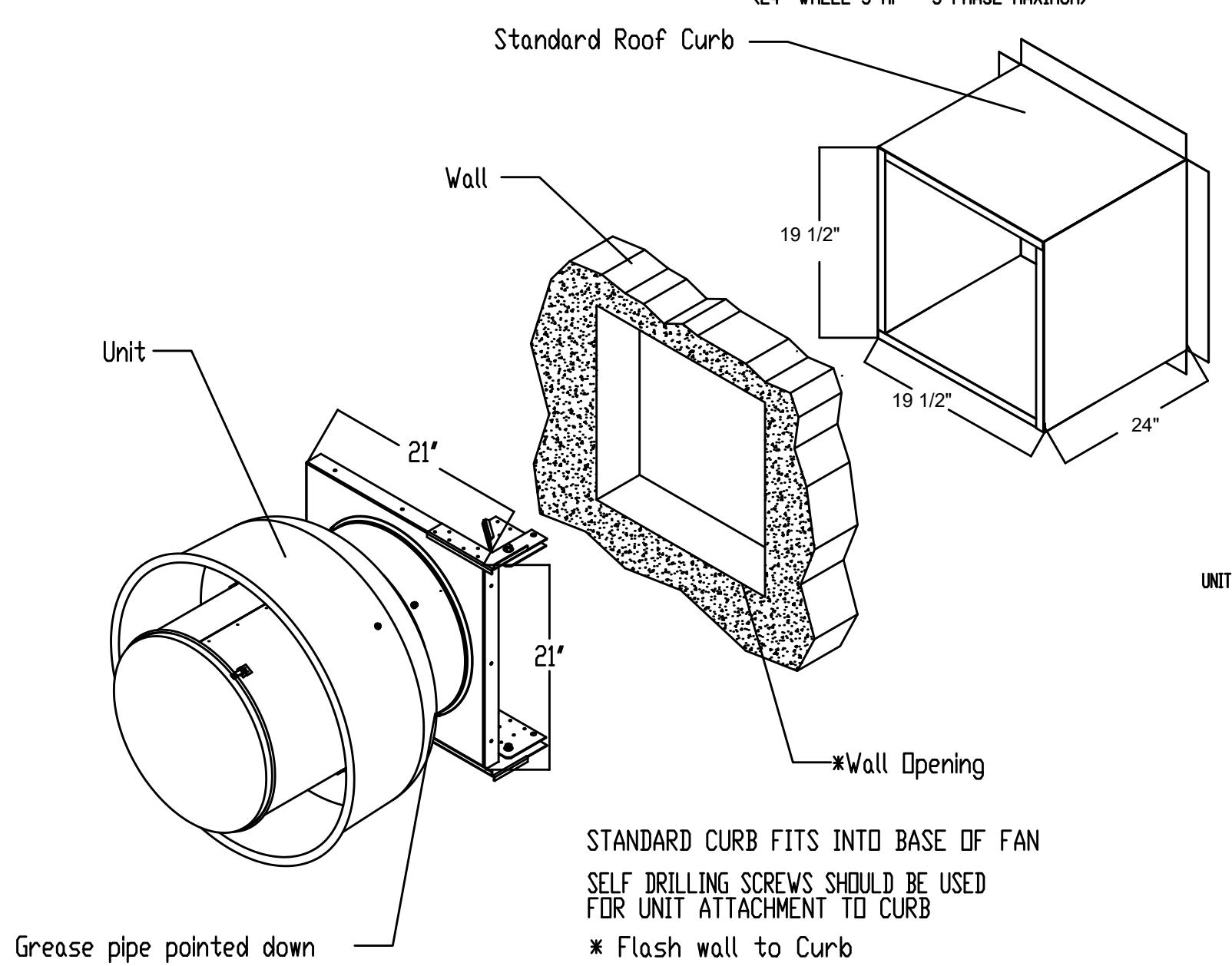
OPTIONS

- GREASE BOX
- WALL MOUNT CONSTRUCTION FOR FAN
- FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
- 2 YEAR PARTS WARRANTY


TOP VIEW
Wall Mount w/ Standard Curb

(24" WHEEL 2 HP - 1 & 3 PHASE)

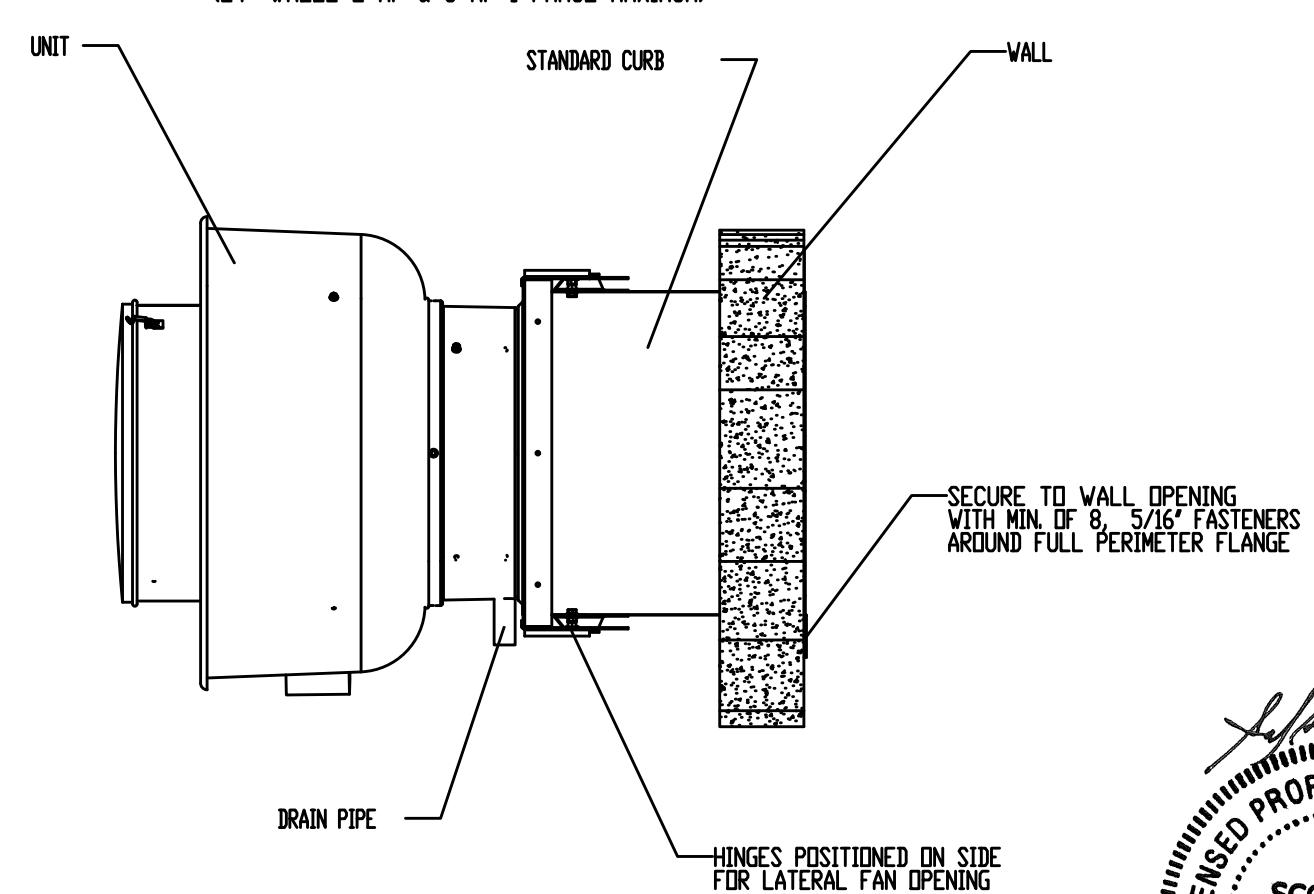
(24" WHEEL 3 HP - 3 PHASE MAXIMUM)



STANDARD CURB FITS INTO BASE OF FAN
SELF DRILLING SCREWS SHOULD BE USED
FOR UNIT ATTACHMENT TO CURB
* Flash wall to Curb
FLASHING AND SEALING OF WALL PENETRATION
DONE BY OTHERS

Wall Mount w/ Standard Curb SIDE VIEW

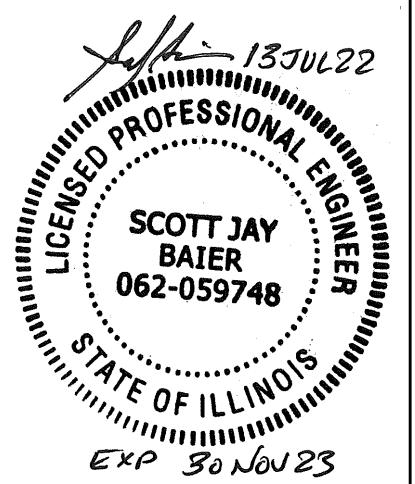
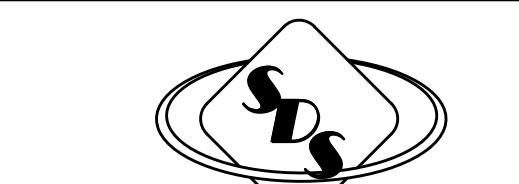
(24" WHEEL 2 HP & 3 HP 1 PHASE MAXIMUM)



| No. | Description | Date |
|-----|-------------------|----------|
| 1 | ISSUED FOR PERMIT | 07-13-22 |
| 2 | | |
| 3 | | |
| 4 | | |

EXHAUST FAN SCHEDULE AND DETAILS

| | |
|-----------------|---------------|
| PROJECT NUMBER: | SDSE 22-020 |
| DATE: | July 13, 2022 |
| DR BY: | SDS |
| CK BY: | SDSE |
| SCALE: | AS NOTED |


M6
ROCKFORD FIRE DEPARTMENT STATION NO. 4
2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 61114


SYSTEMS DESIGN SERVICE
ENGINEERING, INC.
3600 EAST STATE STREET SUITE 215
ROCKFORD, ILLINOIS 61108
PHONE: (815) 399-3381 FAX: (815) 399-3383
WWW.SDSEGROUP.COM
IL PROF DESIGN FIRM #184.004999

MUA FAN INFORMATION – JOB#5534764

| FAN UNIT NO | TAG | QTY | FAN UNIT MODEL # | BLOWER | HOUSING | MIN CFM | DESIGN CFM | ESP | RPM | MOTOR ENCL | HP | BHP | PHASE | VOLT | FLA | MCA | MOCP | WEIGHT (LBS) | SONES |
|-------------|-------|-----|------------------|--------|---------|---------|------------|-------|------|------------|-------|--------|-------|------|-----|------|------|--------------|-------|
| 2 | MUA-1 | 1 | D76 | G7D | D.6 | 600 | 750 | 0.375 | 1420 | TEAO-ECM | 1.000 | 0.2580 | 1 | 208 | 6.9 | 9.8A | 15A | 291 | 14.6 |

GAS FIRED MAKE-UP AIR UNIT(S)

| FAN UNIT NO | TAG | INPUT BTUs | OUTPUT BTUs | TEMP RISE | REQUIRED INPUT GAS PRESSURE | GAS TYPE |
|-------------|-------|------------|-------------|-----------|-----------------------------|----------|
| 2 | MUA-1 | 65361 | 60132 | 77°F | 7 IN. W.C. - 14 IN. W.C. | NATURAL |

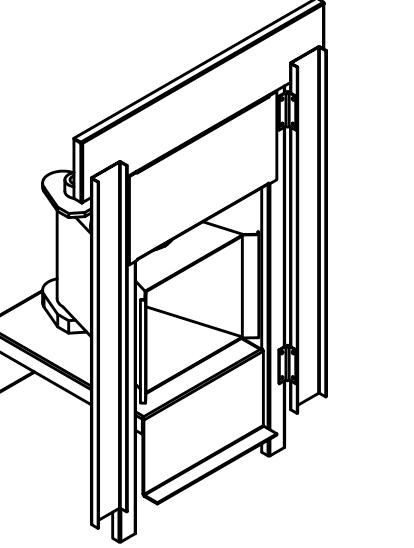
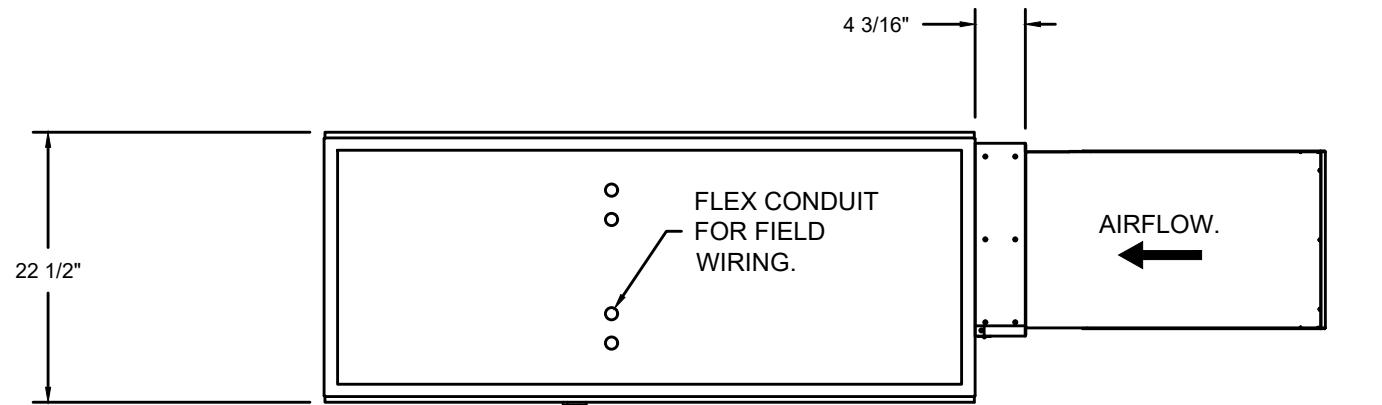
FAN #2 D76D - HEATER (MUA-1)

1. LOW CFM DIRECT FIRED HEATER. DIRECT DRIVE.
2. INTAKE HOOD WITH EZ FILTERS.
3. SIDE DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4"
5. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5"
6. ECM WIRING PACKAGE AND MANUAL OR 0-10VDC C

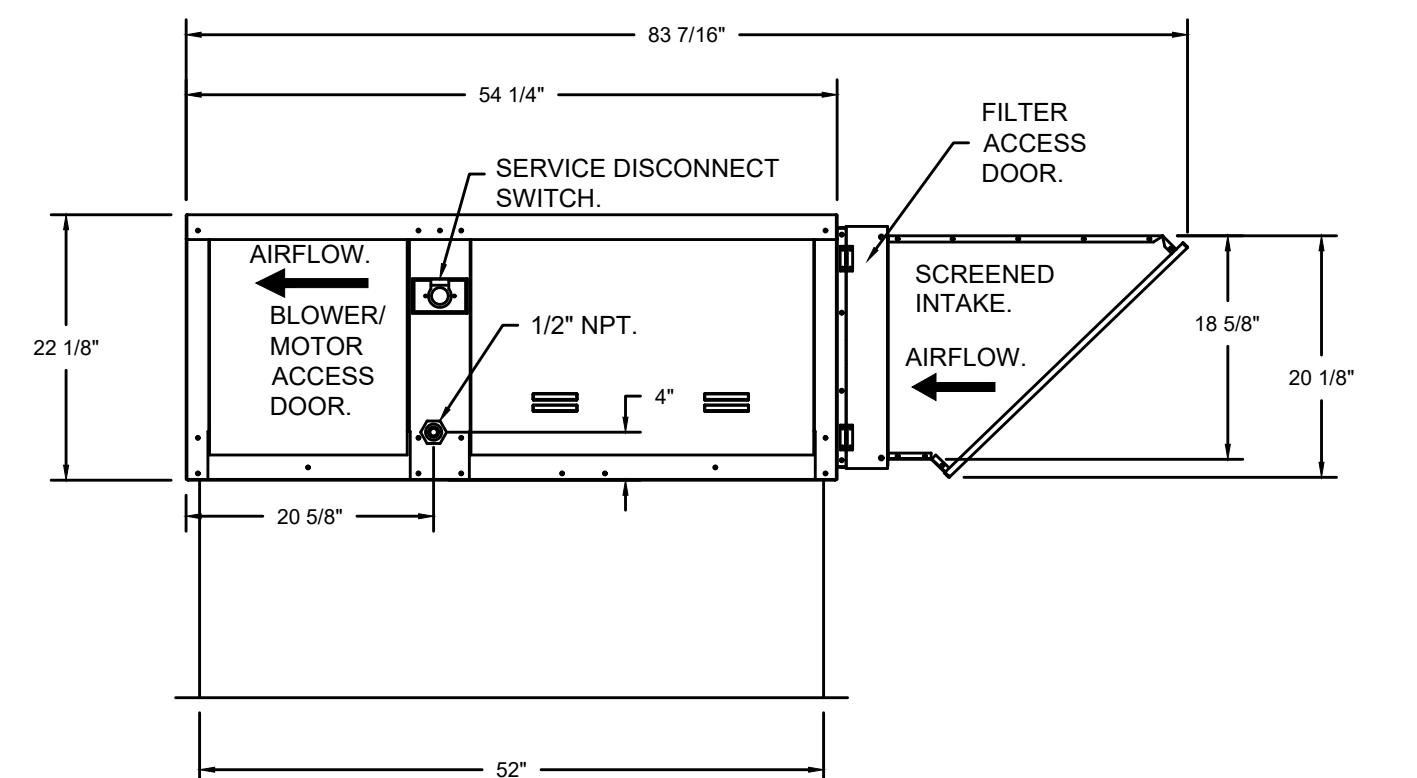
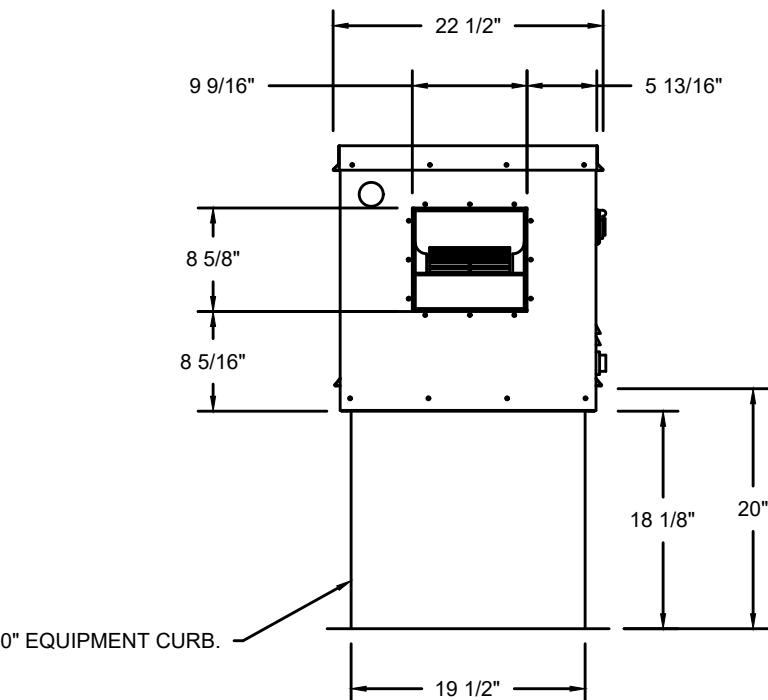
NUMBER "ECM-VCU-RTC"**.

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = -2°F. TEMP. RISE = 77°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 61697.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 67062.
OUTPUT BTUs AT ALTITUDE OF 709 FT. = 60132.
INPUT BTUs AT ALTITUDE OF 709 FT. = 65361.



DUCT FIRED (DF) PROFILE PLATE ASSEMBLY



SELECT FIRED PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:
DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO.: US6629523B2), SELF-ADJUSTING PROFILE TES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE TES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A XIMUM OF 5PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO₂). DIRECT FIRED TES SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT L ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION: SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS: PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18

GENERAL CONSTRUCTION:

OFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
OFILE PLATES SHALL VARY IN SIZE PER UNIT.
OFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
SIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
RING HINGES SHALL BE MADE FROM PLATED STEEL.

MAKEUP AIR UNIT SCHEDULE AND DETAILS

A circular professional engineer license seal. The outer ring contains the text "LICENSED PROFESSIONAL ENGINEER" at the top and "STATE OF ILLINOIS" at the bottom. The inner circle contains "SCOTT JAY BAEUER" at the top and "062-059748" at the bottom. The date "13JUL22" is handwritten at the top, and "EXP 30 Nov 23" is handwritten at the bottom.

M7

SCALE: AS NOTED

PRESENT EQUIPMENT AND DEMOLITION NOTES

A. THE FOLLOWING REMOVED PRESENT EQUIPMENT AND MATERIALS WHICH ARE IN GOOD OPERATING CONDITION (OR ARE PLACED IN GOOD CONDITION), SUITABLE, MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS, AND ARE APPROVED IN WRITING BY ENGINEER, OR CAN NOT BE REUSED (PXR, Pxn, PN).

B. REMOVED DUCTWORK NOT BE REUSED.

C. ANY OF ABOVE EQUIPMENT WHICH IS NOT REUSED AND FOLLOWING REMOVED PRESENT EQUIPMENT SHALL BECOME PROPERTY OF CONTRACTOR, AND SHALL BE REMOVED FROM PREMISES (P).

1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

C. CONTRACTOR SHALL:

1. PROVIDE NEW FLOORS UNDER REMOVED PRESENT EQUIPMENT AND WHERE CALLED FOR.

2. REPAIR FLOORS UNDER AND WALLS ADJACENT TO REMOVED EQUIPMENT, TO MATCH ADJACENT CONSTRUCTION.

3. FILL IN PRESENT CHASES WHICH ARE NO LONGER REQUIRED AND NEATLY PATCH TO MATCH ADJACENT CONSTRUCTION.

4. CUT OPENINGS REQUIRED FOR:

A. HIS WORK;
B. ADMISSION OF NEW EQUIPMENT;
C. REMOVAL OF PRESENT EQUIPMENT;
D. NEW CONNECTION TO PRESENT CONSTRUCTION.

5. PATCH AND REPAIR UNUSED PRESENT HOLES AND OPENINGS, AND THOSE LEFT BY THE REMOVAL OF PRESENT EQUIPMENT AND ADMISSION OF NEW EQUIPMENT.

6. PATCH AND REPAIR PRESENT EQUIPMENT, AND BUILDING CONSTRUCTION WHICH HAS NOT BEEN CUT, REMOVED, DISTURBED OR MARRED, AS REQUIRED, TO RESTORE IT TO ORIGINAL CONDITION BEFORE BEING DISTURBED.

F. UNUSED OPENINGS IN EQUIPMENT, WALLS, CEILING, FLOOR ETC. SHALL BE FILLED.

G. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAINTED SAME AS NEW CONSTRUCTION.

H. CERTAIN ABBREVIATIONS OR SYMBOLS, WHEN APPLIED TO PRESENT (TO EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE THE FOLLOWING MEANINGS:

NC NEW CONNECTIONS TO PRESENT DUCTWORK, EQUIPMENT, PIPING, ETC. INSTALL, TEST, COVER, PAINT, ETC. SAME AS NEW WORK.

P TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.

PX TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC. TO EQUAL ORIGINAL CONDITION. REMOVED MATERIAL MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.

PXR SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED, SAME AS NEW WORK, IN ORIGINAL POSITION, OR CLOSE TO ORIGINAL LOCATION. IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.

PXN REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED SAME AS NEW WORK IN NEW POSITION MARKED "Pxn". IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS EXISTING OR NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., EQUAL TO EXISTING OR NEW WORK.

PN COMPLETELY REINSTALL DEVICE IN NEW LOCATION TO EXISTING OR NEW DUCTWORK AS SHOWN. SAME AS NEW WORK. PROVIDE ALL NECESSARY DUCT OR PIPE EXTENSIONS AS REQUIRED.

I. WORK OF EVERY DIVISION SHALL BE COORDINATED WITH ALL OTHER WORK AND PRESENT CONDITIONS, SO THAT

1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED DURING PERIODS WHEN THOSE SERVICES ARE NEEDED.

2. SPECIAL SYSTEMS SUCH AS FIRE ALARM, SOUND, ETC., OF EVERY KIND TO PRESENT BUILDINGS WILL NOT BE INTERRUPTED DURING WORKING AND/OR OCCUPIED HOURS, EXCEPT AS APPROVED BY THE OWNER.

J. DUCTWORK SERVING NEW AND/OR PRESENT MECHANICAL DEVICES IN FINISHED PRESENT ROOMS OR SPACES SHALL BE CONCEALED IN FINISHED ROOMS, WHERE POSSIBLE OR SHALL BE RUN IN ADJOINING UNFINISHED ROOMS, SHAFTS, CHAMBERS, CLOsets, ROOMS, ETC., EXCEPT WHERE EXPOSED DUCT IS PERMITTED IN FINISHED PRESENT ROOMS BY ARCHITECT IN WRITING. PRESENT DIFFUSERS, GRILLS, REGISTERS, SWITCHES, ETC. SHALL BE REMOVED AS PER NOTE "PX" UNLESS ANOTHER SYMBOL IS SHOWN ON DRAWINGS OR THE DEVICES ARE SERVING OTHER EQUIPMENT WHERE SPECIFICALLY APPROVED BY ARCHITECT IN WRITING. OPENINGS MAY BE PERMITTED TO REMAIN AND BE PROVIDED WITH NEAT FLUSH COVERS, EXTENDING OVER ENTIRE WALL OPENING.

K. UNNEEDED EQUIPMENT, DUCTWORK, ETC. SHALL BE COMPLETELY REMOVED; AND CONSTRUCTION PATCHED AS PER NOTE "PXR". NEW CONNECTIONS TO PRESENT DUCTS/EQUIPMENT, SHALL BE MADE, TESTED, COVERED, PAINTED, ETC., SAME AS NEW EQUIPMENT, PRESENT EQUIPMENT, AND OTHER COVERING DISTURBED BY CONTRACTOR SHALL BE REPAIRED TO EQUAL NEW CONDITION AND PAINTED SAME AS NEW COVERING.

L. WORK SHALL BE COORDINATED SO THAT HEATING, PLUMBING, ELECTRICAL, INTERNET AND TELEPHONE SERVICES TO THE PRESENT BUILDING WILL NOT BE INTERRUPTED, EXCEPT AS APPROVED BY THE OWNER/ARCHITECT.

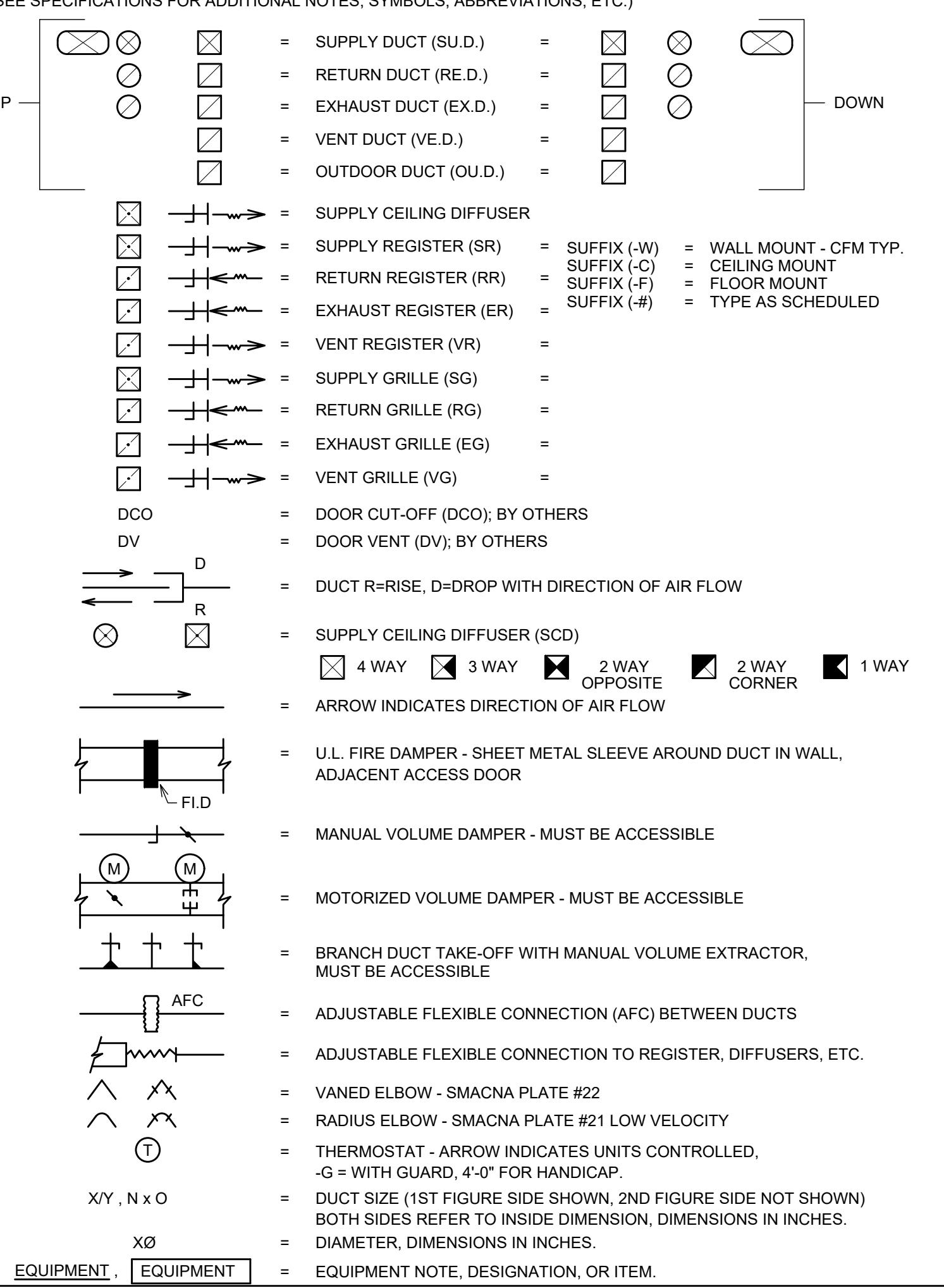
BASIC ABBREVIATIONS

| MARK | DESCRIPTION | MARK | DESCRIPTION |
|--------|--|---------|---------------------------------|
| AAD | AUTOMATIC ALUMINUM DAMPERS | MC | MECHANICAL CONTRACTOR |
| ACCU | AIR COOLED CONDENSING UNIT | MTD | MOUNTED |
| AD | ACCESS DOOR | NC | NEW CONNECTION |
| AFC | ADJUSTABLE FLEXIBLE CONNECTION | OA | OUTDOOR AIR |
| AFF | ABOVE FINISH FLOOR | OAD | OUTDOOR AIR DAMPER |
| ALUM | ALUMINUM | OAI | OUTDOOR AIR INTAKE |
| AP | ACCESS PANEL | O.D. | OUTDOOR AIR DUCT |
| ASC | ABOVE SUSPENDED CEILING | P | PRESENT |
| BOD | BOTTOM OF DUCT | PC | PLUMBING CONTRACTOR |
| BDD | BACK DRAFT DAMPER | PRE | POWER ROOF EXHAUSTER |
| BJA | BETWEEN JOISTS ABOVE | RAD | RETURN AIR DAMPER |
| CAD | COMBUSTION AIR DAMPER | R.E.D. | RETURN AIR DUCT |
| CD | CEILING DIFFUSER (S) SUPPLY (R) RETURN | REF | REFERENCE |
| CFM | CUBIC FEET PER MINUTE | REFRIG. | REFRIGERANT-LIQUID,SUCTION,HGBP |
| CLG | CEILING | RG | RETURN GRILLE |
| CTC | CLOSE TO CEILING (EXPOSED) | RR | RETURN REGISTER |
| CR | CONDENSATE RETURN | RTU | ROOFTOP UNIT |
| CTW | CLOSE TO WALL (EXPOSED) | SCD | SUPPLY CEILING DIFFUSER |
| D | DRAIN | SIM | SIMILAR |
| DC | DUCT COVERING | SG | SUPPLY GRILLE |
| DCO | DOOR CUTOFF (BY OTHERS) | SLD | SUPPLY LINEAR DIFFUSER |
| DL | DUCT LINING | SM | SHEET METAL |
| DS | DISCONNECT SWITCH | SR | SUPPLY REGISTER |
| DV | DOOR VENT (BY OTHERS) | SS | STAINLESS STEEL |
| EC | ELECTRICAL CONTRACTOR | STW | SLEEVE THRU WALL AND SEAL |
| EH | EXHAUST HOOD | S.U.D. | SUPPLY DUCT |
| ER | EXHAUST REGISTER | TBF | TO BELOW FLOOR |
| EF | EXHAUST FAN | TC | TEMPERATURE CONTROL |
| EG | EXHAUST GRILLE | TFA | TO FLOOR ABOVE |
| EX.D | EXHAUST DUCT | TFB | TO FLOOR BELOW |
| EXP | EXPOSED | TF.D. | TRANSFER DUCT |
| F.A.D | FRESH AIR DUCT | TG | TRANSFER GRILLE |
| FBO | FURNISHED BY OTHERS | TJA | THRU JOIST ABOVE |
| FFA | FROM FLOOR ABOVE | TOD | TOP OF DUCT |
| FFB | FROM FLOOR BELOW | TR | THROUGH ROOF |
| F.I.D. | FIRE DAMPER | TYP | TYPICAL |
| G | GAS PIPE | VE.D. | VENT AIR DUCT |
| GC | GENERAL CONTRACTOR | VD | VOLUME DAMPER |
| HGBP | HOT GAS BYPASS PIPING | VG | VENT GRILLE |
| HVAC | HEATING, VENTILATING & AIR CONDITION. | VTR | VENT THRU ROOF |
| LPS | LOW PRESSURE STEAM | W/I | WITH |

SEE SPECIFICATIONS FOR ADDITIONAL ABBREVIATIONS, PREFIXES, SUFFIXES, ETC.

HVAC SHEET METAL SYMBOLS:

(SEE SPECIFICATIONS FOR ADDITIONAL NOTES, SYMBOLS, ABBREVIATIONS, ETC.)



MECHANICAL GENERAL NOTES:

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICTS. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES, ETC., SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOT WITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLEARNESS OF PRESENTATION.

CONTRACTOR IS ALLOWED TO MAKE MINOR CHANGES TO THE PIPING TO AVOID FIELD CONFLICTS AT NO ADDITIONAL COST TO THE OWNER AND AS LONG AS THE RELOCATION DOES NOT AFFECT THE PERFORMANCE OF THE SYSTEM.

2. EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER CONTRACTORS TO VERIFY SPACES IN WHICH THEIR WORK WILL BE INSTALLED IS CLEAR OF OBSTRUCTIONS, MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING, WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.

FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS NEEDED FOR WORK, AND ALSO FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.

WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS.

CONTRACTOR TO REVIEW, PRIOR TO BIDDING, ALL DRAWINGS TO COORDINATE VARIOUS WORK AS CALLED FOR. CONTRACTOR SHALL CAREFULLY CHECK ALL DRAWINGS FOR ALL TRADES, AND ANY LACK OF COORDINATION BETWEEN HIS WORK AND DRAWINGS FOR JOB CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE DRILLING, SAW CUTTING, ETC., AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/ELECTRICAL ITEMS SHALL BE THE RESPONSIBILITY OF THE APPLICABLE MECHANICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

2. HEATING, VENTILATING, AIR CONDITIONING, AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER, CONDUITS, DISCONNECTS, BREAKERS, FUSES, AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER. INCREASED CURRENT REQUIREMENTS NECESSITATING LARGER WIRE, BREAKERS, FUSES, SWITCHES, ETC. TO ACCOMMODATE ANY ALTERNATE OR SUBSTITUTE MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR. FURNISHING EQUIPMENT, WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT.

3. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL CEILING DIFFUSERS, REGISTERS, AND/OR GRILLES AS TO LOCATION, QUANTITIES AND PROPER TYPES FOR SURFACE MOUNT AND/OR LAY-IN SUSPENDED CEILINGS AND LIGHT PATTERNS. OPENINGS SHALL BE IN CENTER OF TILES OR AS DIRECTED BY ARCHITECT/ENGINEER.

4. CONTRACTOR SHALL INCLUDE IN HIS WORK THE RELOCATION OF ALL CROSS BRACING, AS REQUIRED TO FIT DUCTS BETWEEN JOISTS. THIS WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR WITH ARCHITECTURAL APPROVAL.

5. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.

6. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC. AS CLEARANCE IS MINIMAL, COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT. ALL DUCTWORK IS ABOVE SUSPENDED CEILINGS, UNLESS NOTED OTHERWISE.

7. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREAS MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING. INSULATE DUCTWORK AS NOTED.

8. INSTALL 1" OF NON-SHRINK GROUT AROUND DUCTWORK ON EACH WALL FACE TO SEAL OPENINGS AND ELIMINATE SOUND TRANSFER WITH AIR-TIGHT CONNECTIONS.

9. OUTDOOR INTAKE SHEETMETAL DUCTWORK SHALL BE WATER-TIGHT WITH SOLDERED SEAMS. PITCH DUCTWORK TO WALL LOUVER AND SCREEN TO DRAIN ANY MOISTURE TO BUILDING EXTERIOR. INTAKES TO BE INSULATED. CAULK AROUND INTAKE AT EXTERIOR WALL, COORDINATE WITH GENERAL CONTRACTOR.

10. CONTRACTOR SHALL INCLUDE IN HIS WORK (1) SET OF FILTERS TO BE USED DURING CONSTRUCTION FOR ALL AIR HANDLING EQUIPMENT, FURNACES, ENERGY RECOVERY VENTILATORS, ROOFTOP UNITS, RETURN FANS, FILTER BOXES, FAN OPERATED VAV BOXES, ETC. CONTRACTOR PRIOR TO AIR BALANCING AND BUILDING OCCUPANCY SHALL INSTALL A COMPLETE SET OF CLEAN FILTERS. PROVIDE TO OWNER (1) COMPLETE SPARE/REPLACEMENT SET OF FILTERS FOR EACH PIECE OF EQUIPMENT. PROVIDE ALSO TO OWNER IN WRITING REPLACEMENT SIZES, TYPE, NUMBER PER EQUIPMENT, LOCATIONS, ETC.

11. UPON BALANCING, IF SYSTEM(S) CANNOT BE SUCCESSFULLY BALANCED AS AGREED BY OWNER/ARCHITECT/ENGINEER THEN ADDITIONAL DAMPERS, BELTS, SHEAVES, OR PULLEYS WILL BE INSTALLED TO PROVIDE PROPER AIR QUANTITIES, ACCEPTABLE SOUND LEVELS AND TEMPERATURE/HUMIDITY REQUIREMENTS BY THE HVAC CONTRACTOR WITHOUT INCREASE IN CONTRACT PRICE WITHIN THE GUARANTEE PERIOD.

12. SCHEDULE OF DUCT INSULATION:

A. RECTANGULAR/ROUND SUD/R.E.D./V.E.D., W/3" DC, MINIMUM INSTALLED R FACTOR OF 8; IN ATTIC SPACE.

B. RECTANGULAR SUD./V.E.D., W/1-1/2" DL OR 2" DC, MINIMUM INSTALLED R FACTOR OF 6; ASC OR IN NON-CONDITIONED SPACES.

C. ROUND SUD./V.E.D., W/2" DC, MINIMUM INSTALLED R FACTOR OF 6; ASC OR IN NON-CONDITIONED SPACES.

D. RECTANGULAR R.E.D. W/1-1/2" DL, MINIMUM INSTALLED R FACTOR OF 6; WHERE INDICATED ON DRAWINGS.

E. ROUND FLEXIBLE SUD./V.E.D., W/2" MINIMUM INSTALLED R FACTOR OF 6; PRE-INSULATED DC. 5 FT. 0 IN. MAX LENGTH.

F. RECTANGULAR AND ROUND SUD. W/2" DC.

G. RECTANGULAR EX.D. FROM EXHAUST REGISTER W/1" DL TO 5 FT. DOWNSTREAM OF EXHAUST REGISTER, EXCEPT WET AREAS SUCH AS SHOWERS.

H. ROUND OR RECTANGULAR EX.D. W/1" DC AT 5 FT. BEFORE EF OR 5 FT. BEFORE DUCT LEAVES INTERIOR, UNLESS DL IS CALLED FOR.

I. EXTERIOR RECTANGULAR/ROUND SUD./RE.D./V.E.D. W/3" DC, 6 LB. DENSITY, FIBERGLASS WITH FOIL FACE, MINIMUM INSTALLED R FACTOR OF 12; .020 ALUMINUM JACKET, SEAL WEATHERTIGHT.

13. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAINTED SAME AS NEW CONSTRUCTION.

14. THE ENGINEER IS NOT PROVIDING PROJECT ADMINISTRATION OR ANY FORM OF PROJECT MANAGEMENT FOR THE CONSTRUCTION OF THIS BUILDING. THE USE OF THESE DRAWINGS BY ANY CONTRACTOR, SUB-CONTRACTOR, BUILDERS, TRADESMEN OR WORKER SHALL INSTIGATE A HOLD HARMLESS AGREEMENT BETWEEN THE DRAWING USER AND THE ENGINEER.

15. THE USER OF THE DRAWINGS AGREES TO HOLD THE ENGINEER HARMLESS FOR ANY RESPONSIBILITY IN REGARD TO CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES AND FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND FURTHER SHALL HOLD THE ENGINEER HARMLESS FOR COST AND PROBLEMS ARISING FROM THE NEGLIGENCE OF THE CONTRACTOR, SUB-CONTRACTOR, TRADESMEN OR WORKER. THE USE OF THESE DRAWINGS ALSO IMPLIES THAT THE ENGINEER SHALL TAKE NO RESPONSIBILITY FOR THE PLANNED USER'S

DIVISION 23 - MECHANICAL

SECTION 23010 - BASIC MECHANICAL REQUIREMENTS:

1. CONDITIONS:

THIS SECTION SHALL APPLY TO ALL SECTIONS IN DIVISION 23.

GENERAL CONDITIONS OF THE CONTRACT AND THE ARCHITECTURAL SUPPLEMENTARY AND GENERAL CONDITIONS APPLY TO THIS SECTION/DIVISION. THE SUPPLEMENTARY GENERAL CONDITIONS FOR DIVISION 26 - ELECTRICAL, ALSO APPLY TO THIS SECTION/DIVISION.

2. SCOPE OF WORK:

PROVIDE COMPLETE SYSTEMS AS CALLED FOR, AND/OR SHOWN, AND/OR SPECIFIED. HVAC OR RESPECTIVE SUB-CONTRACTORS SHALL FURNISH AND COMPLETELY INSTALL THE SYSTEM, SERVICE, EQUIPMENT, OR MATERIAL NAMED, TOGETHER WITH OTHER ASSOCIATED DEVICES, EQUIPMENT, MATERIALS, WIRING, PIPING, ETC., AS REQUIRED FOR A COMPLETE SATISFACTORY OPERATING INSTALLATION BY THE RESPECTIVE CONTRACTOR. OTHER SUBCONTRACTORS, AS REQUIRED TO PERFORM WORK CALLED FOR, SHALL BE RESPONSIBLE TO THE HVAC CONTRACTOR RESPECTIVELY. SECURE ALL PERMITS FOR WORK AND INSPECTIONS AS REQUIRED.

3. BASIC SYSTEMS:

SYSTEMS PROVIDED SHALL INCLUDE BUT SHALL NOT BE LIMITED TO:

- A. CONDITIONS, SCOPE OF WORK, BASIC SYSTEMS, PERMITS AND FEES, CODES, STANDARDS AND REGULATIONS.
- B. MATERIALS AND EQUIPMENT, WORK PRIORITY OVER OTHER TRADES, COORDINATION, WIRING, OPENINGS, SLEEVES AND CHASES, EQUIPMENT INSTALLATION (FBO)-FURNISHED BY OTHERS, ACCESS PANELS, EQUIVALENT MAKE EQUIPMENT, SHOP DRAWINGS.
- C. VERIFICATION, SUPERVISION AND INSTRUCTION, IDENTIFICATION, PAINTING, CLEANING, TESTING AND BALANCING, GUARANTEE, RECORD DOCUMENTS.

4. PERMITS AND FEES:

HVAC SHALL BE RESPONSIBLE FOR THE OBTAINING OF THEIR RESPECTIVE PERMITS, AND THEIR COSTS, AS WELL AS OTHER FEES NECESSARY TO THE PROJECT INCLUDING INSPECTIONS. PERMITS AND FEES SHALL ALL BE INCLUDED FOR ALL REQUIRED NATURAL GAS, BUILDING DEPT. REQUIREMENTS, ETC.

5. CODES, STANDARDS, AND REGULATIONS:

EQUIPMENT, DEVICES, APPARATUS AND INSTALLATIONS TO BE IN FULL COMPLIANCE WITH CURRENT (LATEST EDITION) APPLICABLE LOCAL, CITY, COUNTY, STATE AND GOVERNMENT REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OWNER'S INSURANCE COMPANY STANDARDS, AMERICANS WITH DISABILITIES ACT, LATEST EDITION OF ILLINOIS ACCESSIBILITY CODE, LATEST EDITION AND AMENDMENTS OF ILLINOIS STATE PLUMBING CODE, NATIONAL ASSOCIATION OF ROOFING CONTRACTORS, LOCAL GAS AND ELECTRIC UTILITY COMPANIES, LABOR REGULATIONS, AND OTHER STATE OF ILLINOIS DEPARTMENT OF PUBLIC HEALTH RULES. CHANGES REQUIRED TO CONFORM TO REQUIREMENTS SHALL BE MADE WITHOUT INCREASE IN CONTRACT PRICE AS APPROVED BY THE ARCHITECT.

ELECTRICAL EQUIPMENT, WIRING, GAS BURNING EQUIPMENT, HANDLING AND STORAGE EQUIPMENT, ALL WATER/STEAM/DRAIN/WASTEVENT PIPING, REFRIGERATION PIPING, GAS VALVES AND PIPING, INSULATING MATERIALS, ETC., SHALL COMPLY WITH REQUIREMENTS OF NFPA, NEC, UL, AGA, OSHA, EPA, ICC, STATE AND FEDERAL SAFETY CODES FOR A PARTICULAR TYPE INSTALLATION AND SHALL BE SO LABELED WHERE APPLICABLE.

ELECTRICAL DESIGN FOR NUMBER OF WIRES AND SIZES, CONDUIT SIZES, CIRCUIT BREAKER SIZES, ETC., ARE BASED ON ELECTRICAL CHARACTERISTICS OF EQUIPMENT SCHEDULED OR SPECIFIED. IF ELECTRICAL CHARACTERISTICS OF EQUIPMENT TO BE USED DIFFER FROM THOSE SPECIFIED, ALL CHANGES (IF REQUIRED) RELATIVE TO CIRCUIT BREAKER SIZES, NUMBER OF WIRES AND SIZES, CONDUIT SIZES, ETC., SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE EQUIPMENT FURNISHING OR INSTALLING CONTRACTOR. CHANGES RELATIVE TO THE ABOVE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, ENGINEER, AND TRADES INVOLVED, IN WRITING AND SHALL BE APPROVED BEFORE INSTALLATION TO AVOID CONFLICT. CHANGES SHALL BE MADE WITHOUT INCREASE OF CONTRACT PRICE TO THE OWNER.

6. MATERIALS AND EQUIPMENT:

MATERIALS AND EQUIPMENT SHALL BE OF NEW CONSTRUCTION, AND QUALITY SPECIFIED.

7. WORK PRIORITY OVER THE OTHER TRADES:

ALL CONTRACTORS FOR THE MECHANICAL-ELECTRICAL TRADES ARE TO BE GOVERNED AS FOLLOWS AND WORK IN COOPERATION WITH ONE ANOTHER TO FIT PIPING AND DUCTWORK INTO THE STRUCTURE AS JOB CONDITIONS MAY DEMAND. ALL FINAL DECISIONS AS TO RIGHT OF WAY AND RUN OF PIPE, DUCTS, ETC., TO BE MADE BY ARCHITECT.

IN GENERAL, PRIORITY IS TO BE ARRANGED AS FOLLOWS:

- D. SHEET METAL DUCT WORK/HVAC UNITS.
- E. ELECTRICAL CONDUITS.

8. COORDINATION:

COORDINATE WORK OF HVAC, TEMPERATURE CONTROLS, PLUMBING WORK, FIRE PROTECTION WORK, ELECTRICAL WORK, GENERAL CONTRACTOR TYPE WORK, ETC., TO AVOID INTERFERENCES AND CONFLICTS OF WORK INDICATED. WORK MUST BE COMPLETED AS SCHEDULED BY THE ARCHITECT. VERIFY AT TIME OF BIDDING TO AVOID MISUNDERSTANDING. ANY DISCREPANCIES NOTICED AT TIME OF PRE-BID MEETING AND/OR INSPECTION OF SITE BY THOSE INSPECTING FOR BIDDING THE PROJECT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY SO THAT CORRECTIONS CAN BE MADE BY ADDENDUM PRIOR TO BID DATE.

9. WIRING:

WIRING TO BE IN COMPLIANCE WITH CURRENT (LATEST EDITION) N.E.C. AND ALL APPLICABLE CODES. ALL MOTORS, EQUIPMENT, WIRING, CABLING, DEVICES, ETC., TO BE NON-RADIO INTERFERING. LINE WIRES, OF PROPER SIZE, SHALL BE FURNISHED TO THE EQUIPMENT WITH FINAL POWER CONNECTIONS MADE BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR WILL FURNISH DISCONNECT SWITCHES FOR EQUIPMENT AND WILL FURNISH STARTERS, EXCEPT FOR PACKAGED EQUIPMENT WHICH COMES FACTORY-WIRED COMPLETE WITH STARTERS. HVAC CONTRACTOR WITHIN HIS CONTRACT, SHALL BE RESPONSIBLE FOR PROVIDING RESPECTIVE CONTROLS FOR ALL OF HIS EQUIPMENT, PROVIDE CONTROL DEVICES, CONTROL PANELS, CONTROLS, INTERLOCKS, ETC., TO GIVE A COMPLETE/SATISFACTORY OPERATING SYSTEM. IF ELECTRICAL CONTRACTOR FAILS TO COORDINATE OR PROVIDE REQUIRED STARTERS, HVAC CONTRACTOR SHALL PROVIDE AS REQUIRED, TO GIVE A COMPLETE OPERATING ACCEPTABLE SYSTEM. RESPECTIVE CONTRACTORS OR RESPECTIVE SUBCONTRACTORS WILL DO ALL CONTROL WIRING, INTERLOCK WIRING, ETC., FROM INFORMATION PROVIDED BY THE RESPECTIVE HVAC CONTRACTOR FOR WORK REQUIRED.

FOR ELECTRIC/ELECTRONIC PORTION OF THE SYSTEM, PROVIDE ALL RELAYS, TRANSFORMERS, PROTECTION, CIRCUIT BREAKERS, DEVICES, ETC., WITH WIRING AND CONDUITS AS REQUIRED BY LATEST USE. CONCRETE PIPES, CONDUITS, WIRING, ETC., IN ALL FINISHED AREAS, RUN PIPING, CONDUITS, ETC., EXPOSED IN UNFINISHED AREAS SUCH AS MECHANICAL ROOMS, ETC., AND WHERE ALLOWED, WHERE EXPOSED, RUN CONDUIT AND PIPING IN STRAIGHT LINES, PARALLEL TO WALLS AND CEILING. WHERE RETURN AIR PLenums ARE USED, PIPING, WIRING AND ALL CABLES USED SHALL BE SUITABLE FOR THIS TYPE INSTALLATION AND SHALL NOT CONTRIBUTE TO COMBUSTION OR PRODUCTION OF SMOKE IN EVENT OF FIRE. FOR CONTROL SYSTEMS, PROVIDE SHIELDED CABLE AND CONNECTIONS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.



10. OPENINGS, SLEEVES, AND CHASES:

EACH RESPECTIVE CONTRACTOR SHALL SET SLEEVES AND INSERTS REQUIRED FOR PIPING, HANGERS, INTAKES, LOUVERS, VENTILATORS, DUCTWORK, CURBS, ETC., IN CONSTRUCTION. RESPECTIVE CONTRACTOR TO FURNISH GENERAL CONTRACTOR WITH COMPLETE INFORMATION AS TO SIZE AND LOCATION OF OPENINGS THROUGH WALLS, FLOORS, ROOFS, ETC., FOR INSTALLING THIS WORK. IF THIS INFORMATION IS NOT SUPPLIED BEFORE NEW WALLS, FLOORS, ROOFS, ETC., ARE BUILT, RESPECTIVE CONTRACTOR SHALL FURNISH, CUT AND PATCH ALL REQUIRED OPENINGS FOR INSTALLATION OF EQUIPMENT, MATERIAL DEVICES, ETC., AS REQUIRED AND APPROVED BY THE ARCHITECT. FOR NEW CONSTRUCTION, GENERAL CONTRACTOR WILL CUT HOLES THROUGH ROOF AND ROOFING CONTRACTOR WILL DO ALL FLASHING, ROOF PATCHING, ETC., UNLESS OTHERWISE NOTED. ROOF OPENINGS 18" AND LARGER SHALL BE FRAMED WITH HEADERS CONNECTED TO ROOF JOISTS WITH STEEL MEMBERS FRAMED BETWEEN. VERIFY WITH ARCHITECT. ALL ROOFING WORK AND EQUIPMENT TO MEET REQUIREMENTS OF NATIONAL ASSOCIATION OF ROOFING CONTRACTORS.

11. ACCESS PANELS:

HVAC OR RESPECTIVE SUB-CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR ALL VALVES, CONTROLS, ETC., IN DRYWALL CEILING, CHASES AND OTHER OTHERWISE UNACCESSIBLE LOCATIONS. ACCESS PANELS SHALL BE OF PRIMED STEEL CONSTRUCTION WITH HINGED COVER. PANEL SHALL BE PROVIDED WITH DRYWALL RING WHEN INSTALLED IN DRYWALL CEILINGS OR WALLS. PANEL SHALL BE OF MILCOR PRODUCTS, ELMODOR, INLAND STEEL OR OTHER EQUIVALENT MAKE. MINIMUM SIZE SHALL BE 18" X 18" UNLESS APPROVED OTHERWISE. COORDINATE PANEL LOCATION AND SIZING INFORMATION WITH GENERAL CONTRACTOR, AND PROVIDE PANELS TO GENERAL CONTRACTOR FOR INSTALLATION.

12. EQUIVALENT MAKE EQUIPMENT:

EQUIVALENT MAKE EQUIPMENT FOR EQUIPMENT MANUFACTURERS NOT LISTED IN SPECIFICATIONS ARE SUBJECT TO REVIEW OF SAID EQUIPMENT BEFORE BIDDING. PRIOR TO BIDDING, ANY COMPANY WHO EXPECTS TO BE NAMED BY CONTRACTOR AS A SUPPLIER OF EQUIPMENT SPECIFIED AND/OR CALLED FOR ON PLANS OR IN SPECIFICATIONS, SHALL HAVE ON FILE WITH THE DESIGN ENGINEER COPIES OF COMPLETE PUBLISHED TECHNICAL DATA.

IT SHALL BE THE MANUFACTURER'S RESPONSIBILITY TO CERTIFY THE FOLLOWING:

- A. SHOW PERFORMANCE CHARACTERISTICS OF SELECTED EQUIPMENT, SIZES INDICATED AND DIMENSIONAL DATA TO SHOW THAT EQUIPMENT WILL FIT INTO SPACE ALLOWED.
- B. INDICATE EQUIPMENT CONSTRUCTION AND MATERIALS USED IN SAME.
- C. INDICATE APPLICATION AS CALLED FOR.
- D. INDICATE ELECTRICAL REQUIREMENTS THAT ARE EQUAL TO OR LESS THAN EQUIPMENT SPECIFIED, COMPLETE SEQUENCE OF OPERATION AND COMPLETE INSTALLATION INSTRUCTIONS AS REQUIRED BY MANUFACTURER FOR INTENDED USE.
- E. SHOW DATA ITEM FOR ITEM, FOR EQUIPMENT SPECIFIED.

DATA SUBMITTED MUST BE RECEIVED BY THE DESIGN ENGINEER NOT LATER THAN TEN (10) WORKING DAYS PRIOR TO THE BID DATE TO ALLOW SUFFICIENT TIME FOR REVIEW OF SUBMITTALS. AN ADDENDA WILL BE ISSUED IF EQUIPMENT IS TO BE CONSIDERED AS AN "EQUIVALENT MAKE."

EQUIPMENT NOT CONFORMING TO THE ABOVE WILL NOT BE CONSIDERED.

13. VERIFICATION:

VERIFICATION OF MECHANICAL ITEMS FOR PROJECT SHALL BE INCLUDED. CONTRACTOR, PRIOR TO BIDDING, SHALL SECURE ALL NECESSARY INFORMATION, POINTS FOR NEW CONNECTIONS TO ANY TYPE OF SERVICE AS REQUIRED AND SHALL INCLUDE NECESSARY COST FOR FEES AS REQUIRED IN HIS BID FOR THESE CONNECTIONS. CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE FOR THE WORK TO ELIMINATE MISCONCEPTIONS OF FACT, TO VERIFY AND DETERMINE DIMENSIONS, ELEVATIONS, LOCATION OF EXISTING EQUIPMENT, SERVICES, PIPING, AND TO OBSERVE FEATURES AFFECTING WORKING CONDITIONS, TRANSPORTATION AND STORAGE FACILITIES. CONTRACTOR SHALL GIVE DUE CONSIDERATION TO SAME IN PREPARING PROPOSALS AS NO EXCEPTIONS WILL BE CONSIDERED AFTER AWARDING OF CONTRACT, NOR WILL CONTRACTOR BE ENTITLED TO ANY EXTRA COMPENSATION FOR HIS FAILURE TO VERIFY CONDITIONS AT THE SITE OR AT POINTS OF CONNECTION.

THE RUN OF ALL LINES SHOWN ON DRAWINGS IS TO BE REGARDED AS DIAGRAMMATIC AND TENTATIVE. CONTRACTOR SHALL CAREFULLY VERIFY LOCATION, DEPTH, AND SIZE OF LINE OR SEWER TO WHICH CONNECTION IS PROPOSED. BEFORE INSTALLING ANY LINES, CONTRACTOR SHALL ASSURE THAT THEY CAN BE RUN AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH FOOTING, OTHER PIPING, FIXTURES, ETC. ANY NECESSARY DEVIATION SHALL BE REFERRED TO ARCHITECT FOR APPROVAL BEFORE ANY LINES OR SERVICE ARE RUN, AT NO INCREASE IN CONTRACT PRICE.

14. SUPERVISION AND INSTRUCTION:

SPECIAL SUPERVISION AND INSTRUCTIONS SHALL BE INCORPORATED INTO THE PROJECT. EACH SPECIALIZED INSTALLATION SHALL BE MADE UNDER SUPERVISION OF A CONTRACTOR TRAINED AND QUALIFIED BY THE CONTRACTOR'S SUPERVISOR, AND WHO WILL ALSO SUBMIT A WRITTEN REPORT THAT THE INSTALLATION HAS BEEN INSTALLED IN KEEPING WITH SPECIFIED REQUIREMENTS AND THE MANUFACTURER'S STANDARDS. (B) INSTRUCT OWNER'S OPERATING PERSONNEL BEFORE FINAL ACCEPTANCE. (C) PREPARE PERMANENT FORM OPERATING INSTRUCTIONS, PARTS LISTS, WIRING DIAGRAMS AND CONTROL DIAGRAMS, IN BOOKLET FORM, IN TRIPPLICATE, TURNED OVER TO OWNER; (D) CERTIFY THAT INSTALLATION IS OPERATING SATISFACTORILY UNDER OWNER'S PERSONNEL; AND (E) VERIFY AND CERTIFY IN WRITING TO THE ARCHITECT, THAT ALL EQUIPMENT AND CONTROL OPERATING INSTRUCTIONS, SERVICE AND MAINTENANCE MANUALS, AND COORDINATION OF EQUIPMENT TO OPERATION HAS BEEN COMPLETED. CERTIFICATION AND SIGN-OFF SHALL BE COMPLETED BY OWNER OR OWNER'S REPRESENTATIVE.

INSTRUCTION ON EQUIPMENT SHALL BE AS FOLLOWS:

INSTALLATION REQUIRED EACH FOR 2 HOURS OR MORE NUMBER OF INSTRUCTION VISITS
HVAC SYSTEMS - TOTAL 1

15. PAINTING:

COORDINATE PAINTING REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.

16. CLEANING, TESTING, AND BALANCING:

EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF THEIR EQUIPMENT AND SYSTEMS AND SHALL REMOVE ALL DEBRIS CREATED BY THEMSELVES FROM THE PREMISES, PRIOR TO FINAL ACCEPTANCE.

EACH HEATING, AIR CONDITIONING, VENTILATING, EXHAUST, AIR MOVING SYSTEM, ETC., SHALL BE TESTED AND BALANCED (REBALANCE AS NECESSARY) TO APPROPRIATE AIR QUANTITIES, SOUND LEVELS, TEMPERATURE, AND HUMIDITY AS CALLED FOR, TO GIVE UNIFORM OWNER ACCEPTABLE AIR DISTRIBUTION AND COMFORT. UPON BALANCING IF SYSTEM CANNOT BE SUCCESSFULLY BALANCED AS AGREED BY OWNER/ARCHITECT/ENGINEER THEN ADDITIONAL DAMPERS, BELTS, SHEAVES, OR PULLEYS WILL BE INSTALLED TO PROVIDE PROPER AIR QUANTITIES, ACCEPTABLE SOUND LEVELS AND TEMPERATURE/HUMIDITY REQUIREMENTS BY THE HVAC CONTRACTOR WITHOUT INCREASE IN CONTRACT PRICE WITHIN THE GUARANTEE PERIOD.

BALANCING TO BE DONE IN ACCORDANCE WITH AABC, ASHRAE, SMACNA, NEBB, SMARTA, OR EQUIVALENT STANDARDS. ALL AIR QUANTITIES OR SETTINGS SHALL BE RECORDED ON "AS-BUILT" DRAWINGS.

FINAL CERTIFIED REPORTS SHALL BE SUBMITTED IN THE FORM OF SHOP-DRAWINGS FOR REVIEW AND FINAL ACCEPTED SIGNATURES BY OWNER/ARCHITECT/ENGINEER.

17. GUARANTEE:

HVAC CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, APPARATUS, MATERIALS AND WORKMANSHIP ENTERING INTO THIS CONTRACT AND SHALL REPLACE ALL PARTS AT HIS OWN EXPENSE WHICH HAVE PROVEN DEFECTIVE WITHIN ONE (1) YEAR FROM FORMAL ACCEPTANCE. INDIVIDUAL ITEMS SHALL BE GUARANTEED AS CALLED FOR IN ADDITION TO THE ABOVE.

END OF SECTION 23010

DIVISION 23 - MECHANICAL

SECTION 23500 - HVAC SPECIFICATIONS/NOTATIONS

1. CONDITIONS:

GENERAL CONDITIONS OF THE CONTRACT AND THE ARCHITECTURAL SUPPLEMENTARY AND GENERAL CONDITIONS APPLY TO THIS SECTION/DIVISION. THE SUPPLEMENTARY GENERAL CONDITIONS FOR DIVISION 16 - ELECTRICAL, ALSO APPLY TO THIS SECTION/DIVISION.

2. SYSTEMS:

MECHANICAL SYSTEM PROVIDED SHALL INCLUDE BUT NOT BE LIMITED TO:

- A. CONDITIONS, SYSTEMS.
- B. SHEET METAL DUCTWORK AND ACCESSORIES.
- C. KITCHEN EXHAUST HOOD/FAN/CONTROL SYSTEM, DIRECT GAS-FIRED MAKE-UP AIR UNIT.

3. SHEET METAL DUCTWORK AND ACCESSORIES:

GREASE DUCT SYSTEM TO BE INSTALLED, CONSTRUCTED, FABRICATED, ETC., IN ACCORDANCE WITH LATEST CODES, STACK SERVING MEDIUM/HIGH HEAT KITCHEN HOOD SHALL CONSIST OF DOUBLE-WALL METAL STACK, TESTED TO UL 1978 AND BE UL LISTED, FOR USE WITH KITCHEN HOOD EQUIPMENT, IN COMPLIANCE WITH NFPA 96-97 AND IICC 96-37. FABRICATE WITH 4 INCH MINIMUM AIR SPACE BETWEEN WALLS. CONSTRUCT INNER JACKET OF 20 GAUGE ANS/AM 167, TYPE 304 OR TYPE 316 STAINLESS STEEL. CONSTRUCT OUTTER JACKET OF ALUMINUM COATED STEEL: FOR SIZES 10 INCHES TO 24 INCHES, 24 GAUGE, AND FOR SIZES 28 INCHES TO 48 INCHES, 18 GAUGE. PROVIDE ACCESSORIES EACH BEARING FACTORY-APPLIED UL LABEL (AS REQUIRED), INSULATION BETWEEN JACKETS TO BE 4" HIGH TEMPERATURE CERAMIC FIBER, FIRE RESISTANCE RATING TO BE 2 HOURS F & T. MATERIAL TO BE SERIES 4G METAL-FAB OR EQUIVALENT. COMPLETE INSTALLATION TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES.

5. DIRECT GAS-FIRED MAKE-UP AIR UNIT (MAU):

PROVIDE INDOOR OR OUTDOOR ROOFTOP TYPE, DIRECT FIRED, 100% OUTSIDE AIR, NATURAL GAS HEAT/MAKEUP AIR UNITS, OF TYPE AS CALLED FOR AND AS MANUFACTURED BY CAPTIVEAIRE, ECON AIR,

UNIT SHALL MEET THE REQUIREMENTS OF UL NEC, AGA, ANSI STANDARD Z83.4 OWNER'S INSURANCE COMPANY, FACTORY MUTUAL RESEARCH CORPORATION FM OPTION, IF REQUIRED, AND SHALL INCLUDE BUT SHALL NOT BE LIMITED TO THE TYPE, SIZE, CAPACITY, ETC., AS CALLED FOR ON DRAWINGS. UNIT SHALL BE FACTORY ASSEMBLED AND FLAME/RUN TESTED PRIOR TO SHIPPING.

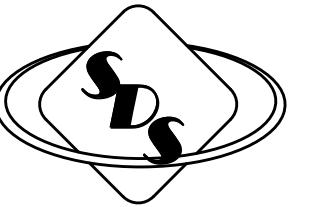
UNIT SHALL BE CONSTRUCTED OF WEATHERIZED HEAVY GAUGE FINISHED GALVANIZED STEEL, ANGLE IRON FRAMEWORK, AND REINFORCED WITH STEEL STRUCTURAL MEMBERS. ACCESS DOORS SHALL BE PROVIDED TO ALLOW ACCESS TO THE BURNER AND BLOWER ASSEMBLIES. OBSERVATION PORTS SHALL BE LOCATED ON THE ACCESS DOOR AND OPPOSITE BURNER END SECTION FOR OBSERVATION OF THE MAIN FLAME. UNIT SHALL BE PRIMED WITH A HEAT AND RUST RESISTANT PRIMER PRIOR TO THE FINAL APPLICATION OF EPOXY PAINT FINISH WHICH SHALL BE SUITABLE FOR EITHER INDOOR OR OUTDOOR APPLICATION. CHANNEL IRON BASE RAILS SHALL RUN FROM ONE SIDE OF EACH UNIT TO THE OTHER SIDE AND SHALL BE USED FOR VIBRATION ISOLATOR MOUNTING AND INSTALLATION SUPPORT. EACH UNIT SHALL BE FULLY INSULATED, WITH 1" THICK, NFPA 90, THERMAL AND ACOUSTICAL INSULATION. ALL COMPONENTS, AND ACCESS PANELS SHALL BE WEATHER/WATER TIGHT FOR OUTDOOR AND/OR INDOOR INSTALLATIONS.

BLOWER SCREWS SHALL BE WELDED TO THE FRAME WORK AND BRACED. BLOWER WHEELS SHALL BE STATICALLY AND DYNAMICALLY BALANCED, FORWARDLY CURVED. DOUBLE WIDTH, DOUBLE INLET, CLASS 1 WHEELS. BLOWER WHEELS SHALL BE MOUNTED ON A SOLID TURNED GROUND AND POLISHED SHAFT WITH KEYWAYS FOR BLOWER WHEELS AND DRIVES, AND SHALL BE COATED WITH A RUST PREVENTATIVE MATERIAL. DRIVER AND DRIVEN SHEAVES SHALL BE KEYED TYPE HUB, MULTIPLE V-BELT ARRANGEMENT TO BE SIZED FOR 50% GREATER THAN THE REQUIRED BRAKE HORSEPOWER. BEARINGS SHALL BE A COMBINATION OF SELF-ALIGNING FLANGE BEARINGS MOUNTED ON REINFORCED HEAVY GAUGE BLOWERS END SECTIONS. INTERMEDIATE BEARINGS SHALL BE SELF-ALIGNING PILLOW BLOCK TYPE.

BLOWER MOTOR SHALL BE THE NEW NEMA RATED AND FRAME SIZE, DUAL VOLTAGE (OPEN DRIP PROOF), AND MOUNTED TO THE UNIT ON AN ADJUSTABLE BASE, MOUNTED ADJACENT TO THE BLOWERS OUT OF THE AIR STREAM. FUSED DISCONNECT SWITCH ON UNIT PROVIDED BY ELECTRICAL CONTRACTOR. FAN MOTOR TO BE NON-RADIO/NON-COMMUNICATION INTERFERING/INTERFACING, TO BE BALL BEARING TYPE VIBRATION ISOLATED, TO PREVENT NOISE AND VIBRATION CARRYOVER TO BUILDING'S STRUCTURE FOR ALL FREQUENCIES AND MOUNTING INVOLVED. CARRYOVER TO BUILDING'S STRUCTURE FOR ALL FREQUENCIES AND MOUNTING INVOLVED, FOR 95% EFFICIENCY AND TO HAVE THERMAL OVERLOAD PROTECTION ON EACH PHASE LEG.

MANUFACTURER'S PREFABRICATED STEEL ROOF CURB OR FIELD BUILT CUSTOM CURB AS REQUIRED, WITH RUBBER GASKET AND WOOD NAILER TO SEAL WEATHERTIGHT. INSULATE IF ROOFING CONTRACTOR DOES NOT. ALL ROOF WORK TO BE IN COMPLIANCE WITH NATIONAL ASSOCIATION OF ROOFING CONTRACTORS. FOR EXISTING WORK, HVAC CONTRACTOR WILL FLASH AND SEAL AT THE ROOF PENETRATION AND DO ALL REQUIRED CUTTING, PATCHING, SEALING, REINFORCING REQUIRED TO MAINTAIN ROOF INTEGRITY.

BURNER UNIT SHALL HOUSE A DIRECT FIRED BURNER SUITABLE FOR BURNING NATURAL GAS AND AIR MIXTURE WITH A STANDARD TURN DOWN RATIO OF 25 OR 30 TO 1. BURNER SHALL BE CAPABLE OF DELIVERING 500,000 BTU PER FOOT OF BURNER. GAS BURNER SHALL BE OF A CONTINUOUS ALUMINUM EXTRUSION WITH RIBBED, PERFORATED STAINLESS STEEL SIDE PLATES AND CAST IRON END PLATES. BURNER SHALL BE ARRANGED SO THE PILOT RUNS THE LENGTH OF THE BURNER AND IGNITES THE BURNER INSTANTANEOUSLY. PILOT SHOT SHALL BE AUTOMATICALLY



SYSTEMS DESIGN SERVICE
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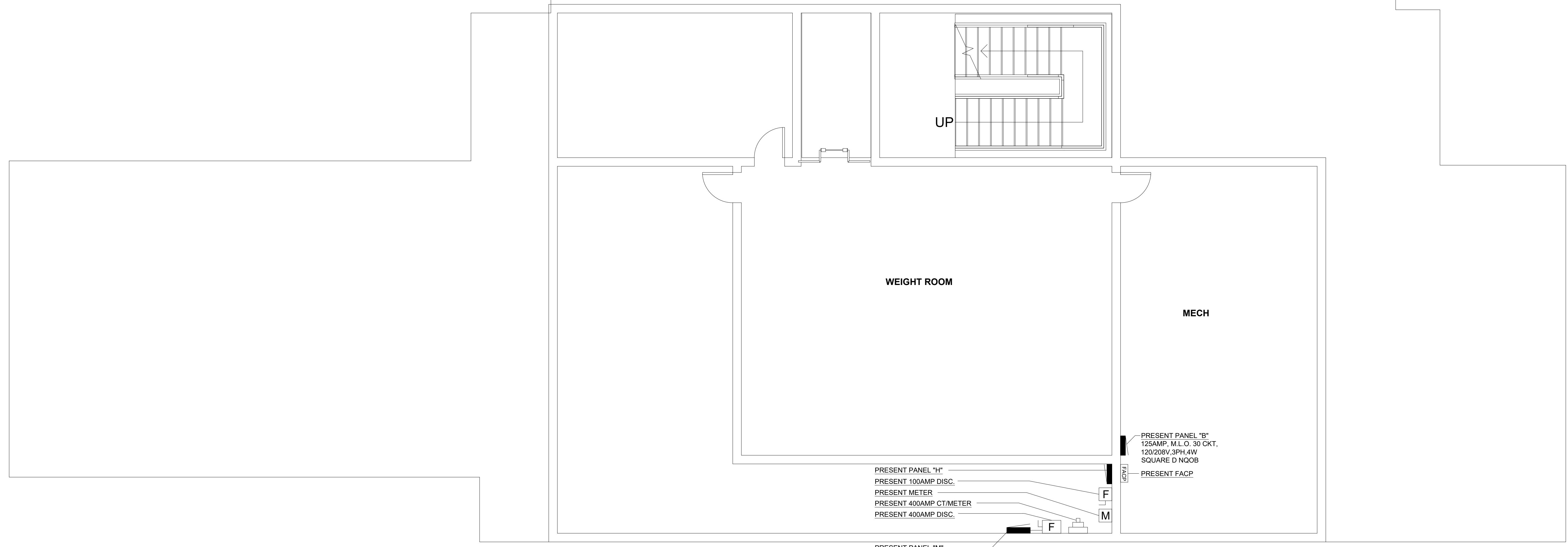
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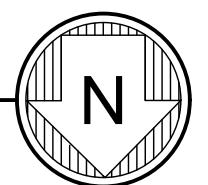
ROCKFORD FIRE DEPARTMENT STATION NO. 4

2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 61114



BASEMENT PLAN - ELECTRICAL

SCALE: 1/4" = 1'-0"



E1

SCALE: AS NOTED

| No. | Description | Date |
|-----|-------------------|---------|
| 1 | ISSUED FOR PERMIT | 07-13-2 |
| 2 | | |
| 3 | | |
| 4 | | |

BASEMENT ELECTRICAL PLAN

PROJECT NUMBER:
SDSE 22-020

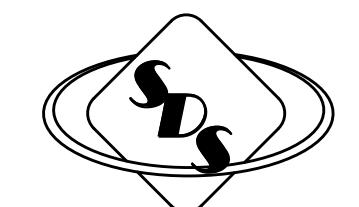
DATE: July 13, 2022

DR BY: SDS

CK BY: SDSE

E1

SCALE: AS NOTED



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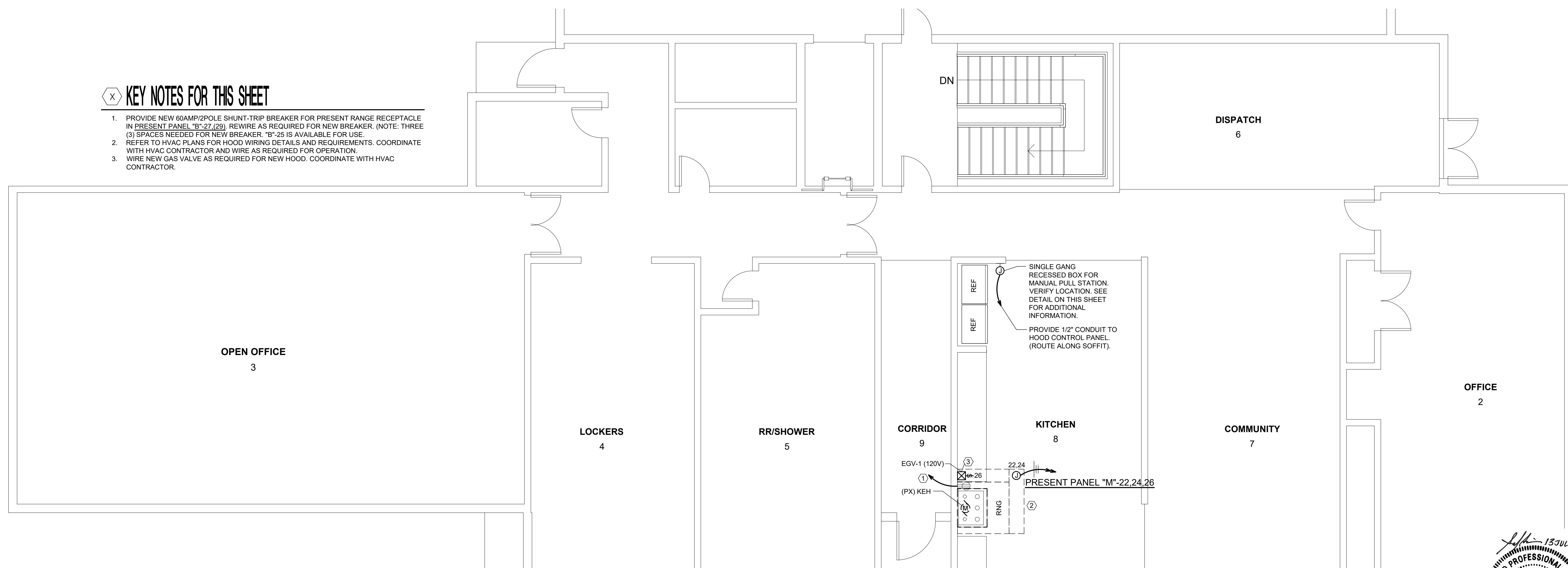
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ROCKFORD FIRE DEPARTMENT STATION NO. 4

2959 SHAW WOODS DRIVE
ROCKFORD, ILLINOIS 6114

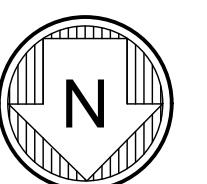
KEY NOTES FOR THIS SHEET

1. PROVIDE NEW 60AMP/2POLE SHUNT-TRIP BREAKER FOR PRESENT RANGE RECEPTACLE IN PRESENT PANEL "B"-27,(2). REWIRE AS REQUIRED FOR NEW BREAKER. (NOTE: THREE (3) SPACES NEEDED FOR NEW BREAKER. "B"-28 IS AVAILABLE FOR USE).
2. REFER TO HVAC PLANS FOR HOOD WIRING DETAILS AND REQUIREMENTS. COORDINATE WITH HVAC CONTRACTOR AND WIRE AS REQUIRED FOR OPERATION.
3. WIRE NEW GAS VALVE AS REQUIRED FOR NEW HOOD. COORDINATE WITH HVAC CONTRACTOR.



FIRST FLOOR PLAN - ELECTRICAL

SCALE: 1/4" = 1'-0"



| No. | Description | Date |
|-----|-------------------|---------|
| 1 | ISSUED FOR PERMIT | 07-13-2 |
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FIRST FLOOR & ROOF ELECTRICAL PLANS

PROJECT NUMBER:
SDSE 22-020

DATE:
July 13, 2022

DR BY:
SDS

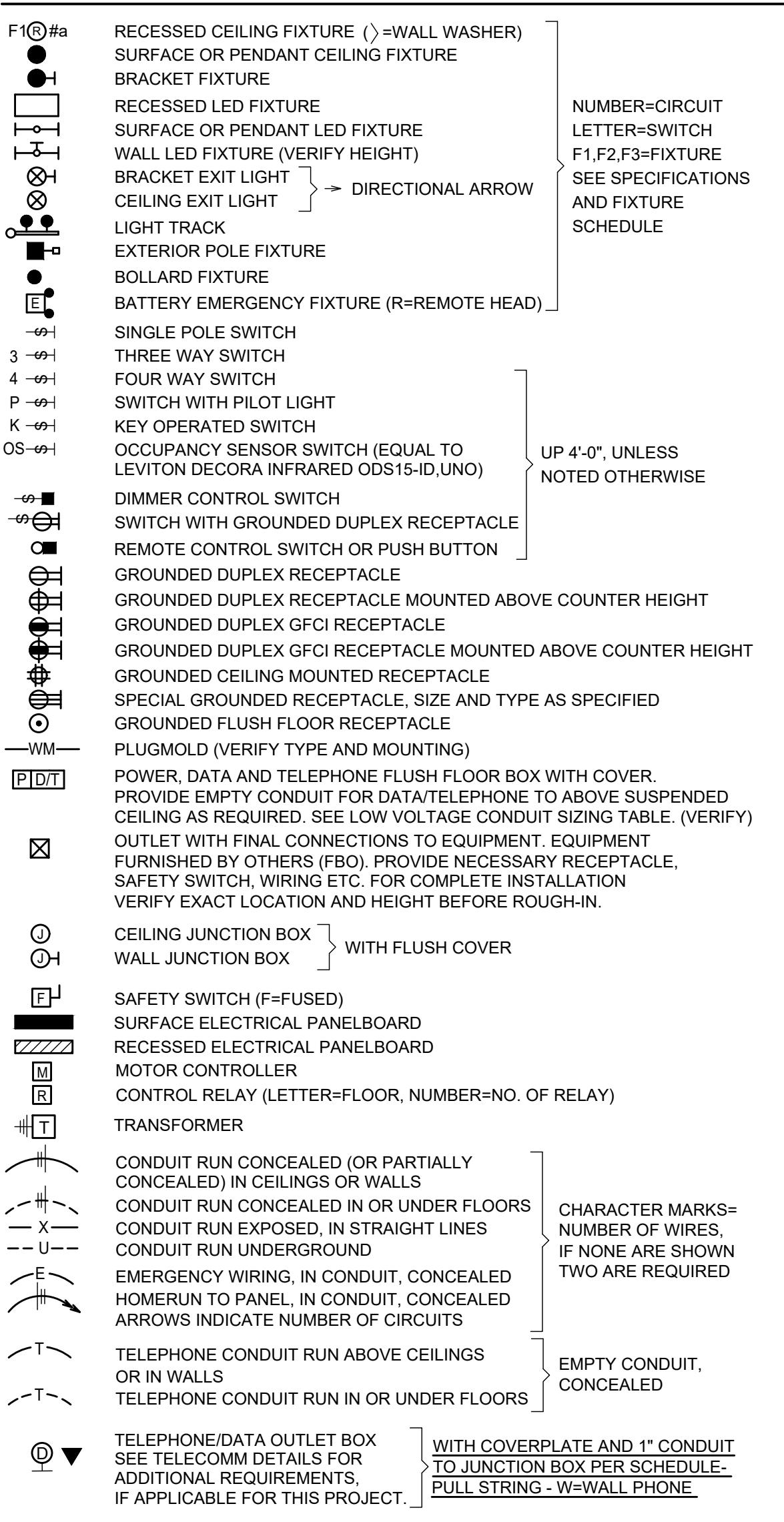
CK BY:
SDSE



E2

SCALE: AS NOTED

ELECTRICAL SYMBOLS



PRESENT EQUIPMENT AND DEMOLITION NOTES

A. FOLLOWING REMOVED PRESENT EQUIPMENT AND MATERIALS WHICH ARE IN GOOD OPERATING CONDITION (OR ARE PLACED IN GOOD CONDITION), SUITABLE, MEET REQUIREMENTS OF THESE SPECIFICATIONS, AND ARE APPROVED IN WRITING BY ENGINEER, OR CALLED FOR MAY BE REUSED (PXN-PN).

1. LIGHTING FIXTURES

B. REMOVED PIPE AND WIRE MUST NOT BE REUSED.

C. ANY OF ABOVE EQUIPMENT WHICH IS NOT REUSED AND FOLLOWING REMOVED PRESENT EQUIPMENT SHALL BECOME PROPERTY OF CONTRACTOR, AND SHALL BE REMOVED FROM PREMISES BY HIM (PX).

1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

D. FOLLOWING PRESENT EQUIPMENT SHALL BE CAREFULLY REMOVED, INTACT, MATCH MARKED, INSOFAR AS IS PRACTICAL, SHALL REMAIN PROPERTY OF OWNER, AND SHALL BE DELIVERED TO OWNER OUTSIDE OF BUILDING WHERE DIRECTED BY THE ENGINEER (PX-DO).

1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

E. CONTRACTOR SHALL:

1. PROVIDE NEW FLOORS UNDER REMOVED PRESENT EQUIPMENT AND WHERE CALLED FOR
2. REPAIR FLOORS UNDER AND WALLS ADJACENT TO REMOVED EQUIPMENT, TO MATCH ADJACENT CONSTRUCTION.
3. FILL IN PRESENT CHASES WHICH ARE NO LONGER REQUIRED AND NEATLY PATCH TO MATCH ADJACENT CONSTRUCTION.
4. CUT OPENINGS REQUIRED FOR:

 - A. HIS WORK;
 - B. ADMISSION OF NEW EQUIPMENT;
 - C. REMOVAL OF PRESENT EQUIPMENT;
 - D. NEW CONNECTION TO PRESENT CONSTRUCTION;

5. PATCH AND REPAIR REMOVED PRESENT HOLES AND OPENINGS, AND THOSE LEFT BY THE REMOVAL OF PRESENT EQUIPMENT AND ADMISSION OF NEW EQUIPMENT.
6. PATCH AND REPAIR PRESENT EQUIPMENT, AND BUILDING CONSTRUCTION WHICH HAS NOT BEEN CUT, REMOVED, DISTURBED OR MARRED, AS REQUIRED, TO RESTORE IT TO ORIGINAL CONDITION BEFORE BEING DISTURBED.

F. UNUSED OPENINGS IN ENCLOSURES, IN CONDUITS, BOXES, CABINETS, AND PANELS SHALL BE FILLED.

G. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAIRED SAME AS NEW CONSTRUCTION.

H. CERTAIN ABBREVIATIONS OR SYMBOLS, WHEN APPLIED TO PRESENT (TO EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE THE FOLLOWING MEANINGS.

NC NEW CONNECTIONS TO PRESENT PIPING, DEVICE WIRING, EQUIPMENT, ETC. INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK.

P TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.

PX TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC., OF EVERY KIND, UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK, OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., TO EQUAL ORIGINAL CONDITION, REMOVED MATERIAL MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.

PX-DO SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED INTACT, AS FAR AS PRACTICAL, MATCHED MARKED, AND OTHERWISE IDENTIFIED AS REQUIRED AND DELIVERED TO OWNER OUTSIDE OF BUILDING AS DIRECTED BY ENGINEER.

PXR SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED, SAME AS NEW WORK, IN ORIGINAL POSITION, IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.

PXN ETC. SAME AS "PXR" EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED SAME AS NEW WORK, IN NEW POSITION MARKED "PN", IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.

PN ETC. COMPLETELY REINSTALL DEVICE, LINE OR EQUIPMENT REMOVED, AT NEW LOCATION, SAME, AS NEW WORK.

I. WORK OF EVERY DIVISION SHALL BE COORDINATED WITH ALL OTHER WORK AND PRESENT CONDITIONS, SO THAT

1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED DURING PERIODS WHEN THOSE SERVICES ARE NEEDED.
2. SPECIAL SYSTEMS SUCH AS FIRE ALARM, SOUND, ETC., OF EVERY KIND TO PRESENT BUILDINGS WILL NOT BE INTERRUPTED DURING WORKING AND/OR OCCUPIED HOURS, EXCEPT AS APPROVED BY ENGINEER.

J. NEW CONDUIT SERVING NEW AND/OR PRESENT ELECTRICAL DEVICES IN FINISHED PRESENT ROOMS OR SPACES SHALL BE CONCEALED IN FINISHED ROOMS, WHERE POSSIBLE OR SHALL BE RUN IN ADJOINING UNFINISHED ROOMS, SHAFTS, STORAGE ROOMS, ETC., WHERE EXPOSED CONDUIT IS PERMITTED IN FINISHED PRESENT ROOMS BY ARCHITECT IN WRITING, IT SHALL BE WIREMOLD, WITH MATCHING BOXES, RUN INCONSPICUOUSLY AS POSSIBLE, IN STRAIGHT LINES, PARALLEL TO WALLS AND CEILINGS, WITH NEAT BENDS, UNNEEDED BOXES, SWITCHES AND WIRING SHALL BE COMPLETELY REMOVED AND OPENINGS PATCHED. IN PRESENT ROOMS OR LOCATIONS WHERE NEW LIGHTING EQUIPMENT IS SHOWN, PRESENT FIXTURES, BOXES, WIRING, SWITCHES, ETC. SHALL BE REMOVED AS PER NOTE "PX" UNLESS ANOTHER SYMBOL IS SHOWN ON DRAWINGS, WHERE SPECIFICALLY APPROVED BY ARCHITECT IN WRITING, BOXES MAY BE PERMITTED TO REMAIN AND BE PROVIDED WITH NEAT FLUSH COVERS, EXTENDING OVER ENTIRE WALL OPENING.

K. UNNEEDED ELECTRICAL FIXTURES, SWITCHES, STARTERS, DEVICES, ETC., SHALL BE COMPLETELY REMOVED; AND CONSTRUCTION PATCHED AS PER NOTE "PX" NEW CONNECTIONS TO PRESENT EQUIPMENT, SHALL BE MADE, TESTED, COVERED, PAINTED, ETC., SAME AS NEW EQUIPMENT. PRESENT EQUIPMENT, AND OTHER COVERING DISTURBED BY CONTRACTOR SHALL BE REPAIRED TO EQUAL NEW CONDITION AND PAINTED SAME AS NEW COVERING.

L. WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES, ON THE SAME CIRCUIT AND/OR CONDUIT RUN, SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO REMAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.

M. LIGHTING FIXTURES WHICH ARE REUSED SHALL HAVE LENS AND REFLECTORS CLEANED. ALL FIXTURES SHALL BE PROVIDED WITH NEW LAMPS.

N. WORK SHALL BE COORDINATED SO THAT HEATING, PLUMBING, ELECTRICAL, AND TELEPHONE SERVICES TO THE PRESENT BUILDING WILL NOT BE INTERRUPTED, EXCEPT AS APPROVED BY THE ARCHITECT.

ELECTRICAL ABBREVIATIONS

| | | | |
|------|------------------------------|-----|----------------------------|
| AC | ABOVE COUNTER | JB | JUNCTION BOX |
| AFF | ABOVE FINISHED FLOOR | KW | KILOWATTS |
| ASC | ABOVE SUSPENDED CEILING | LTC | LIGHTING |
| C | CONDUIT | MAX | MAXIMUM |
| CF | CARPET FLANGE | MFG | MANUFACTURER |
| CTC | CLOSE TO CEILING | MIN | MINIMUM |
| CTF | CLOSE TO FLOOR | MOB | MOTOR OUTLET BOX |
| CTW | CLOSE TO WALL | MTD | MONTEED |
| E | EMERGENCY | NEC | NATIONAL ELECTRICAL CODE |
| EDH | ELECTRIC DUCT HEATER | NL | NIGHT LIGHT |
| ESUH | ELECTRIC SUSPENDED UNIT | OS | OCCUPANCY SENSING DEVICE |
| | HEATER | PH | PHASE (0) |
| EWC | ELECTRIC WATER COOLER | PNL | PANEL |
| EWH | ELECTRIC WATER HEATER | SW | SWITCH |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL | TFA | TO FLOOR ABOVE |
| FACP | FIRE ALARM CONTROL PANEL | TFB | TO FLOOR BELOW |
| FBO | FURNISHED BY OTHERS | TTC | TELEPHONE TERMINAL CABINET |
| FFA | FROM FLOOR ABOVE | UNO | UNLESS NOTED OTHERWISE |
| FFB | FROM FLOOR BELOW | V | VOLTS |
| FLA | FULL LOAD AMPS | W | WIRE |
| GFI | GROUND FAULT INTERRUPTER | WP | WEATHER PROOF |
| HP | HORSEPOWER | WR | WEATHER RESISTANT |
| IWS | IN WALL SPACE | | |

GENERAL NOTES APPLY TO ALL SHEETS

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, BEAMS, DOOR SWINGS, WINDOWS, COORDINATION, ADDITIONAL INFORMATION, ETC. AND REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ARCHITECT PRIOR TO SUBMITTING BID.

ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S WIRING DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

CONTRACTOR SHALL VERIFY FINAL LOCATIONS AND CEILING TYPES FOR ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL REFLECTED CEILING PLAN AND ALL TRADES BEFORE ORDERING OR ROUGH-IN OF EQUIPMENT TO AVOID CONFLICTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE DRILLING, SAW CUTTING, ETC., AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/PLUMBING ITEMS SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

ELECTRICAL COORDINATION NOTE

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS ASSOCIATED WITH ALL OTHER TRADES THAT INVOLVE THE ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING FOR DEVICES AND SYSTEMS PROVIDED BY OTHER TRADES. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ASPECTS OF WORK RELATED TO THESE SYSTEMS AND DEVICES. PRIOR TO SUBMITTING FINAL BID, INCLUDE ALL NECESSARY LABOR AND MATERIALS ASSOCIATED WITH OTHER TRADES AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS THAT REQUIRE THE ELECTRICAL CONTRACTOR TO WIRE.

GENERAL DEMOLITION NOTE

FOR ALL WALLS, CEILINGS, FLOORS, ETC. REQUIRED FOR CONSTRUCTION DEMOLITION WORK OR NEW CONSTRUCTION WORK, INCLUDING, BUT NOT LIMITED TO ITEMS SHOWN REMOVE (PX) AND/OR REMOVE AND RELOCATE (PXN-PN): ALL ELECTRICAL EQUIPMENT, DEVICES, BOXES, CONDUIT, WIRING, ETC., AS REQUIRED, FOR DEMOLITION OF PRESENT CONSTRUCTION AND TO AVOID INTERFERENCE WITH NEW CONSTRUCTION. VERIFY BEFORE BIDDING TO INCLUDE ALL NECESSARY MATERIALS AND LABOR)

PRESENT PANEL SCHEDULE (REVISED FOR NEW WORK)

| PRESENT PANEL: "M" | | | | | | | | | | | | | | |
|---------------------------|--|--------------|---------------------|-------------|--------|----------------------|--------|-------------|--------|---------------------|----------------------|-----|--------------|--|
| LOCATION: ELECTRICAL ROOM | | | VOLTAGE: 208 /120 V | | | A.I.C. RATING: EXST. | | | | | | | | |
| SUPPLY FROM: UTILITY | | | PHASE: 3 PH | | | MAINS TYPE: MLO | | | | | | | | |
| MOUNTING: SURFACE | | | WIRE: 4 W | | | MAINS RATING: 400 A | | | | | | | | |
| ENCLOSURE: NEMA 1 | | | | | | MCB RATING: N/ A | | | | | | | | |
| CKT | DESCRIPTION | TRIP | POLES | DEMAND CODE | A | B | C | DEMAND CODE | POLES | TRIP | DESCRIPTION | CKT | | |
| 1 | | 30 (VERIF Y) | 3 | H | 1,800 | 1,800 | | H | 3 | 30 | PRESENT EAST AC UNIT | 2 | | |
| 3 | PRESENT WEST AC UNIT | | | H | | 1,800 | 1,800 | | | | H | | | |
| 5 | | | | H | | | 1,800 | 1,800 | | | H | | | |
| 7 | | 60 | 3 | G | 3,600 | 6,000 | | G | 3 | 100 | PRESENT PANEL "A" | 8 | | |
| 9 | PRESENT | | | G | | 3,600 | 6,000 | | | | G | | | |
| 11 | | | | G | | | 3,600 | 6,000 | | | G | | | |
| 13 | | 125 | 3 | G | 7,200 | 396 | | H | 2 | 20 | KITCHEN EXHAUST FAN | 14 | | |
| 15 | PRESENT PANEL "B" (ABOVE MAIN BUS SECTION) | | | G | | 7,200 | 396 | | | | H | | | |
| 17 | | | | G | | | 7,200 | 718 | | | H | | | |
| 19 | | 25 | 1 | | 718 | | | H | 1 | 20 | MAKE-UP AIR UNIT | 18 | | |
| 21 | SPACE ONLY | | | | | | 200 | | | | | H | | |
| 23 | | | | | | | | 1,200 | | | | H | | |
| 25 | SPACE ONLY | | | | 180 | | | H | 1 | 20 | GAS VALVE | 26 | | |
| 27 | | | | | | 180 | | R | | | | | | |
| | | | | | 21,694 | VA | 21,176 | VA | 22,318 | VA | | | | |
| | | | | | | | | | | LOAD CLASSIFICATION | | | | |
| | | | | | | | | | | DEMAND CODE | | | | |
| | | | | | | | | | | CONNECTED LOAD | | | | |
| | | | | | | | | | | DEMAND FACTOR | | | | |
| | | | | | | | | | | DEMAND | | | | |
| | | | | | | | | | | TOTAL | | | PANEL TOTALS | |
| | | | | | | | | | | CONN. LOAD: | | | 65,188 VA | |
| | | | | | | | | | | DEMAND LOAD: | | | 62,266 VA | |
| | | | | | | | | | | CONN. CURRENT: | | | 181 A | |
| | | | | | | | | | | DEMAND CURRENT: | | | 173 A | |

| No. | Description | Date |
|-----|-------------------|----------|
| 1 | ISSUED FOR PERMIT | 07-13-22 |
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ELECTRICAL NOTES, SYMBOLS AND SCHEDULE

PROJECT NUMBER: SDSE 22-020

DATE: July 13, 2022

DR BY: SDS

CK BY: SDSE

13JUL22
LICENCED PROFESSIONAL ENGINEER
SCOTT JAY BAIER
062-059748
STATE OF ILLINOIS
EXP 30 Nov 23

E3

SCALE: AS NOTED

ROCKFORD FIRE DEPARTMENT
STATION NO. 4
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ROCKFORD, ILLINOIS 61108

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IL PROF DESIGN FIRM #184.00499

DIVISION 26 ELECTRICAL SPECIFICATIONS

SECTION 262000 INTERIOR DISTRIBUTION SYSTEM

PART 1 GENERAL

THE SUPPLEMENTARY GENERAL CONDITIONS ALONG WITH THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS GOVERN WORK UNDER THIS SECTION. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PROVIDE FOR A COMPLETE OPERATING SYSTEM. THE OMISSION OR REFERENCE TO MINOR SYSTEM COMPONENTS WHICH ARE REASONABLY REQUIRED FOR THE PROPER FUNCTIONING AND/OR SAFE OPERATION OF THE SYSTEM SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SAME AT NO ADDITIONAL COST TO THE OWNER. IT IS THE FURTHER INTENT THAT THE SYSTEM SHALL BE TURNED OVER TO THE OWNER IN A FUNCTIONAL AND OPERATING CONDITION. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE ELECTRICAL SYSTEM INCLUDING, BUT NOT LIMITED TO, SERVICE, LIGHTING, POWER, DEVICES, PANELS, CIRCUIT BREAKERS, CONDUIT AND WIRING. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY AND NEW SERVICES, IF APPLICABLE TO THIS PROJECT, (VERIFY BEFORE BIDDING TO INCLUDE ALL WORK AS REQUIRED). THE WORK SHALL BE IN ACCORDANCE WITH THE REFERENCES LISTED BELOW AND ALL LOCAL CODES, LAWS, ORDINANCES AND STATE REGULATIONS WHICH GOVERN THE INSTALLATION.

1.1 REFERENCES

THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. THE PUBLICATIONS ARE REFERRED TO WITHIN THE TEXT BY THE BASIC DESIGNATION ONLY.

ASTM D 709 (2016) LAMINATED THERMOSETTING MATERIALS
EIA 480 (1981) TOGGLE SWITCHES
IEEE STDs DIRECTORY
ICC/ANSI A117.1 (2009) ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES
ICC (2012) INTERNATIONAL ENERGY CONSERVATION CODE
ANSI Z535.1 (2006, R 2011) AMERICAN NATIONAL STANDARD FOR SAFETY-COLOR CODE
ANSI/NEMA FB 1 (2014) STANDARD FOR FITTINGS, CAST METAL BOXES, AND CONDUIT BODIES FOR CONDUIT, ELECTRICAL METALLIC TUBING, AND CABLE SUPPORTS
ANSI/NEMA OS 1 (2013) NONMETAL OUTLET BOXES, DEVICE BOXES, COVERS, AND BOX SUPPORTS
NEMA 250 (2014) ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM)
NEMA KS 1 (2013) ENCLOSED AND MISCELLANEOUS DISTRIBUTION EQUIPMENT SWITCHES (600 V MAXIMUM)
NEMA PB 1 (2011) PANELBOARDS
NEMA RN 1 (2005, R 2013) POLYVINYL-CHLORIDE (PVC) EXTERNALLY COATED GALVANIZED RIGID STEEL CONDUIT AND INTERMEDIATE METAL CONDUIT
NEMA TC 2 (2013) STANDARD FOR ELECTRICAL POLYVINYL CHLORIDE (PVC) CONDUIT
NEMA TC 3 (2015) STANDARD FOR POLYVINYL CHLORIDE (PVC) FITTINGS FOR USE WITH RIGID PVC CONDUIT AND TUBING
NEMA WD 1 (1999, R 2014) STANDARD FOR GENERAL COLOR REQUIREMENTS FOR WIRING DEVICES
NEMA WD 6 (2016) WIRING DEVICES DIMENSIONS SPECIFICATIONS
NFPA 70 (2014) NATIONAL ELECTRICAL CODE
NFPA 70E (2015) STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE
UL 1 (2005, REPRINT JUL 2007) STANDARD FOR FLEXIBLE METAL CONDUIT (2006, REPRINT MAR 2014) STANDARD FOR ELECTRICAL INTERMEDIATE METAL CONDUIT - STEEL
UL 1242 (2016) MOLDED-CASE CIRCUIT BREAKERS, MOLDED-CASE SWITCHES, AND CIRCUIT-BREAKER ENCLOSURES
UL 489 (2007, REPRINT NOV 2014) ELECTRICAL RIGID METAL CONDUIT-STEEL (2007, REPRINT DEC 2012) ELECTRICAL METALLIC TUBING -- STEEL (2016) STANDARD FOR WIREWAYS, AUXILIARY GUTTERS, AND ASSOCIATED FITTINGS

1.2 DEFINITIONS

A. UNLESS OTHERWISE SPECIFIED OR INDICATED, ELECTRICAL AND ELECTRONICS TERMS USED IN THESE SPECIFICATIONS, AND ON THE DRAWINGS, SHALL BE AS DEFINED IN IEEE STDs DIRECTORY.
B. THE TECHNICAL SECTIONS REFERRED TO HEREIN ARE THOSE SPECIFICATION SECTIONS THAT DESCRIBE PRODUCTS, INSTALLATION PROCEDURES, AND EQUIPMENT OPERATIONS AND THAT REFER TO THIS SECTION FOR DETAILED DESCRIPTION OF SUBMITTAL TYPES.
C. VERTICAL ASSEMBLY: A VERTICAL ASSEMBLY IS A POLE, TOWER, OR OTHER SUCH SUPPORT, MOUNTING HARDWARE, ARMS, BRACKETS AND THE LOAD. LOAD CAN BE A LUMINAIRE, SIREN, LOUDSPEAKER OR OTHER DEVICE. ALL COMPONENTS OF A VERTICAL ASSEMBLY WILL BE RATED BY THE MANUFACTURER TO WITHSTAND 135 MPH WIND LOADING.

1.3 SUBMITTALS

SUBMIT THE FOLLOWING IN ACCORDANCE WITH SECTION SUBMITTAL PROCEDURES: PRECONSTRUCTION SUBMITTALS (SHOP DRAWINGS): SUBMIT PRODUCT DATA FOR THE FOLLOWING: CONDUITS, RACEWAYS AND FITTINGS, WIRE AND CABLE, SPLICES AND CONNECTORS, SWITCHES, RECEPTACLES, OUTLETS, OUTLET BOXES, AND PULL BOXES, CIRCUIT BREAKERS, PANELBOARDS, LAMPS AND LIGHTING FIXTURES, AND DRY-TYPE DISTRIBUTION TRANSFORMERS. COORDINATE COLOR OF DEVICES AND COVERPLATES WITH ARCHITECT/OWNER PRIOR SUBMITTING SHOP DRAWING SUBMITTALS FOR APPROVAL. CLOSEOUT SUBMITTALS (ORM INSTRUCTIONS): SUBMIT TEST REPORTS FOR THE FOLLOWING: FIRE ALARM TEST, LOW VOLTAGE CABLE TEST, CONTINUITY TEST, PHASE-ROTATION TESTS, INSULATION RESISTANCE TEST, SUBMIT MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S START-UP AND CHECK-OUT CHECKLISTS, SUBMIT STATE FIRE ALARM CERTIFICATION, AND PRE-ENERGIZATION CHECKLISTS.

1.4 GENERAL REQUIREMENTS

SUBMIT MATERIAL, EQUIPMENT, AND FIXTURE LISTS FOR THE FOLLOWING ITEMS SHOWING MANUFACTURER'S STYLE OR CATALOG NUMBERS, SPECIFICATION AND DRAWING REFERENCE NUMBERS, WARRANTY INFORMATION, AND FABRICATION SITE. SUBMIT MANUFACTURER'S INSTRUCTIONS INCLUDING SPECIAL PROVISIONS REQUIRED TO INSTALL EQUIPMENT COMPONENTS AND SYSTEM PACKAGES. SPECIAL NOTICES SHALL DETAIL IMPEDANCES, HAZARDS AND SAFETY PRECAUTIONS. SUBMIT CERTIFICATION REQUIRED TO INSTALL EQUIPMENT COMPONENTS AND SYSTEM PACKAGES.

1.5 MANUFACTURER'S NAMEPLATE

EACH ITEM OF EQUIPMENT SHALL HAVE A NAMEPLATE BEARING THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER SECURELY AFFIXED IN A CONSPICUOUS PLACE; THE NAMEPLATE OF THE DISTRIBUTING AGENT WILL NOT BE ACCEPTABLE.

1.6 FIELD FABRICATED NAMEPLATES

ASTM D 709. PROVIDE LAMINATED PLASTIC NAMEPLATES FOR EACH EQUIPMENT ENCLOSURE, RELAY, SWITCH, AND DEVICE; AS SPECIFIED IN THE TECHNICAL SECTIONS OR AS INDICATED ON THE DRAWINGS. EACH NAMEPLATE INSRIPTION SHALL IDENTIFY THE FUNCTION AND, WHEN APPLICABLE, THE POSITION. NAMEPLATES SHALL BE MELAMINE PLASTIC, 0.125 INCH THICK, WHITE WITH BLACK CENTER CORE. SURFACE SHALL BE MATTE FINISH. CORNERS SHALL BE SQUARE. ACCURATELY ALIGN LETTERING AND ENGRAVE INTO THE CORE. MINIMUM SIZE OF NAMEPLATES SHALL BE ONE BY 2.5 INCHES. LETTERING SHALL BE A MINIMUM OF 0.25 INCH HIGH NORMAL BLOCK STYLE.

1.7 WARNING SIGNS

PROVIDE WARNING SIGNS FOR THE ENCLOSURES OF ELECTRICAL EQUIPMENT INCLUDING SUBSTATIONS, PAD-MOUNTED TRANSFORMERS, PAD-MOUNTED SWITCHES, GENERATORS, AND SWITCHGEAR HAVING A NOMINAL RATING EXCEEDING 600 VOLTS.

A. WHEN THE ENCLOSURE INTEGRITY OF SUCH EQUIPMENT IS SPECIFIED TO BE IN ACCORDANCE WITH IEEE C57.12.29 OR IEEE C57.12.29, SUCH AS FOR PAD-MOUNTED TRANSFORMERS, PROVIDE SELF-ADHESIVE WARNING SIGNS ON THE OUTSIDE OF THE HIGH VOLTAGE COMPARTMENT DOOR(S). SIGN SHALL BE A DECAL AND HAVE NOMINAL DIMENSIONS OF 7 BY 10 INCHES WITH THE LEGEND "DANGER HIGH VOLTAGE" PRINTED IN TWO LINES OF NOMINAL 2 INCH HIGH LETTERS. THE WORD "DANGER" SHALL BE IN WHITE LETTERS ON A RED BACKGROUND AND THE WORDS "HIGH VOLTAGE" SHALL BE IN BLACK LETTERS ON A WHITE BACKGROUND. DECAL SHALL BE PANDUIT NO. PPS0710D72 OR APPROVED EQUAL.

1.8 VERIFICATION OF POINTS

BEFORE SUBMITTING THEIR BID, THE CONTRACTOR SHALL VISIT THE SITE AND CONTACT THE CITY AND ALL UTILITIES TO CAREFULLY VERIFY ALL EXPOSED, CONCEALED AND BURIED POINTS OF CONNECTIONS, AS TO LOCATIONS, SIZE, TYPE, DEPTH, OPERATING CHARACTERISTICS, ETC, INCLUDING BUT NOT LIMITED TO: PRESENT SITE CONDITIONS, PRESENT UTILITY COMPANY ELECTRICAL DISTRIBUTION SYSTEM, WORK ASSOCIATED WITH EQUIPMENT BY OTHERS, NEW CONNECTIONS TO PRESENT EQUIPMENT OR CONSTRUCTION, PRESENT EQUIPMENT TO BE REMOVED AND/OR RELOCATED. IF THE CONTRACTOR FINDS THAT PRESENT POINTS OF CONNECTION ARE INCORRECTLY SPECIFIED, THEY SHALL NOTIFY THE ARCHITECT, IN WRITING, AT LEAST 7 CALENDAR DAYS BEFORE BIDS ARE TO BE SUBMITTED. THE ARCHITECT WILL ISSUE AN ADDENDUM TO ADDRESS THE REVISED POINTS OF CONNECTION. IF THE CONTRACTOR FAILS TO NOTIFY THE ARCHITECT, IN WRITING, AS OUTLINED ABOVE,

IT WILL BE ASSUMED THEIR BID INCLUDES EVERYTHING REQUIRED TO PROVIDE CONNECTIONS AS THEY ACTUALLY EXIST, OR AS THEY WILL BE REQUIRED BY THE UTILITY OR AUTHORITY HAVING JURISDICTION WITHOUT INCREASE TO THE CONTRACT PRICE.

1.9 COORDINATION

CERTAIN MOTORS, EQUIPMENT, CONTROLS, ETC ARE PROVIDED BY THE HEATING, VENTILATION, PLUMBING AND/OR OTHER CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED MOTOR STARTERS, SAFETY SWITCHES, VARIABLE FREQUENCY DRIVES, CONTROLS ETC AND COMPLETELY WIRE ALL EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CODES. SEE SPECIFICATIONS AND DRAWINGS FOR ALL OTHER TRADES TO AVOID CONFLICTS OR DUPLICATING WORK TO BE PROVIDED BY OTHERS. (VERIFY PRIOR TO ROUGH-IN).

BEFORE BIDDING, THE CONTRACTOR SHALL CAREFULLY CHECK ALL PLANS AND SPECIFICATIONS FOR EVERY TRADE AND SHALL INCLUDE IN THEIR BID ALL ASSOCIATED ELECTRICAL WORK TO BE PROVIDED FOR THE PROJECT. BEFORE ANY WORK IS INSTALLED OR ANY EQUIPMENT IS PURCHASED, THE CONTRACTOR SHALL CAREFULLY CHECK PLANS AND SPECIFICATIONS FOR EVERY TRADE AS WELL AS THE JOB CONDITIONS. ANY LACK OF COORDINATION BETWEEN THE WORK OF THE EC AND THEIR SUBS, SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT. THE ARCHITECT WILL WORK OUT CONFLICTS AND ADJUSTMENTS IN CONTRACT PRICE, IF WARRANTED. CHANGES IN EQUIPMENT SHALL BE INCORPORATED IN THE SHOP DRAWINGS.

IF CONFLICTS ARISE DURING THE CONSTRUCTION PERIOD, THEY SHALL BE REPORTED TO THE ARCHITECT, IN WRITING, AND THEY SHALL BE WORKED OUT BETWEEN THE ARCHITECT, GENERAL CONTRACTOR, AND OTHER ASSOCIATED TRADE AT NO INCREASE TO THE CONTRACT PRICE.

PART 2 PRODUCTS

2.1 MATERIALS

MATERIALS AND EQUIPMENT TO BE PROVIDED SHALL BE NEW, UL LISTED FOR THE REQUIRED LOCATION/USE, AND BEAR THE MANUFACTURER'S NAME, MODEL NUMBER, AND OTHER IDENTIFICATION MARKINGS. THE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE PRODUCTS. MATERIALS AND EQUIPMENT SHALL BE OF THE SAME MANUFACTURER THROUGHOUT THE PROJECT TO PROVIDE A UNIFORM APPEARANCE, OPERATION AND MAINTENANCE.

2.1.1 RIGID STEEL CONDUIT: RIGID STEEL CONDUIT SHALL COMPLY WITH UL 6 AND BE GALVANIZED BY THE HOT-DIP PROCESS. RIGID STEEL CONDUIT SHALL BE POLYVINYLCHLORIDE (PVC) COATED IN ACCORDANCE WITH NEMA RN 1, WHERE UNDERGROUND AND IN CORROSIVE AREAS, OR MUST BE PAINTED WITH BITUMATIC. FITTINGS FOR RIGID STEEL CONDUIT SHALL BE THREADED, GASKETS SHALL BE SOLID. CONDUIT FITTINGS WITH BLANK COVERS SHALL HAVE GASKETS, EXCEPT IN CLEAN, DRY AREAS OR AT THE LOWEST POINT OF A CONDUIT RUN WHERE DRAINAGE IS REQUIRED. COVERS SHALL HAVE CAPTIVE SCREWS AND BE ACCESSIBLE AFTER THE WORK HAS BEEN COMPLETED.

2.1.2 ELECTRICAL METALLIC TUBING (EMT): EMT SHALL BE IN ACCORDANCE WITH UL 797 AND BE ZINC COATED STEEL. COUPLINGS AND CONNECTORS SHALL BE ZINC-COATED, RAINTIGHT, GLAND COMPRESSION WITH INSULATION THROAT. CRIMP, SPRING, OR SETSCREW TYPE FITTINGS ARE NOT ACCEPTABLE.

2.1.3 FLEXIBLE METALLIC CONDUIT-FLEXIBLE METALLIC CONDUIT SHALL COMPLY WITH UL 1 AND BE GALVANIZED STEEL. FITTINGS FOR FLEXIBLE METALLIC CONDUIT WITH A PROTECTIVE JACKET OF PVC EXTRUDED OVER A FLEXIBLE INTERLOCKED GALVANIZED STEEL CORE TO PROTECT WIRING AGAINST MOISTURE, OIL, CHEMICALS, AND CORROSIVE FUMES. SPECIFICALLY DESIGN FITTINGS FOR LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.

2.1.4 INTERMEDIATE METAL CONDUIT: INTERMEDIATE METAL CONDUIT SHALL COMPLY WITH UL 1242 AND BE GALVANIZED.

2.1.5 RIGID NONMETALLIC CONDUIT: RIGID NONMETALLIC CONDUIT SHALL COMPLY WITH NEMA TC 2 AND NEMA TC 3 WITH WALL THICKNESS NOT LESS THAN SCHEDULE 40.

2.1.6 WIREWAYS AND AUXILIARY GUTTERS: WIREWAY AND AUXILIARY GUTTERS SHALL BE A MINIMUM 4- BY 4 INCH TRADE SIZE CONFORMING TO UL 870.

2.1.7 SURFACE RACEWAYS AND ASSEMBLIES: SURFACE METAL RACEWAYS AND MULTI-OUTLET ASSEMBLIES SHALL CONFORM TO NFPA 70. RECEPTACLES SHALL CONFORM TO NEMA WD 1, TYPE 5-20R.

2.2 WIRE AND CABLE

CONDUCTORS INSTALLED IN CONDUIT ABOVE GROUND SHALL BE COPPER 600-VOLT TYPE THWN-2, CONDUCTORS INSTALLED UNDERGROUND SHALL BE TYPE XHHW. ALL CONDUCTORS AWG NO. 8 AND LARGER, SHALL BE STRANDED. ALL CONDUCTORS SMALLER THAN AWG NO. 8 SHALL BE SOLID. FLEXIBLE CABLE SHALL BE TYPE SO AND CONTAIN A GROUNDING CONDUCTOR WITH GREEN INSULATION. CONDUCTORS INSTALLED IN PLENUM SHALL BE MARKED PLENUM RATED.

2.3 SPLICES AND CONNECTORS

MAKE ALL SPLICES IN AWG NO. 8 AND SMALLER WITH APPROVED INSULATED ELECTRICAL TYPE OR INDENTOR CRIMP-TYPE CONNECTORS AND COMPRESSION TOOLS. MAKE ALL SPLICES IN AWG NO. 6 AND LARGER WITH BOLTED CLAMP-TYPE CONNECTORS. JOINTS SHALL BE WRAPPED WITH AN INSULATING TAPE THAT HAS AN INSULATION AND TEMPERATURE RATING EQUIVALENT TO THAT OF THE CONDUCTOR.

2.4 SWITCHES

ALL WIRING DEVICES SHALL BE HUBBELL, P & S, BYRANT, G.E. OR LEVITON UNDERWRITER'S APPROVED, NEC RATED AND SPECIFICATION GRADE

2.4.1 SAFETY SWITCHES: SAFETY SWITCHES SHALL COMPLY WITH NEMA KS 1, AND BE THE HEAVY-DUTY TYPE WITH ENCLOSURE, VOLTAGE, CURRENT RATING, NUMBER OF POLES, AND FUSING AS INDICATED. MAKE PROVISIONS TO LOCK THE HANDLE IN THE "OFF" POSITION, BUT THE SWITCH SHALL NOT BE CAPABLE OF BEING LOCKED IN THE "ON" POSITION. PROVIDE SWITCHES OF THE QUICK-MAKE, QUICK-BREAK TYPE. APPROVE TERMINAL LUGS FOR USE WITH COPPER CONDUCTORS. SAFETY COLOR CODING FOR IDENTIFICATION OF SAFETY SWITCHES SHALL CONFORM TO ANSI Z535.1.

2.4.2 TOGGLE SWITCHES: TOGGLE SWITCHES SHALL COMPLY WITH EIA 480, CONTROL INCANDESCENT, MERCURY, AND FLUORESCENT LIGHTING FIXTURES AND BE OF THE HEAVY DUTY, GENERAL PURPOSE, NONINTERCHANGEABLE FLUSH-TYPE. TOGGLE SWITCHES SHALL BE COMMERCIAL GRADE TOGGLE TYPE, SINGLE, DOUBLE-POLE, THREE/FOUR-WAY TWO-PPOSITION DEVICES RATED 20 AMPS AT 120 OR 277 VOLTS, 60 HERTZ ALTERNATING CURRENT (AC) ONLY. ALL TOGGLE SWITCHES SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

2.5 RECEPTACLES

RECEPTACLES SHALL BE COMMERCIAL GRADE, 20A, 125 VAC, 2-POLE, 3-WIRE DUPLEX CONFORMING TO NEMA WD 6, NEMA 5-20R, WATER RESISTANT.

2.6 OUTLETS, OUTLET BOXES, AND PULL BOXES

OUTLET BOXES FOR USE WITH CONDUIT SYSTEMS SHALL BE IN ACCORDANCE WITH ANSI/NEMA FB 1 AND ANSI/NEMA OS 1 AND, BE NOT LESS THAN 1-1/2 INCHES DEEP. FURNISH ALL PULL AND JUNCTION BOXES WITH SCREW-FASTENED COVERS, STAINLESS STEEL NEMA 4X AT OUTDOOR LOCATIONS.

2.7 CIRCUIT BREAKERS

CIRCUIT-BREAKER INTERRUPTING RATING SHALL BE NOT LESS THAN THOSE INDICATED AND IN NO EVENT LESS THAN THE MAXIMUM AVAILABLE FAULT CURRENT AT THE LOCATION. MULTIPOLLE CIRCUIT BREAKERS SHALL BE THE COMMON-TRIP TYPE WITH A SINGLE HANDLE. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE CONFORMING TO UL 489.

2.8 LAMPS AND LIGHTING FIXTURES

MANUFACTURERS AND CATALOG NUMBERS SHOWN ARE INTENDED TO RESTRICT THE SELECTION TO FIXTURES OF THE PARTICULAR MANUFACTURER UNLESS STATED AS NOR EQUAL IN THE SCHEDULE. FIXTURES WITH THE SAME SALIENT FEATURES AND EQUIVALENT LIGHT DISTRIBUTION AND BRIGHTNESS CHARACTERISTICS, OF EQUAL FINISH AND QUALITY, MAY BE ACCEPTABLE. PROVIDE LAMPS OF THE PROPER TYPE AND WATTAGE FOR EACH FIXTURE. BALLASTS SHALL BE HIGH POWER FACTOR AND BE ENERGY EFFICIENT.

LED LUMINAIRES MUST BE NEMA SSL 1, UL 8750 LISTED. LED DRIVERS MUST BE ELECTRONIC, UL CLASS 1, CONSTANT-CURRENT TYPE AND COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. POWER FACTOR (PF) GREATER THAN OR EQUAL TO 0.9.
2. CURRENT DRAFT TOTAL HARMONIC DISTORTION (THD) OF LESS THAN 20 PERCENT.
3. CLASS A SOUND RATING.
4. OPERABLE AT INPUT VOLTAGE OF 120-277 VOLTS AT 60 HERTZ.

5. MINIMUM 5 YEAR MANUFACTURER'S WARRANTY.

6. ROHS COMPLIANT.

7. INTEGRAL THERMAL PROTECTION THAT REDUCES OR ELIMINATES THE OUTPUT POWER IF CASE TEMPERATURE EXCEEDS A VALUE DETERMINAL TO THE DRIVER.

8. UL LISTED FOR DRY OR DAMP LOCATIONS TYPICAL OF INTERIOR INSTALLATIONS.

FULLY-DIMMABLE USING 0-10V CONTROL, OR AS INDICATED IN LUMINAIRE SCHEDULE.

9. LUMINAIRES FOR HAZARDOUS (CLASSIFIED) LOCATIONS SHALL BE LISTED AND LABELED FOR INDICATED CLASS AND DIVISION OF HAZARD AS NRTL.

3.4 IDENTIFICATION PLATES AND WARNINGS

FURNISH AND INSTALL IDENTIFICATION PLATES FOR LIGHTING AND POWER PANELBOARDS, MOTOR CONTROL CENTERS, ALL LINE VOLTAGE HEATING AND VENTILATING CONTROL PANELS, FIRE DETECTOR AND SPRINKLER ALARMS, DOOR BELLS, PILOT LIGHTS, DISCONNECT SWITCHES, MANUAL STARTING SWITCHES, AND MAGNETIC STARTERS. PROCESS CONTROL DEVICES AND PILOT LIGHTS SHALL HAVE IDENTIFICATION PLATES. FURNISH IDENTIFICATION PLATES FOR ALL LINE VOLTAGE ENCLOSED CIRCUIT BREAKERS, IDENTIFYING THE EQUIPMENT SERVED, VOLTAGE, PHASE(S) AND POWER SOURCE. CIRCUITS 480 VOLTS AND ABOVE SHALL HAVE CONSPICUOUSLY LOCATED WARNING SIGNS IN ACCORDANCE WITH OSHA REQUIREMENTS. EACH IDENTIFICATION NAMEPLATE SHALL INCLUDE BUILDING NAME, PANELBOARD DESIGNATION, VOLTAGE AND WHERE PANELBOARD IS FED FROM.

3.5 FIELD TESTING

SUBMIT TEST REPORTS IN ACCORDANCE WITH REFERENCED STANDARDS IN THIS SECTION. AFTER COMPLETION OF THE INSTALLATION AND SPLICING, AND PRIOR TO ENERGIZING THE CONDUCTORS, PERFORM WIRE AND CABLE CONTINUITY AND INSULATION TESTS AS HEREIN SPECIFIED BEFORE THE CONDUCTORS ARE ENERGIZED. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST EQUIPMENT, LABOR, AND PERSONNEL TO PERFORM THE TESTS, AS HEREIN SPECIFIED. ISOLATE COMPLETELY ALL WIRE AND CABLE FROM ALL EXTRANEous ELECTRICAL CONNECTIONS AT CABLE TERMINATIONS AND JOINTS. SUBSTATION AND SWITCHBOARD FEEDER BREAKERS, DISCONNECTS IN COMBINATION MOTOR STARTERS, CIRCUIT BREAKERS IN PANEL BOARDS, AND OTHER DISCONNECTING DEVICES SHALL BE USED TO ISOLATE THE CIRCUITS UNDER TEST. PERFORM INSULATION-RESISTANCE TEST ON EACH FIELD-INSTALLED CONDUCTOR WITH RESPECT TO GROUND AND ADJACENT CONDUCTORS. APPLIED POTENTIAL SHALL BE 500 VOLTS DC FOR 300 VOLT RATED CABLE AND 1000 VOLTS DC FOR 600 VOLT RATED CABLE. TAKE READINGS AFTER 1 MINUTE AND UNTIL THE READING IS CONSTANT FOR 15 SECONDS. MINIMUM INSULATION-RESISTANCE VALUES SHALL NOT BE LESS THAN 25 MEGOHMS FOR 300 VOLT RATED CABLE AND 100 MEGOHMS FOR 600 VOLT RATED CABLE. FOR CIRCUITS WITH CONDUCTOR SIZES BAWG AND SMALLER INSULATION RESISTANCE TESTING IS NOT REQUIRED.

PERFORM CONTINUITY TEST TO INSURE CORRECT CABLE CONNECTION (IE CORRECT PHASE CONDUCTOR, GROUNDED CONDUCTOR, AND GROUNDED CONDUCTOR WIRING) END-TO-END. ANY DAMAGES TO EXISTING OR NEW ELECTRICAL EQUIPMENT RESULTING FROM CONTRACTOR MIS-WIRING WILL BE REPAIRED AND RE-VERIFIED AT CONTRACTOR'S EXPENSE. ALL REPAIRS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO ACCEPTANCE OF THE REPAIR.

CONDUCT PHASE-ROTATION TESTS ON ALL THREE-PHASE CIRCUITS USING A PHASE-ROTATION INDICATING INSTRUMENT. PER