

A PROJECT OF THE
PEORIA PARK DISTRICT

**BOILER REPLACEMENT
RIVERPLEX RECREATION AND WELLNESS CENTER
600 N.E. WATER ST.
PEORIA, ILLINOIS**

PEORIA PARK DISTRICT
PEORIA, ILLINOIS



PROJECT#: 16-018

SEPTEMBER 20, 2016

PROJECT MANUAL

PACKAGE #_____

PROJECT MANUAL INCLUDING SPECIFICATIONS FOR:

**BOILER REPLACEMENT
RIVERPLEX RECREATION AND WELLNESS CENTER**
600 N.E. WATER ST.
PEORIA, ILLINOIS

ARCHITECT:

APACE DESIGN ARCHITECTS & ENGINEERS
2112 E. WAR MEMORIAL DR.
PEORIA, IL 61614-8002
309-685-4722
ATTN: MARK CORDES

OWNER:

PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA,
PEORIA, ILLINOIS

TRUSTEES:

TIMOTHY J. CASSIDY, PRESIDENT
ROBERT L. JOHNSON, SR.
JACQUELINE J. PETTY
WARREN E. RAYFORD
KELLY A. CUMMINGS
MATTHEW P. RYAN
NANCY L. SNOWDEN

PROJECT MANAGER:

BECKY FREDRICKSON
PLANNING, DESIGN & CONSTRUCTION DIVISION
BRADLEY PARK EQUIPMENT SERVICE
1314 N. PARK ROAD
PEORIA, ILLINOIS 61604
TELEPHONE: 309-686-3386

ADMINISTRATIVE STAFF:

EMILY CAHILL, EXECUTIVE DIRECTOR
BRENT WHEELER, DEPUTY DIRECTOR
MATT FREEMAN, SUPERINTENDENT OF PARKS
JANET BUDZYNSKI, SUPERINTENDENT OF FINANCE
AND ADMINISTRATIVE SERVICES
BECKY FREDRICKSON, SUPERINTENDENT OF PLANNING,
DESIGN AND CONSTRUCTION
CYNDY MCKONE, SUPERINTENDENT OF
MARKETING/PUBLIC RELATIONS
SHALESSE PIE, SUPERINTENDENT OF HUMAN
RESOURCES
NICK CONRAD, SUPERINTENDENT OF
RIVERFRONT DIVISION

Address all communications regarding this work to the Project Manager listed above.

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Peoria Park District, Peoria, Illinois, hereinafter known as the Owner, for the following project:

Boiler Replacement
RiverPlex Recreation and Wellness Center
600 N.E. Water St.
Peoria, IL 61603

It is the intent of the Owner to receive Base Bids for the project listed above.

Sealed bids will be received until Tuesday, October 4, 2016 @ 1:00 p.m. prevailing time, by the Owner, at the Peoria Park District Administrative Office, 1125 W. Lake Ave., Peoria, Illinois 61614. (The Board Room clock shall be the official time keeping device in respect to the bid submission deadline.)

An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309) 686-3386. A non-refundable plan deposit of \$50.00 will be charged for each printed set of Bid Documents.

A list of planholders can be obtained upon request. This information will be available up to twenty-four (24) hours prior to the scheduled bid opening time. **After that deadline, no information pertaining to the project will be given.**

A 10% Bid Bond is required, and is to be included with the Bid Proposal. The successful Bidder will be required to furnish a 100% Performance Bond and a 100% Labor and Materials Payment Bond within ten (10) days of formal Award of Contract.

The general prevailing rate of wage for the Peoria area shall be paid for each craft or type of worker needed to execute this contract or perform this work as required by the State of Illinois Department of Labor. Additionally, it is required that provisions of the Illinois Preference Act, the Illinois Drug Free Workplace Act, and the Substance Abuse Prevention on Public Works Act must be adhered to. Bidders are also advised that contract documents for this project include the non-discrimination, equal opportunity and affirmative action provisions in the Human Rights Act and rules and regulations of the Department of Human Rights. The Peoria Park District is an AA/EEO organization and encourages participation by minority and female-owned firms.

The Peoria Park District reserves the right to reject any or all bids, waive technical deficiencies, informalities or irregularities or rebid any project.

PLEASURE DRIVEWAY AND PARK DISTRICT
OF PEORIA, ILLINOIS

BY: TIMOTHY J. CASSIDY, President

BY: V. JOYCE MCLEMORE, Secretary

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SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. INSTRUCTIONS TO BIDDERS

- A. "Instructions to Bidders", AIA Document A701, 1997 Editions, published by the American Institute of Architects, including revisions adopted before date of this Project Manual, is hereby made part of these specifications with same force and effect as though set forth in full.
- B. The following modifies, changes, deletes from or adds to the **Instructions to Bidders** (AIA Document A701, 1997 Edition). Where any Article of the Instructions to Bidders is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.
- C. Parenthesis () indicates the appropriate section and Subparagraph of the Instructions to Bidders which each paragraph of the Supplementary Instructions to Bidders modifies or refers to.

2. PROJECT DESCRIPTION

- A. The Project description generally is as follows:
 - 1. **BASE BID:**

Work includes, but is not limited to, existing boiler demolition and replacement, and all associated work for such.
- B. **PRE-BID MEETING :**
 - 1. A pre-bid meeting will be held at The RiverPlex Recreation & Wellness Center on Tuesday, September 27, 2016 at 10 :30 a.m.

3. CODES AND PERMITS

- A. **COSTS ASSOCIATED WITH REGULATORY COMPLIANCE.** All Work performed in connection with this Project shall be in compliance with the requirements of all applicable local, state, and federal laws, regulations, and rules, as well as the requirements of the Construction Documents. The Bid Price shall reflect all costs of compliance to those requirements, whether or not specifically stated in the Construction Documents or specific sections of the Project Manual.
- B. **PERMITS/FEES.** Work shall not commence until all required building (and/or other) permits have been secured by the Contractor and copies of these permits submitted to the Owner's Representative. Cost of permits is to be included in the Bid Price.

4. BID GUARANTY

The bid must be accompanied by a Bid Guaranty which shall not be less than 10% of the amount of the Bid. At the option of the Bidder, the 10% Guaranty may be a Certified Check, Cashier's Check, or a Bid Bond. The Bid Bond shall be secured by a Guaranty or a Surety Company acceptable to the Owner. No bid will be considered unless it is accompanied by the required Guaranty. Funds must be made payable to the order of the Owner. Cash deposits will not be accepted. The Bid Guaranty shall ensure the execution of the Agreement and the furnishing of the Surety Bond or Bonds by the successful Bidder, all as required by the Contract Documents.

5. AWARD OF CONTRACT/REJECTION OF BIDS:

The Contracts will be awarded on the basis of Paragraph 5.3 of the Instructions to Bidders. The Bidders to whom the awards are made will be notified at the earliest possible date. The Owner, however, reserves the right to reject any and all Bids, to accept any combination of base bids and alternates and to waive any technical deficiencies, informalities, or irregularities in Bids received whenever such rejection or waiver is in its interest.

No bid shall be withdrawn for a period of sixty (60) days after the opening of bids without the consent of the Owner. The failure of the Bidder to submit a Bid Bond, Certified Check or Cashier's Check in the full amount to cover all proposals bid upon shall be sufficient cause for rejection of his bid. The award will be made contingent upon submittal and evaluation of Contractor's Qualification Statement, Bonds, Certificate of Insurance, Contractor Certification(s), including Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors, etc.

6. EXECUTION OF AGREEMENT:

Subsequent to the award and within ten (10) days after the prescribed forms are prepared and presented for signature by the Owner's Representative, the successful Bidder shall execute and return to the Owner's Representative an Agreement in the form included in the Contract Documents in such number of copies as the Owner may require. The President of the Board of Trustees will complete execution of Agreement after all bonds and any other required documents have been received by the Park District. One fully executed copy of Agreement will then be returned to Contractor.

7. PERFORMANCE BOND/LABOR AND MATERIAL PAYMENT BOND & INSURANCE

- A. **BONDS REQUIRED.** Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful Bidder shall, within ten (10) calendar days after award of contract, furnish Surety Bonds in penal sums, each not less than the amount of the Contract as awarded as security for the faithful performance of the Contract (Performance Bond), and for the payment (Labor and Materials Payment Bond) of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment or services employed or used by him in performing the work.

- B. FORM OF BONDS.** Such bonds shall be in the same form as the samples included in the Project Manual and shall bear the same date as or a date subsequent to that of the Agreement. The current Power of Attorney for the person who signs for any Surety Company shall be attached to such Bonds. Bonds shall be signed by a Guaranty or Surety Company acceptable to the Owner.
- C. COST OF PERFORMANCE BOND/LABOR AND MATERIAL PAYMENT BOND.** All costs for the Performance Bond/Labor and Material Payment Bond shall be included in the submitted Bid Price.
- D. INSURANCE.** Insurance requirements for this project are addressed both in the Supplementary General Conditions and in "Attachment A.6", in the "Exhibits" section of this Project Manual.
 - a) In respect to the property ("builders risk") insurance coverages referenced in the Supplementary General Conditions: the successful Bidder will be required to provide such coverages as the work of the Project will be accomplished by one general contractor.
- E. TIME FRAMES.** The successful Bidder shall, within ten (10) days after award of contract by the Board of Trustees, submit Proof of Insurance coverages/Bonds in the form and amounts required to the Owner's Representative. Should the Bidder be unable to provide the required Proof of Insurance(s)/Bonds within the specified ten day period the Owner reserves the right, at its sole discretion, to withdraw its award of contract from that Bidder.

8. DEFAULT

- A.** The failure of the successful Bidders to execute the Agreement, supply the required Bonds or proof of required insurance coverage(s) within (ten) 10 days after award of contract, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, may constitute a default. In such case, award of contract will be transferred to the second lowest bidder.

9. CONTRACTOR'S QUALIFICATION STATEMENT

- A.** Contractor's Qualification Statement (AIA Document 305) shall be submitted by low bidder for evaluation prior to award of contract if so requested by the Owner or his representatives.

10. LIST OF SUBCONTRACTORS/PRODUCT & EQUIPMENT SUBSTITUTIONS

- A.** Each Bidder shall submit a "MAJOR SUBCONTRACTORS LIST" proposed to be used in the execution of the Work. If there will be no subcontractors, the Bidder shall state "No Subcontractors" on this form. The completed form is due with the Bid Proposal.
 - 1) Identify the trade name, address, telephone number, and category of work of each subcontractor.
 - 2) Failure to submit the "Major Subcontractors List" with the Bid Proposal may result in the rejection of the Bid.
 - 3) Delete Subparagraphs (6.3.1.1) and (6.3.1.2) from AIA A701.
- B.** The Bidder, by submission of a signed bid form, agrees to install all products and equipment by brand name or names specified in the Technical Specifications sections of this Project Manual. "Or equal" substitutions will be allowed only if approved in writing prior to the bid opening and listed in the "Substitutions" section of the Bid Form.

11. CONTRACT ADMINISTRATION FORMS/COSTS OF FORMS

- A. REQUIRED FORMS.** The following AIA forms will be used (AIA forms will be supplied by the Owner if requested, and charged to the Contractor at cost) in the administration of the project:
 - 1) **AIA Document A310:** "Bid Bond", February 1970 edition
 - 2) **AIA Document A305:** "Contractor's Qualification Statement", 1986 edition
 - 3) **AIA Document G702:** "Application and Certificate of Payment", May 1992 edition
 - 4) **AIA Document G703:** "Continuation Sheet", May 1992 edition
- B. OTHER FORMS.** Other contract administration forms (to be provided by the Owner unless otherwise noted) required for use in the Project are:
 - 1) **Major Subcontractors List**
 - 2) **Contractor's Affidavit**
 - 3) **Individual Contractor Form**
 - 4) **Corporate or Partnership Form**
 - 5) **Performance Bond**
 - 6) **Labor and Material Payment Bond**
 - 7) **Lien Waiver Forms**
 - 8) **Weekly Workforce Report**

- 9) **Certified Payroll Form** (Contractor may use own form)
- 10) **Insurance Forms: As required in Attachment A (at end of Project Manual)** (will not be provided by Owner)
- 11) **Agreement Between Owner and Contractor**

Examples of these forms are included in the Project Manual.

12. CONSTRUCTION TIME AND LIQUIDATED DAMAGES CLAUSE:

- 2.51 PROJECT COMPLETION.** The Agreement will include the following paragraph(s) or language substantially the same, regarding construction time and liquidated damages:
- 1) **LIQUIDATED DAMAGES:** Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not Substantially Complete within the time specified below, plus any extensions thereof allowed in accordance with Article 8 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time.
 - 2) Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty) Contractor shall pay Owner ONE HUNDRED DOLLARS (\$100.00) for each calendar day that expires after sixty four (64) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on October 13, 2016 and be at Substantial Completion by December 15, 2016.
 - 3) After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within seven (7) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner ONE HUNDRED DOLLARS (\$100.00) for each day that expires after the time specified.
 - 4) Owner and Contractor agree that the per day liquidated damage amounts set forth in subparagraphs "2" and "3" of this section constitute a reasonable forecast of the financial losses, actual costs and increased expenses the Owner may incur as a result of delayed Substantial or Final Completion of the Project.

13. PROJECT MANUAL/PLANS & SITE VISITATION

- A. A set of Bid Documents may be examined, at no charge, at the office of the Owner's Representative.
- B. **PLAN DEPOSIT.** An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. A printed set of Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309) 686-3386. A non-refundable plan deposit of \$50.00 will be charged for each printed set of Bid Documents.
- C. **FAMILIARITY WITH BID DOCUMENTS & SITE VISITATION.** Bidders, by submission of their Bids, represent that they have visited the site to acquaint themselves with the local conditions in which the Work is to occur, and that they are familiar with all the requirements of the Project, as defined in the Project Manual and the Plan(s).

14. OTHER MODIFICATIONS TO AIA-701/OTHER CONDITIONS

- A. Add the following sentence to (4.1.7): "Bidder shall submit two (2) completed copies of Bid Form and retain one (1) copy for his files."
- B. Delete Section (6.2) - "Owner's Financial Capability"; and last sentence of Paragraph (4.2.1.)
- C. In reference to (7.2.1), the Peoria Park District reserves the right of final approval of bonding companies.
- D. Delete paragraph (7.1.3).

15. EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

- A. The "Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors Form" and "Workforce Profile" and "Sexual Harassment Policy" shall be filled out and returned with the Bid. Failure to submit a completed "Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors Form" and "Workforce Profile" and "Sexual Harassment Policy" may result in rejection of the bid.
- B. Effective July 1, 1993, every party to a public contract and every party bidding on public contracts is required to have a written "Sexual Harassment Policy" that contains:
 - 1) A definition of sexual harassment under state law;
 - 2) A description of sexual harassment utilizing examples;
 - 3) A formalized complaint procedure;
 - 4) A statement of victim's rights;

- 5) Directions on how to contact the Illinois Department of Human Rights - **Illinois companies**. Out-of-State companies must include directions on how to contact the enforcement agency within their state. Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency.
- 6) A recitation that there cannot be any retaliation against employees who elect to file charges.

Recommendation: Your "**Sexual Harassment Policy**" should be drafted in language easy to understand and any revisions should be reviewed by legal counsel. A copy of your policy should be posted in a prominent and accessible location to assure all employees will be notified of the company's position.

In order to conduct business with the Peoria Park District, you must have a written "Sexual Harassment Policy" that conforms to the new Act.

FAILURE TO DO SO WILL DISQUALIFY YOU AS AN ELIGIBLE VENDOR.

- C. Lowest responsible bidder not meeting the Park District's goal of 12% for minority/women participation, must provide proof of efforts made in contacting an adequate number of minority and women owned firms and/or labor.

16. BID SUBMISSION

- A. **DATE, TIME & PLACE OF RECEIVING BIDS.** Bids will be received until the date and time listed in the "Advertisement for Bids", at which time they will be publicly opened, read aloud and recorded. The Bid Opening will be held at the place listed in the "Advertisement for Bids".
- B. **REQUIRED ITEMS.** The following items must be included as part of the "BID":
 - 1) Two (2) signed copies of the **BID FORM**. (Retain the third copy for your files.)
 - 2) The **PEORIA PARK DISTRICT CERTIFICATE OF EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE FOR CONTRACTORS AND VENDORS FORM** and **SEXUAL HARASSMENT POLICY**.
 - 3) The **WORKFORCE PROFILE**.
 - 4) The **ILLINOIS DRUG FREE WORKPLACE CERTIFICATION**.
 - 5) The **CONTRACTOR CERTIFICATION** (individual or corporate/partnership).
 - 6) The **LIST OF SUBCONTRACTORS**. (Submit form and state "No Subcontractors" on the form, if none will be used.)
 - 7) The **BID GUARANTY**.
 - 8) The **CERTIFICATION OF SAFETY COMPLIANCE**.
 - 9) **SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION**
- C. **BID SUBMISSION.** The "BID" shall be enclosed in envelopes (outer and inner), both of which shall be sealed and clearly labeled with the following information, in order to prevent premature opening of the bid:
 - "PROPOSAL"
 - NAME OF PROJECT
 - NAME OF BIDDER
 - DATE/TIME OF BID OPENING

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Bid From: _____

PROJECT NO. 16-018
BID FOR: BOILER REPLACEMENT
LOCATION: RIVERPLEX RECREATION AND
WELLNESS CENTER

BID FORM

BID TO: PEORIA PARK DISTRICT

UNDERSIGNED:

1. Acknowledges receipt of:
 - A. Project Manual and Drawings for:

 - B. Addenda: No. _____ through No. _____
2. Has examined facility and the bid documents and shall be responsible for performing work specifically required of him by all parts of bidding documents including specifications for entire project, even though such work may be included as related requirements specified in other divisions or sections.
3. And agrees to enter into and execute Contract with Owner, if awarded on basis of this bid, and to:
 - A. Furnish Bonds and Insurance required by the Bidding & Contract Documents.
 - B. Accomplish work in accord with Contract.
 - C. Complete work within specified Contract time.
4. **CONTRACT TIME:** Contractor agrees to Substantially Complete ALL WORK as required by the Contract Documents per the Supplementary General Conditions and Supplementary Instructions to Bidders.
5. **BASE BIDS:**
 - A. Base Bid:
Bidder agrees to perform all building and site work, as set forth in the Project Manual and Drawings for the sum of:

_____ Dollars (\$_____._____)
6. **PROPOSED SUBSTITUTION LIST:**
Base Bid(s) and Alternates are understood to include only those product brands, items, and elements which are specified in the Bid Documents. The following is a list of substitute products, equipment or methods of construction which the Bidder proposes to furnish on this project, with difference in price being added or deducted from Base Bid(s).

Bid From: _____

PROJECT NO. 16-018
BID FOR: BOILER REPLACEMENT
LOCATION: RIVERPLEX RECREATION AND
WELLNESS CENTER

Bidder understands that acceptance of any proposed substitution which has not been approved as an "equal" to the product brand, item, or element specified prior to bid opening is at Owner's option. Approval or rejection of any substitutions listed below will be indicated before executing Contract.

<u>ITEM</u>	<u>ADD</u>	<u>DEDUCT</u>
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____

7. **BIDDERS CHECKLIST:**

Did you visit the site?	Yes	No
Is Bid Security enclosed? (If applicable)	Yes	No
Is Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors and Sexual Harassment Policy enclosed?	Yes	No
Is Workforce Profile enclosed?	Yes	No
Is List of Subcontractors enclosed?	Yes	No
Is Contractor Certification enclosed?	Yes	No
Is Ill. Drug Free Workplace Certification enclosed?	Yes	No
Is Certificate of Safety Compliance enclosed?	Yes	No
Is Substance Abuse Prevention Program Certification enclosed?	Yes	No

Bid From: _____

PROJECT NO. 16-018
BID FOR: BOILER REPLACEMENT
LOCATION: RIVERPLEX RECREATION AND
WELLNESS CENTER

8. **BIDDER INFORMATION:**

NAME OF BIDDER: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NO.: _____

BY: _____
(Signature of Authorized Official)

TITLE: _____

BIDDER'S SEAL

WITNESS: _____

END OF BID FORM



Peoria Park District
Certificate of Equal Employment Opportunity Compliance
for
Contractors and Vendors

Office Use Only:
Approved: _____
Date: _____

Disclosure of the information requested in this form is required by the Peoria Park District. Failure to properly complete and sign this form will result in it being returned unprocessed thereby resulting in a delay or denial of eligibility to bid.

As part of the Company's commitment to equal employment opportunity practices, this company does the following:

- Recruits, trains, upgrades, promotes and disciplines persons without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- Notifies all recruitment sources that all qualified applicants will be considered for employment without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- When advertising is used, specifies that all qualified applicants will be considered for employment without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- Notifies all labor organizations which furnish this company with any skilled or non-skilled labor of the Company's responsibility to comply with the equal employment opportunity requirements required in all contracts by the Peoria Park District.
- Notifies all of its sub-contractors of their obligation to comply with the equal employment opportunity requirements required in all contracts by the Peoria Park District.
- Has an affirmative action program that assures the company's fair employment practices are understood and carried out by all of its managerial, administrative and supervisory personnel.

Is the Company a minority/woman owned business (MBE/WBE)? ____ YES ____ NO

The Company does not discriminate against any employees or applicants for employment because of race, color, religion, sex, national origin, veteran status, age, mental or physical ability.

The Company does not maintain segregated facilities for any of its employees on the basis of race, religion, color, national origin, because of habit, local custom, or otherwise.

By signing this form, the Company attests that it complies with all statements listed above as part of the Company's commitment to equal employment opportunity practices. The Company further agrees that it has completed the attached Workforce Profile Sheet truthfully, to the best of its knowledge.

Company Name

Company Address

Signature of Company Official

Name / Title

Telephone Number & Fax Number

Email Address

Rev. 6/2012

WORKFORCE PROFILE - FULL TIME ONLY

Job Classifications	Total Employees		Black		Hispanic		Native American		Asian		Veteran		Disabled	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1. Officials, Managers, Supervisors														
2. Professionals														
3. Technicians														
4. Sales														
5. Office/Clerical														
6. White Collar Trainees:														
7. Skilled Crafts:														
8. Apprentices:														
9. On-the-job Trainees:														
10. Semi-skilled														
11. Service Workers														
12. Unskilled														
TOTALS														

WORKFORCE PROFILE INSTRUCTIONS

RACE/ETHNIC IDENTIFICATION

WHITE (not of Hispanic origin): All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

BLACK (not of Hispanic origin): All persons having origins in any of the Black racial groups of Africa.

HISPANIC: All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

ASIAN or PACIFIC ISLANDER: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

NATIVE AMERICAN or ALASKAN NATIVE: All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

DESCRIPTION OF JOB CLASSIFICATIONS

OFFICIALS, MANAGERS, AND SUPERVISORS - Occupations requiring administrative personnel who set broad policies, and exercise over-all responsibility for the 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 foremen who are members of management, purchasing agents and buyers, and kindred workers.

PROFESSIONALS - Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accountants/auditors, airplane pilots and navigators, architects, artists, chemists, designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, personnel and labor relations workers, physical scientists, physicians, social scientists, teachers, and kindred workers.

TECHNICIANS - Occupations requiring combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: drafters, engineering aids, junior engineers, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic physical sciences), and kindred workers.

SALES WORKERS - Occupations engaging wholly or primarily in direct selling. Includes: advertising agents/salespersons, insurance agents/brokers, real estate agents/brokers, stock and bond salespersons, demonstrators, salespersons and sales clerks, and kindred workers.

OFFICE AND CLERICAL WORKERS - Includes all clerical type work regardless of level of difficulty, where the activities are predominantly non-manual though some manual work not directly involved with altering or transporting the products is included. Includes: bookkeepers, cashiers, collectors (bills and accounts), messengers and office couriers, office machine operators, shipping and receiving clerks, stenographers, typist and secretaries, telegraph and telephone operators, and kindred workers.

WHITE COLLAR TRAINEES - Persons engaged in formal training for official, managerial, professional, technical, sales, office and clerical occupations.

SKILLED CRAFTS - Manual worker of relatively high skill level having a thorough and comprehensive knowledge of the processes involved in their work. Exercise considerable independent judgment and usually receive an extensive period of training. Includes: the building trades hourly paid foremen and leadmen who are not members of management, mechanics and repairmen, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors and tailoresses, and kindred workers.

APPRENTICES - Persons employed in a program including work training and related instruction to learn a trade or craft which is traditionally considered an apprenticeship, regardless of whether the program is registered with a Federal or State agency.

ON-THE-JOB TRAINEES - Persons engaged in formal training for craftsmen when not trained under apprentice programs; semi-skilled, unskilled and service occupations.

SEMI-SKILLED WORKERS - Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training.

SERVICE WORKERS - Workers in both protective and non-protective service occupations. Includes: attendants (hospital and other institution, professional and personal service), barbers, charwomen and cleaners, cooks (except household), counter and fountain workers, elevator operators, fire fighters, guards, watchmen and doorkeepers, stewards, janitors, police officers and detectives, porters, waiters and waitresses, and kindred workers.

UNSKILLED WORKERS - Workers in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require the application of little or no independent judgement. Includes: garage laborers, car washers and greasers, gardeners (except farm) and groundskeepers, longshoremen and stevedores, lumbermen, craftsmen and wood choppers, laborers performing lifting, digging, mixing loading and pulling operations, and kindred workers.

PLEASE BE ADVISED!

Every party to a public contract and every party bidding on public contracts are required to have a written sexual harassment policy that contains:

- (1) a definition of sexual harassment under state law;
- (2) a description of sexual harassment utilizing examples;
- (3) a formalized complaint procedure;
- (4) a statement of victims rights;
- (5) directions on how to contact the Illinois Department of Human Rights – **Illinois companies.** **Out-of-State companies must include directions on how to contact the enforcement agency within their state.** Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency.
- (6) a recitation that there cannot be any retaliation against employees who elect to file charges.

Recommendation: Your sexual harassment policy should be drafted in language easy to understand and any revisions should be reviewed by legal counsel. A copy of your policy should be posted in a prominent and accessible location to assure all employees will be notified of the company's position.

In order to conduct business with the PEORIA PARK DISTRICT, you must have a written sexual harassment policy that conforms to the new ACT.

**FAILURE TO DO SO
WILL DISQUALIFY YOU AS AN ELIGIBLE VENDOR!!!**

Please be advised, effective July 1, 1993, Governor Jim Edgar established under Executive Order Number 7 (Public Act 87-1257) that every party to a public contract and every party bidding on a public contract within the State of Illinois must have a written policy statement prohibiting sexual harassment. The following model policy statement is a draft copy provided for use in formulating your company's policy statement

SEXUAL HARASSMENT POLICY STATEMENT

It is the responsibility of each individual employee to refrain from sexual harassment and it is the right of each individual employee to work in an environment free from sexual harassment.

DEFINITION OF SEXUAL HARASSMENT

According to the Illinois Human Rights Act, sexual harassment is defined as:

Any unwelcome sexual advances or requests for sexual favors or any conduct of a sexual nature when

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;
2. submission to or rejection of such conduct by an individual is used as the basis for employment decision(s) affecting such individual; or
3. such conduct has the purpose or effect of substantially interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment.

The courts have determined that sexual harassment is a form of discrimination under Title VII of the U.S. Civil Rights act of 1964, as amended in 1991. One such example is a case where a qualified individual is denied employment opportunities and benefits that are, instead, awarded to another individual who submits (voluntarily or under duress) to sexual advances or sexual favors. Another example is where an individual is subjected to unwelcome sexual nature in order to receive an employment opportunity.

Other conduct commonly considered to be sexual harassment includes:

- ⇒ Verbal: Sexual innuendoes, suggestive comments, insults, humor and jokes about sex, anatomy or gender-specific traits, sexual propositions, threats, repeated requests for dates, or statement about other employees, even outside of their presence, of a sexual nature.
- ⇒ Non-Verbal: Suggestive or insulting sounds (whistling), leering, obscene gestures, sexually suggestive bodily gestures, "catcalls", "smacking" or "kissing" noises.
- ⇒ Visual: Posters, signs, pin-ups, slogans of a sexual nature.
- ⇒ Physical: Touching, unwelcome hugging or kissing, pinching, brushing the body, coerced sexual intercourse or actual assault.

Sexual harassment most frequently involves a man harassing a woman. However, it can also involve a woman harassing a man or harassment between members of the same gender.

The most severe and overt forms of sexual harassment are easier to determine; however, some sexual harassment is more subtle and depends to some extent on individual perception and interpretation. The trend in the courts is to assess sexual harassment by a standard of what would offend a "reasonable woman" or a "reasonable man", depending upon the gender of the alleged victim.

An example of the most subtle form of sexual harassment is the use of endearments. The use of terms such as "honey", "darling", and "sweetheart" is objectionable to many women who believe that these terms undermine their authority and their ability to deal with men on an equal and professional level.

Another example is the use of a compliment that could potentially be interpreted as sexual in nature. Below are three statements that might be made about the appearance of a woman in the workplace:

- ⇒ “That’s an attractive dress you have on.”
- ⇒ “That’s an attractive dress. It really looks good on you.”
- ⇒ “That’s an attractive dress. You really fill it out well.”

The first statement appears to be simply a compliment. The last is most likely to be perceived as sexual harassment depending on individual perceptions and values. To avoid the possibility of offending an employee, it is best to follow a course of conduct above reproach, or to err on the side of caution.

RESPONSIBILITY OF INDIVIDUAL EMPLOYEES

Each individual employee has the responsibility to refrain from sexual harassment in the workplace. An individual employee who harasses a fellow worker is, of course, liable for his or her individual conduct. The harassing employee will be subject to disciplinary action up to and including discharge in accordance with company/organization policy or a collective bargaining agreement, as appropriate.

RESPONSIBILITY OF SUPERVISORY PERSONNEL

Each supervisor is responsible for maintaining a workplace free of sexual harassment. This is accomplished by promoting a professional environment and by dealing with sexual harassment as with all other forms of employee misconduct.

The courts have found companies/organizations as well as supervisors can be held liable for damages related to sexual harassment by a manager, supervisor, employee, or third party (an individual who is not an employee but does business with a company/organization, such as a contractor, customer, sales representative, or repair person).

Liability is based either on a company/organization's responsibility to maintain a certain level of control and discipline, or on the supervisor acting as an agent of the company/organization. As such, supervisors must act quickly and responsibly, not only to minimize their own liability, but also that the company/organization.

DRAFT

RESOLUTION OUTSIDE THE COMPANY/ORGANIZATION

It is hoped that most sexual harassment complaints and incidents can be resolved within a company/organization. However, an employee has the right to contact the Illinois Department of Human Rights (IDHR) or the U.S. Equal Employment Opportunity Commission (EEOC) about filing a formal complaint. An IDHR complaint must be filed within 180 days of the alleged incident(s) unless it is a continuing offense. A complaint with EEOC must be filed within 300 days.

Illinois Department of Human Rights

(217) 785-5100 – Springfield
(217) 785-5125 – TDD Springfield
(312) 814-6200 – Chicago
(312) 263-1579 – TDD Chicago

Illinois Human Rights Commission

(217) 785-4350 – Springfield
(217) 785-5125 – TDD Springfield
(312) 814-6269 – Chicago
(312) 814-4760 – TDD Chicago

U.S. Equal Employment Opportunity Commission

(312) 353-2613 – Chicago District Office
(800) 669-4000 – Toll Free Within State of Illinois
(800) 669-6820 – TDD Chicago

An employee who is suddenly transferred to a lower paying job or passed for promotion, after filing a complaint with IDHR or EEOC, may file a retaliation charge, also due 180 days (IDHR) or 300 days (EEOC) from the alleged retaliation.

An employee who has been physically harassed or threatened while on the job may also have grounds for criminal charges of assault and battery.

FALSE AND FRIVOLOUS COMPLAINTS

False and frivolous charges refer to cases where the accuser is using a sexual complaint to accomplish some end other than stopping sexual harassment. It does not refer to charges made in good faith which cannot be proven. Given the seriousness of the consequences for the accused, a false and frivolous charge is a severe offense that can itself result in disciplinary action.



ILLINOIS DRUG FREE WORKPLACE CERTIFICATION

The undersigned Contractor/Vendor hereby certifies that it will comply with all provisions of the Illinois Drug Free Workplace Act of 1991.

Dated this _____ day of _____, 20 _____

Contractor/Vendor

By: _____



SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION

Project Name: _____

Location: _____

The Substance Abuse Prevention on Public Works Act Public Act 95-0635, prohibits the use of drugs and alcohol, as defined in the Act, by employees of the Contractor and by employees of all approved Subcontractors while performing work on a public works project. The Contractor/Subcontractor herewith certifies that it has a superseding collective bargaining agreement or makes the public filing of its written substance abuse prevention program for the prevention of substance abuse among its employees who are not covered by a collective bargaining agreement dealing with the subject as mandated by the Act.

A. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has signed collective bargaining agreements that are in effect for all of its employees, and that deal with the subject matter of Public Act 95-0635.

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative Date

B. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has in place, for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act, the attached substance abuse prevention program that meets or exceeds the requirements of Public Act 95-0635.

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative Date



CERTIFICATION OF SAFETY COMPLIANCE

The undersigned Contractor/Vendor hereby certify that they and their sub-contractors will comply with any and all prevailing occupational safety and health standards including, but not limited to the following: hazard communication, hearing conservation, respirator use, permit required confined space entry, scaffolding, personal protective equipment, ladder usage, ventilation, flammable and combustible liquids handling and storage and lockout/tagout. Such compliance may include a training component or require a written program of compliance.

Dated this day of _____, 20 ____.

CONTRACTOR/VENDOR: _____

By: _____

**PLEASURE DRIVEWAY AND PARK DISTRICT
OF PEORIA, ILLINOIS**

Individual Contractor Form

CONTRACTOR CERTIFICATION

I, _____, do hereby certify that I am a contractor who has not been barred from bidding on a public contract as a result of a violation of either Section 33E-3 (bid-rigging) or Section 33E-4(bid rotating) of the Illinois Criminal Code, Illinois Compiled Statutes 720 ILCS 5/33E-3 and 5/33E-4.

Contractor

By: _____

Subscribed and Sworn before me this _____ day of _____, 20____

Notary Public

My Commission Expires _____, 20____

**PLEASURE DRIVEWAY AND PARK DISTRICT
OF PEORIA, ILLINOIS**

Corporate or Partnership Contractor Form

CONTRACTOR CERTIFICATION

I, _____, a duly authorized agent of
(Agent)

_____, do hereby certify that neither
(Contractor)

_____, nor any individual presently
(Contractor)

affiliated with _____, has been barred from
(Contractor)

bidding on a public contract as a result of a violation of either Section 33E-3 (bid-rigging) or Section 33E-4 (bid rotating) of the Illinois Criminal Code, Illinois Compiled Statutes, 720 ILCS 5/33E-3 and 5/33E-4.

Contractor

By: _____

Subscribed and Sworn before me this _____ day of _____, 20____

Notary Public

My Commission Expires _____, 20____

MAJOR SUBCONTRACTORS LIST

The following tabulation of Major Subcontractors shall be attached and made a condition of the Bid. The Bidder expressly understands and agrees to the following provisions:

- A. If awarded a Contract as a result of this Bid, the major subcontractors used in the prosecution of the work will be those listed below.
- B. The following list includes all subcontractors who will perform work representing 5% (five percent) or more of the total Base Bid.
- C. The subcontractors listed below are financially responsible and are qualified to perform the work required.
- D. The subcontractors listed below comply with the requirements of the Contract Documents.
- E. Any substitutions in the subcontractors listed below shall be requested in writing by the Contractor and must be approved in writing by the Owner. No sub-subcontractors will be allowed unless specifically stated on the form. All pertinent financial, performance, insurance and other applicable information shall be submitted with the request for substitution(s). Owner shall respond to such requests within 14 calendar days following the submission of all necessary information to the full satisfaction of the Owner.
- F. Failure to submit the list of Major Subcontractors as stated herein shall constitute a material variation from the Invitation to Bid; and any such Bid may be rejected by the Owner.

Subcontractor Name	Address	Telephone	Area of Work	Minority/Women Owned Business (Yes/No)

(Attach additional sheets if required)

END OF MAJOR SUBCONTRACTORS FORM

Directory of Minority & Women Owned Business Enterprises
Compiled with Information from
City of Peoria Equal Opportunity Office
Peoria Housing Authority
Peoria Park District

Revised 11/13

Absolute Risk Management Strategies Kelly Peterson	MBE Construction Safety, Job Site Safety Plan Development, Job Site Risk Assessment, Construction OSHA Training 416 Main St., Suite 533, Peoria, IL 61602	309-256-8471 309-222-4050 Cell
Adams Septic & Sewer Services, Inc. Michelle Adams	WBE Septic and Sewer Contractor 1641 N. Tiber Ridge Ct., East Peoria, IL 61611	309-691-6113
Aerial Work Services Company	MBE Landscaping and Seeding 13805 Wadsworth Road, Wadsworth, IL	847-662-5321 847-662-5321 Fax
AFE Construction, Inc. Tommy and Monica Arbuckle	WBE General Contractor WBE P.O. Box 199, Mackinaw, IL 61755	309-303-7065 866- 491-2209 Fax
A & L Salvage, Inc. Archie Brown	MBE Clean Up, Tree Cutting & Removal, Truck Salvaging 824 W. Brons Peoria, IL 61604	309-682-4412
Alexander Brothers Construction Co. Allester Alexander	MBE Concrete, Demolition, Excavation, Landscaping P.O. Box 1508, Peoria, IL 61605	309-673-6768
A. Lucas & Sons Steel Margaret Hanley	WBE Structural Steel Fabrication 1328 SW Washington, Peoria, IL 61602	309-673-8547 309-673-7213 Fax
Ambri Inc. Robert J. Hunt. Jr.	MBE Drywall, Flooring, Painting, Cabinetry 9101 S. Nashville Ave., Oak Lawn, IL 60453	708-233-0217 Ph and Fax
Atherton, P.A. Patricia Atherton	WBE Asphalt, Concrete, Demolition, Excavation 57 Eichorn Road, Spring Bay, IL 61611	309-822-8575 309-822-8782 Fax
A Unique Maintenance Service Andrea McKnight	MBE Commercial and Industrial Construction Cleanup 2101 N. North St., Peoria, IL 61604	309-685-7197 309-685-4472 Fax
Braun Excavating, Inc. Teresa Braun	WBE Demolition, Digging of Footings, Excavation, Pipe Laying 24 Gulf Stream Bartonville, IL 61607	309-697-5454 309-697-6567 Fax
Brown, Leo Trucking, Inc. Leo Brown	MBE Trucking/Hauling P. O. Box 9057, Peoria, IL 61612	309-685-6710 309-685-0759 Fax
Buddy's Landscaping Dexter Davis	MBE Landscaping P. O. Box 1836, Bloomington, IL 61702	309-824-9211 309-454-3342 Fax
Capitol Trucking Eddie Washington	MBE Janitorial Service, Snow Removal, Trucking 2803 Creston Ln., Peoria, IL 61604	309-679-9388 309-339-5313 Cell
Central IL Construction Inc. Jessica Youngman	WBE Land Surveying 416 Germantown Rd., Germantown, IL 61548	309-383-3156
Central IL Rebar Insulators Roger Fleming	MBE Structural Steel and Rebar Replacement 4719 Ridgelawn, Peoria, IL 61615	309-258-1379 888-387-5716 Fax
Central Landscaping Donna Brandenburg	WBE Landscaping 12512 Mendell Rd., Princeville, IL 61559	309-385-4832 309-385-2644 Fax
CJL Landscaping, Inc. Rebecca J. Kelch	WBE Landscaping 10902 W. U. S. Highway 150, Brimfield, IL 61517	309-691-9200 309-691-5131 Fax

C & L Construction & Roofing Co. Jeanette Burns	WBE Roofing, Electrical, Plumbing P.O. Box 416, Peoria, IL 61651	309-672-2641
Clean Sweep Lead Abatement Ricky Walker	MBE Lead-Based Paint Removal 4014 Brighton Peoria, IL 61615	309-689-1146
Clevenger Contractors Inc. Verlee Clevenger	WBE Guardrail, Bridge Rail, Seeding, Fencing 355 Naples Rd., P.O. Box 19, Bluffs, IL 62621	217-754-3411 217-754-3537 Fax
CNS Forestry & Landscaping LLC Christine Schilling	WBE Landscaping, Seeding, Sodding, Tree Removal 1813 1000 th St., Lincoln, IL 62656	217-792-3808 217-792-3808 Fax
Cordova Construction Tina Christopher	WBE Concrete Removal, Curb & Gutter Removal, Sidewalk Removal 2424 N. Ellory Road, Peoria, IL 61615	309-674-8810
Cornerstone Builders & Developers Ron Touilly	WBE 6129 W. Southport Rd., Peoria, IL 61615	309-674-9000 309-673-7783 Fax
CSS (Construction Specialties & Services) Dave Suzuki	MBE Building Specialties, Design, Engineering, Estimating P. O. Box 120703 Peoria, IL 61614	309-685-8453
Davis Brothers Construction Company Russell Davis	MBE Trucking/Hauling 1522 W. Kettelle St. Peoria, IL 61605	309-683-6931
DECA Realty Eddie J. Washington	MBE Real Estate Broker, Appraiser 417 W. Main, Peoria, IL 61606	309-637-3322 309-682-3922 Fax
Design Air Inc. Courtney Eston	MBE Commercial Air Duct Cleaning 3806 W. Hearthwood Dr., Dunlap, IL 61525	309-693-8632 309-243-2102 Fax
Dunbar Transfer	WBE Trucking P.O. Box 315, Chillicothe, IL 61523-0315	309-303-5122
E & D Trucking and Hauling, Inc. Eddie Proctor	MBE Trucking/Hauling 1913 N. Idaho, Peoria, IL 61604	309-682-4336 309-251-6736 Cell
Earth Care Unlimited, Inc. Monica Thomley	WBE Seeding, Sodding, Landscaping 3108 Panther Grove Rd., Ashland, IL 62612	217-452-7320 217-452-7178 Fax
Economy Painting & Decorating Linda Coffman	MBE Painting 9315 W. Goetz, Hanna City, IL 61536	309-565-7300
Elegant Installations James Barrett	MBE Installation/sales custom drapery, blinds, shade, shutters 125 E. Elaine, Peoria, IL 61614	309-648-8118 309-93-0007 Fax
Fashion Floors, Inc. Yvonne Hand	WBE Floorcoverings 930 S. 2 nd Street, Suite B, Pekin, IL 61554	309-353-8272 309-347-1109 Fax
Foster-Jacob, Inc. Emily Jacob	WBE Electrical 826 W. Main St., Peoria, IL 61603	309-674-8129 309-674-6890 Fax
Fire & Ice Heating and Air J.T. Toombs	MBE HVAC Maintenance, Installment 922 W. Smith St., Peoria, IL 61605	309-219-3708
Fuhrmann Engineering Inc. Kathy Shelter	WBE Civil Engineers / Land Surveyors 456 Fulton St., Suite 146	309-713-3498 Ext. 5
Flessner Electric	WBE Electrical 3600 S. Cameron Ln., Mapleton, IL 61547	309-697-2484
G&L Trucking & Construction	WBE 1113 W. Groveland Ave., Peoria, IL 61604	309-686-9334
Garza Heating & Cooling	MBE 1304 S. Western Ave., Peoria, IL 61605	309-645-6294
Ronald A. Givens & Associates Ronald A. Givens	MBE Insurance & Investments 2616 N. Lehman, Peoria, IL 61602	309-685-4588 309-676-3152 Fax

Gutters & More	WBE 157 Thunderbird Ln., East Peoria, IL 61611	309-694-4000 309-694-3356 Fax
Hancock Trucking, Inc. Nancy Hancock	WBE Trucking/Hauling 30570 Hancock Road Mackinaw, IL 61755	309-447-6733
Hanley Steel, Inc. Jill Hanley	WBE Fabricated Structural and Miscellaneous Steel 8811 N. Industrial Rd., Peoria, IL 61615	309-692-5250 309-692-5251 Fax
Heart Technologies Jim Bainter, Brad Armstrong	WBE Data and Telephone, Communication and Construction 3105 N. Main Street, Peoria, IL 61611	309-427-7000 309-427-7007 Fax
Hermann & Associates Alisha Hermann	WBE Consultant Engineering 5835 N. Galena Rd., Peoria, IL 61614	309-687-5566 309-687-0571 Fax
Hopgood Painting Bruce Hopgood		309-826-4981
Horan Construction, Inc. Susan Arnholt	WBE Carpentry, Concrete, Demolition, General, Wrecking 1720 W. Chanute Road Peoria, IL 61615	309-691-3133 309-691-1841 Fax
Infrastructure Engineering Thu Truitt	MBE Civil Engineering 456 Fulton St., Suite 104, Peoria, IL 61602	309-637-9200 309-637-9210
Intech Innovations John McCrary	WBE Audio/Video Design and Integration Washington, IL 61571	309-370-6676 309-745-9691 Fax
J Construction Frank Coates	MBE General 1810 Stever, Peoria, IL 61605	309-303-3919 Cell
JAKS Construction Inc. John Spencer	Disabled Vet Concrete Cutting, Drilling, Sealing 19319 Great Crane Rd., Bloomington, IL 61705	800-455-9662 309-455-9662 Fax
J. D. Masonry Services Hurdestine Dabbs	M/WBE Concrete 907 E. Arcadia, Peoria, IL 61603	309-453-6533 Cell
J&J Manufacturing	110 W. Walnut, Chillicothe, IL 61523	209-274-3141
J & J Construction Herman Johnson	MBE Demolition, Excavation 1300 W. Aiken Ave., Peoria, IL 61605	309-673-8616 309-676-8292 Fax
J & K Construction James Tilman	MBE General 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-685-8554 Fax
JM Industrial Supply Ron Given	MBE Maintenance Items, Tools, Soaps 2323 Lakeshore, Pekin, IL 61554	309-346-5796 309-347-5100 Fax
Joseph & Associates Construction Inc. Elva Jones	M/WBE Rough and Finish Carpentry 325 Sanford St., East Peoria, IL 61611	309-550-5639 309-282-6013 Fax
Kahbeah Contracting & Trucking Larry Kahbeah	MBE Trucking/Hauling 510 N. Yates, P. O. Box 56, Tallula, IL 62688	217-634-4157 217-634-4157 Fax
Kreiling Roofing Co.	WBE Slate, Wood Shakes, Tile, Thatch, Custom Fabricated Copper and Steel, Residential and Commercial 2335 W. Altorfer Dr., Peoria, IL 61615	309-673-3649
LNR Construction & Trucking Demonte Davis	MBE Concrete, Trucking 2200 Linsley St., Peoria, IL 61604	309-682-6331
LV Enterprise John L. Palmer	MBE Trucking/Hauling 303 E. Archer Avenue, Peoria, IL 61603	309-657-2420 309-682-8872 Fax
M & A Plumbing Michael Abner	MBE Plumbing 6216 N. Devonshire Avenue, Peoria, IL 61615	309-689-0133 309-689-0133 Fax
McGinnis Transportation Beth McGinnis	WBE Trucking, Tandem, 24 » Box Truck 336 Riverview Dr., Creve Cœur, IL 61610	309-369-4465 309-694-1604 Fax
M&K Heating & Cooling Reggie Williams	MBE HVAC 2406 W. Newman Parkway, Peoria, IL 61604	309-256-6129

M & L Plumbing Manzell Lawson	MBE Plumbing 1309 W. Lincoln, Peoria, IL 61605	309-674-8466
Mid-Illinois Companies, Corp.	WBE Metal Framing, Insulation, Drywall, Plaster and Exterior Insulation, Acoustical Ceilings and Wall Panels, Painting and Wall Covering, Access Flooring 905 NE Adams St., Peoria, IL 61603	309-674-0717 309-674-5802 Fax
Midwest Construction Services Sheila Shover	M/WBE Traffic Control Products, Trucking/Hauling P. O. Box 4185, Bartonville, IL 61607	309-697-1000 309-697-1004 Fax
Millennia Professional Services of IL Paul Moreno	MBE Civil Engineering, Erosion Control, Landscaping, Sewer Construction, Surveying, Retaining Walls 850 N. Main St., Morton, IL 61550	309-321-8141 309-321-8142
Molleck Electric	WBE Electrical 14926 W. Winchester Dr., Brimfield, IL 61517	309-446-3483
Ordaz Construction Co. Inc. Elizabeth Ordaz Mercer	WBE Concrete 8010 N. Sommer St., Peoria, IL 61615	309-693-3338 309-693-5505 Fax
Pendleton Excavating Darold Pendleton	MBE Excavation, Sand & Gravel 1207 W. MacQueen Peoria, IL 61605	309-685-9133 309-685-9133 Fax
Porter, V. L. Vincent Porter	MBE Concrete, General 500 W. North, Suite 10, Springfield, IL 62704	217-744-8050
RNS Electric Inc. Regina Slonneger	WBE Electrical 28558 Irish Lane, Washington, IL 61571	309-444-5200 309-444-5201 Fax
RTM Concrete Construction Morris Stokes	MBE Concrete 2207 W. Wiswall, Peoria, IL 61605	309-637-4237
N. E. Rudd Trucking Nanette Jenkins-Rudd	WBE Trucking/Hauling P.O. Box 14, 107 Washington St., Kingston Mines, IL 61539	309-389-4150 309-389-2849 Fax
Nelton Construction Damon Nelton	MBE Concrete, Residential and Commercial Construction 1180 Upper Spring Bay Rd., East Peoria, IL 61611	309-694-9837 309-694-9852 Fax
Professional Contracting Services Inc. Don Mackey	MBE Concrete, Masonry, Carpentry, Site Work 2669 N. County Hwy. 19, Canton, IL 61520	309-647-9744 309-208-7089 Cell
Ridge Painting Vickie Ridge	MBE Painting 4216 N. Patricia Ct., Peoria, IL 61615	309-688-5610
Rufus Construction Company Rufus Nelson	MBE Painting, Roofing, Remodeling 1819 S. Idaho Street, Peoria, IL 61605	309-673-6776 309-497-9453 Cell
Searle Trucking, Inc. Debbie Searle	WBE Trucking/Hauling P. O. Box 1084, Peoria, IL 61653	309-686-0708 309-688-5365 Fax
Sherwin Baker & Associates, Inc. Sherwin Baker	MBE Construction Management, Consulting, Engineering, Technical Services 103 E. Archer, Peoria, IL 61603	309-688-4203 309-688-4203 Fax
Smeltz, V.	MBE Excavation P. O. Box 64, Washington, IL 61571	
Tabitha Ventures, Inc. Edward O. Taiwo	MBE Asphalt, Concrete, Demolition, Earthwork, Electrical, Excavation, General, HVAC, Landscaping, Painting, Plumbing, Resurfacing, Roofing, Trucking/Hauling 2000 W. Pioneer Parkway, Suite 7B, Peoria, IL 61615	309-692-1473 309-692-1564 Fax
The Communication Connection Jennifer Stone	WBE Communication, Wire and Cable, Electrical and Telephone Products 604 Filmore Street Harrisburg, PA 17104	717-561-7267
Three Cross Development J. T. Donelson	MBE Concrete, General, Sidewalk 1519 W. Millman Peoria, IL 61605	309-637-1238

Third Hand Landscaping Tommy Harris	MBE Landscaping 2313 W. Lincoln, Peoria, IL 61605	309-673-6702
Thompson Brothers Inc. Todd Thompson	MBE General Carpentry and Construction, Interior Finish Work, Millwork 221 Court St., Pekin, IL 61554	309-613-0254
Thornton Rave dba Illini Concrete Co. of Illinois	MBE Precast and Prestressed Concrete, Demolition, Excavating and Grading, Drainage, Aggregate Bases and Surfaces, Pavement Patching 929 E. Grove St., Suite A, Bloomington, IL 61701	309-585-2376 309-585-2472 Fax
Tilman Electric James Tilman	MBE Electrical 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-264-3903 Cell
TOS Trucking John McCullum	MBE Trucking 11501 Farmington Rd., Hanna City, IL 61536	309-208-1927
Wards Custom Landscaping Wardine Smith	MBE Landscaping 3804 W. Pagewood Dr., Peoria, IL 61615	309-671-1890 309-671-1893 Fax
Whitaker Construction Lionel Whitaker	MBE Concrete, General, Curb & Gutter, Sidewalk 4010 N. Marbleway Dr., Peoria, IL 61615	309-682-9305 309-208-0476 Cell
Wiegand & Storrer Inc. Leslie Savant	WBE Horizontal Boring, Sewer, Watermain P.O. Box 2068, East Peoria, IL 61611	309-699-6457 309-699-9660 Fax
Willie Veneble Construction Willie Venable	MBE Construction, Concrete Removal, Demolition 1000 E. Wilcox, Peoria, IL 61605	309-686-1429 309-360-0757 Cell
Willis Electric Phyllis Willis	WBE Electrical P.O. Box 545, Chillicothe, IL 61523	309-579-2926

Peoria County Prevailing Wage for July 2015

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng	
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====	=====	
ASBESTOS ABT-GEN		BLD		26.700	28.200	1.5	1.5	2.0	7.700	16.21	0.000	0.800	
ASBESTOS ABT-GEN		HWY		29.910	31.410	1.5	1.5	2.0	7.700	17.47	0.000	0.800	
ASBESTOS ABT-MEC		BLD		32.510	35.010	1.5	1.5	2.0	11.47	10.96	0.000	0.720	
BOILERMAKER		BLD		38.000	41.000	2.0	2.0	2.0	7.070	15.99	0.000	0.400	
BRICK MASON		BLD		32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590	
CARPENTER		BLD		30.880	33.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520	
CARPENTER		HWY		32.700	34.950	1.5	1.5	2.0	8.000	15.81	0.000	0.520	
CEMENT MASON		BLD		28.050	29.800	1.5	1.5	2.0	7.500	15.65	0.000	0.500	
CEMENT MASON		HWY		29.280	30.780	1.5	1.5	2.0	7.500	16.02	0.000	0.500	
CERAMIC TILE FNSHER		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
ELECTRIC PWR EQMT OP		ALL		38.300	45.290	1.5	1.5	2.0	6.150	10.73	0.000	0.380	
ELECTRIC PWR GRNDMAN		ALL		26.280	45.290	1.5	1.5	2.0	5.790	7.360	0.000	0.260	
ELECTRIC PWR LINEMAN		ALL		42.540	45.290	1.5	1.5	2.0	6.280	11.92	0.000	0.430	
ELECTRIC PWR TRK DRV		ALL		27.560	45.290	1.5	1.5	2.0	5.830	7.720	0.000	0.280	
ELECTRICIAN		ALL		34.820	37.320	1.5	1.5	2.0	6.500	11.68	0.000	0.800	
ELECTRICIAN		BLD		34.820	37.320	1.5	1.5	2.0	6.100	11.43	0.000	0.400	
ELECTRONIC SYS TECH		BLD		28.250	30.250	1.5	1.5	2.0	6.350	10.54	0.000	0.400	
ELEVATOR CONSTRUCTOR		BLD		41.690	46.900	2.0	2.0	2.0	13.57	14.21	3.340	0.600	
GLAZIER		BLD		31.870	33.870	1.5	1.5	1.5	10.25	7.700	0.000	1.250	
HT/FROST INSULATOR		BLD		43.350	45.850	1.5	1.5	2.0	11.47	12.36	0.000	0.720	
IRON WORKER		BLD		32.190	34.090	0.0	0.0	0.0	9.490	13.91	0.000	0.000	
IRON WORKER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000	
LABORER		BLD		25.700	27.200	1.5	1.5	2.0	7.700	16.21	0.000	0.800	
LABORER		HWY		29.160	30.660	1.5	1.5	2.0	7.700	17.47	0.000	0.800	
LABORER, SKILLED		BLD		26.100	27.600	1.5	1.5	2.0	7.700	16.21	0.000	0.800	
LABORER, SKILLED		HWY		29.460	30.960	1.5	1.5	2.0	7.700	17.47	0.000	0.800	
LATHER		BLD		30.880	33.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520	
MACHINERY MOVER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000	
MACHINIST		BLD		45.350	47.850	1.5	1.5	2.0	7.260	8.950	1.850	0.000	
MARBLE FINISHERS		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
MARBLE MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
MILLWRIGHT		BLD		31.060	33.310	1.5	1.5	2.0	8.000	15.87	0.000	0.520	
MILLWRIGHT		HWY		33.060	35.310	1.5	1.5	2.0	8.000	15.95	0.000	0.520	
OPERATING ENGINEER		BLD 1		37.050	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000	
OPERATING ENGINEER		BLD 2		34.450	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000	
OPERATING ENGINEER		BLD 3		30.160	40.050	1.5	1.5	2.0	7.000	17.48	0.000	3.000	
OPERATING ENGINEER		HWY 1		38.150	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000	
OPERATING ENGINEER		HWY 2		35.460	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000	
OPERATING ENGINEER		HWY 3		31.030	41.150	1.5	1.5	2.0	7.250	18.23	0.000	3.000	
PAINTER		ALL		33.650	35.650	1.5	1.5	1.5	10.30	8.200	0.000	1.350	
PAINTER SIGNS		BLD		33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000	
PILEDRIIVER		BLD		31.880	34.130	1.5	1.5	2.0	8.000	15.71	0.000	0.520	
PILEDRIIVER		HWY		33.700	35.950	1.5	1.5	2.0	8.000	15.81	0.000	0.520	
PIPEFITTER		BLD		37.400	41.510	1.5	1.5	2.0	7.000	11.63	0.000	1.060	
PLASTERER		BLD		28.140	29.770	1.5	1.5	2.0	7.500	15.00	0.000	0.870	
PLUMBER		BLD		34.520	37.630	1.5	1.5	2.0	7.000	13.86	0.000	0.950	
ROOFER		BLD		30.580	32.110	1.5	1.5	2.0	8.450	7.220	0.000	0.250	
SHEETMETAL WORKER		BLD		32.430	34.050	1.5	1.5	2.0	9.120	15.55	0.000	0.780	
SIGN HANGER		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000	
SPRINKLER FITTER		BLD		37.120	39.870	1.5	1.5	2.0	8.420	8.500	0.000	0.350	
STEEL ERECTOR		HWY		35.980	37.980	0.0	0.0	0.0	9.490	13.91	0.000	0.000	
STONE MASON		BLD		32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590	
SURVEY WORKER	-->	NOT IN	EFFECT	ALL	28.900	30.400	1.5	1.5	2.0	7.700	14.86	0.000	0.800
TERRAZZO FINISHER		BLD		29.890	0.000	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
TERRAZZO MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
TILE MASON		BLD		31.650	32.900	1.5	1.5	2.0	8.600	10.05	0.000	0.580	
TRUCK DRIVER		ALL 1		33.000	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250	
TRUCK DRIVER		ALL 2		33.480	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250	
TRUCK DRIVER		ALL 3		33.700	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250	
TRUCK DRIVER		ALL 4		34.010	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250	
TRUCK DRIVER		ALL 5		34.900	36.550	1.5	1.5	2.0	11.10	5.230	0.000	0.250	
TRUCK DRIVER		O&C 1		27.280	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250	
TRUCK DRIVER		O&C 2		27.680	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250	
TRUCK DRIVER		O&C 3		27.860	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250	

TRUCK DRIVER	O&C 4	28.110	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 5	28.850	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TUCKPOINTER	BLD	32.380	33.880	1.5	1.5	2.0	8.600	9.870	0.000	0.590

Legend: RG (Region)
 TYP (Trade Type - All, Highway, Building, Floating, Oil & Chip, Rivers)
 C (Class)
 Base (Base Wage Rate)
 FRMAN (Foreman Rate)
 M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.)
 OSA (Overtime (OT) is required for every hour worked on Saturday)
 OSH (Overtime is required for every hour worked on Sunday and Holidays)
 H/W (Health & Welfare Insurance)
 Pensn (Pension)
 Vac (Vacation)
 Trng (Training)

Explanations

PEORIA COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

LABORER, SKILLED - BUILDING

The skilled laborer building (BLD) classification shall encompass the following types of work, irrespective of the site of the work: cutting & acetylene torch, gunnite nozzlemen, gunnite pump men & pots, kettlemen & carriers of men handling hot stuff, sandblaster nozzle men, sandblasting pump men & pots, setting up and using concrete burning bars, wood block setters, underpinning & shoring of existing buildings, and the unload-ing and handling of all material coated with creosote.

LABORER, SKILLED - HIGHWAY

The skilled laborer heavy & highway (HWY) classification shall encompass the following types of work, irrespective of the site of the work: jackhammer & drill operator, gunite pump & pot man, puddlers, vibrator men, wire fabric placer, sandblast pump & pot man, strike off concrete, unloading, handling & carrying of all creosoted piles, ties or timber, concrete burning bars, power wheelbarrows or buggies, asphalt raker, brickset-ers, cutting torchman (electric & acetylene), men setting lines to level forms, form setters, gunite nozzle man & sandblasting nozzle man, power man, and rip-rapping by hand.

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING

Class 1. Cranes; Overhead Cranes; Gradall; All Cherry Pickers; Mechanics; Central Concrete Mixing Plant Operator; Road Pavers (27E - Dual Drum - Tri Batchers); Blacktop Plant Operators and Plant Engineers; 3 Drum Hoist; Derricks; Hydro Cranes; Shovels; Skimmer Scoops; Koehring Scooper; Drag Lines; Backhoe; Derrick Boats; Pile Drivers and Skid Rigs; Clamshells; Locomotive Cranes; Dredge (all types) Motor Patrol; Power Blades - Dumore - Elevating and similar types; Tower Cranes (Crawler-Mobile) and Stationary; Crane-type Backfiller; Drott Yumbo and similar types considered as Cranes; Caisson Rigs; Dozer; Tournadozer; Work Boats; Ross Carrier; Helicopter; Tournapulls - all and similar types; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Heavy Equipment Greaser; CMI, CMI Belt Placer, Auto Grade & 3 Track and similar types; Side Booms; Multiple Unit Earth Movers; Creter Crane; Trench Machine; Pump-crete-Belt Crete-Squeeze Cretes-Screw-type Pumps and Gypsum; Bulker & Pump - Operator will clean; Formless Finishing Machine; Flaherty Spreader or similar types; Screed Man on Laydown Machine; Wheel Tractors (industrial or Farm-type w/Dozer-Hoe-Endloader or other attachments); F.W.D. & Similar Types; Vermeer Concrete Saw.

Class 2. Dinkeys; Power Launches; PH One-pass Soil Cement Machine (and similar types); Pugmill with Pump; Backfillers; Euclid Loader; Forklifts; Jeeps w/Ditching Machine or other attachments; Tunneluger; Automatic Cement and Gravel Batching Plants; Mobile Drills (Soil Testing) and similar types; Gurries and Similar Types; (1) and (2) Drum Hoists (Buck Hoist and Similar Types); Chicago Boom; Boring Machine & Pipe Jacking Machine; Hydro Boom; Dewatering System; Straw Blower; Hydro Seeder; Assistant Heavy Equipment Greaser on Spread; Tractors (Track type) without Power Unit pulling Rollers; Rollers on Asphalt -- Brick Macadem; Concrete Breakers; Concrete Spreaders; Mule Pulling Rollers; Center Stripper; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Cement Finishing Machine; Barber

Green or similar loaders; Vibro Tamper (All similar types)
Self-propelled; Winch or Boom Truck; Mechanical Bull Floats; Mixers over 3 Bag to 27E; Tractor pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Truck Type Hoptoe Oilers; Fireman; Spray Machine on Paving; Curb Machines; Truck Crane Oilers; Oil Distributor; Truck-Mounted Saws.

Class 3. Air Compressor; Power Subgrader; Straight Tractor; Trac Air without attachments; Herman Nelson Heater, Dravo, Warner, Silent Glo, and similar types; Roller: Five (5) Ton and under on Earth or Gravel; Form Grader; Crawler Crane & Skid Rig Oilers; Freight Elevators - permanently installed; Pump; Light Plant; Generator; Conveyor (1) or (2) - Operator will clean; Welding Machine; Mixer (3) Bag and Under (Standard Capacity with skip); Bulk Cement Plant; Oiler on Central Concrete Mixing Plant.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

CLASS 1. Cranes; Hydro Cranes; Shovels; Crane Type Backfiller; Tower, Mobile, Crawler, & Stationary Cranes; Derricks; Hoists (3 Drum); Draglines; Drott Yumbo & Similar Types considered as Cranes; 360 Degree Swing Excavator (Shears, Grapples, Movacs, etc.); Back Hoe; Derrick Boats; Pile Driver and Skid Rigs; Clam Shell; Locomotive - Cranes; Road Pavers - Single Drum - Dual Drum - Tri Batcher; Motor Patrols & Power Blades - Dumore - Elevating & Similar Types; Mechanics; Central Concrete Mixing Plant Operator; Asphalt Batch Plant Operators and Plant Engineers; Gradall; Caisson Rigs; Skimmer Scoop - Koering Scooper; Dredges (all types); Hoptoe; All Cherry Pickers; Work Boat; Ross Carrier; Helicopter; Dozer; Tournadozer; Tournapulls - all and similar types; Operation of Concrete and all Recycle Machines; Multiple Unit Earth Movers; Scoops (all sizes); Pushcats; Endloaders (all types); Asphalt Surfacing Machine; Slip Form Paver; Rock Crusher; Operation of Material Crusher, Screening Plants, and Tunnel Boring Machine; Heavy Equipment Greaser (top greaser on spread); CMI, Auto Grade, CMI Belt Placer & 3 Track and Similar Types; Side Booms; Asphalt Heater & Planer Combination (used to plane streets); Wheel Tractors (with Dozer, Hoe or Endloader Attachments); CAT Earthwork Compactors and Similar Types; Blaw Knox Spreader and Similar Types; Trench Machines; Pump Crete - Belt Crete - Squeeze Crete - Screw Type Pumps and Gypsum (operator will clean); Creter Crane; Operation of Concrete Pump Truck; Formless Finishing Machines; Flaherty Spreader or Similar Types; Screed Man on Laydown Machine; Vermeer Concrete Saw; Operation of Laser Screed; Span Saw; Dredge Leverman; Dredge Engineer; Lull or Similar Type; Hydro-Boom Truck; Operation of Guard Rail Machine; and Starting Engineer on Pipeline or Construction (11 or more pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc, and Ground Heater (Trailer Mounted).

CLASS 2. Bulker & Pump; Power Launches; Boring Machine & Pipe Jacking Machine; Dinkys; Operation of Carts, Powered Haul Unit for a Boring Machine; P & H One Pass Soil Cement Machines and Similar Types; Wheel Tractors (Industry or Farm Type - Other); Back Fillers; Euclid Loader; Fork Lifts; Jeep w/Ditching Machine or Other Attachments; Tunnelluger; Automatic Cement & Gravel Batching Plants; Mobile Drills - Soil Testing and Similar Types; Pugmill with Pump; All (1) and (2) Drum Hoists; Dewatering System; Straw Blower; Hydro-Seeder; Bump Grinders (self-propelled); Assistant Heavy Equipment Greaser; Apsco Spreader; Tractors (Track-Type) without Power Units Pulling Rollers; Rollers on Asphalt - Brick or Macadam; Concrete Breakers; Concrete Spreaders; Cement Strippers; Cement Finishing Machines & CMI Texture & Reel Curing Machines; Vibro-Tampers (All Similar Types Self-Propelled); Mechanical Bull Floats; Self-Propelled Concrete Saws; Truck Mounted Power Saws; Operation of Curb Cutters; Mixers - Over Three (3) Bags; Winch and Boom Trucks; Tractor Pulling Power Blade or Elevating Grader; Porter Rex Rail; Clary Screed; Mule Pulling Rollers; Pugmill without Pump; Barber Greene or Similar Loaders; Track Type Tractor w/Power Unit attached (minimum); Fireman; Spray Machine on Paving; Curb Machines; Paved Ditch Machine; Power Broom; Self-Propelled Sweepers; Self-Propelled Conveyors; Power Subgrader; Oil Distributor; Straight Tractor; Truck Crane Oiler; Truck Type Oilers; Directional Boring Machine; Horizontal Directional Drill; Articulating End Dump Vehicles; Starting Engineer on Pipeline or Construction (6 -10 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

CLASS 3. Straight Framed Truck Mounted Vac Unit (separately powered); Trac Air Machine (without attachments); Rollers - Five Ton and Under on Earth and Gravel; Form Graders; Bulk Cement Plant; Oilers; and

Starting Engineer on Pipeline or Construction (3 - 5 pieces) including: Air Compressor (Trailer Mounted), All Forced Air Heaters (regardless of Size), Water Pumps (Greater than 4-1/2" or Total Discharge Over 4-1/2"), Light Plants, Generators (Trailer Mounted - Excluding Decontamination Trailer), Welding Machines (Any Size or Mode of Power), Conveyor, Mixer (any size), Stud Welder, Power Pac, etc., and Ground Heater (Trailer Mounted).

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

SAMPLE ADDENDUM

Peoria Park District
Planning, Design and Construction Department
1314 N. Park Road
Peoria, IL 61604
Telephone: (309) 686-3386

ADDENDUM NO. _____

PROJECT TITLE: _____

ISSUANCE DATE: _____

LOCATION: _____

The proposed Contract Documents for this Work are modified as follows:

- I. **DRAWINGS**: (Delete/Change/Modify/Etc.)

- II. **PROJECT MANUAL/SPECIFICATIONS/GENERAL CONDITIONS/ETC.**:
(Delete/Change/Modify/Etc.)

- III. **INVITATION TO BID**: (Delete/Change/Modify/Etc.)

END OF ADDENDUM NO. _____

(Addendum may be bound into Project Manual, attached to front cover, faxed, mailed or delivered to bidders.)

Addendum No. _____
Page 1 of 1



Pleasure Driveway and Park District of Peoria, Illinois
Sample Agreement Between Owner and Contractor

This **AGREEMENT** for

BOILER REPLACEMENT
RIVERPLEX RECREATION AND WELLNESS CENTER

is made as of the _____ day of _____ in the year of Two Thousand Sixteen (2016)

Between the Owner:

PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, ILLINOIS
1125 W. LAKE AVENUE
PEORIA, IL 61614

And the Contractor:

PLANNING, DESIGN AND CONSTRUCTION DEPARTMENT
1314 N. PARK ROAD
PEORIA, IL 61604

The Owner's Representative is:

The Architect or Engineer is:

APACE DESIGN ARCHITECTS & ENGINEERS
2112 E. WAR MEMORIAL DR.
PEORIA, IL 61614-8002

The Owner and Contractor agree as follows:

I. THE CONTRACT DOCUMENTS. The Contract Documents consist of this AGREEMENT, the Plans/Drawings for the Project dated September 20, 2016, all sections of the Project Manual dated September 20, 2016, including but not limited to the Instructions and Supplementary Instructions to Bidders, the Bid Form, the General Conditions (1997 AIA Document A201) and Supplementary General Conditions, the General Requirements, the Specifications, and other documents as enumerated in Section 10 and Attachment #1 of this AGREEMENT, and including addenda issued prior to the execution of this AGREEMENT. The Contract Documents form the CONTRACT between the Owner and the Contractor. The CONTRACT represents the entire and integrated contract for the construction of the Work of the Project between the parties hereto and supersedes prior proposals, contracts, negotiations, or representations, either written or oral.

II. THE WORK OF THE CONTRACT. The Contractor shall execute the entire Work described in the Contract Documents, unless modified in Section XI of this AGREEMENT.

III. BASIS OF PAYMENT. The Work of the CONTRACT shall be performed on a lump sum basis.

IV. CONTRACT SUM. The Owner shall pay the Contractor the sum of

--

(and incorporates the acceptance of bid alternates as defined in sub-paragraph "A", below) for the Contractor's performance of the Work required by the Contract Documents, subject to modifications made by Owner approved Change Orders. If this CONTRACT calls for a unit price basis of payment, the contract sum stated above shall be adjusted by Change Order based upon multiplying the unit prices submitted by the Contractor on the Bid Form (and included herein as an Attachment to this CONTRACT) times (x) the actual quantities installed.

A. ACCEPTANCE OF ALTERNATES. The contract sum stated above is based on the acceptance of the following alternates, which are described in the Project Manual:

<u>ITEM</u>	<u>ADD</u>	<u>DEDUCT</u>

V. DATES OF COMMENCEMENT AND COMPLETION OF THE WORK. The Owner's Representative will issue a written Notice to Proceed with the Work of the Project after receiving the required Performance Bond, Labor and Material Payment Bond, and Certificate of Insurance (in proper form and providing the required coverages and amounts from a company [or companies] acceptable to the Owner, and naming the Owner as an Additional Insured), and any other pre-construction submittals required by the Contract Documents. The Contractor hereby acknowledges and agrees that failure to provide such submittals in a timely manner shall not be cause to adjust the date(s) for completion of the Work.

- A. LIQUIDATED DAMAGES.** Owner and Contractor recognize that time is of the essence of this CONTRACT and that Owner will suffer financial loss if the Contractor has not achieved Substantial Completion and Final Completion of the Work within the time specified below, plus any extensions thereof allowed in accordance with Article 8 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time.
- B. SUBSTANTIAL COMPLETION.** Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty), Contractor shall pay Owner ONE HUNDRED dollars (\$100.00) for each calendar day that expires after sixty four (64) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on October 13, 2016 and be at Substantial Completion by December 15, 2016.
- C. FINAL COMPLETION.** After Substantial Completion if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within seven (7) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner ONE HUNDRED dollars (\$100.00) for each day that expires after the time specified.

VI. PROGRESS PAYMENTS, REDUCTION OF RETAINAGE AND FINAL PAYMENT.

- A.** Unless otherwise specified elsewhere in the Contract Documents, the Contractor may submit monthly applications for progress payments ("Application for Payment") to the Owner's Representative. Each Application for Payment must be certified by the Architect or Engineer (if applicable), or the Owner's Representative if an Architect or Engineer has not been engaged for construction phase services. An Application for Payment shall be for a period of no less than one calendar month ending on the last day of the month, unless otherwise approved in writing by the Owner's Representative. Application forms shall be subject to Owner's approval. Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor, in accordance with the Contract Documents. The Schedule of Values shall be approved by the Owner's Representative and the Architect or Engineer (if applicable) in advance of the Contractor's first Application for Payment and the approved schedule shall be used by the Contractor as the basis for submitting payment requests. The Owner's Representative and/or

Architect/Engineer's (if applicable) approval of the Schedule of Values shall not constitute a complete check for accuracy, and shall not relieve the Contractor from responsibility for errors of any sort.

- B. An Application for Payment (certified by the Architect or Engineer, if applicable) shall be submitted to the Owner's Representative no later than the fifth (5th) day of the month following the period for which the application is being submitted. In such case, the Owner shall make the progress payment to the Contractor not later than the twentieth day of the next month. A progress payment request on an Application for Payment (certified by the Architect or Engineer, if applicable) received by the Owner's Representative after the fifth (5th) day of a month shall be made by the Owner not later than forty-five days after receipt by the Owner's Representative.
- C. Based upon its review of the certified (by the Architect or Engineer, if applicable) Application for Payment, the Owner shall make a progress payment to the Contractor in such amount as the Owner reasonably determines is properly due, subject to a retainage of ten percent (10%) of the value of the Work completed and covered by the Application for Payment, less the aggregate of previous payments in each case. In determining the amount properly due, the Owner shall consider the value of labor, materials and equipment incorporated in the Work, or properly allocable to materials and equipment suitably stored at the site or at some other location previously agreed upon in writing by the parties. The Owner's Representative shall have the sole right to determine that materials or equipment stored off-site have been properly delivered, protected, and/or secured. The Owner's Representative (or the Architect or Engineer, if applicable) may nullify or withhold a Certificate of Payment, in whole or in part, for the reasons set forth in Section 9.5 of the General Conditions. Upon Substantial Completion of the Work, the Owner shall pay the Contractor a sum sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Owner's Representative shall determine for incomplete work and unsettled claims.

VII. Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner when **1)** the Contract has been fully performed by the Contractor except for the Contractor's responsibility to correct nonconforming Work as provided in Subparagraph 12.2.2 of the General Conditions and to satisfy other requirements, if any, which necessarily survive final payment; and **2)** a final Certificate of Payment has been issued by the Architect/Engineer or Owner's Representative; such final payment shall be made by the Owner not more than forty-five (45) days after the receipt of the final Certificate of Payment by the Owner.

VIII. CHANGE ORDERS. The Owner and Contractor agree that changes in the Work are sometimes required and necessary, and that timely: **a)** submission of proposed changes in the Work or the scope of Work by the Owner, **b)** pricing by the Contractor, **c)** review by the Owner's Representative and/or Architect/Engineer, and **d)** final approval by the Owner are necessary in order to assure that the Work of the Project is completed on schedule. The Contractor hereby acknowledges and agrees that an increase in the scope of the Work does not grant or imply an increase in the Contract Time, unless specifically so stated on the final approved Change Order. The Contractor also agrees that any and all Work which deviates from the plans and specifications and/or results in additional Work performed by Contractor's forces, including those of his sub-contractor's, will not result in additional expense to the Owner, unless **finally approved both by the Owner and the Architect/Engineer (if applicable) prior to the additional Work being performed.** No claim for an addition to the Contract Sum shall be valid unless approved by a written Change Order signed by the Owner and the architect/engineer (if applicable) **prior to the additional Work being performed.**

IX. TERMINATION OR SUSPENSION. The CONTRACT may be terminated by the Owner or the Contractor as provided by Article 14 of the General Conditions. The Work may be suspended by the Owner as provided in Article 14 of the General Conditions.

X. ENUMERATION OF CONTRACT DOCUMENTS. The Contract Documents, except for modifications issued after the execution of this Agreement, consist of:

- A.** this Standard Form of Agreement Between Owner and Contractor, of the Pleasure Driveway and Park District of Peoria, Illinois.
- B.** the Plans or Drawings titled RiverPlex Boiler, dated September 20, 2016, and enumerated in ATTACHMENT #1 - "LIST OF DRAWINGS".
- C.** Supplementary and other Conditions of the CONTRACT, and the Specifications, are those found in the Project Manual titled "Boiler Replacement, RiverPlex Recreation and Wellness Center", and dated September 20, 2016 enumerated as follows:
 - 1)** Supplementary Instructions to Bidders
 - 2)** Contractor's Proposal, as accepted by the Owner
 - 3)** General Conditions of the Contract for Construction, AIA Document A201, 1997 Edition
 - 4)** Supplementary General Conditions
 - 5)** Major Subcontractor List
 - 6)** Directory of Minority & Women Owned Business Enterprises
 - 7)** Illinois Drug Free Workplace Certification
 - 8)** Contractor Certification (Individual or Corporate/Partnership)
 - 9)** Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors
 - 10)** Workforce Profile
 - 11)** Performance Bond
 - 12)** Labor and Material Payment Bond
 - 13)** Proof of Insurance
 - 14)** Specifications: Division 010000, "General Requirements"; Divisions 020000-350000 as applicable
 - 15)** Attachment A.6 - Insurance Requirements
 - 16)** Certificate of Safety Compliance
 - 17)** Peoria Park District Weekly Workforce Report
 - 18)** Certified Payroll Form
 - 19)** Substance Abuse Prevention Program Certification

XI. MISCELLANEOUS PROVISIONS. Other Provisions of this Agreement are as follows:

This AGREEMENT is entered into as of the day and year first written above and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Architect/Engineer (if any) for use in the administration of the CONTRACT, and one to the Owner.

OWNER:

CONTRACTOR :

(Signature)

(Signature)

TIMOTHY J. CASSIDY, Park Board President

(Printed Name and Title)

ATTEST:

ATTEST:

ATTACHMENT #1 - LIST OF DRAWINGS

<u>Number</u>	<u>Title</u>	<u>Date</u>
H100	Existing/Demolition & Revised HVAC Plans	9/20/16
H200	Existing/Demolition & Revised Sections/Elevations & Details	9/20/16
E100	Existing/Demolition & Revised Electrical Plans	9/20/16

PERFORMANCE BOND

**TO: PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA
PEORIA, ILLINOIS**

KNOW ALL MEN BY THEIR PRESENTS;

That _____
as Principal, and _____ as
corporation of the State of _____, as Surety, are held and firmly bound unto the
PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS, as Oblige, in the amount of _____
(\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____, 20 _____ entered into a contract
with Oblige for _____
in accordance with contract documents prepared by the Architect-Engineer, which Contract is by reference made a part hereof and
is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly and faithfully
perform the Contract and all changes thereof, and during the life of any guaranty or warranty required under the Contract, and, if
Principal shall fully secure and protect the Oblige from all liability and from all loss or expense of any kind, including all court
costs, engineering fees and attorneys' fees made necessary or arising from the failure, refusal or neglect of Principal to comply
with all obligations assumed by Principal in connection with the performance of the Contract and all changes thereof, then this
obligation shall be null and void; otherwise it shall remain in full force and effect.

Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof. Whenever
Principal shall be and is declared to be in default under the Contract, Oblige having performed Oblige's obligations thereunder,
Surety shall, after notice of such default, reserve all rights against all parties, take over and complete the Contract and become
entitled to payment of the balance of any monies due or to become due to such defined Principal in accordance with the progress
of the work.

A condition of this Bond is that the Principal shall faithfully perform in accordance with the prevailing wage clause provided in
the bid specification or Contract pursuant to Illinois Compiled Statutes 820 ILCS 130/1 *et. seq.*

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Oblige named
herein.

Signed and Sealed this _____ day of _____, 20 _____.

CONTRACTOR

Contractor Firm Name

By: _____
Signature

Title

SURETY

Surety Name

By: _____
Attorney-in-Fact

Resident Agent

ATTEST:

Corporate Secretary (Corporations only)

LABOR & MATERIAL PAYMENT BOND

**TO: PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA
PEORIA, ILLINOIS**

KNOW ALL MEN BY THESE PRESENTS:

That: _____

as Principal, and _____

_____ a corporation of the State of _____ as Surety, are held and firmly bound unto the PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS, as Obligee, for the use and benefit of claimants as hereinafter defined in the amount of _____ Dollars (\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____, 20 _____, entered into a Contract with Obligee for _____

_____ in accordance with contract documents prepared by the Architect-Engineer which Contract is by reference made a part hereof, and is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly pay for all laborers, workers and mechanics engaged in the work under the Contract, and not less than the general prevailing rate of hourly wages of a similar character in the locality in which the work is performed, as determined by the State of Illinois Department of Labor pursuant to the Illinois Compiled Statutes 820 ILCS 130/1 et. seq. and for all material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

1. A claimant is defined as any person, firm, or corporation having contracts with the Principal or with any of Principal's subcontractors for labor or materials furnished in the performance of the Contract on account of which this Bond is given.

2. Nothing in this Bond contained shall be taken to make the Obligee liable to any subcontractor, materialman or laborer, or to any other person to any greater extent than it would have been liable prior to the enactment of The Public Construction Bond Act, approved June 20, 1931, as amended; provided further, that any person having a claim for labor and materials furnished in the performance of the Contract shall have no right of action unless he shall have filed a verified notice of such claim with the Obligee within 180 days after the date of the last item of work or the furnishing of the last item of materials, which claim shall have been verified and shall contain the name and address of the claimant, the business address of the claimant within the State of Illinois, if any, or if the claimant be a foreign corporation having no place of business within the State the principal place of business of the corporation, and in all cases of partnership the names and residences of each of the partners, the name of the Contractor for the Obligee, the name of the person, firm or corporation by whom the claimant was employed or to whom such claimant furnished materials, the amount of the claim and a brief description of the public improvement for the construction or installation of which the Contract is to be performed. No defect in the notice herein provided for shall deprive the claimant of its right of action under the terms and provisions of this Bond unless it shall affirmatively appear that such defect has prejudiced the rights of an interested party asserting the same.

3. No action shall be brought on this Bond until the expiration of 120 days after the date of the last item of work or of the furnishing of the last item of material except in cases where the final settlement between the Obligee and the Contractor shall have been made prior to the expiration of the 120 day period, in which case action may be taken immediately following such final settlement; nor shall any action of any kind be brought later than 6 months after the acceptance by the Obligee of the work. Such suit shall be brought only in the circuit court of this State in the judicial district in which the Contract is to be performed.

4. Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof.

5. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

6. The Principal and Surety shall be liable for any attorneys fees, engineering costs, or court costs incurred by the Obligee relative to claims made against this Bond.

Signed and Sealed this _____ day of _____, 20 _____.

CONTRACTOR

SURETY

Contractor Firm Name:

By: _____
Signature

By: _____
Attorney-in-Fact

Title

Resident Agent

ATTEST:

Corporate Secretary (Corporations only)

CONTRACTOR'S AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

THE undersigned, being duly sworn, deposes and says that he is _____
_____ of the _____
who is the contractor for the _____
building located at _____
owned by _____.

That the total amount of the contract including extras is \$_____ on which he has received payment of \$_____ prior to this payment. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub-contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications:

NAMES	WHAT FOR	CONTRACT PRICE	AMOUNT PAID	THIS PMT.	BALANCE DUE

TOTAL ALL LABOR AND MATERIAL TO COMPLETE

There are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

Signed this _____ day of _____, 20 ____.

Signature: _____

Subscribed and sworn to before me this _____ day of _____, 20 ____.

Notary Public

FINAL WAIVER OF LIEN

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____ ha_____ been employed by THE
PEORIA PARK DISTRICT to furnish material and labor for the _____
at the premises commonly known as _____
located in the City of _____, County of Peoria, State of Illinois.

The undersigned, for and in consideration of _____
(\$ _____) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged,
do_____ hereby waive and release any and all lien or claim or right of lien under the statutes of the State of Illinois relating to
mechanics' liens, with respect to and on said above-described premises and improvements thereon and on the money, funds or
other considerations due or become due from the owner on account of labor or services, material, fixtures, apparatus or machinery
heretofore furnished or which may be furnished at any time hereafter by the undersigned for the above described premises.

Dated this _____ day of _____ 20 _____.

[Affix corporate seal here.]

(Name of sole owner, corporation or partnership)

ATTEST:

(Signature of secretary of corporation)

_____(SEAL)
(Signature of sole owner or authorized
representative of corporation or partnership)

WAIVER OF LIEN

**GENERAL CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS**

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO ALL WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____ has been employed
by THE PEORIA PARK DISTRICT to furnish material and labor for the _____ at
the premises commonly known as _____

_____ located in the City of Peoria, County of Peoria, and State of Illinois.

NOW, THEREFORE, the undersigned, for and in consideration of the sum of _____ Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged by the undersigned, does hereby waive and release to the extent only of the aforesaid amount of _____ Dollars, paid simultaneously herewith, any and all lien or right or claim of lien under the statutes of the State of Illinois relating to mechanics' liens, with respect to and on said above-described premises, and the improvements thereon and on the money, funds, or other consideration due or to become due from the owner on account of labor, services, material, fixtures, apparatus or machinery, furnished by the undersigned, to or on account of the said owner, for the above-described premises, but only to the extent of the payment aforesaid.

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here]

(Name of sole owner, corporation or partnership)

ATTEST:

(Signature of secretary of corporation)

(SEAL)
(Signature of sole owner or authorized
representative of corporation or partnership)

SUB-CONTRACTOR'S FINAL WAIVER OF LIEN

[illegible]

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____
(sub-contractor)
has been employed by _____
(general contractor)
to furnish material and labor for the _____ at the
premises commonly known as _____, in the City of _____,
County of Peoria, State of Illinois.

The undersigned, for and in consideration of _____
 _____ (\$ _____) Dollars, and other good and valuable considerations,
 the receipt whereof is hereby acknowledged, do _____ hereby waive and release any and all lien or claim or right of lien under
 the statutes of the State of Illinois relating to Mechanics Liens, on the above described premises and improvements thereon and on
 the money, funds or other considerations due or become due from the owner on account of labor or services, material, fixtures,
 apparatus or machinery heretofore furnished or which may be furnished at any time hereafter by the undersigned for the above
 described premises.

Dated this _____ day of _____, 20_____.

[Affix corporate seal here.]

ATTEST:_____

(Name of sole owner, corporation or partnership)

(Signature of sole owner or authorized
representative of corporation or partnership)

_____(SEAL)
(Signature of secretary of corporation)

SUB-CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS

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PEORIA PARK DISTRICT

Weekly Workforce Report

Instructions

This weekly workforce report must be completed and returned to the Peoria Park District project manager for each week that you are working on Peoria Park District property. You are to report only those employees that are actually working on the Peoria Park District project identified on this report. Do not report employees that are not working on the project identified on this report.

If you have further questions regarding this report, please contact the Owner's Project Manager.

I. Trade and Hour Breakdown Table

- List the different trades (carpenter, laborer, plumber, etc.) and report the number of hours by race/gender for each trade;
- Total the hours for each trade on the right.

II. New Hires by Race and Gender

- If additional employees are hired for the job, please record the number of employees hired by race/gender.

III. Total Project Employee Breakdown

- Please track total hours by race/gender for the project if project lasts longer than a week.

Weekly Workforce Report (Peoria Park District Form) Date:_____ Week Ending: _____

Contractor/Subcontractor:_____ Project: _____

Trade & Hour Breakdown:

TRADE	FEMALE HOURS	CAUCASIAN HOURS	AFRICAN- AMERICAN HOURS	HISPANIC HOURS	NATIVE AMERICAN HOURS	ASIAN, PAC. ISLANDER HOURS	TOTAL HOURS

New Hires by Race & Gender

TRADE	CAUCASIAN	AFRICAN- AMERICAN	HISPANIC	NATIVE AMERICAN	ASIAN, PACIFIC ISLANDER	MALE	FEMALE

Total Project Employee Breakdown

	CAUCASIAN	AFRICAN- AMERICAN	HISPANIC	NATIVE AMERICAN	ASIAN, PACIFIC ISLANDER	MALE	FEMALE



Certified Transcript of Payroll

IDOL Case File Number: _____ Payroll Start: _____

Payroll End: _____

Contractor and/or Subcontractor

Public Body Information

(Contract Number)

(Project Number)

(Project Location)

_____ (Company Name)		_____ (Contact Name)	
_____ (Street Address)		_____ (City)	
_____ (State)	_____ (Zipcode)	_____ (Telephone Number)	

Report Hours for Each Day, Including Overtime Hours, List Hourly Prevailing Wage Rate and Hourly Fringe Benefits Allotments.

Worker Name, Address Last Four of SSN & Telephone Number		* Hours worked each day							Total Straight Time Hours	Total OT Hours	Hourly Wage Rate	OT Wage Rate	Per Pay Period	
		SUN	MON	TUE	WED	THR	FRI	SAT					Gross	Net
_____ Labor Classification _____ _____	PW													
	N													
Hourly Fringe Benefit: Pension: _____ Health/Welfare: _____ Vacation: _____ Training: _____														
_____ Labor Classification _____ _____	PW													
	N													
Hourly Fringe Benefit: Pension: _____ Health/Welfare: _____ Vacation: _____ Training: _____														
_____ Labor Classification _____ _____	PW													
	N													
Hourly Fringe Benefit: Pension: _____ Health/Welfare: _____ Vacation: _____ Training: _____														

Please place an "F" by the hourly rate for fringe benefits paid to a Fund jointly managed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act (See instruction 4 for completing this form). In addition contractors/subcontractors who do not make contributions for covered fringe benefits to a fringe benefit fund that is jointly managed and jointly governed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act must provide the additional information set forth on the form on page 2 (see Instruction 5). Contractors/subcontractors who do not make contributions for fringe benefits on a per hour basis for each hour worked must convert such contributions to an annualized per hour basis for purpose of reporting on this form in accordance with instruction 5. You must keep original records showing start and end time each day.

***PW - Prevailing Hours Worked *N - Non Prevailing Hours Worked**



Certified Transcript of Payroll

AFFIDAVIT

Weekly Statement of Compliance

Date: _____

I, _____,
(name signatory party)

_____, do
(Title)

hereby state: that I pay or supervise the payment
of the persons employed on the public works
project _____;

(name of project)

that during the payroll period commencing on the
_____ day of _____,
(day) (month) (year)

all persons employed on said project have been
paid the full weekly wages earned, that no
rebates have been or will be made either directly
or indirectly to or on behalf of said

(name of contractor or subcontractor)

from the full weekly wages earned by any person,
and that no deductions have been made either
directly or indirectly from the full weekly wages
earned by any persons, other than permissible
deductions as defined by Federal and/or State
Law. I further certify that this payroll is correct
and complete; that the wage rates contained
therein are not less than the actual rates herein
stated and that the classification set forth for each
laborers or mechanic conform to the work he/she
performed.

Signature

Digital Signature _____

FRINGES

Health Fund _____
Health Address _____
Health Sponsor _____
Health Admin _____

Pension Fund _____
Pension Address _____
Pension Sponsor _____
Pension Admin _____

401(k) Fund _____
401(k) Address _____
401(k) Sponsor _____
401(k) Admin _____

Vacation Fund _____
Vacation Address _____
Vacation Sponsor _____
Vacation Admin _____

SUBCONTRACTORS

Attach explanation of Monies paid, copy of contract
of billing, or other pertinent information.

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Company Name: _____

Contact Person: _____

(Address)

(City) (State) (zipcode)

Telephone Number: _____

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.)	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 Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number										
				-				-		
or										
Employer identification number										
					-					

Part II Certification

Under penalties of perjury, I certify that:

- 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
- 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
- I am a U.S. citizen or other U.S. person (defined below); and
- 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 on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

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

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS 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-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), 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.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- 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?* on page 2 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).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

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

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, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

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 his or her 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 his or her 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 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include 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 Part II instructions on page 3 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 under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 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 no longer are 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, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **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. 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 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** 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.

d. **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. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity 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, "Business name/disregarded entity name." 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, you may enter it on line 2.

Line 3

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

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in 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 in 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 possession, 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 possession
- 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
- 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 Income, 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) written or printed 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 possession, 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.

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 individual taxpayer identification number (ITIN). Enter it in the social security number box. 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. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 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 1-800-772-1213. 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/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "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, generally you will 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.

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 items 1, 4, or 5 below indicate 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), 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)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
5. Sole proprietorship or disregarded entity owned by an individual	The owner ³
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ⁴
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ⁴
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. 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
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (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 and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. 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.) Also see *Special rules for partnerships* on page 2.

***Note.** Grantor also must provide a Form W-9 to trustee of trust.

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 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 credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system 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 1-877-777-4778 or TTY/TDD 1-800-829-4059.

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 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov 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 possessions for use in administering their laws. The information also may 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, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

A complete copy of AIA Document A201, 1997 Edition, with Supplementary General Conditions incorporated, is available for review in the Peoria Park District's Planning, Design and Construction Office.

SUPPLEMENTARY GENERAL CONDITIONS

1. A. **"GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION"**, AIA Document A201, 1997 Edition, published by the American Institute of Architects, including revisions adopted before the date of the Project Manual, is hereby made part of these Specifications with same force and effect as though set forth in full.
 - B. The following modifies, changes, deletes from or adds to the General Conditions of the Contract for Construction (AIA Document A201, Fourteenth Edition, 1997). Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.
 - C. Parenthesis () indicates the appropriate section and Subparagraph of the General Conditions which each paragraph of the Supplementary General Conditions modifies or refers to.
2. **INSERT THE FOLLOWING PHRASE TO PARAGRAPH (1.1.1) AFTER THE WORDS "The Contract Documents consist of the Agreement Between Owner and Contractor (hereinafter the Agreement)":**

“the Contractor's Bid, the Advertisement for Bids, the Instructions to Bidders, sample forms and addenda relating to these,”

DELETE THE LAST SENTENCE OF PARAGRAPH (1.1.1).

3. **ADD THE FOLLOWING SENTENCES TO END OF PARAGRAPH (1.2.1):**

The Contractor shall notify the Owner's Representative immediately if discrepancies are discovered. Full-size or large-scale details or drawings shall govern small-scale drawings that the former are intended to amplify. Dimensions from drawings shall not be determined by scale or rule. Where the Drawings and Specifications conflict with each other or with themselves, the Owner's Representative (in consultation with the Architect, if any) will decide which conflicting requirement governs. Should discrepancies or doubt occur, Contractor shall not proceed with the Work without clarification from the Owner. Contractor shall request clarification in a reasonable time to avoid delays and increases in the Contract Sum.

ADD THE FOLLOWING PARAGRAPHS TO SECTION (1.2):

1.2.4 If any item or material shown on the Drawings is omitted from the Specifications, or vice-versa (except when the Drawings and Specifications clearly exclude such omitted item), and when such item or material is clearly required to complete the detail shown or specified, the Contractor shall furnish and install such item or material of the type and quality established by the balance of the detail shown and specified at no increase to the Contract Sum.

1.2.5 Where a typical or representative detail is shown on the Drawings, this detail shall constitute the standard for workmanship and materials throughout those parts of the Work.

1.2.6 Any Summary of Work as outlined in the Specifications shall not be deemed to limit the work required by the Contract Documents. The Contractor and each Subcontractor shall be responsible for carefully examining all Drawings, including all details, plans, elevations, sections, schedules and diagrams for each particular type of work, and for coordinating the Work described in the Drawings, with the related Specifications. The Contractor shall also be responsible for determining the exact scope of work for each type of work per the Contract Documents and Contractor shall endeavor to check cross-references of work excluded from any division. The Contract Sum is deemed to be based on a complete installation. When additional details or instructions are clearly required to complete the work, the Contractor is deemed to have made an allowance in the Contract Sum for completion of such Work consistent with the local standard of care.

1.2.7 The Drawings are intended to show the arrangement, design and extent of the Work and are schematic in nature. They are not to be scaled for roughing-in measurements or used as shop drawings.

4. ADD THE FOLLOWING PARAGRAPH TO SECTION (1.5):

1.5.3 Neither any oral representation by or oral agreement with any officer, agent, or employee of Owner or Architect before execution of this Contract shall affect or modify any of the Contractor's rights or obligations hereunder. Contractor is not aware of any facts that make misleading or inaccurate in any material respect any information Owner or Architect has furnished to Contractor which would have a material adverse affect on the Contract Time or Contract Sum which Contractor has not advised Owner or Architect of, and if, during the course of the performance of the Work, Contractor learns of any such facts it will so advise Owner. Contractor shall not be entitled to any adjustments in the Contract Time or the Contract Sum as a consequence of Contractor's breach of the terms of this Subparagraph.

5. IN PARAGRAPH (1.6.1) DELETE THE WORD "Architect" IN THE FOURTH SENTENCE AND REPLACE IT WITH THE WORD "Owner".

DELETE SENTENCES #7, #8, #9 STARTING WITH "The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are"

6. DELETE PARAGRAPH (2.2.3) IN ITS ENTIRETY.

7. ADD THE FOLLOWING SENTENCE AT THE END OF PARAGRAPH (2.3.1):

"The Owner shall not be liable for any extra cost incurred by the Contractor by such an order."

8. IN PARAGRAPH (2.4.1) DELETE THE SECOND TO LAST SENTENCE.

9. IN PARAGRAPH (3.2.1, 3.2.2 AND 3.2.3) AFTER THE WORD "Architect" ADD THE WORDS "and Owner".

10. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.2):

3.2.4 Before starting any work, the Contractor shall examine work performed by others to which his work adjoins or is applied to and report to the Owner's Representative any conditions that will prevent the satisfactory accomplishment of his work. Failure to notify the Owner's Representative of deficiencies or faults in preceding work prior to commencing work shall constitute acceptance thereof and waiver of any claim of its unsuitability.

11. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.4):

3.4.4 Before ordering any material or doing any Work, the Contractor shall verify all measurements at the Project site and he shall be responsible for the correctness of same. No extra charge or compensation will be allowed to the Contractor on account of any difference between actual dimensions and the measurements shown on the Project Drawings.

3.4.5 The Contractor shall carefully inspect all materials delivered on and to the Project site and reject defective materials without waiting for the Owner's Representative or other representative of Owner to observe the materials.

12. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.5):

3.5.2 The Contractor agrees to assign to the Owner any and all manufacturer's warranties relating to materials and equipment furnished as part of the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties subject to installation directives and other terms of the Contract Documents. The Contractor agrees to deliver to the Owner, upon final payment, such assignments along with or as part of a reference manual, in form and detail reasonably acceptable to Owner, showing all such warranties and guarantees provided by the Contractor and Subcontractors. Such warranties and guarantees shall commence no sooner than the date of purchase from the supplier.

3.5.3 The warranty of Contractor provided in Paragraph 3.5 shall in no way limit or abridge the warranties of the suppliers of equipment and systems which are to comprise a portion of the Work, if they are broader, and all of such warranties shall be in form and substance as required by the Contract Documents. Contractor shall take no action or fail to act in any way which results in the termination or expiration of such third party warranties or which otherwise results in prejudice to the rights of the Owner under such warranties subject to installation directives and other terms of the Contract Documents. Contractor agrees to provide all notices required for the effectiveness of such warranties and shall include provisions in the contracts with the providers and manufacturers of such systems and equipment whereby Owner shall have a direct right of enforcement of such warranty obligations.

13. IN PARAGRAPH (3.6.1), DELETE THE WORD "Sales".

ADD THE FOLLOWING AT THE END OF PARAGRAPH (3.6.1):

The Peoria Park District is exempt from Federal, State and Local taxes. A certificate of exemption will be furnished upon request.

14. IN PARAGRAPH (3.10.2) BEFORE THE WORD "Architect's" ADD THE WORDS "Owner's and".

IN PARAGRAPH (3.10.2) AFTER THE WORD "Architect" ADD THE WORDS "and Owner's Representative".

ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.10):

3.10.4 The construction schedule shall provide for the most expeditious and practicable execution of the Work. The Contractor shall also work closely with the Owner to confirm that the construction schedule accurately reflects the status of the Project. The Contractor's construction schedule shall be updated every month by the Contractor and submitted to the Owner.

- .1** Whenever it becomes apparent from the updated construction schedule that any substantial completion previously established by the construction schedule cannot be met, the Contractor shall, at the Owner's request, take any or all of the following actions with no increase to the Contract Sum or Contract Time (unless the delay is caused by an event set forth in paragraph 8.3 of these General Conditions thereby permitting adjustment of the Contract Sum and/or Contract Time under Paragraph 4.3.5 of these General Conditions):

- .1.1** Increase construction manpower to substantially return the Project to schedule;
- .1.2** Increase the number of working hours per shift, shifts per day or the amount of construction equipment or any combination of the foregoing which will substantially return the Project to schedule;
- .1.3** Reschedule activities to concurrently accomplish activities, to the maximum degree practicable, in the time required by the Contract Documents.

If the Contractor fails to take any of these actions Owner shall have the notice and other rights set forth in Paragraph 2.4.

15. IN PARAGRAPH (4.1.1) DELETE THE FIRST SENTENCE AND SUBSTITUTE THE FOLLOWING:

"The Architect, Owner's Representative, and Owner's Project Manager are defined in Paragraph C of "Section 01000 - General" of "Division 01000 - General Requirements".

16. IN PARAGRAPH (4.2.1) DELETE THE WORDS "and will be an Owner's Representative".

17. IN PARAGRAPH (4.2.2) DELETE THE WORDS "as a representative of the Owner".

18. IN PARAGRAPH (4.2.4) IN THE FIRST SENTENCE SUBSTITUTE THE WORD "Architect" FOR THE WORD "Owner" AND SUBSTITUTE THE WORD "Owner" FOR THE WORD "Architect".

19. IN PARAGRAPH (4.2.5) DELETE THE WORD "Architect's" AND "Architect" AND SUBSTITUTE THE WORDS "Owner Representative's" AND "Owner Representative".

20. IN PARAGRAPH (4.2.6) IN THE SECOND SENTENCE AFTER THE WORDS "will have authority" INSERT THE WORDS "upon written authorization from the Owner".

21. IN PARAGRAPH (4.2.8) DELETE THE WORD "prepare" AND SUBSTITUTE THE WORDS "assist the Owner's Representative in preparing".

22. IN PARAGRAPH (4.2.9) DELETE THE WORD "Architect" AND SUBSTITUTE WORDS "Owner's Representative, assisted by the Architect".

23. IN PARAGRAPH (4.2.11) IN THE FIRST SENTENCE DELETE THE WORDS "and decide".

24. IN PARAGRAPH (4.2.12) IN THE FIRST SENTENCE DELETE THE WORD "and decisions".

IN PARAGRAPH (4.2.12) IN THE SECOND SENTENCE DELETE THE WORDS "and initial decisions" AND "or decisions".

25. ADD PARAGRAPH TO SECTION (4.2):

4.2.14 Notwithstanding any other provision of this Agreement to the contrary, the Architect shall have no authority to order or approve any material deviation from the Contract Documents, whether or not such deviation affects the Contract Sum or other Substantial Completion Date (as defined herein). In the event any such deviation is sought, prior written approval from the Owner’s Representative and the Owner must be obtained. The Architect may decide quality issues and may approve non-material deviations from the Contract Documents.

- 26. IN PARAGRAPH (4.3.4) IN THE FOURTH SENTENCE DELETE THE WORD “decision” AND SUBSTITUTE THE WORD “recommendation”.**

IN PARAGRAPH (4.3.4) IN THE LAST SENTENCE DELETE THE WORD “determination” AND SUBSTITUTE THE WORD “recommendation”.

- 27. DELETE PARAGRAPH (4.3.10) IN ITS ENTIRETY.**

- 28. DELETE PARAGRAPH (4.4.1) AND SUBSTITUTE THE FOLLOWING:**

“Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be initially referred in writing to the Architect for a recommendation.”

- 29. IN PARAGRAPH (4.4.2) AFTER “(2)” ADD THE WORD “recommend” AND CHANGE THE WORD “reject” TO “rejecting”.**

IN PARAGRAPH (4.4.2) AFTER “(3)” ADD THE WORD “recommend” AND CHANGE THE WORD “approve” TO “approving”.

IN PARAGRAPH (4.4.2) AT THE END OF THE SENTENCE DELETE THE WORD “resolve” AND ADD THE WORDS “make recommendation on”.

- 30. IN PARAGRAPH (4.4.3) DELETE THE WORD “decision” AND SUBSTITUTE THE WORD “recommendation”.**

- 31. IN PARAGRAPH (4.4.4) IN THE LAST SENTENCE DELETE THE WORDS “either reject or approve the Claim” AND SUBSTITUTE THE WORDS “provide a recommendation regarding the Claim in accordance with Paragraph 4.2.2”.**

IN PARAGRAPH (4.4.4) AT THE END OF THE LAST SENTENCE DELETE THE WORDS “in whole or in part.”

- 32. DELETE PARAGRAPHS (4.4.5) AND (4.4.6) IN THEIR ENTIRETY.**

- 33. IN PARAGRAPH (4.4.8) DELETE THE WORD “resolution” AND SUBSTITUTE THE WORDS “final recommendation”.**

IN PARAGRAPH (4.4.8) AFTER THE WORD “Architect,” ADD THE WORD “or”.

IN PARAGRAPH (4.4.8) AT THE END OF THE SENTENCE DELETE THE WORDS “or by arbitration”.

- 34. IN PARAGRAPH (4.5.1) DELETE THE WORD “decision” AND SUBSTITUTE THE WORD “recommendation”.**

IN PARAGRAPH (4.5.1) DELETE THE WORDS “arbitration or”.

- 35. IN PARAGRAPH (4.5.2) IN THE SECOND SENTENCE DELETE THE WORDS “a demand for arbitration” AND SUBSTITUTE THE WORDS “legal or equitable proceedings”.**

IN PARAGRAPH (4.5.2) AFTER THE WORDS “proceed in advance of “ DELETE THE WORDS “arbitration or”.

- 36. IN PARAGRAPH (4.5.3) DELETE THE FIRST SENTENCE.**

- 37. DELETE SECTION (4.6) IN ITS ENTIRETY.**

- 38. IN PARAGRAPH (5.2.1) DELETE THE FIRST SENTENCE AND SUBSTITUTE:**

“The subcontractors/suppliers listed by the Contractor on the Major Subcontractor/Supplier List (submitted with the Bid) shall not be changed without the written consent of the Owner.”

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE DELETE THE WORDS “Architect will” AND SUBSTITUTE THE WORDS “Owner’s Representative will”.

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE AFTER THE WORDS “promptly reply to” ADD THE WORDS “any request made by”.

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE AFTER THE WORDS “any such proposed” ADD THE WORDS “change in”.

IN PARAGRAPH (5.2.1) IN THE LAST SENTENCE DELETE THE WORDS “Owner or Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

IN PARAGRAPH (5.2.1) IN THE LAST SENTENCE DELETE THE WORD “promptly” AND ADD THE WORDS “within 10 calendar days (of receipt of written request for such change from the Contractor)”.

- 39. IN PARAGRAPH (6.2.2) BEFORE THE WORD “Architect” ADD THE WORDS “Owner and”.**

- 40. IN PARAGRAPH (6.3.1) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORD “Owner”.**

- 41. IN PARAGRAPH (7.2.1) DELETE THE WORDS “the Architect” AND SUBSTITUTE THE WORDS “the Owner’s Representative”.**

ADD THE FOLLOWING PARAGRAPHS TO SECTION (7.2):

7.2.3 A Change Order shall include all of the Contractor’s costs associated therewith.

7.2.4 The Contractor shall not accept any request for a Change Order from any person other than the Owner and may not perform any work asserted to constitute a change in the Work until the Owner has approved the Change Order in writing, unless the Owner authorizes the Contractor, in writing, to proceed with a change prior to the Owner’s final approval. Notwithstanding anything to the contrary herein, the Contractor shall not charge for overtime services in the performance of any Change Order Work, unless the Owner has specifically authorized overtime in writing. Owner may competitively bid changes in the Work and Contractor, Subcontractor and suppliers shall provide Owner with all documents Owner requests to facilitate such competitive bidding of changes in the Work.

7.2.5 There shall be no change in the Work, whether an alteration or addition to the Contract Sum or to any amounts due under the Contract Documents or to a change in the Contract Time, unless and until such alteration or addition has been authorized by a written Change Order executed and issued in accordance and compliance with the requirements with this Article 7 or by written authorization to proceed with such change in the Work signed by the Owner or as otherwise provided pursuant to the Contract Documents. The requirements set forth in this Paragraph 7.2.5 are of the essence. No claim that the Owner has been unjustly enriched by any alteration or addition to the Work, whether or not any such unjust enrichment to the Work or to the Owner in fact exists, shall form the basis of any claim for an increase in any amount due under the Contract Documents or a change in the Contract Time, and the terms of a fully-executed Change Order shall be conclusive.

- 42. IN PARAGRAPH (7.3.1) DELETE THE WORDS “the Architect” AND SUBSTITUTE THE WORDS “the Owner’s Representative”.**
- 43. IN PARAGRAPH (7.3.4) DELETE THE WORDS “the Architect” AND SUBSTITUTE THE WORDS “the Owner’s Representative”.**
- 44. IN PARAGRAPH (7.3.6) IN THE FIRST SENTENCE DELETE THE WORD “determined” AND SUBSTITUTE THE WORD “recommended”.**
- 45. IN PARAGRAPH (7.3.7) IN THE FIRST SENTENCE AFTER THE WORD “Architect” ADD THE WORDS “and the Owner’s Representative”.**
- 46. IN PARAGRAPH (7.3.8) DELETE THE WORDS “the Architect” AND SUBSTITUTE THE WORDS “the Owner’s Representative”.**
- 47. IN PARAGRAPH (7.3.9) DELETE THE WORD “determination” AND SUBSTITUTE THE WORD “recommendation”.**
- 48. IN PARAGRAPH (8.1.3) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.**
- 49. ADD THE FOLLOWING PARAGRAPHS TO SECTION (8.2) .**

8.2.4 All work shall be "Substantially Complete" as required by the **Instructions to Bidders** and the **Agreement Between Owner and Contractor**.

8.2.5 It is further agreed that said completion schedule is reasonable, and the Contractor shall prosecute said work regularly, diligently and continuously at such rate of progress as will insure full completion thereof within the time specified.

8.2.6 Provided, however, the following exceptions:

- .1** Any preference, priority or allocation order duly issued by the United States Government.
- .2** Any unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including acts of God, or of a public enemy, acts of the Owner, acts of another Contractor in performance of a separate contract with the Owner, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather. The criteria on which the unusually severe weather shall be based is the average precipitation/temperatures

received in the project area, as recorded over a period of the last five (5) years at the local area United States Weather Station. Any extension of time due to unusually severe weather must be requested by the Contractor on the basis of documented records of the actual precipitation/temperatures during the contract time period, compared with the normal/average for the area. Also, the criteria shall include the number of excessive precipitation or extreme cold days (i.e., days in which the temperature would adversely affect the type of work being constructed) over the same period and whether or not the Contractor's force worked on said days or stage of construction was affected.

.3 Any delays of subcontractors occasioned by any of the causes specified in this paragraph.

8.2.7 Provided further that the Contractor shall, within seven (7) days from the beginning of any such delay during the performance of the Contract, notify the Owner's Representative in writing of the alleged cause of such delay.

50. IN PARAGRAPH (8.3.1) DELETE THE WORDS “and arbitration”.

IN PARAGRAPH (8.3.1) DELETE THE WORD “determine” AND SUBSTITUTE THE WORD “recommend”.

51. DELETE PARAGRAPH (9.2.1) AND SUBSTITUTE THE FOLLOWING:

“Before the first Application for Payment, the Contractor shall submit to the Owner’s Representative a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect and Owner’s Representative may require. This schedule, unless objected to by the Architect and Owner’s Representative, shall be used as a basis for reviewing the Contractor’s Applications for Payment.”

52. IN THE FIRST SENTENCE OF (9.3.1), CHANGE "ten" TO "forty five”.

IN PARAGRAPH (9.3.1) IN THE FIRST SENTENCE DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

ADD THE FOLLOWING TO THE END OF PARAGRAPH (9.3.1):

Payment requests shall consist of AIA Documents #702 "Application and Certificate for Payment"; AIA #703 "Continuation Sheet"; Contractors Affidavit of Payment to Subcontractors and Suppliers; Weekly Workforce Reports; Certified Payroll Form; and Waivers of Lien. (Waivers of Lien are required from the general contractor in the full amount of the current payment application, and from all subcontractors, suppliers, or workers who provide more than \$10,000 of project material/labor of the Work. The waiver shall be in the amount(s) listed in the Contractor's Affidavit.) For final payment, the general contractor shall also provide a Waiver of Lien in the full amount of the contract price.

The Waiver of Lien and Contractor Affidavit forms used shall be the Peoria Park District's standard form(s): 1) "Final Waiver of Lien" (for general contractors), 2) "Waiver of Lien - General Contractor's Partial To Cover Only Certain Payments", 3) "Sub-Contractor's Final Waiver of Lien", 4) "Waiver of Lien - Sub-Contractor's Partial To Cover Only Certain Payments, and 5) "Contractor's Affidavit". (These forms are included in the Project Manual, and are the required Waiver of Lien forms for the project.)

(If the Contractor is unable to provide the required sub-contractor waiver at the time the application for payment is submitted (preferred method) alternatively, it may be provided at the time that payment is

delivered by the District. If the sub-contractor waiver(s) still cannot be provided at that time, the District will provide "two-party" checks in which the Contractor and the sub-contractor are named jointly as payees.)

Format of AIA #703 shall follow that of "Schedule of Values". (See Division 01000 Article IV.) All payment requests shall reflect retainage in the amount of 10% of completed work.

- 53. IN PARAGRAPH (9.3.1.1) DELETE THE WORDS “or by interim determination of the Architect, but not yet included in Change Orders”.**
- 54. ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (9.3.1):**
- 9.3.1.3** Upon Substantial Completion, the Owner will pay 95% percent of the amount due to the Contractor on account.
- 9.3.1.4** Monthly progress payments will be made by the Owner on projects lasting more than sixty days (from award of the bid to the Substantial Completion date given in the Supplementary Instructions to Bidders).
- 55. ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (9.3.2):**
- 9.3.2.1** Material stored on site will be considered for payment only when a Schedule of Stored Materials with appropriate values accompany the payment request as an attachment.
- 9.3.2.2** All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of material and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the contract.
- 56. IN PARAGRAPH (9.4.1) DELETE THE WORDS “Architect” AND “Architect’s” AND SUBSTITUTE THE WORDS “Owner’s Representative” AND “Owner’s Representative’s”.**
- IN PARAGRAPH (9.4.1) DELETE THE PHRASE "with a copy to the Contractor".**
- 57. IN THE FIRST SENTENCE OF PARAGRAPH (9.4.2) DELETE THE WORD “Architect”.**
- IN THE FIRST SENTENCE OF PARAGRAPH (9.4.2) AFTER THE WORDS “Architect’s” ADD THE WORDS “and Owner’s Representative’s”.**
- IN THE FOURTH SENTENCE OF PARAGRAPH (9.4.2) DELETE THE WORDS “Architect has” AND SUBSTITUTE THE WORDS “Owner’s Representative and Architect have”.**
- 58. IN PARAGRAPH (9.5.1) DELETE THE WORDS “Architect” AND “Architect’s” AND SUBSTITUTE THE WORDS “Owner’s Representative AND “Owner’s Representative’s”.**
- 59. IN PARAGRAPHS (9.6.1, 9.6.3, AND 9.6.4) DELETE THE WORDS “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.**
- 60. IN PARAGRAPH (9.7.1) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.**

IN PARAGRAPH (9.7.1) DELETE THE WORDS “or awarded by arbitration”.

61. IN PARAGRAPH (9.8.2) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

62. IN THE FIRST SENTENCE OF PARAGRAPH (9.8.3) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative assisted by the Architect”.

IN THE SECOND AND THIRD SENTENCES OF PARAGRAPH (9.8.3) DELETE THE WORDS “Architect’s” and “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative’s” and “Owner’s Representative”.

63. IN PARAGRAPH (9.8.4) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

64. IN PARAGRAPH (9.9.1) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

65. IN PARAGRAPH (9.10.1) IN THE FIRST SENTENCE AFTER THE FIRST TWO APPEARANCES OF THE WORD ‘Architect’ ADD THE WORDS “and Owner’s Representative”.

IN PARAGRAPH (9.10.1) DELETE THE THIRD AND FOURTH APPEARANCES OF THE WORD “Architect” and “Architect’s” AND SUBSTITUTE THE WORDS “Owner’s Representative” and “Owner’s Representative’s”.

IN PARAGRAPH (9.10.1) AFTER THE FIFTH APPEARANCE OF THE WORD “Architect’s” ADD THE WORDS “and Owner’s Representative’s”.

IN THE LAST SENTENCE OF PARAGRAPH (9.10.1) DELETE THE WORD “Architect’s” AND SUBSTITUTE THE WORDS “Owner’s Representative’s”.

66. IN PARAGRAPH (9.10.2) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORD “Owner’s Representative”.

67. ADD THE FOLLOWING SUB-PARAGRAPH TO PARAGRAPH (9.10.2):

9.10.2.1 When all items including items noted within Division 1000 General Requirements are found to be complete and in conformance with the Contract Documents, a final payment will be issued.

68. IN PARAGRAPH (9.10.3) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

69. IN PARAGRAPH (11.1.1) IN THE FIRST SENTENCE AFTER THE PHRASE “as will protect the Contractor” ADD THE WORDS “Architect and Owner”.

70. IN PARAGRAPH (11.1.2), IN THE FIRST SENTENCE DELETE THE WORDS “limits of liability specified in the Contract Documents” AND SUBSTITUTE THE WORDS “limits required in ‘Attachment A – Project Specific Insurance Requirements’ (which is included as the last section of the Project Manual and the requirements therein shall be made part of the Contract Documents).”.

IN PARAGRAPH (11.1.2) AFTER THE FIRST SENTENCE ADD:

“In addition, if any of the work occurs within fifty feet of an active railroad line and the Contractor’s general liability coverages provide for exclusions of coverage when working on or near a railroad, the Contractor shall provide a separate Railroad Protective Liability Insurance Policy naming the railroad as the insured party, with the coverage limits required by that railroad.”

- 71. IN PARAGRAPH (11.1.3), AFTER THE WORDS “Certificates of insurance” ADD THE WORDS “and endorsements to the insurance policy(s) which are”.**

IN PARAGRAPH (11.1.3) AFTER THE WORDS “acceptable to the Owner” ADD THE WORDS “and naming the Owner, their agents and consultants as additional insured”.

ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (11.1)

11.1.4 The Contractor may, at his option, furnish Owner’s Protective Liability Insurance in lieu of naming the Owner Additional Insured on the Contractor’s policy, as required above. This insurance shall protect the Owner from claims as set forth in Paragraph 11.1.1 of the General Conditions, and to the limits required herein, as shown in “Attachment A”.

11.1.5 The Contractor shall furnish two copies of each of the required Certificates or Endorsements for each copy of the Agreement which shall specifically set forth evidence of all coverage required by the Contract Documents. The form of the Certificate(s) or Endorsement(s) shall be those as required in “Attachment A”. The Contractor shall also furnish to the Owner copies of any endorsements which limit coverage, or are subsequently issued amending coverage or limits of coverage.

- 72. DELETE PARAGRAPHS (11.3.1, 11.3.2, AND 11.3.3) IN THEIR ENTIRETY.**

- 73. DELETE PARAGRAPH (11.4.1) AND SUBSTITUTE:**

“If the work of the project is being completed by one general or prime contractor rather than multiple prime contractors, the Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full replacement value thereof. Such insurance shall be in a company or companies against which the Owner has no reasonable objection. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

- 74. AT THE END OF PARAGRAPH (11.4.1.1) ADD THE FOLLOWING SENTENCE:** “The form of policy for this coverage shall be “Completed Value”.

- 75. DELETE PARAGRAPH (11.4.1.2) IN ITS ENTIRETY.**

- 76. DELETE PARAGRAPH (11.4.1.3) IN ITS ENTIRETY AND SUBSTITUTE:**

“If by the terms of this insurance any mandatory deductibles are required, or if the Contractor should elect, with the concurrence of the Owner, to increase the mandatory deductible amounts or purchase this insurance with voluntary deductible amounts, the Contractor shall be responsible for payment of the amount of all deductibles in the event of a paid claim. If separate contractors are added as insureds to be covered by this policy, the separate contractors shall be responsible for payment of appropriate part of any deductibles in the event claims are paid on their part of the Project.”

- 77. DELETE PARAGRAPHS (11.4.3, 11.4.4, AND 11.4.5) IN THEIR ENTIRETY.**

78. DELETE PARAGRAPH (11.4.6) AND SUBSTITUTE:

“The Contractor shall file two certified copies of all policies with the Owner before exposure to loss can occur. If the Owner is damaged by the failure of the Contractor to maintain such insurance and to so notify the Owner, then the Contractor shall bear all reasonable costs properly attributable thereto.

79. DELETE PARAGRAPHS (11.4.7, 11.4.8, 11.4.9, AND 11.4.10) IN THEIR ENTIRETY.

80. DELETE PARAGRAPH (11.5.1) AND SUBSTITUTE:

“The Contractor shall furnish a Performance Bond and a separate Labor and Material Payment Bond, each for one hundred percent (100%) of the Contract Sum. Form of these bonds shall be as provided by the Owner in the Project Manual and no other form will be accepted. The Surety shall be authorized to do business in the State of Illinois and be acceptable to the Owner.

81. IN PARAGRAPH (12.1.1) DELETE THE WORD “Architect’s” AND SUBSTITUTE WORDS “Owner’s Representative’s and Architect’s”. DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

82. IN PARAGRAPH (12.1.2) AFTER THE WORD “Architect” ADD THE WORDS “and Owner’s Representative”.

83. IN PARAGRAPH (12.2.1.1) AFTER THE WORD “Architect” ADD THE WORDS “and Owner’s Representative”.

84. IN PARAGRAPH (13.5.4) AFTER THE WORD “Architect” ADD THE WORDS “and Owner’s Representative”.

85. IN PARAGRAPH (14.1.1.3) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

86. IN PARAGRAPH (14.2.2) DELETE THE PHRASE “, upon certification by the Architect that sufficient cause exists to justify such action,”.

87. IN PARAGRAPH (14.2.4) DELETE THE WORD “Architect” AND SUBSTITUTE THE WORDS “Owner’s Representative”.

88. DELETE PARAGRAPH (14.4.3) IN ITS ENTIRETY AND SUBSTITUTE:

In case of such termination for the Owner’s convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination. In no event, however, will such amounts exceed the Contract Sum reduced by the amount of prior payments except for increases pursuant to the claims procedure in the Contract Documents. Subcontracts, subsubcontracts, and purchase orders will contain appropriate provisions for termination for convenience under this Paragraph 14.4.

89. ADD THE FOLLOWING ARTICLE 15: LABOR, SAFETY AND WAGE STANDARDS TO THE GENERAL CONDITIONS OF THE CONTRACT:

**ARTICLE 15
LABOR, WAGE, SAFETY, AND OTHER STANDARDS**

15.1 LABOR STANDARDS. All employers shall comply with the Employment of Illinois Workers on Public Works Act [30 ILCS 570/1 to 570/7].

15.2 WAGE STANDARDS.

15.2.1 PREVAILING WAGE ACT: Wages and benefits to employees shall comply with all Federal and State of Illinois statutes pertaining to public works projects and specifically: Wages of Employees on Public Works [820 ILCS 130/1 - 12].

15.2.2 Not less than the prevailing rate of wages as determined by the Park District or the Department of Labor shall be paid to all laborers, workers and mechanics performing work under this contract. All contractor's bonds shall include a provision as will guarantee the faithful performance of such prevailing wage clause as provided by this bid specification or contract.

15.2.3 The terms "general prevailing rate of hourly wages", "general prevailing rate of wages" or "prevailing rate of wages" when used in this Act mean the hourly cash wages plus fringe benefits for training and apprenticeship programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training, health and welfare, insurance, vacations and pensions paid generally, in the locality in which the work is being performed, to employees engaged in work of a similar character on public works.

15.2.4 PREVAILING WAGE ACT/FOIA
Contractors and subcontractors shall submit certified payroll on a monthly basis to the Park District in compliance with requirements of 820 ILCS 130/5. These records will be kept by the Park District for three years and may be reviewed by others through the Freedom of Information Act (FOIA). The Park District will exclude employee's address, telephone number, and social security number from public inspection.

15.3 SAFETY STANDARDS.

15.3.1 PROTECTION OF PERSONS AND PROPERTY: The Contractor and his subcontractors shall, at all times, comply with applicable provisions of Federal, State and Local laws.

15.3.1.1 The Contractor and his sub-contractors shall have written programs complying with Occupational Safety and Health Administration standards and/or Illinois Department of Labor requirements including, but not limited to the following: hazardous communications, hearing conservation, respirator use, confined space entry, scaffolding, ladders, ventilation, flammable and combustible liquids, and lockout/tagout. The Contractor shall submit documentation of their programs at the request of the Owner's Representative, or Occupational Safety and Health Administration and/or Illinois Department of Labor officials.

15.4 EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

15.4.1 During the performance of the contract, the contractor agrees to the following:

15.4.1.1 That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or

women are under-utilized and will take appropriate affirmative action to rectify any such under-utilization.

- 15.4.1.2** That, if it hires additional employees in order to perform his contract or any portion thereof, it will determine the availability (in accordance with the Rules and Regulations of the Illinois Department of Human Rights) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not under-utilized.
- 15.4.1.3** That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability or an unfavorable discharge from military service.
- 15.4.1.4** That it will have a written sexual harassment policy to include at the minimum, the following:
 - 15.4.1.4.1** a definition of sexual harassment under the law;
 - 15.4.1.4.2** a description of sexual harassment utilizing examples;
 - 15.4.1.4.3** a formalized complaint procedure;
 - 15.4.1.4.4** a statement of victim's rights;
 - 15.4.1.4.5** directions on how to contact the Illinois Department of Human Rights. Out-of-state companies must provide directions for filing with the enforcement agency within their state. Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency; and
 - 15.4.1.4.6** A recitation that there cannot be any retaliation against employees who elect to file charges.
 - 15.4.1.4.7** In addition, it is recommended that the employer post a copy of the sexual harassment policy in a prominent and accessible location and distribute it in a manner to assure notice to all employees on an annual basis.
 - 15.4.1.4.8** The Illinois Human Rights Act specifically provides that all documents may meet, but cannot exceed, the sixth grade literacy level. Therefore, the employers sexual harassment policy must be stated in plain language and in "laymen's terms".
- 15.4.1.5** That it 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 such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such Act and Rules and Regulations, the contractor will promptly so notify the Department and the contracting agency and will recruit

employees from other sources when necessary to fulfill its obligations thereunder.

- 15.4.1.6.** That it will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
- 15.4.1.7.** That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
- 15.4.1.8.** That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the contractor will 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.

- 15.4.2** In the event of the contractor's non-compliance with the provisions of the Illinois Human Rights Act, the contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporation, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulations.

END OF SUPPLEMENTARY GENERAL CONDITIONS

DIVISION 010000 GENERAL REQUIREMENTS

SECTION 010000 - GENERAL

A. SUMMARY OF THE WORK

1. The Work covered under this Contract consists of that work described by the Invitation to Bid, the Instructions/Supplemental Instructions to Bidders, the Bid/Proposal Form, the General/Supplemental Conditions of the Contract, these General Requirements, the Plans, and the Technical Specifications.
2. The Contractor shall be responsible for all items incidental to the scope of the Work intended by the bidding documents as per A.1 above, including but not limited to, expenses incurred by the requirements of various Sections of Division 010000, unless specifically stated otherwise herein.
3. Changes to the Work as required by approved Change Orders shall be at the expense of the Owner, however, requests for additional payments made after the fact will not be considered.

B. OCCUPANCY BY OWNER.

1. The Owner reserves the right to occupy any portion of the project before it has been entirely completed, with the understanding that such occupancy shall in no way constitute acceptance of the work, in whole or in part, or of any work performed under the Contract, provided that such occupancy does not substantially interfere with completion of the work by the Contractor.

SECTION 012300 – ALTERNATES

A. Alternates to the Bid are set forth in the Supplementary Instructions to Bidders and are listed in the Bid Form.

1. Accepted Alternates have been incorporated into the Agreement.

B. Bid Alternate pricing, as set forth in the Supplementary Instructions to Bidders and the Bid Form, shall be good for a minimum of 90 calendar days after the date of the Bid opening, and the Owner reserves the right to accept Alternates up to that time.

SECTION 012600 - CHANGE ORDERS

A. OWNER'S REPRESENTATIVE'S FIELD ORDERS

1. From time to time during progress of the Work the Owner's Representative may issue an "Owner's Representative's Field Order" which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.
2. Should the Contractor consider that a change in Contract Sum or Contract Time is required he shall submit an itemized proposal to the Owner's Representative **immediately and before proceeding with the Work**. If the proposal is found to be satisfactory and in proper order, the Field Order will be superseded by a Change Order.

B. PROPOSAL REQUESTS

1. From time to time during the progress of work the Owner's Representative may issue a "Proposal Request" for an itemized quotation for changes to the Work which may result in a change to the Contract Sum or Contract Time. This document **is not a Change Order** and is not a direction to proceed with the changes described therein.

C. CHANGE ORDERS

1. Change Orders are written documents describing changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof. Change Orders must be signed by both the Owner and the Architect/Owner's Representative prior to proceeding with the Work subject to the Change Order. **REQUESTS FOR "EXTRA'S" OR OTHER ADDITIONAL PAYMENTS OVER AND ABOVE THE CURRENT CONTRACT SUM WILL NOT BE CONSIDERED WITHOUT THE PRIOR, WRITTEN APPROVAL OF BOTH THE OWNER AND THE OWNER'S REPRESENTATIVE.**
 - a) INITIATION. Change Orders may be initiated by a "Field Order" or "Proposal Request" per paragraphs "A" and "B" above. In addition, either the Contractor or Owner (or Owner's Representative) may initiate a Change Order through:
 - 1) Discovery of a discrepancy in the Contract Documents,
 - 2) Discovery of concealed conditions or,
 - 3) Discovery, during the course of the Work, of methods of accomplishing the Work in a better or more economical manner.
 - b) PROCESSING CHANGE ORDERS.
 - 1) Change Orders will be dated and will be numbered in sequence.
 - 2) The Change Order will describe the change or changes, or will refer to the Proposal Requests or Field Orders involved.
 - 3) The Owner's Representative will issue three copies of each Change Order to the Contractor.
 - 4) The Contractor promptly shall sign all three copies and return them to the Owner's Representative.
 - 5) The Owner and Owner's Representative will retain two signed copies in their files, and will forward one signed copy to the Contractor.
 - 6) Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:
 - i) The Contractor promptly shall return all three of the Change Orders, unsigned by him, to the Owner's Representative with a letter signed by the Contractor stating the reason or reasons for the Contractor's disagreement.
 - ii) The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

SECTION 012900 – PAYMENT PROCEDURES

A. SCHEDULE OF VALUES

1. Prior to the start of construction, submit a proposed Schedule of Values to the Owner's Representative which shows a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.
 - a) The Schedule of Values is required to be compatible (in the same format) with the Application for Payment "Continuation Sheet", AIA G703.
2. If not requested to submit additional data or to modify the submitted Schedule of Values within ten (10) days of submittal, the initially submitted Schedule shall be deemed approved.

B. APPLICATIONS FOR PAYMENT

1. Progress payments will be made only if specifically called for in the Agreement. In all other cases, the Contractor may submit an Application for Payment (3 copies) upon Substantial Completion (95% of the Contract Sum), with the balance of the Contract Sum to be paid at Final Completion.
 - a) **Paragraph #52 of the Supplementary General Conditions defines the documentation required for each payment request.**
 - b) Applications for payment shall be delivered to the Owner's Project Manager at:

Department of Planning, Design, and Construction
Peoria Park District
Bradley Park Equipment Service
1314 N. Park Road
Peoria, Illinois 61604

SECTION 013100 - PROJECT MEETINGS

A. PRECONSTRUCTION CONFERENCE

1. Conduct a preconstruction conference prior to the start of the Work, at the location of the Work. Provide attendance by the designated personnel of the Contractor, including Sub-contractor's and/or suppliers of major components of the Work, if requested by the Owner's Representative.
 - a) **AGENDA.** Discuss items of significance that could affect progress including such topics as:
 - 1) Tentative construction schedule.
 - 2) Critical Work sequencing.
 - 3) Designation of responsible personnel.
 - 4) Procedures for processing field decisions and Change Orders.
 - 5) Procedures for processing Applications for Payment.
 - 6) Distribution of Contract Documents.
 - 7) Submittal of Shop Drawings, Product Data and Samples.
 - 8) Preparation of record documents.
 - 9) Use of the premises.
 - 10) Office, Work and storage areas.
 - 11) Equipment deliveries and priorities.
 - 12) Safety procedures.
 - 13) First aid.
 - 14) Security.
 - 15) Housekeeping.
 - 16) Working hours.
 - 17) Permits and Permitting Agency Requirements

B. PROJECT MEETINGS

1. Project Meetings will be held per the schedule determined at the Preconstruction Conference, or as needed for proper coordination and administration of the project.
 - a) **AGENDA**
 - 1) Review and correct or approve minutes of the previous progress meeting.
 - 2) Review progress of the Work since last meeting, including status of submittals for approval.
 - 3) Identify problems which impede planned progress.
 - 4) Develop corrective measures and procedures to regain planned schedule.
 - 5) Complete other current business.

C. REPORTING

1. Distribute copies of the minutes of each meeting to each party present, and to other parties who should have been present, no later than three business days after each meeting.

SECTION 013300 - SUBMITTALS

- A. Requirements for shop drawings, samples, mock-ups, product data, etc., relative to specific elements or components of the work are called out in the various sections of the Technical Specifications.
 1. Submit items to allow for Owner's Representative's review and approval, potential re-submission if full approval is not given, ordering, delivery, fabrication time, etc., so as to allow the Work to proceed in a timely manner and in conformance with the project schedule.
- B. **OTHER CONTRACTOR SUBMITTALS**
 1. Unless otherwise modified the Contractor shall also submit:
 - a) A "bar chart" type proposed construction schedule, within ten days after award of the Bid.
 - b) Other submittals as required by other section of Division 010000.

- C. Submission of the required Bonds and Certificate of Insurance are to be made prior to the Owner's issuance of a Notice to Proceed.

SECTION 014000 – QUALITY/REGULATORY REQUIREMENTS

- A. **GENERAL:** Contractors shall comply with all laws, rules and regulations governing the work.
1. When Contractor observes that contract documents are at variance with specified codes, notify Owner's Representative in writing immediately. Owner's Representative will issue all changes in accord with General Conditions.
 2. When Contractor performs any work knowing or having reason to know that the work is contrary to such laws, rules and regulations and fails to so notify the Owner's Representative, Contractor shall pay all costs arising therefrom. However, it will not be the Contractor's primary responsibility to make certain that the contract documents are in accord with such laws, rules and regulations.
- B. **SAFETY:**
1. Comply with all federal, state, and local laws, rules and regulations governing the installation/construction of the work.
 2. Develop and utilize safety program and training for workmen and sub-contractor employees.
- C. **TESTING**
1. **TESTS AND INSPECTIONS REQUIRED**
 - a) Provide all tests and inspections required by governmental agencies having jurisdiction, as required by provisions of the Contract Documents and/or as specifically required by sections of the Technical Specifications.
 2. **PAYMENT FOR TESTING**
 - a) Include within the Contract Sum an amount sufficient to cover all testing, re-testing, and inspections required by the Contract documents and/or the Technical Specifications. Additionally pay for all testing and inspections required by all governmental agencies having jurisdiction.
 - 1) The Owner will pay for any testing and inspecting specifically requested by the Owner's Representative which are over and above those described in Paragraph 1.a) above.
 - 2) When initial tests (over and above those defined by 1.a) above) requested by the Owner's Representative indicate non-compliance with the Contract Documents, costs of initial tests associated with that non-compliance will be deducted by the Owner from the Contract Sum, and subsequent retesting occasioned by the non-compliance shall be performed by the same testing laboratory and the costs thereof shall be paid by the Contractor.
 3. **WAIVER OF INSPECTION AND/OR TESTS**
 - a) Specified inspections and/or tests may be waived only by the specific written approval of the Owner's Representative, and **such waivers will be expected to result in credit to the Owner equal to normal cost of such inspection and/or test.**

SECTION 014200 - REFERENCE STANDARDS AND DEFINITIONS

- A. **Copies of Standards:** Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed for performance of a required construction activity the Contractor shall obtain copies directly from the publication source.
 2. Although copies of standards needed for enforcement of requirements may be included as part of required submittals the Architect reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.
- B. **Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents they mean the recognized name of the trade association standards generating organization authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the Encyclopedia of Associations, published by Gale Research Co. available in most libraries.
- C. **Definitions:** Architect, Owner's Representative, and Owner's Project Manager
1. **ARCHITECT:** The Architect shall be the person or entity designated by the Owner as the Owner's Representative and shall be identified as such in the Agreement Between Owner and Contractor, and is referred to throughout the Contract Documents as if singular in number and masculine in gender.
 2. **OWNER'S REPRESENTATIVE:** The duties of the Owner's Representative as listed in the Project Manual, include but are not limited to, construction phase observation and technical administration services.
 - a) **LIMITS OF AUTHORITY:** The Owner's Representative shall be authorized to provide approvals and interpretations concerning the plans, specifications and progress of the Work as bid, but is not authorized to change the scope of the Work on behalf of the Owner.
 3. **OWNER'S PROJECT MANAGER:** The Owner's Project Manager will represent, act on behalf of, and provide interface between the Owner and the Contractor in respect to contract administration and/or other matters which affect the scope of the Work.
 - a) Unless defined otherwise in the Project Manual, the Owner's Project Manager shall be a designated member of the Planning, Design, and Construction Division of the Peoria Park District.
 - b) The Owner's Project Manager will also be the Owner's Representative and will provide construction phase observation and technical administration services, if a consultant Architect has not been engaged to do so, by the Owner.

SECTION 015000 – TEMPORARY FACILITIES & CONTROLS

- A. **MOBILIZATION**
1. Furnish all labor, tools, materials, equipment, and incidentals necessary for preparatory work.
 2. Provide and establish personnel, equipment, supplies, materials, offices or buildings, and other facilities necessary to work on the project.
 3. Demobilize all of the above and remove temporary facilities at the completion of the project.

B. BARRIERS, PROTECTION OF SITE AND PROPERTY

1. GENERAL

- a) Owner's improvements to remain, existing utilities, as well as adjacent site improvements shall be protected from damage by barriers, guards and coverings. Damaged work shall be replaced or repaired to condition prevailing at time of signing of contract, at no additional cost to Owner.
- b) Provide 6' high, continuous chain link or orange plastic (used materials acceptable) construction fence to prohibit unauthorized personnel or public entry from the site of the Work. (Substitutions may be considered; submit request in writing to the Owner's Representative.)
- c) Contractor shall provide, erect and maintain additional planking, fences, protective canopies, railings, shoring, lights, warning signs, etc., as needed for the protection of adjacent property and the public.

2. LANDSCAPE PROTECTION

- a) All live, healthy trees, shrubs, etc. on the site or on the street fronts of the site, not specified to be removed and not interfering with installation of new work required hereunder, shall be protected against injury from construction operations.
- b) All shade trees which are to remain and which are liable to damage during the building operations, shall be properly boxed and protected from damage during the course of construction work as directed by the Park District. **No site-related work shall occur until the required tree protection (fencing, boxing, etc.) has been installed and approved by the Owner or his representative.**
 - 1) LIQUIDATED DAMAGES: The Owner reserves the right to charge the Contractor for damage to existing trees, and to deduct the charges from the amounts due the Contractor, based on the following schedule:
 - aa) Broken limbs 1" or over in diameter: \$50 per caliper inch of limb
 - bb) Trenching or grading within the tree dripline or 20' from the trunk, whichever is less, of trees 4" or over in caliper diameter: \$100 per tree/per foot within dripline, or within 20' minimum if applicable
 - cc) Damage to tree trunks, including "barking", nicking, gouging, etc. \$150 per caliper inch of tree, per each injury

3. BARRIERS/CONSTRUCTION FENCE MATERIALS

- a) 2" open mesh chain link fence, 72" high minimum, galvanized, with appropriately sized posts; gates where indicated.
- b) Alternate barrier fencing materials may be acceptable, however, no additional payments will be made on account of approval of alternate barrier/safety fencing materials.
- c) Materials may be new or used, if in serviceable condition.

4. WATCHMAN SERVICE

- a) The Owner will not be responsible for loss due to theft or other damage which is not covered under Property Insurance. The Contractor shall make such arrangements for watchman service as he considers necessary and he shall be responsible for all loss or damage of his property, equipment, material, etc., at the site, and he shall make good such damage or loss without any additional cost to the Owner.

5. EXISTING IMPROVEMENTS - PROTECTION

- a) The Contractor shall be entirely responsible for all injuries to water pipes, electric conduits or cables, drains, sewers, gas mains, poles, telephones and telegraph lines, streets, pavements, sidewalks, curbs, culverts, retaining walls, building walls, foundation walls, or other structures of any kind met with during the progress of the Work, and shall be liable for damages to public or private property resulting therefrom.

C. CONSTRUCTION ACCESS, ROADS, AND PARKING AREAS

1. CONTRACTOR'S USE OF PREMISES

- a) The Contractor shall require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

2. CONSTRUCTION ACCESS

- a) To avoid traffic conflict with vehicles of the Owner's employees and customers, and to avoid over-loading of streets and driveways elsewhere on the Owner's property, limit the access of trucks and equipment to the route shown (IF SHOWN) on the Drawings as "Access Route". If access route is not shown on the Drawings, coordinate construction access and routes with the Owner's Project Manager.
- b) Do not permit such vehicles to park on any street or other area of the Owner's property except in the area shown on the Drawings as "Contractor's Parking Area". If not shown on the drawings, the Contractor's Parking Area shall be as designated by the Owner's Project Manager.
- c) Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the job site.

3. SECURITY

- a) Restrict the access of all persons entering upon the Owner's property in connection with the Work to the Access Route and to the actual site of the Work.

D. TEMPORARY ENVIRONMENTAL CONTROLS

1. GENERAL

- a) Provide temporary environmental controls at the site of the Work to ensure that construction operations have no harmful effects on adjacent properties and on members of the public who may come in proximity to the Work, and/or the employees of the Owner who are engaged in regular daily tasks and operations and are unable to be relocated to another work site during construction operations.
- b) Owner reserves the right to stop the Work, at the Contractor's expense, until the Contractor provides necessary control measures for the conditions listed below; additionally, the Owner reserves the right to perform or have performed necessary control measures, should the Contractor refuse to do so at the time requested and to deduct the cost of those expenses from the amount due the Contractor.

2. DUST CONTROL

- a) Provide dust control materials to minimize dust from construction operations. Prevent air-borne dust from dispersing into the atmosphere.

3. WATER CONTROL

- a) Control surface water to prevent damage to the project, the site and adjoining properties.
 - 1) Control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; direct drainage to proper runoff channels or storm drainage utilities.
- b) Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.
- c) Dispose of drainage water in a manner to prevent flooding, erosion silting, or runoff of silt or sediment or other damage to all portions of the site or to adjoining properties.

4. **RODENT CONTROL**
 - a) Provide rodent control to prevent infestation of construction or storage areas.
 - 1) Use methods and materials which will not adversely affect conditions at the site or on adjoining properties.
 5. **DEBRIS CONTROL**
 - a) Maintain all areas free of extraneous debris, waste, and rubbish.
 6. **POLLUTION CONTROL**
 - a) Prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
 - b) Provide equipment and personnel, perform emergency measures to contain all spillages, and to remove contaminated soils or liquids.
 - 1) Excavate and dispose of all contaminated earth off-site. Replace with suitable compacted fill and topsoil.
 - c) Take special measures, as necessary, to prevent harmful substances from entering public waters, including lakes, streams, intermittent drainage channels, and storm or sanitary sewers.
 7. **EROSION CONTROL**
 - a) Plan and execute construction and earthwork in a manner to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
 - 1) Schedule the Work to minimize the areas of bare soil exposed at one time, if possible.
 - 2) Provide temporary control measures such as berms, dikes, and drains to prevent runoff of silt or sediment from the site.
 - 3) Comply with Section 015713.
- E. **PROJECT IDENTIFICATION AND SIGNAGE**
1. **GENERAL**
 - a) Provide and install project identification sign, if located and/or called out on the Drawings.
 2. **SUBMITTALS**
 - a) Provide shop drawing(s) of proposed sign/sign installation to Owner's Representative for approval, prior to installation
 3. **INSTALLATION**
 - a) Provide project sign as detailed on Drawings
 - b) If not detailed on Drawings provide project identification sign per the following minimum requirement:
 - 1) Content
 - aa) Name of project
 - bb) Name of Owner
 - cc) Name of Architect(s) and major consultants
 - dd) Names of Contractor and major subcontractors
 - ee) Allow additional 200 characters of text explaining the project
 - 2) Construction
 - aa) Size: 4' x 8'
 - bb) Materials: Min. 5/8" AC DFPA Exterior Plywood, with (2) 4" x 4" x 12' long pressure treated post supports
 - cc) Paint: paint front and back, seal edges, provide content as approved by Owner's Representative. Conform to recognized sign painting standards in selection of paint materials. Use only professional sign painter with three years minimum experience to apply sign graphics and lettering.
 - 3) Install sign in a manner consistent with length of time of construction operations. Remove sign and fill post holes at project completion.
- F. **FIELD OFFICES**
1. **TEMPORARY FACILITIES**

Provide and pay for temporary (new, or used if in serviceable condition) facilities and controls needed for the Work, if called out on the Drawings, which may include, but are not necessarily limited to:

 - a) Temporary utilities such as heat, water, electricity, and telephone;
 - b) Field office for the Contractor's personnel (required if shown on the Drawings; otherwise at the Contractor's option and expense).
 - 1) Conform with requirements for Engineer's Field Office Type B, as defined in Article 646.04 of the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation.
 - c) Sanitary facilities;
 - d) Enclosures such as tarpaulins, barricades, and canopies;
 - e) Temporary fencing of the construction site;
 - f) Project sign.
 2. Comply with Federal, State, and local codes and regulations.
 - a) Maintain temporary facilities and controls in proper and safe condition throughout the progress of the work. The Contractor is responsible for conformance with all safety codes and regulations for all Work under his jurisdiction, including that of Sub-Contractors.
 3. Locate temporary facilities as shown on the Drawings, or as approved by the Owner's Representative if not shown on the Drawings.

SECTION 016000 – PRODUCT REQUIREMENTS

- A. **MATERIALS AND EQUIPMENT**
1. **STANDARD SPECIFICATIONS**
 - a) Reference herein to known standard specifications of governmental agencies or technical societies shall refer to the latest edition of such specifications, adopted and published at date of these Specifications.
 2. **MANUFACTURED ARTICLES**
 - a) All manufactured articles, materials and equipment to be incorporated in the work shall be new (unless otherwise specified) and of the quality specified and shall be used, erected, installed, connected, cleaned and conditioned as directed by and in conformity with job conditions to produce the best results obtainable.
 - 1) Field measurements for all special products and materials which requires close tolerances or fitting into other items or components of the Work shall be taken on the job by the party furnishing the materials.

3. QUALITY ASSURANCE

- a) Per the Supplementary Instructions to Bidders, the Bidder by submission of a signed bid form, agrees to install products and equipment by brand and model name or names specified in the Technical Specifications, Divisions 02-35. Substitutions are allowed only in conformance to the following:
 - 1) Proprietary Specification Requirement: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
 - 2) Semiproprietary Specification Requirement: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted
 - aa) Where either of the two cases above prevail, and the named product is accompanied by "or approved equal" substitutions will be allowed only upon written approval of the Owner's Representative prior to submission of bids.
 - 3) Non-Proprietary Specification Requirement: When the Specifications lists products or manufacturers that are available and are accompanied by "or equal", the Contractor may propose any available product that complies with the Specifications' requirements; however, the Owner's Representative shall determine if the produced item complies with those requirements.
 - 4) Descriptive Specification Requirement: Where Specifications describe a product or assembly listing exact characteristics required, with or without use of a brand, trade, or model name, provide a product or assembly that provides the characteristics and otherwise complies with the Contract Documents.
 - 5) Performance Specification Requirement: Where Specifications require compliance with performance requirements, provide products or assembly that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - 6) Compliance with Standards, Codes, and Regulations: Where the Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standard, code, or regulation specified.
- b) VISUAL MATCHING AND SELECTION. Where the Specifications require matching an established sample or call for "as selected", the Owner's Representative's decision will be final on whether a proposed product matches satisfactorily.

B. STORAGE AND PROTECTION

1. GENERAL

- a) Contractor shall provide and maintain:
 - 1) Storage for materials and equipment to be installed in Project.
 - 2) Protection and security for stored materials and equipment, on and off site.
 - 3) Protection of existing on-site elements to remain.
 - 4) Protection of adjacent properties improvements

2. METHODS

- a) Store off grade and cover with impervious material all moisture or water vulnerable materials.
- b) Store finished products and equipment in an enclosed building, on or off site.
- c) Maintain integrity of shipping cartons until ready for installation.
- d) Provide separate storage for combustible and non-combustible products.
- e) Follow storage recommendations of product and equipment manufacturers.
- f) Other methods shall be subject to Owner's prior written approval.

- 3. The Contractor shall maintain an emergency phone number where a contact person can be notified at any time, Sundays and holidays included, of an emergency condition due to the work which requires immediate repair or protection.

C. SUBSTITUTIONS

- 1. See "SECTION 016000 – A. MATERIALS AND EQUIPMENT" for requirements pertaining to substitution of specified materials, products, equipment, etc.
- 2. Contractor may propose substitute materials, products, equipment, etc., after award of the Bid; however, such proposals are expected to result in a cost savings to the Owner and/or higher quality Work at no additional cost to the Owner.

D. WARRANTIES AND BONDS

1. GENERAL

- a) This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
- b) Warranties for the Work and products and installations of each Contractor shall be one (1) year unless specified otherwise in the individual Sections of Divisions 02 through 35.
- c) Disclaimers and Limitations:
 - 1) Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Contractors required to countersign special warranties with the Contractor.
 - 2) The responsibility of the Contractor in respect to the required warranties shall not be relieved or limited in any way by the failure of installed components, equipment, materials, etc., due to naturally occurring and/or re-occurring conditions at the site or area of the Work including, but not limited to:
 - aa) ground and soil conditions, especially as related to frost heave;
 - bb) high wind velocities (except those exceeding velocities normally used for calculating wind loading at the site of the Work);
 - cc) rain and water damage (unless caused by winds exceeding normal design limits);
 - dd) ice/snow loading on structures
 - ee) and other naturally occurring or re-occurring site conditions
 - 3) The Contractor shall notify the Owner's Representative, prior to the award of the contract, of any part or component of the Work that is, in his opinion, not designed to accommodate the existing, naturally occurring, or re-occurring conditions of the site, and whether or not a change in the proposed methods of construction, types of equipment, etc., will affect the bid price.

- aa) Should the proposed change in construction methods, equipment type, etc., result in additional expense, the Owner reserves the right to request proposals from the other bidders and to make award the contract based on the bid amount which includes the proposed change.
- 2. **WARRANTY REQUIREMENTS**
 - a) Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
 - b) Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
 - c) Replacement cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
 - d) Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.
 - aa) Rejection of Warranties: The Owner reserves the rights to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 - e) The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
 - f) For specific warranty requirements related to landscape materials, refer to the applicable Section.
- 3. **SUBMITTALS**
 - a) Submit written warranties to the Owner's Representative prior to the date certified for Substantial Completion. If the Owner's Representative's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner's Representative.
 - 1) When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner's Representative within fifteen days of completion of that designated portion of the Work.
 - b) Form of Submittal: At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - c) Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
 - d) Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 - e) Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the project title or name, and the name of the Contractor.
 - f) When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

SECTION 017300 – EXECUTION

- A. **GEOTECHNICAL DATA**
 - 1. If the Owner has caused borings or other subsurface investigations to be made, the data or report pursuant to these investigations will be included in the Project Manual, as an Appendix, and labeled as such.
 - 2. The Owner and Owner's Representative do not guarantee the accuracy or validity of the data, nor do they assume any responsibility for the Contractor's interpretation of the data.
 - 3. The Contractor's may, at his option, perform additional subsurface investigation, however, it shall be at the Contractor's sole expense.
- B. **FIELD ENGINEERING**

Provide such field engineering services as are required for proper completion of the Work including, but not limited to:

 - 1. Establishing and maintaining lines and levels
 - 2. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.
 - 3. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks and control points. Preserve permanent reference points during construction.
- C. **COORDINATION OF TRADES AND SUB-CONTRACTORS**
 - 1. The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operation of all trades, sub-contractors, or materials and men engaged upon the work. He shall be prepared to guarantee to each of his subcontractors the dimensions which may be required for fitting of their work to all surrounding work and shall do, or cause his agents to do, all cutting, fitting, adjusting and patching necessary to make the several parts of the work come together properly and fit the work to receive, or be received by that of other contractors.
 - 2. When two or more prime contracts are being executed at one time in such manner that the work on one contract may interfere with the work of another, the Owner's Representative shall decide which contractor shall cease work and which shall continue, or whether the work on both contracts may progress at the same time and in what manner.
 - a) The Contractor shall not cause any unnecessary hindrance or delay to any other contractors on the premises, and shall be responsible for all damages done to the work of other contractors caused by him or by his employees.
- D. **REFERENCE AND CONTROL POINTS PROVIDED BY OWNER**

In addition to layout procedures provided by the Contractor for proper performance of the Contractor's responsibilities:

1. Locate and protect existing control points before starting work on the site.
2. Preserve permanent reference points during progress of the Work.
3. Do not change or relocate reference points or items of the Work without specific approval from the Owner's Representative.
4. Promptly advise the Owner's Representative when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
5. Upon direction of the Owner's Representative, require the field engineer to replace reference stakes or markers.
6. Locate such replacement according to the original survey control.

E. REFERENCE AND CONTROL POINTS PROVIDED BY THE CONTRACTOR

1. If not provided by the Owner (and defined as the responsibility of the Owner in the Contract Documents) establish sufficient general reference points in the form of permanent bench marks, grade stakes or other markers as will enable the Contractor to proceed with the Work.
2. The Contractor may lay out his own work, or cause the Work to be laid out by a qualified party such as a Registered Land Surveyor or a Professional Engineer, as necessary.
3. The Contractor shall establish and be responsible for all lines, elevations and measurements of the structure utilities, installations, and other Work executed by him under the contract.
 - a) Exercise proper precautions to verify the figures and dimensions shown on the drawings before laying out the work; be responsible for any error resulting from failure to exercise such precaution.

SECTION 017329 - CUTTING AND PATCHING

A. CHASES AND OPENINGS

1. The Contractor is responsible for the provision and/or coordination of all chases, openings and recesses required by work of his own forces, subcontractors or separate contractors.
 - a) Each subcontractor or separate contractor shall be responsible for furnishing advance information to the General Contractor as to exact dimensions and locations of such chases and openings, and shall provide and set in place all necessary sleeves, inserts and forms.
 - b) Openings shall be accurately located, neatly cut, and no larger than necessary. Provide all rebuilding, patching, refinishing and painting required to restore the construction to original condition.
2. Provide shoring, bracing, and support as required to maintain structural integrity of the project.
3. Provide protection from cutting and patching operations as required for other portions of the project; protect the Work and existing improvements in proximity to the cutting and patching operations from the elements.

SECTION 017419 – CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

A. PERIODIC CLEANING

1. Each Contractor shall clean up after his own work as needed and/or ensure that sub-contractors clean up after their work and remove accumulations of waste, debris, and rubbish caused by construction operations.
 - a) Remove all waste, rubbish and debris on a daily basis (if needed), as they accumulate, and after completion of the Work.

B. PROJECT COMPLETION

1. On completion of the project, the entire job shall be cleaned up and left in perfect condition, including adjacent areas.
 - a) Marred surfaces shall be patched or repaired and touched up to match adjoining surfaces.
 - b) All rubbish shall be removed from the site before acceptance.
 - c) New surfaces and/or exposed elements of the Work shall be protected from stain and marring. These surfaces shall be cleaned to the satisfaction of the Owner's Representative or replaced if said stains or mars are unable to be completely removed

C. GOVERNMENTAL REGULATIONS

1. Conduct cleaning and disposal operations in compliance with Federal, State and local ordinances and anti-pollution laws and regulations.

SECTION 017700 - PROJECT CLOSEOUT

A. GENERAL

Work includes:

1. Substantial Completion.
2. Final Completion
3. Closeout submittals.
4. Instruction

B. SUBSTANTIAL COMPLETION

1. Prepare and submit the list ("punch-list") required by the first sentence of Paragraph 9.8.2 of the General Conditions.
 - a) Within a reasonable time after receipt of the list the Owner's Representative will inspect to determine status of completion. Should the Owner's Representative determine that the Work is not Substantially Complete:
 - 1) The Owner's Representative will so notify the Contractor, in writing, giving the reasons therefore.
 - 2) Remedy the deficiencies and notify the Owner's Representative when ready for reinspection.
 - 3) The Owner's Representative will reinspect the Work.
 - b) When the Owner's Representative concurs that the Work is Substantially Complete:
 - 1) The Owner's Representative will prepare a "Certificate of Substantial Completion" on AIA form G704, accompanied by the Contractor's list of items to be completed or corrected, as verified and approved by the Owner's Representative.
 - 2) The Owner's Representative will submit the Certificate to the Owner and to the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

C. FINAL COMPLETION

1. Prepare and submit the notice required by the first sentence of Paragraph 9.10.1 of the General Conditions.
 - a) Verify that the Work is complete including, but not necessarily limited to, the items mentioned in Paragraph 9.8.2 of the General Conditions. Certify that:
 - 1) the Contract Documents have been reviewed;
 - 2) the Work has been inspected for compliance with the Contract Documents;
 - 3) the Work has been completed in accordance with the Contract Documents;
 - 4) equipment and systems have been tested as required, and are operational;
 - 5) the Work is completed and ready for final inspection.
 - b) The Owner's Representative will make a final inspection to verify status of completion and if all "punch-list" items have been completed, and upon receipt of the Contractor's Final Application for Payment, issue a Certificate of Final Completion. Should the Owner's Representative determine that the Work is incomplete or defective:
 - 1) The Owner's Representative will so notify the Contractor, in writing, listing the incomplete or defective work.
 - 2) Remedy the deficiencies promptly, and notify the Owner's Representative when ready for reinspection.
 - c) FINAL APPLICATION FOR PAYMENT
 - 1) Submit a final Application for Payment to the Owner's Representative, showing all adjustments to the Contract Sum.
 - 2) If needed, the Owner's Representative will prepare a final Change Order showing adjustments to the Contract Sum which were not made previously by Change Orders.
 - 3) Include final waivers of lien from the Contractor, sub-contractors, and major suppliers.
 - 4) Final payment will not be released until all close-out submittals have been made, final cleaning has been performed, and required instruction(s) to Owner's personnel have been accomplished.

D. CLOSEOUT SUBMITTALS

1. When the Owner's Representative determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals. Closeout submittals include, but are not necessarily limited to:
 - a) Project record documents described in "Section 017839".
 - b) Operation and maintenance manuals/data as described in "Section 017823".
 - c) Warranties and bonds as described in "Section 016000".
 - d) Keys and keying schedule;
 - e) Spare parts and materials extra stock;
 - f) Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
 - 1) Certificates of Inspection, as required
 - 2) Certificate(s) of Occupancy
 - g) Certificates of Insurance for products and completed operations;
 - h) Evidence of payment and release of liens.
 - 1) Consent of Surety to Final Payment
 - 2) Contractor's Final Waiver of Lien
 - 3) Separate releases or Waivers of Lien for sub-contractors, suppliers and others with lien rights against the Owner, together with a list of those parties.
 - i) List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

SECTION 017823 - OPERATING/MAINTENANCE MANUALS & INSTRUCTION

A. GENERAL

1. Compile operating/product data and related information appropriate for Owner's maintenance and operation of products and equipment provided under the Contract.
2. Instruct Owner's personnel in operation and maintenance of products, equipment and systems.
3. OPERATIONS AND MAINTENANCE DATA REQUIRED:
 - a) Operating and maintenance manuals are required for each area of Work which is listed below, if that area of Work is included within the scope of Work of the project:
 - 1) HVAC
 - 2) Plumbing – including water supply, sewage and waste disposal
 - 3) Electrical

B. OPERATIONS/MAINTENANCE MANUALS - FORM OF SUBMITTAL

1. Prepare operating and maintenance manuals in the form of an instructional manual, utilizing heavy-duty, durable 3-ring vinyl covered loose-leaf binders, for use by the Owner's operating personnel. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder. Provide when drawings or diagrams are required as part of the manual.
2. Provide sturdy manila or kraft envelope, accordion type file folder, or cardboard file boxes, properly labeled, of sufficient size to contain all submittals.
3. Submit one copy of data in final form at least fifteen days before final inspection. This copy will be returned within fifteen days after final inspection, with comments. After final inspection make corrections or modifications to comply with the Owner's Representative's comments and submit three copies of each approved manual to the Owner's Representative
4. WARRANTIES, BONDS AND SERVICE CONTRACTS
 - a) Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond. Provide list for each product containing name, address, and phone number of:
 - 1) Contractor.
 - 2) Subcontractor.

- 3) Maintenance contractor, as appropriate.
- 4) Local supply source for parts and replacement.
- b) Identify area of responsibility of each contractor.

C. MANUAL FOR MATERIALS AND FINISHES

- 1. Submit two (2) copies of complete manual in final form.
- 2. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.
- 3. Content for products, applied materials and finishes:
 - a) Manufacturer's data, giving full information on products.
 - 1) Catalog number, size, composition.
 - 2) Color and texture designations.
 - 3) Information for re-ordering special-manufactured products.
- 4. Instructions for care and maintenance.
 - a) Manufacturer's recommendations for types of cleaning agents and methods.
 - b) Cautions against cleaning agents and methods detrimental to product.
 - c) Recommended cleaning and maintenance schedule.
- 5. Moisture-Protection and Weather-Exposed Products: Provide complete manufacturer's data with instructions on inspection, maintenance and repair of products exposed to the weather or designed for moisture-protection purposes.
- 6. Manufacturer's Data: Provide manufacturer's data giving detailed information, including the following, as applicable:
 - a) Applicable standards.
 - b) Chemical composition.
 - c) Installation details.
 - d) Inspection procedures.
 - e) Maintenance information.
 - f) Repair procedures.

D. INSTRUCTION

- 1. Instruct the Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work including, but not limited to;
 - a) Mechanical
 - b) Water supply
 - c) Electrical service/distribution and lighting
 - d) Other items or systems as required in individual sections of the Technical Specifications
- 2. Instructions for the Owner's Personnel: For instruction of the Owner's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the equipment or system involved.

SECTION 017839 - PROJECT RECORD DOCUMENTS (AS-BUILTS)

A. DOCUMENTS REQUIRED AT SITE

- 1. The Contractor shall maintain at the job site one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders, and other Contract modifications.
 - a) Each of these project record documents shall be clearly marked "**Project Record Copy**"
 - b) Shall be maintained in good condition
 - c) shall be available at all times for inspection by the Park District, and shall not be used for construction purposes.

B. Project-record drawings shall be marked up to show significant changes made during construction progress, referenced to visible and accessible features of the structures. Project-record drawings shall be kept current and no work shall be concealed until required information has been recorded.

C. Record-documents shall be submitted in satisfactory condition to the Park District at the completion of the project. **FINAL COMPLETION OF THE PROJECT WILL NOT BE ATTAINED, AND FINAL PAYMENT WILL BE WITHHELD, UNTIL PROJECT "AS-BUILTS" ARE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.**

END OF GENERAL REQUIREMENTS

Project Manual for

RIVERPLEX BOILER REPLACEMENT

RiverPlex Recreation and Wellness Center
600 NE Water Street
Peoria, Illinois 61603

OWNER:

Peoria Park District
1314 N. Park Road
Peoria, IL 61603

**ARCHITECT, MECHANICAL
& ELECTRICAL:**

apace**Design** Architects + Engineers
2112 E. War Memorial Drive
Peoria, IL 61614-8002
Project No. 24929.04

DATE:

20 September 2016

SET NO.



EXPIRES 11/30/16



EXPIRES 11/30/15

All the Bidding Documents are the exclusive property of apaceDesign Architects + Engineers; and can only be used with the express permission of apaceDesign Architects + Engineers. Furthermore, these documents cannot be copied (either mechanically or electronically), in whole or in part, without the express written permission of apaceDesign Architects + Engineers.

PROJECT MANUAL FOR: **RIVERPLEX BOILER REPLACEMENT**
RiverPlex Recreation and Wellness Center
600 NE Water Street
Peoria, Illinois 61603

OWNER: Peoria Park District
1314 N. Park Road
Peoria, IL 61603

**ARCHITECT, MECHANICAL
& ELECTRICAL:** apace**Design** Architects + Engineers
2112 E. War Memorial Drive
Peoria, IL. 61614-8002

DATE: 20 September 2016

**NOTE: THESE SPECIFICATIONS UTILIZE THE (UPDATED) 2004 CSI MASTERFORMAT.
CERTAIN DIVISION NUMBERS HAVE CHANGED FROM THE PREVIOUS FORMAT.**

Division	Section Title	Pages
DIVISION 01 - GENERAL REQUIREMENTS		
011000	SUMMARY	4
012500	SUBSTITUTION PROCEDURES	3
012600	CONTRACT MODIFICATION PROCEDURES	3
012900	PAYMENT PROCEDURES	4
013100	PROJECT MANAGEMENT AND COORDINATION	7
013200	CONSTRUCTION PROGRESS DOCUMENTATION	4
013300	SUBMITTAL PROCEDURES	8
014000	QUALITY REQUIREMENTS	8
015000	TEMPORARY FACILITIES AND CONTROLS	7
016000	PRODUCT REQUIREMENTS	5
017300	EXECUTION	7
017700	CLOSEOUT PROCEDURES	6
017823	OPERATION AND MAINTENANCE DATA	7
017839	PROJECT RECORD DOCUMENTS	3
017900	DEMONSTRATION AND TRAINING	4
DIVISION 02 - EXISTING CONDITIONS		
024119	SELECTIVE DEMOLITION	5
DIVISION 23 - HEATING VENTILATING AND AIR CONDITIONING		
230529	SUPPORTS AND ANCHORS FOR HVAC	5
230553	IDENTIFICATION FOR HVAC PIPE AND EQUIPMENT	3
230593	TESTING ADJUSTING & BALANCING FOR HVAC	5
230710	HVAC PIPE AND EQUIPMENT INSULATION	5
230720	HVAC DUCTWORK INSULATION	3
230900	TEMPERATURE CONTROLS	4
231123	FACILITY NATURAL GAS PIPING/DIGESTER GAS PIPING	4
232113	HYDRONIC PIPING	5
232114	HYDRONIC SPECIALTIES	3

232123	HVAC PUMPS	2
233100	DUCTWORK	3
235100	BREECHING CHIMNEYS & STACKS	2
235239	FIRE TUBE BOILERS	6
 DIVISION 26 - ELECTRICAL		
260500	BASIC ELECTRICAL REQUIREMENTS	5
260519	WIRES & CABLES	3
260526	GROUNDING AND BONDING	2
260533	CONDUITS, RACEWAYS, & FITTINGS	3
260534	DEVICE & JUNCTION BOXES	2
260553	ELECTRICAL IDENTIFICATION	2

SPECIFIERS: **apace**Design Architects + Engineers
Architectural: Benjamin L. Kauffman
Mechanical & Electrical: Mark A. Cordes
Tel.: (309) 685-4722 Fax: (309) 685-4784

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: RiverPlex Boiler Replacement, 2015904.03.

1. Project Location: RiverPlex Recreation and Wellness Center, 600 NE Water Street, Peoria, IL 61603.

B. Owner: Peoria Park District, 1125 W. Lake Ave., Peoria, IL 61614.

1. Owner's Representative: Becky Fredrickson, 309-686-3386.

C. Architect: apaceDesign Architects + Engineers, 2112 E. War Memorial Drive, Peoria, IL 61614, 309-685-4722.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Project consists of an existing boiler demolition and replacement, and all associated work for such.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

1.5 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to project work limited. Connections of utilities may be required beyond project limited and shall be coordinated with Owner a minimum 72 hours in advance and require a written notice to proceed from the Owner.
 - 2. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials, unless Owner's approves areas in writing.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and existing, adjacent building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.
 - 3. RiverPlex will remain open during construction of the project. Take extra precautions to ensure RiverPlex patrons safety. Hours of operation are from 5:00 AM - 10:00 PM.

1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

- B. On-Site Work Hours: Limit work to normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Architect's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
 - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- F. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

apaceDesign Architects + Engineers
Project No. 2015904.03

SUMMARY
Section 011000

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
- 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution will not adversely affect Contractor's construction schedule.
 - c. Requested substitution has received necessary approvals of authorities having jurisdiction.

- d. Requested substitution is compatible with other portions of the Work.
- e. Requested substitution has been coordinated with other portions of the Work.
- f. Requested substitution provides specified warranty.
- g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions".

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail".

- B. Contractor-Initiated Work Change Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be

- made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 7. Work Change Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail".

1.4 ADMINISTRATIVE CHANGE ORDERS

- A.Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B.Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.5 CHANGE ORDER PROCEDURES

- A.On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.
1. Change Orders are written documents describing changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof. Change Orders must be signed by both the Owner and the Architect/Owner's Representative prior to proceeding with the Work subject to the Change Order. **REQUESTS FOR "EXTRA'S" OR OTHER ADDITIONAL PAYMENTS OVER AND ABOVE THE CURRENT CONTRACT SUM WILL NOT BE CONSIDERED WITHOUT THE PRIOR, WRITTEN APPROVAL OF BOTH THE OWNER AND THE OWNER'S REPRESENTATIVE.**
 - a. PROCESSING CHANGE ORDERS.
 1. Orders will be dated and will be numbered in sequence.
 2. The Change Order will describe the change or changes, or will refer to the Proposal Requests or Field Orders involved.
 3. The Owner's Representative will issue three copies of each Change Order to the Contractor.
 4. The Contractor promptly shall sign all three copies and return them to the Owner's Representative.

5. The Owner and Owner's Representative will retain two signed copies in their files, and will forward one signed copy to the Contractor.
6. Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:
 - i. The Contractor promptly shall return all three of the Change Orders, unsigned by him, to the Owner's Representative with a letter signed by the Contractor stating the reason or reasons for the Contractor's disagreement.
 - ii. The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
 - 2. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
 - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 4. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Arrange schedule of values consistent with format of AIA Document G703.
 - 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

- a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Applications for Payment
 1. Progress payments will be made only if specifically called for in the Agreement. In all other cases, the Contractor may submit an Application for Payment (3 copies) upon Substantial Completion (95% of the Contract Sum), with the balance of the Contract Sum to be paid at Final Completion.
 - a. Paragraph #52 of the Supplementary Conditions defines the documentation required for each payment request.
 - b. Applications for payment shall be delivered to the Owner's Project Manager at: Department of Planning, Design, and Construction, Peoria Park District, Bradley Park Equipment Services, 1314 N. Park Road, Peoria, IL 61604
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of

- Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Schedule of unit prices.
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707-1994, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination drawings.
 - 2. Requests for Information (RFIs).
 - 3. Project Web site.
 - 4. Project meetings.
- B. Related Requirements:
 - 1. Section 011200 "Multiple Contract Summary" for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.

1.5 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid.
 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings.

3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: AIA Document G716.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
 1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.

- c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 - 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 - 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use CSI Log Form 13.2B.
- 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.
 - 4. RFI number including RFIs that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date the RFI was submitted.
 - 7. Date Architect's response was received.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
- 1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 - 2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
- 1.7 PROJECT MEETINGS
- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
- 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Preparation of record documents.
 - l. Use of the premises and existing building.
 - m. Work restrictions.
 - n. Working hours.
 - o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Procedures for moisture and mold control.
 - r. Procedures for disruptions and shutdowns.
 - s. Construction waste management and recycling.
 - t. Parking availability.
 - u. Office, work, and storage areas.
 - v. Equipment deliveries and priorities.
 - w. First aid.
 - x. Security.
 - y. Progress cleaning.
 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.

- k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at biweekly intervals.
- 1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.

- 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Construction schedule updating reports.
 - 3. Daily construction reports.
 - 4. Site condition reports.

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. PDF electronic file.
- B. Construction Schedule Updating Reports: Submit with Applications for Payment.
- C. Daily Construction Reports: Submit at weekly intervals.
- D. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of final completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 - 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 - 4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 - 6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Phasing: Arrange list of activities on schedule by phase.
 - 2. Work under More Than One Contract: Include a separate activity for each contract.
 - 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 - 4. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.

- e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 - 5. Work Stages: Indicate important stages of construction for each major portion of the Work.
 - D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
 - E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and Contract Time.
 - F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.
- 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)
- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 30 days of date established for commencement of the Work.
 - B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.
- 2.3 REPORTS
- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events.
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Meter readings and similar recordings.
 - 12. Emergency procedures.
 - 13. Orders and requests of authorities having jurisdiction.

14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 2. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 4. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed

because of need to review submittals concurrently for coordination.

- a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Other necessary identification.
 4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
 5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.

- a. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
 - 1) Project name.
 - 2) Date.
 - 3) Destination (To:).
 - 4) Source (From:).
 - 5) Name and address of Architect.
 - 6) Name of Construction Manager.
 - 7) Name of Contractor.
 - 8) Name of firm or entity that prepared submittal.
 - 9) Names of subcontractor, manufacturer, and supplier.
 - 10) Category and type of submittal.
 - 11) Submittal purpose and description.
 - 12) Specification Section number and title.
 - 13) Specification paragraph number or drawing designation and generic name for each of multiple items.
 - 14) Drawing number and detail references, as appropriate.
 - 15) Indication of full or partial submittal.
 - 16) Transmittal number, numbered consecutively.
 - 17) Submittal and transmittal distribution record.
 - 18) Remarks.
 - 19) Signature of transmitter.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations: Identify deviations from the Contract Documents on submittals.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 - 1. Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect will return one copy.
 - 2. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect will not return copies.

3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. Three paper copies of Product Data unless otherwise indicated. Architect will return one copy.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
 3. Submit Shop Drawings in the following format:
 - a. Three opaque copies of each submittal. Architect and Construction Manager will retain two copies; remainder will be returned.

- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Submit product schedule in the following format:
 - a. Three paper copies of product schedule or list unless otherwise indicated. Architect will return one copy.

- F. Coordination Drawings Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by

manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- U. Schedule of Tests and Inspections: Comply with requirements specified in Section 014000 "Quality Requirements."
- V. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- W. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- X. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- Y. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner or authorities having jurisdiction are not limited by provisions of this Section.
 - 3. Specific test and inspection requirements are not specified in this Section.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.

- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:
 - 1. Name, address, and telephone number of representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 5. Other required items indicated in individual Specification Sections.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

- c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - d. When testing is complete, remove test specimens, assemblies, and mockups; do not reuse products on Project.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed unless otherwise indicated.
 - K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Specification Sections.
- 1.7 QUALITY CONTROL
- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
 - B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Architect.
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as

invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.2 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to Architect, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.3 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in [the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines] [and] [ICC/ANSI A117.1].

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
 - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of eight at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures".

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- G. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- I. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.
 - 1. Provide additional telephone lines for the following:
 - a. Provide a dedicated telephone line for each facsimile machine in each field office.
 - 2. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Contractor's emergency after-hours telephone number.
 - e. Architect's office.
 - f. Engineers' offices.
 - g. Owner's office.
 - h. Principal subcontractors' field and home offices.
 - 3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 - 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 - 2. Remove snow and ice as required to minimize accumulations.
- E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 - 1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 - 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 - 3. Maintain and touchup signs so they are legible at all times.
- F. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- H. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- I. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- J. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct

personnel in methods and procedures. Post warnings and information.

4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Discard or replace water-damaged and wet material.
 4. Discard, replace, or clean stored or installed material that begins to grow mold.
 5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
 - 1. Warranties for the Work and products and installations of each Contractor shall be one (1) year unless specified otherwise in the individual sections of Divisions 02 through 35.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for requests for substitutions.

1.2 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will

notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
- b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

- B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

- C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. Refer to other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Warranty Requirements
 - 1. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
 - 2. Reinstatement of Warranty: When Work covered has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
 - 3. Replacement cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
 - 4. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - a. Rejection of Warranties: The Owner reserves the rights to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
 - 5. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

- D. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
 4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the

manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 INFORMATIONAL SUBMITTALS

- A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.3 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- C. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey

control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal

remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use

cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements"

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 013233 "Photographic Documentation" for submitting final completion construction photographic documentation.
 - 2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 4. Section 017900 "Demonstration and Training" for requirements for instructing Owner's personnel.

1.2 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

- B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, keys and keying schedule, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 5. Submit test/adjust/balance records.
 6. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times, including nights, weekends, and holidays.
 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of ten days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify

Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
 1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings.
- B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Submit list of incomplete items in the following format:
 - a. Three paper copies unless otherwise indicated. Architect will return one copy.

1.8 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - p. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.
- 3.2 REPAIR OF THE WORK
- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
 - B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that

cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following formats:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
 - 2. Three paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return zero copies.
- C. Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.

- B. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- C. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name and contact information for Contractor.
 - 6. Name and contact information for Construction Manager.
 - 7. Name and contact information for Architect.
 - 8. Name and contact information for Commissioning Authority.
 - 9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 - 10. Cross-reference to related systems in other operation and maintenance manuals.
- D. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- E. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- F. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- G. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
 - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate

Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 1. Instructions on stopping.
 2. Shutdown instructions for each type of emergency.
 3. Operating instructions for conditions outside normal operating limits.
 4. Required sequences for electric or electronic systems.
 5. Special operating instructions and procedures.

2.3 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 - 2. Performance and design criteria if Contractor is delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
 - 1. Product name and model number. Use designations for products indicated on Contract Documents.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function.
 - 5. Operating characteristics.
 - 6. Limiting conditions.
 - 7. Performance curves.
 - 8. Engineering data and tests.
 - 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
 - 1. Startup procedures.
 - 2. Equipment or system break-in procedures.
 - 3. Routine and normal operating instructions.
 - 4. Regulation and control procedures.
 - 5. Instructions on stopping.
 - 6. Normal shutdown instructions.
 - 7. Seasonal and weekend operating instructions.
 - 8. Required sequences for electric or electronic systems.
 - 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For

each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.

2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
1. Do not use original project record documents as part of operation and maintenance manuals.

- F. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up record prints.
 - 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit one paper-copy set of marked-up record prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit three paper-copy sets of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and three sets of prints.
 - 3) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one paper copy and one annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper copy and annotated PDF electronic files and directories of each submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.
 - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

- a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Format: Annotated PDF electronic file.
 3. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as paper copy and scanned PDF electronic file(s) of marked-up paper copy of Specifications.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as paper copy and scanned PDF electronic file(s) of marked-up paper copy of Product Data.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's and Construction Manager's reference during normal working hours.

END OF SECTION 017839

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training video recordings.

1.2 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.

1.3 CLOSEOUT SUBMITTALS

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
 - 1. At completion of training, submit complete training manual(s) for Owner's use prepared and bound in format matching operation and maintenance manuals and in PDF electronic file format on compact disc.

1.4 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit

instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 - 2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
 - 3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
 - 4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.

- j. Operating procedures for system, subsystem, or equipment failure.
- k. Seasonal and weekend operating instructions.
- l. Required sequences for electric or electronic systems.
- m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
 - 2. Owner will furnish an instructor to describe Owner's operational philosophy.
 - 3. Owner will furnish Contractor with names and positions of participants.

- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner with at least seven days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- E. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Video Recording Format: Provide high-quality color video recordings with menu navigation in format acceptable to Architect.

END OF SECTION 017900

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and , for noise control. Indicate proposed locations and construction of barriers.

B. Schedule of selective demolition activities with starting and ending dates for each activity.

C. Predemolition photographs or video.

1.4 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

1.5 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner before start of the Work.
 - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.
- G. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Inventory and record the condition of items to be removed and salvaged.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 - 4. Maintain fire watch during and after flame-cutting operations.
 - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 6. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area designated by Owner.
 - 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 230529 - SUPPORTS AND ANCHORS FOR HVAC

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Pipe and equipment hangers and supports for boiler and pump equipment and revised heating water piping and revised brine pipe, and boiler vent combustion air intake pipe.
 - b. Sleeves and seals for penetrations involving new pipe.
 - c. Penetrations required in existing walls, floors and roofs.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230710 - HVAC Pipe and Equipment Insulation.
 - 2. 231123 - Facility Natural Gas Piping/Digester Gas Piping.
 - 3. 232113 - Hydronic Piping.
 - 4. 232114 - Hydronic Specialties.
 - 5. 232123 - Hydronic Pumps.
 - 6. 235100 - Breeching Chimneys and Stacks.
 - 7. 235239 - Boilers.

1.03 SYSTEM DEFINITION

- A. HVAC piping includes natural gas, refrigeration, heating water supply and return, combustion air intake and boiler vent pipe and condensate drain piping.

1.04 REFERENCES

- A. AISC - American Institute of Steel Construction.
- B. ASME B31.2 - Fuel Gas Piping
- C. ASME B31.9 - Building Services Piping
- D. ASTM F708 - Design and Installation of Rigid Pipe Hangers.
- E. ASTM E814 - Fire Stop Sealant.

1.05 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Provide manufacturers catalog data including load capacity and firestopping capability. Submit installation techniques to be used for intumescent putty sealants.
- C. Design Data: Indicate load carrying capacity of trapeze, multiple pipe, and riser support hangers.
- D. Provide a separate line item and cost on the Schedule of Values.

1.06 REGULATORY REQUIREMENTS

- A. International Mechanical Code 2012 for support of HVAC piping.

1.07 RECORD DRAWINGS - See General Conditions

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 PIPE HANGERS AND SUPPORTS

- A. Acceptable Manufacturers.
 - 1. B-Line.
 - 2. Grip Strut.
 - 3. Fee and Mason.
 - 4. Grinnel.
 - 5. Unistrut.
- B. Hanger Description:
 - 1. Clamps for attachment to bar joists and beams shall be C-clamps with retaining straps or steel or malleable iron adjustable beam clamps equal to B-Line Figure B-3036 with B-3360 services strap and Figure B-3040.
 - 2. Strut supports shall be stainless steel as noted on Drawings or primed 14 or 12 gauge rolled carbon steel with galvanized die-formed accessory clamps and fasteners.
 - 3. "J-Hooks" for 2" pipe and smaller shall be 1/4" thick by 1-1/4" wide steel rated for 200 lbs each.
 - 4. Hold down straps shall be die-stamped of galvanized sheet steel or formed of galvanized malleable iron.
- C. Copper and Steel HVAC Pipe: (Heating Water, Natural Gas, & Boiler Vent Pipe)
 - 1. Conform to ASME B31.9 and ASTM F708.
 - 2. Hangers for Pipe Sizes 2" and under: Carbon steel, adjustable, Clevis.
 - 3. Multiple or Trapeze Hangers: Steel strut or channels with spacers and hanger rods.
 - 4. Vertical Support: Steel riser clamp.
 - 5. Copper Pipe Support: Carbon steel ring, adjustable, copper plated or strut with neoprene inserts. Neoprene inserts shall be full depth of insulation.
 - 6. Wall Support: "J-Hooks", struts.
 - 7. Alternative support for insulated pipe shall be strut sized for 4" long copper sleeve that passes both pipe and insulation.
- D. Plastic HVAC Pipe (Condensate Drain Pipe):
 - 1. Use hold down straps.

2.03 ACCESSORIES

- A. Hanger Rods: Mild steel continuous threaded national coarse thread.
 - 1. Nuts shall be SAE Grade 3 minimum with cadmium plating and national coarse thread.
 - 2. Lock washers shall be cadmium plated split spring type sized for the rod.

- B. Auxiliary Steel and Trapeze Hangers. Use stainless steel on building exterior.
 - 1. Shall be Schedule 40 steel pipe or rolled steel shapes complying with AISC manual.
 - 2. Manufactured struts shall be rolled of 12, 14, or 16 gauge material to meet loading required or as noted on Drawings or otherwise specified. It shall have a hot dipped galvanized coating. Use stainless steel where noted on Drawing.
- C. Acceptable Products.
 - 1. B-Line.
 - 2. Uni-strut.
 - 3. Grip Strut.

2.04 ANCHORS

- A. Masonry or concrete type for pipe or equipment supports. Shall be wedge type with either studs or National coarse female thread. Alternative type shall be self drilling expansion type. Anchors shall be U. L. listed.
- B. Masonry or concrete type for securing escutcheons to masonry shall be "nail-in" type. Unit shall consist of broad head on hollow zinc alloy core with steel drive pin. Provide with dielectric washer.

2.05 FLASHING

- A. Flashing shall be as detailed on drawings.

2.06 SEALANTS

- A. Exterior/Interior moisture sealant - Shall be non-hardening silicone type rated for temperatures of -40 degrees F to 250 degrees F. Material shall be available in white, gray, brown, and black colors. Material shall be sunlight resistant.
- B. Manufacturer

	Exterior/ Interior <u>Sealant</u>
1. Tremco	Spectrum 2
2. 3M	2000 150
3. General Electric	SCS1000
4. Dow Corning	999A

2.09 ESCUTCHEONS

- A. For vents and intake - Shall be stainless angle sized to overlap entire opening.
- B. For multiple pipes or where holes are over large or offset.
 - 1. Utilize pre-painted aluminum sheet fabricated to cover entire hole and seal within 1/4" of the pipe or pipe covering.
 - 2. Holes shall be hole sawed or punched. Holes shall be round.

PART 3 - EXECUTION

3.01 APPLICATION

- A. HVAC Pipe:

1. Hanger and support spacing on copper tubing shall be: 5'-0" maximum for tube 3/4" and smaller; 8'-0" maximum for tube 1" to 1-1/2"; 10'-0" maximum for tube 2" and larger.
2. Hanger and support spacing on steel piping shall be: 5'-0" for 1/2" and smaller. 8'-0" maximum for pipe 3/4" to 1" and 12'-0" maximum for pipe over 1-1/4".
3. Heating water pipe and natural gas pipe shall be supported with clevis hangers. Provide saddles and shields; saddles for pipe 2-1/2" and larger at each support in hot pipe.
4. PVC brine water piping 1" diameter and less shall be supported and restrained on 2'-0" centers.
5. Vent pipe shall be supported with strut hangers and as detailed.

C. Hanger Rod:

1. Hanger rod size shall be: 3/8" for pipe up to 2" in size and loads up to 360 lbs; 1/2" for pipe 2-1/2" to 3" and loads up to 600 lbs; 5/8" for pipe 4" to 6" and loads up to 900 lbs.

3.02 PREPARATION

A. Coordination of Trades/Owner:

1. Core drill openings in walls.
2. Do noisy work at the Owner's convenience.
3. If core drill operation cannot be made to work, saw cut existing masonry and provide angle frames detailed.

B. Grind or fill concrete substrate with epoxy grout to obtain acceptable substrate.

3.03 ANCHORS

A. Use anchors in concrete or masonry walls and floors.

B. Drill hole clean of loose material. Install anchor, flush with surface. Size hole in accord to manufacturers' recommendation. Physically test anchor by pulling against it. Loose anchors will not be accepted.

3.04 PIPE HANGERS AND SUPPORTS

A. Utilize hangers in accord to Application paragraphs.

B. Install hangers to provide minimum 1/2" space between finished covering and adjacent work.

C. Place hangers within 12" of each horizontal elbow.

D. Use hangers with 1-1/2" minimum vertical adjustment. Provide lock nuts and washers for hanger rod at all hangers. Provide additional lock nut and washer on clevis hanger cross bolts.

E. Support vertical piping such that it cannot be deflected more than 1/8" from center by hand pressure.

F. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

G. Support riser piping independently of connected horizontal piping.

H. Provide copper plated hangers and supports for copper piping. Provide hard neoprene inserts secured with strut. Insert shall completely cover pipe and match insulation thickness as closely as manufactured standards allow.

- I. Locate hangers for pipe movement without disengagement of supported pipe.
- J. Provide auxiliary steel to span structure where required. Provide in accord to Paragraph 3.06 below.
- K. Secure upper attachment from the top of steel joists, and the top or bottom of steel beams. Provide lock nut and washer on each set screw and hanger rod attachment.
- L. Do not use perforated hanger strap.

3.05 SLEEVES, SEALS, FIRESTOPPING & ESCUTCHEONS

- A. Size core drilled holes large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- B. Exterior wall penetrations shall be sealed with colored silicone between vents, openings and core drilled openings. Pack interior of sleeve with fiberglass batt.
- C. Provide escutcheon on exposed interior penetrations. Secure escutcheons into place with bead of sealant under. Wipe away exposed sealant.
- D. The annular area around intakes or vents which penetrate walls shall be packed tightly with mineral wool and sealed with silicone sealant or metal escutcheons.

3.06 AUXILIARY STEEL AND EQUIPMENT SUPPORTS

- A. Hanging Equipment and Materials:
 - 1. Shall be supported from tops of steel joists from concrete decking, or from the bottom or top of steel beams.
 - 2. Auxiliary steel shall be manufactured strut, rolled steel shapes or schedule 40 steel piping. Strut shall be sized in accord to the manufacturer's literature unless shown otherwise on Drawings. Rolled shapes or pipe supports shall be in accord to the following chart.

3. Auxiliary Steel Chart (Pipe Diameter and Angle Size)

PIPE SIZE	LOAD POUNDS	30" SPAN	60" SPAN	90" SPAN	120" SPAN
≤ 3"	≤ 474	1" 1"x1"x1/4"	1-1/2" 1-1/2"x1- 1/2"x1/4"	2-1/2" 2"x2"x1/4"	3" 3"x3"x1/4"
4"	586	1-1/4" 1-1/2"x1- 1/2"x1/4"	1-1/2" 2"x2"x1/4"	2-1/2" 3"x3"x1/4"	3" 3"x3"x5/16"
6"	921	1-1/4" 1-1/2"x1- 1/2"x1/4"	2" 2"x2"x1/4"	2-1/2" 3"x3"x1/4"	4" 4"x4"x1/4"

- B. Equipment supports shall be as shown on drawings, and specified.
- C. Paint supports for equipment and pipe gray.
- D. Remove rust, scale and protective coatings before painting. Paint with one coat of primer and two top coats. Apply per manufacturer's instructions.

END OF SECTION 230529

SECTION 230553 - IDENTIFICATION FOR HVAC PIPE AND EQUIPMENT

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Pipe stencils.
 - b. Equipment labels.
 - c. Control wiring labels.

1.02 RELATED WORK

- A. Specified Elsewhere.
 - 1. 230710 - HVAC Pipe and Equipment Insulation.
 - 2. 231123 - Facility Natural Gas Piping/Digester Gap Piping.
 - 3. 232113 - Hydronic Piping.
 - 4. 235239 - Boilers.

1.03 REFERENCES

- A. ANSI B13.1 - Scheme for the Identification of Piping Systems.

1.04 SUBMITTALS

- A. Submit under provisions of Sections 013300.
- B. Submit list of wording, symbols, letter size, and color coding for HVAC pipe and equipment identification.
- C. Product Data: Provide manufacturers catalog literature for each product required.
- D. Manufacturer's Installation Instructions: Indicate special procedures, and installation.
- E. Provide a separate line item and cost on the Schedule of Values.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 NAMEPLATES

- A. Description: Laminated three-layer plastic with engraved black letters on light contrasting background color. Lettering shall be 1/4" tall. Placard size shall accommodate message without abbreviation. Placard shall be rectangular. Multiple lines shall be utilized to minimize length to height ratio.

2.03 STENCILS

- A. Stencils: With clean cut symbols and letters of following size:
 - 1. 3/4" to 2" Outside Diameter of Insulation or Pipe: 8" long color field, 1/2" high letters.
 - 2. 2-1/2" to 6" Outside Diameter of Insulation or Pipe: 12" long color field, 1-1/4" high letters.

- B. Stencil Paint: (Shall be heat resistant enamel of colors noted below.)

2.04 WIRE LABELS

- A. Shall be self adhesive strips with single numbers or letters. Strips shall be vinyl and measures a minimum of 1/4" x 1-1/2".
- B. Background shall be yellow or white.
- C. Letters shall be nominally 0.10".
- D. Acceptable Manufacturers:
 - 1. Seton - Wire markers.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Sand or steel wool ferrous pipe smooth removing factory applied lacquer coatings. Wipe free of dust.
- A. Painted, paper or rubber surfaces shall be wiped clean. Use solvent as recommended by insulation manufacturer where it applies.
- C. Clean wire ends free of lubricants and dirt.

3.02 INSTALLATION

- A. Install plastic nameplates with corrosive-resistant mechanical fasteners.
- B. Identify HVAC equipment with plastic nameplates. Use names provided by Owner or as shown on Drawings. Extend or replace existing names.
- C. Identify valves in equipment rooms which are remote from the spaces and devices they control. Use names as determined by the Owner or as otherwise specified.
- D. Tag automatic controls, instruments, and relays. Key to control schematic.
- E. Identify piping, concealed or exposed, with stenciled painting. Use names which match those already in use by Owner. If existing pipe is not labeled match those shown on Drawings. Install in clear view and align with axis of piping. Locate on minimum of 50'-0" centers on straight runs without branches and take-offs.
- F. Identify cabling, concealed or exposed, with markers. Use plan English names like "Boiler 1 Operation Monitor".

3.03 APPLICATION

- A. Pipe:
 - 1. Label pipe supported along side other pipe in exposed spaces. Label pipe on a minimum of 50'-0" centers and on both sides of walls.

- B. Wire Labels:
 - 1. Tag automatic controls, instruments, and relays. Key to control schematic. Tag connection point with indelible pen.
- C. Equipment:
 - 1. Label:
 - a. Boiler.
 - b. Boiler Pump.

END OF SECTION 230553

SECTION 230593 - TESTING ADJUSTING & BALANCING FOR HVAC

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Test and balance new boiler flow.
 - b. Provide pretest evaluation of existing systems and those shown as new on drawings. List questions for A/E which may be required before balance work can be completed.
 - c. Provide retesting required in Paragraph 1.04.D.
 - d. Obtain temperature measurements across boiler for heating season.
 - e. Measure water flow at each permanently installed flow measuring balance valve.
 - f. Measure gas consumption rate using utility meter for new boiler.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 232123 - Pumps.
 - 2. 230900 - Temperature Controls.
 - 3. 235239 - Boilers.

1.03 SYSTEM DESCRIPTION

- A. Summary:
 - 1. Test and Balance shall:
 - a. Verify water flow to boiler.
 - b. Verify temperature differential across boiler.
 - c. Verify burner capacity on boilers.
- B. Intent of work is to:
 - 1. Ascertain the new boiler is operating correctly.
 - 4. Leave the Owner with a functioning system.
- C. Definitions:
 - 1. Air balance - testing and adjusting air system components to achieve design parameters or to evenly distribute available air. Includes both flow and temperature measurements recording of measurements, and adjustment of system to achieve specified air flows.
 - 2. Calibration - Comparison of the measured values of an instrument with a known quantity.
 - 3. Testing - measurement of temperatures, gas flow, electric current and voltage which show how much work an air conditioner is doing or how much heat a furnace is providing.

1.04 QUALITY ASSURANCE

- A. Air balance firm shall meet pre-qualification requirements of the CDB. Firm shall have personnel certified in accord to one of the standards referenced under REGULATORY REQUIREMENTS or shall be a registered professional Engineer experienced with this type of work.
- B. Personnel doing work on site shall have certifications noted above.
- C. Instrumentation used for testing and balancing shall be calibrated no more than one month before date of use.

- D. Owner and Architect/Engineer reserve the right to pick six different measurements to be remade after the test and balance report is submitted. If three of the six selected measurements are found to be more than 50 percent different than those submitted in the report the entire balance report shall be redone.
- E. Payment for at least twenty percent balance work will not be made until building has been turned over to the Owner. Contractor will not be paid for report submittals which contain acceptable balance reports for fans later found to be running backwards or similarly obvious problems. Payment will not be made for final reports which simply list problems without also providing solutions.
- F. The A/E will compare measured fan characteristics against the manufacturer's published fan curves and tabulated data. Test data which falls outside of the manufacturer's published curves may require retesting subject the A/E review.

1.05 REGULATORY REQUIREMENTS AND STANDARDS

- A. AABC - National Standards for Total System Balance.
- B. ADC - Test Code for Grilles, Registers, and Diffusers.
- C. ASHRAE 111 - Practices for Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation, Air-conditioning, and Refrigeration Systems.
- D. NEBB - Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems.
- E. SMACNA - HVAC Systems Testing, Adjusting, and Balancing.
- F. SMARTA - Sheet Metal, Air Conditioning and Roofing Contractors Trade Association of Illinois.
- G. TABIC - Testing and Balancing Institute for Certification.

1.06 SUBMITTALS

- A. Submit name and qualification certificate of air balance technician who actually does work. Do this at least ten working days before work is to be done.
- B. Test Reports: Indicate data on standardized form following AABC. SMACNA, SMARTA or TABIC.
- C. Provide written certification from installing contractors systems are in correct working condition and ready for test.
- D. Field Reports: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
- E. Prior to commencing work, submit report forms or outlines indicating adjusting, balancing, and equipment data required.
- F. Submit PDF draft copy of report for review prior to final acceptance of Project. Provide final paper copies for A/E and for inclusion in operating and maintenance manuals.

- G. Submit cost of balance work as line item on contractors schedule of values. Provide name of balance contractor that time.
- H. Provide reports in soft cover, letter size, three-hole binder manuals, complete with index page, with cover identification at front and side.
- I. Include detailed procedures, agenda, sample report forms prior to commencing system balance.

1.07 PROJECT CONDITIONS

- A. Building/Construction Conditions:
 - 1. All portions of systems shall be complete before balance work is begun. Existing boilers and pumps shall also be operable.
- B. Ambient Conditions:
 - 1. Temperature measurements across boilers heat exchangers shall be made when ambient temperatures are 40 degrees F or less.

1.08 SEQUENCING

- A. Do not do work until systems are complete.
- B. Work with temperature installer to balance devices under all operational sequences.
- C. Where systems are completed early for partial Owner occupancy, complete the balance report for those areas at the time the systems are turned over for Owner use.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Not Used.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that boiler system is complete and operable before commencing work. Ensure the following conditions:
 - 1. System has been started and operating in a safe and normal condition.
 - 2. Temperature control systems are installed complete and operable.
 - 3. Proper thermal overload protection is in place for electrical equipment.
- B. Submit field reports immediately by telephone, email or facsimile. Report defects and deficiencies noted during performance of services which prevent system balance. Do not report defects and deficiencies in written reports except as preliminary situations for which remedies were found.
- C. Beginning of work means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect/Engineer to facilitate spot checks during testing.
- B. Provide additional balancing devices as required.

3.03 FIELD QUALITY CONTROL

- A. Boiler Water Flow: Adjust to within plus or minus five (5) percent of design.

3.04 ADJUSTING

- A. Ensure recorded data represents actual measured or observed conditions.
- B. Permanently mark settings of balance, valves, and other adjustment devices allowing settings to be restored.
- C. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.
- D. Leave systems in proper working order, replacing covers, and restoring thermostats to specified settings.
- E. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner.

3.05 WATER SYSTEM PROCEDURES

- A. Boilers:
 - 1. Measure water flow at tapped balance valves.
 - 2. Measure water temperature drop or rise across boilers.
 - 3. Measure water pressure drop across boilers.

3.06 TESTING AND BALANCING

- A. Motors 1/3 Horsepower and Larger:
 - 1. Check and record full load amperes.
 - 2. Report any motors which are overloaded, defective, or operating within their service safety factor.
- B. Pumps:
 - 1. Measure:
 - a. Water flow.
 - b. Suction and discharge pressure.
 - c. Revolutions per minute.
 - d. Voltage.
 - e. Amperes.
 - 2. Calculate pump capacity; correct for density changes from standard conditions.

3.07 REPORTS

- A. Report forms:
 - 1. Title Page:
 - a. Project name and location.
 - b. name of test and balance technician.
 - c. Report date.
 - 2. Summary Comments:
 - a. Final performance.
 - b. Notable characteristics of system.
 - c. Nomenclature used throughout report.
 - d. Test conditions.
 - 3. Instrument List:
 - a. Instrument.
 - b. Manufacturer.

- c. Model number.
- d. Serial number.
- e. Range.
- f. Calibration date.
- 4. Electric Motors:
 - a. Manufacturer.
 - b. Model/Frame.
 - c. HP/BHP.
 - d. Phase, voltage, current, both nameplate and actual.
 - e. RPM.
 - f. Service factor.
 - g. Starter size, rating, heater elements.
 - h. Sheave Make/Size/Bore.
- 5. Boiler:
 - a. Unit number and use.
 - b. Name plate gas input rate.
 - c. Name plate output rate.
 - d. Total temperature difference across boiler.
 - e. Manufacturer's stated efficiency.
 - f. Water flow through boiler.
 - g. Calculation of boiler output.

END OF SECTION 230593

SECTION 230710 - HVAC PIPE AND EQUIPMENT INSULATION

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Insulation of heating water piping.
 - b. Repair of existing broken insulation on heating water pipe in vicinity of main pumps and boilers.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230529 - Supports and Anchors For HVAC.
 - 2. 230553 - Identification For HVAC Pipe and Equipment.
 - 3. 232113 - Hydronic Piping.

1.03 SYSTEM DESCRIPTION

- A. Definitions:
 - 1. Heating water pipe includes supply and return mains, branch mains and equipment run-outs.
- B. Description:
 - 1. Heating water pipe requiring insulation is that which connects the new boiler to the existing mains.
 - 2. There is broken pipe fitting insulation on the main heating water pipe near the boilers.

1.04 QUALITY ASSURANCE

- A. Material shall have UL listings stamped on material or packing containers.
- B. Inspect finished insulation to assure specified tolerance is met. A/E will verify. If A/E notes tolerances are exceeded, entire system shall be re-inspected and corrections made.

1.05 REGULATORY REQUIREMENTS

- A. ASTM C165 - Standard Test Method of Measuring Compressive Properties of Thermal Insulation.
- B. ASTM C177 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
- C. ASTM C302 - Standard Test Method for Density and Dimensions of Preformed Pipe-Covering-Type Thermal Insulation.
- D. ASTM C356 - Standard Test Method for Linear Shrinkage of Preformed High Temperature Insulation Subjected to Soaking Heat.
- E. ASTM C411 - Standard Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation.
- F. ASTM C447 - Standard Practices for Estimating the Maximum Use Temperature of Thermal Insulations.
- G. ASTM C547 - Standard Specification for Mineral Fiber Preformed Pipe Insulation.

- H. ASTM C585 - Standard Practice for Inner and Outer Diameters of Thermal Insulation for Nominal Sizes of Pipe and Tubing.
- I. ASTM C1104 - Standard Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation.
- J. ASTM C1136 - Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation.
- K. ASTM C1335 - Standard Test Method for Measuring Non Fibrous Content of Man Made Rock and Slag Mineral Fiber Insulation.
- L. ASTM C1338 - Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facing.
- M. ASTM D774 - Standard Test Methods for Bursting Strength of Paper.
- N. ASTM D5116 - Standard Guide for Small Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
- O. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- P. ASTM E96 - Water Vapor Transmission of Materials.
- Q. ASTM E119 - Standard Test Materials for Fire Tests of Building Construction and Materials.
- R. ASHRAE 90-1-2001 - Energy Efficient Design of New Buildings Except Low Rise Residential Buildings.

1.06 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Provide product description, list of materials and thickness for each service, and locations. Show compliance with all specified standards. Show K-Value, maximum temperature, permeability, surface burning characteristics, flame spread and smoke density. Provide MSDS sheets for adhesives and paints. Show material is asbestos free. Submit product data for covers and accessories.
- C. Manufacturer's Installation Instructions: Indicate procedures which ensure acceptable workmanship and installation standards will be achieved.
- D. Provide the name of the installing contractor and line item cost of all steam pipe insulation work on the Schedule of Values.

1.07 QUALIFICATIONS

- A. Installer: Workman skilled in performing the work of this section.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in original factory packaging, labeled with manufacturer's identification, including product density fire ratings and thickness. Keep separated.
- B. Store insulation in original wrapping and protect from weather and construction traffic.

- C. Protect insulation against dirt, water, chemical, and mechanical damage.

1.09 ENVIRONMENTAL REQUIREMENTS

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

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 FIBERGLASS

- A. Shall conform to ASTM C547 Type 1. K-value shall be no more than .23 BTU/hr/in degrees F. Material shall be rated for temperatures up to 650 degrees F.
- B. Vapor barrier shall be fiberglass reinforced foil faced scrim craft paper. Jacket permeance shall be limited to .02 perm.
- C. Flame spread shall be no more than 25. Smoke developed rating shall be no more than 50.
- D. Accessory elbow covers shall be .02" thick PVC with flame spread and smoke developed ratings as noted above. Accessory hard covers shall be of same material as noted for elbows. Provide with self sealing closure strip.
- E. Insulation shall be premolded to thickness listed in application table. Vapor barrier shall have pre-glued adhesive strips. If staples are required by the manufacturer, the system shall include a vapor barrier cover for the staples.
- F. Acceptable Products:

	INDOOR INSULATION
1. Knauf	1000/ASJ-SS
2. Schuller	Micro-Lok
3. Owens-Corning	SSL-II

2.03 REMOVABLE COVERS

- A. Quick Latch Type:
 - 1. Shall have asbestos free fiberglass fiber insulation 1" thick blanket.
 - 2. Shall have heat, tear and abrasion resistant stretchable polyethylene silicone surfaced fabric or "Tyvek" type cover.
 - 3. Shall have hook and (Velcro) loop closure.
- B. Acceptable Products
 - 1. No Sweat - Valve Wraps.

PART 3 - EXECUTION

3.01 ENVIRONMENTAL CONDITIONS

- A. Work shall be done when temperatures are within the limits set by the manufacturer.
- B. Outdoor work shall not be done during any form of precipitation.

3.02 PREPARATION

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

3.03 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. On exposed piping, locate insulation and cover seams in least visible locations.
- C. Insulated pipes conveying fluids above ambient temperature: (heating water).
 - 1. Maintain vapor barrier, align insulation and seal without gaps except as noted below.
 - 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjacent pipe. Miter angles.
 - 3. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations.
 - 4. Insulate entire system including fittings, and valves.
- D. Provide galvanized shields at all pipe hangers.
- E. Finish insulation at supports, protrusions, and interruptions.
- F. All joints shall be made with adhesive. Raw edges shall not be exposed except for overlaps.
- G. Attach removable insulation with fasteners exposed for easy access. Wrap blanket around insulated object. Install cover around blanket entirely covering blanket.
- H. On heating piping system pumps, strainers, and balance valves shall be insulated so that devices are accessible for service.
 - 1. Use removable insulation specified.

3.04 APPLICATION

PIPING SYSTEMS	INSULATION TYPE Inch	PIPE SIZE	THICKNESS Inch
A. Heating Water Piping	Fiberglass	up to 1-1/2" 2" and larger	1" 2"
B. Heating Water Pump Bodies	Removable Insulation	N/A	1"
K. Strainers, Butterfly Valves, Ball Valves and Balance Valves	Removable Insulation	N/A	1"

3.05 FIELD QUALITY CONTROL

- A. No more than 1-12" x 1/16" gap per 100 feet of insulated hot pipe will be allowed.

END OF SECTION 230710

SECTION 230720 - HVAC DUCTWORK INSULATION

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Insulation on interior combustion air ductwork.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 233100 - Ductwork.

1.03 SYSTEM DESCRIPTION

- A. Definitions:
 - 1. Round duct is that duct with a round or oval cross-section.
 - 3. "Exterior" means outside the envelope of the building exposed to the elements.
 - 2. Combustion air ductwork is all duct which connects exterior of building to the intake side of boiler.
- B. Description of work:
 - 1. Work includes insulation of new duct and re-insulation of existing duct modified during renovation work.

1.04 QUALITY ASSURANCE

- A. Materials shall be stamped with ASTM and UL listings.
- B. Inspect to be certain tolerance are met. A/E will verify. If tolerance are not found to be met at any one part of the system the entire system shall be re-inspected.
- C. Installer: Workman skilled in performing the work of this section.

1.05 REGULATORY REQUIREMENTS

- A. ASTM C518 - Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- B. ASTM E84 - Surface Burning Characteristics of Building Materials.
- E. ASTM E96 - Water Vapor Transmission of Materials.

1.06 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Provide product description, list of materials and thickness for each service, and locations. Show compliance to referenced standards. Show K-Value, density, permeability flame spread, and surface burning characteristics. Provide MSDS data on all adhesives and cleaners. Show accessories will match insulation.
- C. Manufacturer's Installation Instructions: Indicate procedures which ensure acceptable workmanship and installation standards will be achieved. Submit these for grease duct, hot duct and plenum enclosures.

- D. Provide a separate line item and cost on the Schedule of Values.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. See Section 016000.
- B. Deliver materials to site in original factory packaging, labeled with manufacturer's density and thickness. Keep materials separated until installed or removed from site.
- C. Store insulation in original wrapping and protect from weather and construction traffic.
- D. Protect insulation against dirt, water, chemical, and mechanical damage.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 CELLULAR FOAM (It is assumed cellular foam will be less expensive than 1" fiberglass with PVC covering.)

- A. Insulation: ASTM C534; flexible, cellular elastomeric sheet.
 - 1. K Value: ASTM C177 .28 at 75 degrees F.
 - 2. Minimum Service Temperature: - 40 degrees F.
 - 3. Maximum Service Temperature: 220 degrees F.
 - 4. Maximum Moisture Absorption: ASTM D1056; 6.0 percent by volume.
 - 5. Moisture Vapor Transmission: ASTM E96; 0.20 perm inches.
 - 6. Maximum Flame Spread: ASTM E84; 25.
 - 7. Maximum Smoke Developed: ASTM E84; 50/
 - 8. Connection: Waterproof vapor barrier adhesive.
- B. Acceptable Products:
 - 1. Armstrong AP Armaflex.
 - 2. Schuller Rubatex.
 - 3. Hallstead Mitchell Insul-Tube.

PART 3 - EXECUTION

3.01 ENVIRONMENTAL REQUIREMENTS

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

3.02 PREPARATION

- A. Remove construction dirt and dust from duct to be insulated before insulation work is done.

- B. Verify duct has been sealed and leak tested.

3.03 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Insulated ductwork conveying air below ambient temperature: (combustion air duct).
 - 1. Continue insulation through hangers, and other duct penetrations.
 - 4. Insulate entire indoor portion of system including fittings, joints, flanges, and flexible connections.
- C. Foam Plastic Installation:
 - 1. Shall be fully adhered with manufactures standard cement.
 - 2. Cut edges shall not be exposed. Miter corners.

3.04 APPLICATION

	DUCTWORK	THICKNESS Inch	FINISH
A.	Inside of room Combustion Air Duct	1/2" Cellular Foam	Plain

END OF SECTION 230720

SECTION 230900 - TEMPERATURE CONTROLS

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Installation of controls furnished with boiler.
 - b. Miscellaneous assorted control connections and wiring and devices to make system function.
 - c. All wire conduit tubing and cable required to complete systems.
 - d. Removal of existing controls.
 - e. Reconnection and integration of emergency boiler shut down mechanism for new boiler.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230593 - Testing, Adjusting Balancing for HVAC.
 - 2. 232123 - HVAC Pumps.
 - 3. 235239 - Boilers.

1.03 REFERENCES

- A. ANSI/NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.04 SYSTEM DESCRIPTION

- A. Definition:
 - 1. Temperature Control - Temperature Control Subcontractor.
- B. The Owner's Existing Control System:
 - 1. Carrier and Fulton.
- C. Description:
 - 1. The existing Fulton Control System currently stages the 4 boilers on demand. It will need to be reprogrammed to enable the new boiler to always operate first and energize remaining boiler separately per new sequence of operation.

1.05 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Operation and Maintenance and Training Data:
 - 1. Submit Training curriculum prior to training meeting. Include aspects of:
 - a. Boiler sequence.
 - b. Manually changing "online" boilers.

1.06 PROJECT RECORD DOCUMENTS

- A. Submit record documents under provisions of Section 017839.
- B. Accurately record actual location of control components, including flow and level, switches, and sensors.
- C. Revise shop drawings to reflect actual installation and operating sequences.

1.07 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 017823.
- B. Include systems descriptions, set points, and controls settings and adjustments.
- C. Include inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.
- D. Format and Content:
 - 1. The manual shall include data for only those controllers and systems actually installed. Manufacturer's standard publications shall be highlighted to reflect the system actually used and edited to delete the systems, controllers and equipment not actually used. A cover sheet or sheets which define the correct equipment is acceptable but does not fill the requirements noted above for editing and highlighting.
 - 2. The manual shall be 8-1/2" x 11" paper size, or shall be bound into an 8-1/2" x 11" folder.

1.08 OWNER INSTRUCTION AND COMMISSIONING

- A. System Operation:
 - 1. Controls and equipment which is controlled shall be fully operational and tested before Owner is instructed.
 - 2. Contractor shall meet with the Owner to determine the desired operation set points.
 - 3. Obtain from the Owner a list of those individuals who are authorized to provide schedules to the contractor and to receive instructions regarding system operation.
- B. Owner Instruction:
 - 1. Instruction shall be provided on at least two separate times with a one week minimum period between.
 - 2. Provide a sign up sheet for all personnel who attend training sessions.
 - 3. Notify the Owner at least two weeks before instructional sessions are needed. Coordinate instructional time at Owner's/User's convenience during normal workday.
 - 4. Simply telling whom ever of the Owner's personnel who may be on site when the hardware installation is complete does not meet this specification.

1.09 QUALIFICATIONS

- A. Installing Contractor:
 - 1. Shall have local service capability which can service a control problem within two hours of being called by the Owner.
 - 2. Shall have the "In-House" capability of utilizing systems installed with the new .

1.10 SEQUENCING AND SCHEDULING

- A. Sequence work to ensure installation of components is complementary to installation of similar components in other systems.
- B. Coordinate work and ensure system is completed and commissioned by Date of Substantial Completion.

- C. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.

1.11 WARRANTY (See Boilers Specification 235239)

- A. Provide one year warranty for all parts and labor beginning with the date of substantial completion.

1.12 COORDINATION

- A. Work with the Owner's designed personnel to achieve successful operation of new with existing systems.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 SEQUENCE OF OPERATION

- A. Building Heating Water Control:
 - 1. Primary heating water pumps shall operate as they do now.
- B. Heating Water Boiler Control:
 - 1. Boiler shall be enabled by existing Fulton Boiler Controller to operate as the primary boiler.
 - a. New Boiler control operation shall be modulated to provide a minimum water temperature of 120 degrees F when outdoor temperatures are 60 degrees and above resetting linearly to 200 degrees F when outdoor temperatures reach 20 degrees F or below.
 - b. New boiler shall be primary boiler called by existing Fulton boiler control. It is intended to accommodate most all the heating load until the remaining Fulton boilers can be replaced.
 - c. One of the remaining Fulton Boilers shall be disconnected electrically, and valved off from the main water loop and the natural gas. This is primarily because gas input of the new boiler exceeds that which it is replacing and we do not want to run short of natural gas during low ambient operation.
 - d. Remaining Fulton boilers shall be staged on to assist the new boiler as system delivering temperatures drop off. This should use existing sensors.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that systems are ready to receive work.
- B. Beginning of installation means installer accepts existing conditions.

3.02 DEMOLITION

- A. For Disposal:

1. Remove existing control instruments. Dispose of in a lawful manner.
2. Remove tubing, wire and conduit where exposed within space. Abandon conduit, tubing and wire left in walls that are not otherwise demolished.
3. Disconnect wire at control source and pull from conduits.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install wiring in new conduit in accord with 260533.
- C. Mount outdoor sensors indoors, with sensing elements outdoors with sun shield.
- D. Provide junction boxes for wire connections. Provide conduit in walls. Provide conduit in equipment rooms.
- E. All wire ends shall be labeled and coded to match installation drawings. Wires extending to remote switches and thermostats shall be labeled or coded to indicate line side and switched side.
- F. After completion of installation, test and adjust control equipment. Submit data showing set points and final adjustments of controls.

3.03 DEMONSTRATION

- A. Demonstrate complete operation of boilers, including sequence of operation after Date of Substantial Completion. Demonstrate to Owners designated person. Provide written demonstration notes for future use of Owners personnel.

END OF SECTION 230900

SECTION 231123 - FACILITY NATURAL GAS PIPING/DIGESTER GAS PIPING

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Connection of natural gas pipe new boiler.
 - b. Vent piping from equipment regulators.
 - c. Removal of existing gas pipe, as noted.
 - d. Provide new gas regulator if required by manufacturer.
 - e. Shut off designated boilers to remain.
 - f. Paint designated existing gas main and new pipe serving boiler No. 4.
 - g. Paint designated conduit. See sheet E100.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230529 - Supports and Anchors for HVAC.
 - 2. 235400 - Fuel Fired Heater.
 - 3. 235239 - Boilers.

1.03 REFERENCES

- A. The International Fuel Gas Code 2012.
- C. NFPA 54 - National Fuel Gas Code.

1.04 DESCRIPTION

- A. Natural gas piping system work is to remove existing gas pipe and install new gas pipe to new boiler.

1.05 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Provide manufacturers literature on gas regulators. Show capacity, pressure drop, spring range and construction. Provide UL listing for valves.
- C. Provide manufacturers installation and maintenance data for regulators.
- D. Provide paint manufacturer's color charts.
- E. Submit line item price for gas pipe work on Schedule of Values. Identify supplier vendor.

1.06 WARRANTY

- A. Warranty material and workmanship for period on one year starting with date of substantial completion.

1.07 QUALITY ASSURANCE

- A. Provide welding certificates for tradesman actually doing work.

1.08 COORDINATION

- A. With Owner:
1. Interruption of Owner's existing service shall be at Owner's convenience. Owner may require work be performed during nights or weekends. Interruption periods shall be minimized.
 2. Assist Owner to purge existing gas pipe and recommission existing equipment.
 3. Do not leave existing systems disconnected.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 PIPING

- A. Above grade pipe 2" and smaller shall be schedule 40 black steel made in accord with ASTM A-53 or A-120. Fittings shall be black malleable iron with threaded connections. Connections shall be made with teflon paste.

2.03 VALVES

- A. Stop Valves 2" and smaller shall:
1. Be bronze body with threaded ends.
 2. Be two piece ball type with teflon seats and packing.
 3. Be UL listed for use with natural gas.
- B. Regulator Valves shall:
1. Be rated to provide capacity and pressure reduction shown on the Drawings.
 2. Have capability of positive dead end lock-up.
 3. Have capacity of accepting a 65 psi emergency exposure.
 4. Have surge arrestor and dust cap.
 5. Have field replaceable spring and adjustable spring range.
 6. Have built in relief valves.

D. Acceptable Products:

	<u>Regulator</u> <u>Valve</u>	<u>Stop Valve 2"</u> <u>and Smaller</u>
1. Equimeter	043 Series	---
2. Nibco	---	TFP 600
3. Apollo	---	80 Series
4. Watts	---	FBV-1
5. Red & White	---	RW 5200 Series
6. Maxitrol	325 Series	---

2.04 NATURAL GAS SPECIALTIES

- A. Gauges:
1. Shall be minimum of 2-1/2" diameter.

2. Shall have liquid filled bourdon tube.
3. Shall have stainless steel case, acrylic window and brass movement.
4. Range shall be 0 to 30 inches. Accuracy shall be two percent of span.

2.05 PAINT

- A. Shall be mildew resistant acrylic latex type.
- B. Shall be brush applicable and water based.
- C. Primer shall be gray color. Topcoat shall be safety yellow or as selected by the A/E and Owner.
- D. Acceptable Products:

<u>Manufacturer</u>	<u>Primer</u>	<u>Top Coat</u>
1. Rustoleum	5200 System	5200 System
2. MAB	Rust-O-Lastic	Rust-O-Lastic
3. ICI/Devco	Devflex 4020	Devflex 4020

PART 3 - EXECUTION

3.01 APPLICATION

- A. Above grade gas and gas vent pipe shall be black steel specified.
- B. Steel piping shall be used for two psig main and for low pressure connection downstream of regulators.
- C. Galvanized fittings shall not be used.

3.02 EQUIPMENT CONNECTIONS

- A. Equipment shall be connected only on low side of regulator.
- B. Equipment shall be connected through a stop valve, union and dirt leg in that order. Dirt leg shall always be made at a change in direction. A dirt leg dropping from the runout of an in-line tee is not acceptable.
- C. Final equipment connection shall be full size of opening. Do not bush or reduce connection size.
- D. Drop sizes shall be as shown on drawings.
- E. Where individual regulators are provided at equipment regulator shall be positioned downstream of stop valve and upstream of union.
- F. Provide all fittings and adaptors required to connect equipment.

3.03 REGULATORS

- A. Vents from regulators located inside of buildings shall be piped full size to out of doors, unless shown otherwise on drawings. Do not reduce. Terminate vent with screened elbow turned down.

3.04 PIPING

- A. Piping shall be squarely cut and threaded with sufficient thread to penetrate fitting and valve a minimum of four turns.

- B. Piping shall be reamed and deburred. Oil and metal shavings shall be wiped or blown out of each piece before assembly.
- C. Pipe shall be supported in accord to Section 230529. Pipe shall have supports within 2'-0" of each change in direction. Pipe shall be supported independently of equipment and regulator valves.
- D. Changes in pipe size shall be made with reducing tees or reducing couplings. Do not use bushings.
- E. Drops shall always be made from the branch connection of a tee. "Bullheaded tees" shall not be installed.
- F. No unions or running threads shall be installed above ceilings.
- G. Welding shall be by an electric arc method. Welds shall be uniform and continuous. All welds shall be primer painted with rust resistant enamel.
- H. Install gas equipment furnished, by the Owner or other trades in accord to the manufacturer's instructions provided with that equipment and as specified.
- I. Paint new and designated existing gas piping yellow. Remove rust, scale and protective coatings before painting. Paint with one coat primer and two topcoats. Apply per manufacturer's instruction. Paint supports with pipe.
- J. Install gauges with faces visible from the floor.

END OF SECTION 231123

SECTION 232113 - HYDRONIC PIPING

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Modifications to existing heating boiler water piping system.
 - b. Modify softener brine water pipe.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230529 - Supports and Anchors For HVAC.
 - 2. 230553 - Identification For HVAC Pipe And Equipment.
 - 3. 230710 - HVAC Pipe And Equipment Insulation.
 - 4. 232114 - Hydronic Specialties.
 - 5. 232123 - Hydronic Pumps.
 - 6. 235239 - Boilers.
- B. Owner will:
 - 1. Provide water treatment.
 - 2. Assist in shutoff of system to accommodate new connections.

1.03 SYSTEM DESCRIPTION

- A. New work shall replace one of 4 boilers in anticipation of replacing 2 additional boilers in the future and the removal of 1 boiler.
- B. Definitions.
 - 1. Heating water supply and return piping convey heating water and from terminal heating units or coils in ductwork or air supply units. Temperatures can range from 140 degrees F to 230 degrees F.

1.04 REGULATORY REQUIREMENTS

- A. International Mechanical Code 2012.

1.05 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Include data on valves. Provide manufacturers catalogue information. Indicate valve data and ratings.
- C. Submit line item price for piping work on Schedule of Values. Identify subcontractor.

1.06 PROJECT RECORD DOCUMENTS

- A. Record actual locations of shutoff valves and balance valves.
- B. Show general re-route of exposed piping.

1.07 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 017823.

- B. Maintenance Data: Include installation instructions, space parts lists, exploded assembly views.

1.08 QUALIFICATIONS

- A. Certify welders in accordance with American Welding Society or local union requirements.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 HEATING WATER PIPING, ABOVE GROUND

- A. Steel Pipe: ASTM A53 or A120, Schedule 40, black.
 - 1. Fittings: Shall be Class 150 malleable iron fittings meeting ANSI/ASTM A197 and ANSI ASME B16.3, B16.4, B16.39 standards.
 - 2. Joints: Threaded, or mechanical grooved.
 - 3. Mechanical Grooved Couplings: Malleable iron housing clamps to engage and lock. Elastomeric EPDM sealing gasket, steel bolts, nuts, and washers. At contractors option fittings shall be ductile iron conforming to ASTM A536 with elastomeric EPDM "o-ring".
 - 4. Acceptable Products - grooved fittings.
 - a. Victaulic HVAC Products
 - b. Grinnell Gruvlok

2.03 CONDENSATE DRAIN PIPE & BRINE WATER PIPE

- A. Schedule 80 PVC Rigid.
 - 1. Fittings: Schedle 80 PVC.
 - 2. Joints: Threaded and solvent weld type.
- B. Steel Pipe: ASTM A120 or A53 galvanized with galvanized malleable iron threaded fittings.

2.04 PIPE HANGERS AND SUPPORTS. SEE SECTION 230529.

2.05 UNIONS, FLANGES, AND COUPLINGS

- A. Grooved couplings as noted above.

2.06 SHUT-OFF VALVES

- A. For pipe up to and including 2":
1. Ball configuration with bronze two piece body, chrome plated brass or stainless steel ball, teflon seats and stuffing box ring, lever handle threaded ends. Provide stem extension for insulated piping.
 2. Valve shall be rated for 600 lb. W.O.G.
- B. For pipe 2-1/2" and larger.
1. Butterfly configuration with cast iron or ductile iron alkyd or epoxy coated body and grooved connections.
 2. Seat shall be resilient EPDM positioned to secure between body and grooved connection. Seat shall be rated for temperatures between -30 degrees F to minimum of 230 degrees F.
 3. Shaft shall be 416 stainless steel; disc shall be ductile iron with nickel coating or 316 or 431 stainless steel.
 4. Operator shall be ten position lever type.
 5. Valve shall be rated to shut-off bubble tight for dead end service against a minimum of 150 psi.
- C. Acceptable Products:
- | | | |
|------------------|--------------------|--------------------|
| | Ball Valves | Butterfly Valves |
| 1. Apollo | Model 70 Series | --- |
| 2. Milwaukee | Model BA 125/BA155 | ML-122B |
| 3. Watts | 6000 Series | BF-03 |
| 4. Mueller | --- | Series 89-GEN |
| 5. Anvil Gruvlok | --- | Series 7700 |
| 5. Victaulic | --- | VIC 300 Masterseal |

2.07 BALANCE VALVES

- A. Calibrated, plug type with precision machined orifice or globe style with parabolic disc, readout valves equipped with integral check valves and gasketed caps, calibrated nameplate and indicating pointer.
- B. Acceptable Products: Balance Valve
1. Bell & Gossett Circuit Setter.
 2. Taco Circuit Setter.

2.08 CHECK VALVES

- A. Swing check valves up to and including 3":
1. Ductile iron body, stainless steel trim, stainless steel coated with EPDM; grooved ends.
 2. Valve rating shall be minimum of 150 lb. Temperature rating shall be minimum of 230 degrees F.
- B. Acceptable Products:
- | | |
|------------------|--------------|
| | 2-1/2" to 6" |
| 1. Victaulic | Series 716 |
| 2. Anvil Gruleck | 7800 Series |

PART 3 - EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt on inside and outside before assembly.

- C. Prepare piping connections to equipment with grooved connections.
- D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner, parallel to building structure, and maintain gradient. Provide air vents at all relative high points in pipe systems.
- C. Install piping to conserve building space, and not interfere with use of space.
- D. Group piping whenever practical at common elevations, except where otherwise indicated to simplify air venting and drainage.
- E. Slope piping and arrange to drain at low points, and air venting at high points.
- F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Make runout connections with offsets and swing connections. Avoid anchoring small pipe to large pipe with straight tee connections.
- G. Do not utilize "bull headed" tees, "street" fittings or bushings.
- H. Reduce horizontal piping sized with reducing tees or eccentric reducer fittings. Eccentric fittings shall be level on top.
- I. Pipe reductions in vertical pipe shall be with concentric reducers or reducing tees.
- J. Provide air vents at all high points and drops in direction of flow. Air vents on drops concealed above ceilings shall be extended to equipment cabinets with 1/4" annealed copper tubing and manual air vents. Vents and valves shall be secured to adjoining pipe or structure. Vents shall terminate so to allow a quart size container beneath them. Use most direct route unless otherwise shown on drawings.
- K. Automatic air vents are not specified for this work. No automatic air vents shall be installed in this work without a manual stop valve between them and the system.
- L. Ball valves or 1/4 turn gauge cocks shall be utilized for manual air vents.
- M. Welded branch connections shall be made with welded saddle fittings. Half couplings and nipples are not acceptable. Fittings shall continue with weld or threaded connections.
- N. Install valves with stems upright or horizontal, not inverted. Butterfly valves shall be installed with stems horizontal, or at 45 degrees to vertical.

3.03 SYSTEM START UP

A. Flushing and Cleaning:

1. Before making final connections to existing pipe flush new pipe.
2. Bypass new connection points at equipment and existing mains fill branch pipe with mixture of water and trisodium phosphate at a ratio of 1 pound per 50 gallons of water. Circulate the mixture so that water volume exchanges places within the pipe at least ten times. I.E., a 4" pipe 760 feet long contains about 500 gallons of water. A 10 gpm pump will exchange water one full time in 50 minutes so 8:33 hours of time would be required. Drain wash water from pipe and flush with clear potable water until flow runs clean.

B. Filling:

1. Fill system through system manually vent air from high points. Vent air from high points until it is gone.

END OF SECTION 232113

SECTION 232114 - HYDRONIC SPECIALTIES

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Strainers and specialties.
 - b. Flexible connections.
 - c. Start up of new systems including purging of all air.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 232113 - Hydronic Piping.
 - 2. 232123 - HVAC Pumps.
 - 3. 230900 - Temperature Controls.

1.03 REFERENCES

- A. ASME - Boilers and Pressure Vessel Codes, SEC 8-D-Rules for Construction of Pressure Vessels.

1.04 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Provide product data for manufactured products and assemblies required for this project. Include component sizes, rough-in requirements, service sizes, and finishes. Include product description, model and dimensions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 016000.
- B. Accept devices on site in shipping containers with labeling in place. Inspect for damage.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 STRAINERS

- A. Size 2-1/2" to 4":
 - 1. Grooved stainless steel or cast flanged with grooved end adaptors iron body for 150 psig working pressure, Y pattern with stainless steel perforated screen. Pressure drop shall be no more than 1.0 psi @ 120 gpm.

C. Acceptable Products:

- | | |
|------------------|---------------------------|
| | 2-1/2" to 4" |
| 1. Anvil Gruvlok | 758G |
| 2. Mueller | Style B7 |
| 3. Watts | 77F |
| 4. Victaulic | WYE Type VIC-
Strainer |

2.03 FLEXIBLE CONNECTORS

A. Heating Water Systems:

1. Configuration flexible corrugated stainless steel hose within a braided stainless steel jacket. Ends shall be steel of either male NPT or flanged as required.
2. Unit shall be rated for 200 psi and 400 degrees F.
3. Lengths shall be minimum of four time the diameter.

B. Acceptable Products:

- | | |
|--------------|-------------|
| 1. Metraflex | ML |
| 2. MFC | Equal |
| 3. Hyspan | 4500 Series |
| 4. Twin City | TCHS |

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install specialties in accordance with manufacturer's instructions.
- B. Provide 4" nipples and couplings at highest points in system.
- C. Provide manual air vents at system high points and as indicated.
- D. Support pump fittings with floor mounted pipe and flange supports.
- E. Provide strainer upstream of in-line pumps.
- F. Provide flexible connections on boiler inlet and outlets. Connections shall be full size of boiler discharge and inlet.

3.02 CLEANING

- A. See Section 232113.
- B. Clean and reinstall all strainer screens.
- C. Remove any start-up strainers after flushing is complete and before balancing. Blow wash and test water from system with compressed air or nitrogen.

3.07 COMMISSIONING

- A. Fill hydronic systems with Owner's treated make up water. Purge air from system. At contractor's option automatic air vents shall be installed at key locations in the systems. These shall be valved off after air is purged and system is in operation.
- B. Check each pump to ensure proper rotation.
 1. Verify each pump motor's overload heater ratings.

- C. Verify that equipment labels and pipe marker labels are installed.
- D. Operate system for testing and balancing.

END OF SECTION 232114

SECTION 232123 - HVAC PUMPS

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. New in-line pump to circulate heating water at boiler.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230710 - HVAC Pipe and Equipment Insulation.
 - 2. 232113 - Hydronic Piping.
 - 3. 235239 - Boilers.

1.03 REFERENCES

- A. UL 778 - Motor Operated Water Pumps.
- B. NFPA 70 - National Electrical Code.

1.04 SUBMITTALS

- A. Provide submittals in accord to Section 013300.
- B. Product Data: Provide pump curves showing performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable. Show horsepower, pressure drop and flow relationship. Show motor efficiency on base mounted pumps. Include electrical characteristics and connection requirements.
- C. Manufacturer's Installation Instructions: Indicate hanging and support requirements and recommendations.
- D. Submit line item price for grilles on Schedule of Values. Identify supplier vendor.

1.05 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 017823.
- B. Operation and Maintenance Data: Include installation instructions, assembly views, lubrication instructions, and replacement parts list.

1.06 REGULATORY REQUIREMENTS

- A. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written

description, the model number shall be modified as required to most closely meet the described requirements.

2.02 IN-LINE

- A. Type: Horizontal or vertical shaft, single stage, direct connected, with resiliently mounted motor for in-line mounting, oil lubricated, for 175 psig maximum working pressure.
- B. Casing: Cast iron, with flanged pump connections. Shall be adjustable for mounting with pump flow in horizontal or vertical position.
- C. Impeller: Stamped brass or cast bronze, keyed to shaft.
- D. Bearings: Permanently lubricated bearings.
- E. Shaft: Alloy or stainless steel with copper or bronze sleeve, integral thrust collar.
- F. Seal: Carbon rotating against a stationary ceramic seat, 225 degrees F maximum continuous operating temperature.
- G. Drive: Flexible coupling. Direct keyed for high capacity.
- H. Motor - Open drip proof: Voltage and phase as scheduled. Enclose terminal lugs in terminal box sized to NFPA 70. Motor shall have permanently lubricated bearings.
- I. Acceptable Products:

	Horizontal
	Inline
1. Aurora	326 Series
2. Bell & Gosset	60 Series
3. Mespc	DC Series
4. Taco	1600 Series
5. Patterson	VIL Series

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify that electric power is available and of the correct characteristics.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide access space around pumps for service. Provide no less than minimum as recommended by manufacturer.
- C. Decrease from line size with reducers. Support piping adjacent to pump such that no weight is carried on pump casings. Provide shut-off valves full size of pipe.
- D. Provide air cock and drain connection on horizontal pump casings.

END OF SECTION 232123

SECTION 233100 - DUCTWORK

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Demolition of existing combustion air duct.
 - b. Provision of new combustion air duct.
 - c. Provide incidental sheet metal required for installation of boiler accessories.
 - d. Close wall openings left where duct is removed.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230529 - Supports and Anchors for HVAC.
 - 2. 230593 - Testing, Adjusting and Balancing for HVAC.
 - 3. 230720 - Ductwork Insulation.
 - 4. 235100 - Breeching Chimneys and Stacks.
 - 5. 235239 - Boilers.

1.03 SYSTEM DESCRIPTION

- A. Definitions:
 - 1. Ventilating Contractor = Ventilating Subcontractor.
 - 2. Combustion Air Ductwork - That duct between outside air intakes and the boilers combustion air intake opening.
- B. Description:
 - 1. Combustion air ductwork shall be installed for the new boiler.

1.04 QUALITY ASSURANCE

- A. Installers and Fabricators shall be fully familiar with S.M.A.C.N.A Construction Standards.

1.05 REGULATORY REQUIREMENTS AND STANDARDS

- A. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.
- B. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.
- D. UL 181 - Factory-Made Air Ducts and Connectors.
- E. International Mechanical Code 2012.

1.06 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data:
 - 1. Provide data for manufactured duct and fittings.
 - 2. Provide material safety data sheets for sealants.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 MANUFACTURED DUCTWORK AND FITTINGS

- A. Construction shall be of type 316 stainless steel. Duct shall be round with spiral lock seams.
- B. Sizes: 8" diameter and smaller shall be minimum of 26 gauge. Flatstock shall be 22 gauge or greater.
- C. Fittings shall be made with spiral lock seams of material at least one gauge heavier than adjoining pipe.
- D. Round Ducts:
 - 1. Manufacturers:
 - a. LaPine.
 - b. United McGill.
 - c. Lindab.

PART 3 - EXECUTION

3.01 REMOVAL OF EXISTING CONSTRUCTION

- A. Ductwork and vents designated for removal shall:
 - 1. Be removed such that duct and equipment to remain is not damaged.
 - 2. Be removed from the site.
- B. Removals for ductwork shall include all hangers and supports.
- C. Where duct removal leaves openings.
 - 1. Patch opening on both sides of wall with stainless steel sheet. Pack void with fiberglass batt insulation.

3.02 APPLICATION

- A. Use stainless steel combustion air duct.
- B. Use spiral formed manufactured stainless steel duct for boiler combustion air.

3.05 INSTALLATION

- A. Duct seams and joints shall be sealed airtight. All transverse and longitudinal joints in ducts shall be sealed with sealant specified. Corners on fittings and connections to equipment shall be sealed tight. Joints in adjustable round elbows shall be sealed tight. No leaks will be allowed.
- B. Apply duct sealant according to manufacturer's instruction. Allow sealant material to acclimate before application. Do not install when space temperature is less than 40 degrees F. Remove excess material on exposed duct.
- C. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.

- D. Use crimp joints with bead for joining round duct.
- E. Use double nuts and lock washers on threaded rod supports.
- F. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

3.06 FIELD QUALITY CONTROL

- A. Visual Inspection - Contractor shall provide visual inspection of work as it progresses to insure supports, sizes, configuration and tightness specified is maintained. A/E will occasionally inspect for same qualities.

END OF SECTION 233100

SECTION 235100 - BREECHING CHIMNEYS & STACKS

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor Provide:
 - a. Manufactured vent/intakes for new boiler.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 235239 - Boilers.

1.03 REFERENCES

- A. ANSI/ASTM A525 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements.
- B. ANSI Z223.1 (NFPA 54) - The National Fuel Gas Code.
- C. ASHRAE - Handbook, Equipment Volume, Chapter "Chimney, Gas, Vent, and Fireplace Systems."
- D. ASME SA268, SA240.
- E. ASTM A527 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Lock-Forming Quality.
- F. ASTM A268, A240.
- G. NFPA 211 - Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.
- H. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.
- I. UL 103 - Standard for Factory Built Low Heat Chimneys.
- J. UL 1738 - Standard for Venting Systems for Gas Burning Appliances, Categories II, III, & IV.

1.04 DEFINITIONS

- A. Vent: That portion of a venting system designed to convey flue gases directly outdoors from a vent connector or from an appliance when a vent connector is not used.
- B. Vent Connector: That part of a venting system that conducts the flue gases from the flue collar of an appliance to a chimney or vent, and may include a draft control device.

1.05 SUBMITTALS

- A. Submit product data under provisions of Section 013300.
- B. Submit product data indicating factory built chimneys, including dimensional details and weights of all components. Show compliance to standards.
- C. Submit manufacturer's installation instructions.

- D. Submit line item price for vent on Schedule of Values. Identify supplier/vendor.

1.07 REGULATORY REQUIREMENTS

- A. Conform to the International Fuel Gas Code for installation of natural gas burning appliances and equipment.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 HIGH EFFICIENCY BOILER VENT PIPE

- A. Shall be fabricated with an inner liner of AL-29-4C stainless steel and an outer wall of 409 stainless steel.
- B. Shall have 1" clearance to combustibles.
- C. Shall have factory made silicone seals.
- D. Shall include elbows, stack, flashings, rain skirts, tops and condensate removal fittings.
- E. Acceptable Products:
 - 1. Metal Fab Corr Guard
 - 2. Heat Fab Saf-T-Vent

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. For Category IV double wall gas vents, maintain UL listed minimum clearances from combustibles. Assemble pipe and accessories as required for complete installation.
- C. Level and plumb vents. Terminate above roof in accord to NFPA 90A.
- D. Clean vents during installation, removing dust and debris.
- E. At appliances provide slip joints permitting removal of appliances without removal or dismantling of vent.

END OF SECTION 235100

SECTION 235239 - BOILERS

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Contractor Provide:
 - 1. Boilers, burners and accessories as specified and scheduled.
 - 2. Initial start-up and commissioning of boiler and burner.
 - 3. Instruction of Owner's personnel regarding operation of boilers and burner and how it relates to existing boilers and burners.
 - 4. Tests on new equipment.
 - 5. Coordination required for the initial State of Illinois Fire Marshall inspection for the new boiler.
 - 6. Removal of existing boiler No. 4 with its pipe and accessories.
 - 7. Remote sensors, level control, gas regulator, thermometer and pressure gauges.
 - 8. Manually shut down and electrical disconnect one existing boiler of the Owners choice.

1.02 RELATED WORK

- A. Specified Elsewhere:
 - 1. 230900 - Temperature Controls.
 - 2. 232114 - Hydronic Specialties.
 - 3. 232123 - HVAC Pumps.
 - 4. 233100 - Ductwork.
 - 5. 235100 - Breeching, Chimneys & Stacks.

1.02 SYSTEM DESCRIPTION

- A. Definitions
 - 1. Heating water - Closed loop water circulated at temperatures between 120 to 200 degrees.
 - 2. Breeching - Pipe connecting boiler smoke loop to chimney.
- B. Description of Systems
 - 1. System shall consist of one copper fin heating water boiler with primary pump, flow and level limit switches. This shall be integrated into an existing Fulton boiler system. The Fulton boiler system is to be considered for replacement within the next few years.
 - 2. It is noted the (2) manufacturers specified have different operating requirements for combustion fan full load current (amperes) and hydraulic pressure drop and possibly gas input pressure. These require differences in pumping size wire size and gas regulator needs.

1.03 QUALITY ASSURANCE

- A. Burner controls shall be listed by UL.

1.04 REFERENCES

- A. Standards
 - 1. American Society of Mechanical Engineers (ASME).
 - a. ASME CSD-1 (latest version) Controls and Safety Devices for Automatically Fired Boilers.
 - b. ASME Boiler and Pressure Vessel Code 1992.
 - 2. Industrial Risk Insurers (IRI).
 - 3. Underwriters Laboratories (UL).
 - 4. National Fire Protection Association (NFPA).

a. NFPA 54 - National Fuel Gas Code.

B. Regulations

1. State of Illinois Office of the State Fire Marshall. Boiler and Pressure Vessel Safety Act and Rules and Regulations 2011.

1.05 SUBMITTALS

A. General

1. Submit under provisions of 013300.
2. Do not provide data which is not applicable to specified systems.
3. Where pre-printed Data Sheets are provided which show non-applicable data, cross out the non-applicable data; high light the applicable data on each copy.

B. Shop Drawings

1. Shall be certified by the manufacturer as denoting all dimensions and quantities accurately.
2. Shall show dimensions of boiler and burner as they relate to another and to their connections for natural gas, heating water supply and return.
3. Shall list all accessory parts by manufacturer's name and model.
4. Shall list operating and shipping weight.
5. Shall show gas connections and control schematics.

C. Product Data

1. Shall show input and output capacities, manufacturer, model number, operating ranges, pressure and temperature constraints. Shall show compliance to specification on point by point basis.
2. Show construction and connections for all switches, thermometers, pressure gauges, and regulators.

D. Operation and Maintenance Manuals

1. Shall be specifically edited to match equipment supplied.
2. Shall reflect changes made during start-up.
3. Shall include shop drawings and product data.
4. Shall include name(s), address(s), and telephone number(s) of service personnel and responsible parties.
5. Shall have exploded view diagrams of burners showing all components.
6. Shall include start-up, maintenance, and trouble shooting.

D. Submit line item price for boiler on Schedule of Values. Identify supplier vendor.

1.06 DELIVERY STORAGE AND HANDLING

A. Manufacturer's representative shall be present when boilers are delivered to site and inspect for transit damage. Manufacturer shall process damage claims necessary.

B. All openings shall be temporarily plugged.

C. Equipment shall be stored off site until site is ready for new work.

1.07 PROJECT CONDITIONS

A. Existing double doors have approximately 79" x 80" inches clear to install new boiler and remove old.

1.08 SEQUENCE AND SCHEDULING

A. Manufacturer coordinate delivery of equipment with Owner.

- B. Existing boiler shall be removed as early as possible with the Owner's concurrence. Shutdown of existing main piping shall be accomplished at the Owner's convenience when outdoor temperatures are above 60 degrees F. The system shall be substantially complete and ready for commissioning and test by 1 December 2016.

1.09 WARRANTY

- A. Warranty period shall be 365 days from date of boiler commissioning/start-up. Warranty shall include all equipment and devices supplied with the boiler. Labor to replace factory assembled equipment shall also be included within the manufacturer's warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

- A. Unless otherwise specified the manufacturer's number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 BOILER

- A. Type:
 - 1. Shall be a heating water boiler. Heat exchanger shall be copper tube with cast iron headers.
 - 2. It shall be sealed combustion with boiler efficiency of at least 87 percent.
- B. Cabinet:
 - 1. Shall be fully insulated. It shall be either painted sheet steel.
 - 2. Cabinet shall be removable or have removable access doors.
 - 3. Cabinet footprint shall not exceed 32" x 32".
- C. Heat Exchanger:
 - 1. Shall be thermally shockproof. It shall be capable on consistently accepting an inlet temperature of 105 degrees F.
- D. Burner and Control:
 - 1. Shall be able to operate with natural gas at input pressures of 5" to 7" of water column up to 2 psi. Existing has pressure is 2 psi, provide regulator(s) per 231123 as required.
 - 2. Shall be modulating to a 4:1 ratio at a minimum.
 - 3. Furnish with electronic ignition, high limit, and operating thermostats, flow switch, and low water cutoff. Gas train shall include regulator and primary and secondary gas valves. Arrangement shall be listed by UL or AGA.
 - 4. Control shall include a manufacturer's selected reset control regulating discharge water temperature with input from its own outdoor air and space temperatures. Firing frequency and modulation shall be regulated, by controls included in this boiler.
 - 5. Control shall included LED read out for diagnostic services.
 - 6. Control shall be enabled by existing Fulton Boiler Control system.
 - 7. See Sequence of Operation in 230900.
- E. Connections:
 - 1. Water connections shall be NPT.

2. Relief valve shall be included. It shall have 30 psig relief pressure.
3. Gas shall have NPT connection.
4. Electricity shall have one point connection. Boiler shall have switch for single point shutdown clearly labeled. Boiler control shall be capable of accepting remote shutdown.

2.03 OPERATING AND SAFETY CONTROLS

- A. Aquastats
 1. Range shall be adjustable 100 to 240 degrees F.
 2. Limit Aquastats shall have manual reset.
 3. Operating Aquastats shall have three to 15 degrees adjustable differential.
 4. Provide with sensor well with heat conducting paste
- B. Flow switches shall be paddle type for insertion into a standard "tee" connection. Contacts shall be rated for a minimum of 7.4 amps at 120 volts. Electric enclosure shall be NEMA 1.
- C. Low water cut off shall be electronic probe type with NEMA 1 enclosure.
- D. Pressure Gauges and Thermometers:
 1. Shall be of combination design with pressure and temperature read on one face.
 2. Shall have ranges appropriate for boiler.

PART 3 - EXECUTION

3.01 FIELD ASSEMBLY

- A. Provide itemized list of Contractor installed control, gas train, burner components with the submittal of the bid for this work.
- B. Provide inspection of installing contractors work of field installed components. Be responsible for correct operation.

3.01 INSTALLATION

- A. Modify existing natural gas piping to accommodate new boiler configuration. Use black steel pipe complying with ASTM A-53 with malleable iron fittings. New valves shall be A.G.A. certified ball type complying with ANSI Z21.15B. Install pipe plumb with building lines. Use shortest routes possible with fewest fittings.
- B. Vent all new regulator relief openings to existing gas vent pipes.
- C. Gas and vent pipe shall sized, installed and tested in accord to latest issue of NFPA 54 and the BOCA Mechanical Code, and ASME CSD-1.
- D. Provide electrical devices in accord to ASME CSD-1. Electrical connections shall be made in accord to the latest edition of the National Electrical Code. Field installed control wiring shall be fully labeled at each junction box and termination and shall match control drawings. Provide upgrade of service wiring, breakers, or disconnects to operate and protect new burners if required.
- E. Combustion air shall be provided to the boiler burner through a closed combustion directly from the out of doors.

- F. Burner shall be supported independently of piping and conduit with a pipe type floor stand.
- G. Aquastats shall be installed in and wired in accord to manufacturer. Verify sensing bulb will extend into water volume. Adjust temperatures and differentials as required by burner and boiler manufacturer and code.

3.02 TESTING & OWNER INSTRUCTION

- A. Shall be done by Manufacturer's trained personnel.
- B. Instruction shall consist of one hour session and one follow-up two hour session at the site. Instruction shall cover troubleshooting problems, start-up, emergency shut down, and emergency start-up procedures.
- C. Burners shall be adjusted to optimize efficiency.
- D. Shall be done when ambient temperatures are below 40 degrees F.
- E. System start-up shall include these measurements.
 - 1. Burner firing rate using utility meter.
 - 2. Gross stack temperature.
 - 3. Parts per million (PPM) of Carbon Monoxide, Nitrogen Oxides, and Sulfur Oxides.
 - 4. Percentage of Carbon Dioxide and Oxygen.
 - 5. Combustion efficiency.
 - 6. Stack draft, furnace pressure, and blast tube pressure.
 - 7. Voltage and current readings for each power and control circuit.
 - 8. Gas pressures at regulator inlet, outlet and manifold at low fire, 50 percent fire and maximum firing rate.
- F. Control check shall include setting and testing the operation points of both automatic low water cut-offs, low water alarm, operating limit, high limit, flame failure, combustion air switch(es), high purge switch, low fire interlock and high and low gas pressure switch main manifold and pilot flame signal shall be verified.
- G. All specifics required by the burner manufacturer shall be verified.
- H. Manufacturer shall work with Johnson Control to coordinate communications link with the Johnson Metasys System and to sequence the firing of the boilers with expected heating demand.

3.03 PROJECT CLOSEOUT

- A. Operation and Maintenance Manuals
 - 1. Shall be specifically edited to match equipment supplied.
 - 2. Shall reflect changes made during start-up.
 - 3. Shall include shop drawings and product data.
 - 4. Shall include names, addresses, and telephone numbers of service personnel and responsible parties.
 - 5. Shall have exploded view diagrams of burners showing all components.
 - 6. Shall include gas train and control schematics which match installed conditions.
- B. Clean-up
 - 1. Boiler Room space shall be let free of excess contractor materials. Excess materials, trash demolished items shall be removed from site.
 - 2. Repair any damages done to existing spaces or areas caused by construction traffic.
- C. Warranty

1. Shall include parts and labor warranty for 365 days from date of successful start-up, with a seven day per week, 24-hour per day, emergency service.

END OF SECTION 235239

SECTION 260500 - BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractor Provide:

1. Labor and materials for all electrical system changes. This shall include all equipment, devices, conductors, raceways, housings, connectors, accessories, options and supports for systems to be complete and operational.
2. All minor system components reasonably required for the proper functioning and/or safe operation of the systems and to meet all related codes and ordinances.
3. Required system and component testing as required in these specifications and/or related codes and ordinances.
4. Required electrical demolition and reconfiguration for allowance of work by electrical and other trades, as indicated in these specifications and on drawings.
5. All conduit, wire, cable, boxes, and labor required to relocate boiler and pump.
6. All conduit, wire, cable, boxes, and labor required to set new emergency shut down switches for boiler No. 4.

1.2 RELATED WORK

A. Specified Elsewhere:

1. Division 23 for HVAC equipment electrical connection requirements.
2. 260519 - Wire & Cable.
3. 260526 - Grounding & Bonding.
4. 260533 - Conduit, Raceways, & Fittings.
5. 260534 - Device & Junction Boxes.
6. 262726 - Wiring Devices.

1.3 REFERENCES & REGULATORY REQUIREMENTS

- A. The International Building Code (2012), National Electrical Code (2011), International Fire Code (2012).
- B. All other Contract Documents - including Construction Drawings.

1.4 VERIFICATION OF POINTS

- A. Before submitting his bid, Contractor shall visit the site to carefully verify all points of existing and new connections. Contractor shall verify concealed points of connection as near as possible and shall contact Owner for verification and approval of connection points. Verify these points, as to locations, size, type, depth, operating characteristics, and complications; including, but not limited to:
1. Present site conditions.
 2. Electrical and other system components.
 3. Work associated with equipment provided under other sections.
 4. New connections to present equipment and systems.
 5. Present equipment, devices, and systems to be modified, extended, removed, and/or relocated.

- B. If the Contractor fails to notify the Architect/Engineer, in writing, at least 72 hours prior to bids being due, it will be assumed that his/her bid includes everything required to provide necessary connections to systems as they actually exist or as they will be provided by others, without any increase in contract price.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. When two or more items of the same material or equipment are required, they shall be of the same manufacturer. Product manufacturer uniformity does not apply to raw materials, bulk materials, wire, conduit, fittings, fasteners, and similar items used in Work.
- B. Provide products that are compatible with other components in the system and other interconnected systems or equipment.
- C. Provide permanent operational data nameplate on each item of power operated equipment, indicating manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliance, and similar essential data. Locate nameplates in an accessible location.

2.2 SUBMITTALS

- A. Provide all information requested under individual sections and for all equipment described on drawings as being provided by Division 26. See Section 013300.
- B. Submittals shall indicate the exact item(s) being submitted for review with all options and accessories required for proper operation or specifically indicated in Contract Documents. Catalog cuts with multiple devices on a single sheet shall clearly indicate which item(s) are being submitted upon.
- C. Submittals may be rejected if all options, accessories, or model numbers are not clearly selected.

2.3 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Options and Substitutions shall be done per Division 1.
- B. Any approved options, substitutions, or other changes to products, methods, conductor/conduit routing, or equipment locations shall include any additional costs or credits for all affected trades.

2.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to project properly identified with names, model numbers, types, grades, compliance labels, and similar information needed for distinct identifications; adequately packaged and protected to prevent damage during shipment, storage, and handling.
- B. Store equipment and materials at the site, unless off-site storage is authorized in writing. Protect stored equipment and materials from damage.

- C. Do not store material on site. Install material as it is brought to the site.
- D. See Division 1 for particular storage and delivery requirements.

PART 3 - EXECUTION

3.1 COORDINATION

- A. Coordinate all work per requirements of Division 1.
- B. See all other specification sections for work concerning the connection of electrical power and temperature and boiler control.
- C. Contractor shall verify electrical characteristics and requirements (name plate data) of equipment furnished by others (FBO) for proper coordination and equipment operation. Contractor shall confirm requirements of final equipment furnished by others (FBO) and shall select associated electrical devices accordingly. Before any work is installed, and before any equipment is purchased, The Contractor shall carefully check specifications and plans for every trade and job condition, and any lack of coordination between this work, the plans, specifications, or job conditions, shall be immediately reported to the Architect/Engineer.

3.2 ROUGH-IN

- A. Verify final locations and electrical characteristics for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- B. Refer to equipment specifications in other divisions and processed equipment submittals for rough-in requirements.

3.3 ELECTRICAL INSTALLATIONS

- A. Coordinate electrical equipment and material installations with other building components.
- B. Verify all dimensions by field measurements.
- C. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work.
- D. Where mounting heights are not detailed or dimensioned, install electrical services and overhead equipment to provide the maximum headroom possible.
- E. Install electrical equipment for compliance with code-required clearances and to facilitate maintenance and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
- F. Drawings for work under Division 26 are Diagrammatic and are intended to convey scope of work and indicate general arrangement of conduit, boxes, equipment, lighting fixtures, and other work included in contract.
 - 1. See drawings and specifications for meanings of abbreviations and additional requirements and information. Check mechanical, and other electrical drawings for scale, space limitations and additional

information, and report any discrepancies or conflicts to Architect/Engineer prior to submitting bid.

2. The Contractor shall install and completely wire all equipment furnished under this Contract by the bidding contractor and their subcontractors in accordance with the Manufacturer's wiring diagrams and as required for a complete operating installation. Contractor shall verify and coordinate electrical characteristics and requirements of (FBO) equipment prior to ordering related materials and equipment or rough-in of conduit and wiring to avoid conflicts.

3.5 RECORD DOCUMENTS

- A. Provide record documents as required by Section 017700 and this section.
- B. Mark Drawings to indicate revisions to conduit size and routing, both exterior and interior, actual equipment locations, distribution and branch electrical circuitry, circuit breaker size and arrangements, contract changes, and concealed control system devices.
- C. Drawings shall be kept at the site for constant update and shall be available to monitor compliance to update requirements.

3.6 OPERATION AND MAINTENANCE DATA

- A. Procedures and requirements for preparation and submittal of maintenance manuals shall be done as required by Section 017823.
- B. In addition to the information required by Division 1, include other information requested by individual specification sections for instructions on the operation and maintenance of equipment.

3.7 WARRANTIES

- A. Follow submittal procedures of Division 1, this specification section, and other individual electrical product system specifications, for all warranties of equipment, devices, labor, and systems.
- B. Compile and assemble the warranties as required by Sections 017700 and 017823.
- C. Provide complete warranty information, for each product or equipment item, to include date of beginning of warranty or bond; duration of warranty or bond; and names, addresses, and telephone numbers and procedures for filing a claim and obtaining warranty services.
- D. No system or item shall be warranted for less than 1 year. Provide spares for any item anticipated to need replacement during that year.

3.8 CLEANING

- A. General requirements for final cleaning shall be done as required by Sections 017419 and 017700.

3.9 TESTING

- A. Provide testing and documented results as required by each specification section or applicable codes, laws, and ordinances.

- B. Provide testing and documented results as required or recommended by manufacturer(s) for certification or warranty.

END OF SECTION 260500

SECTION 260519 - WIRES & CABLES

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. Contractor shall provide:

- a. Wire required for connection of new and reconnection of existing electrical circuits.
- b. Wire/cable required for connection of new or reconnection of existing devices to remain or be reinstalled including electrical devices where conductors have been removed or damaged during demolition or new construction.
- c. Wire required for connection or reconnection of both motorized and non- motorized equipment requiring power - new and existing.

1.2 RELATED WORK

A. Specified elsewhere:

1. 260500 - Basic Electrical Requirements.
2. 260526 - Grounding & Bonding.
3. 260533 - Conduits, Raceways & Fittings.
4. 260534 - Device & Junction Boxes.
5. 260553 - Electrical Identification.
6. 262726 - Wiring Devices.

1.3 REFERENCES: ANSI/NFPA 70 - National Electrical Code.

1.4 DESIGN REQUIREMENTS

- A. All wiring and cables shall be sized (minimum) per ANSI/NFPA 70 - National Electrical Code.
- B. Unless specifically noted otherwise, all conductors shall be copper.
- C. All insulations shall be designed to meet the requirements of NEC for the planned application.
- D. All wires and cables installed as part of this project, shall be in conduit/raceway.

1.5 SUBMITTALS FOR REVIEW - See Section 013300

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by NRTL as suitable for purpose specified and shown.

1.7 PROJECT CONDITIONS

- A. Wire and cable routing shown on Drawings is diagrammatic. Route wire and cable as required to meet Project Conditions.
- B. Include wire and cable lengths for required rises and drops in elevation.

1.8 COORDINATION

- A. Coordinate Work under provisions of Section 260500.
- B. Determine required separation between cable and other work.
- C. Determine cable routing to avoid interference with other work.

PART 2 - PRODUCTS

2.1 BUILDING AND COMMUNICATION WIRE AND CABLE

- A. Description: Single conductor insulated wire.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation: ANSI/NFPA 70, Type THHN/THWN.
- E. Use solid or stranded copper conductor for feeders and branch circuits 10 AWG and smaller. Use stranded copper conductors for connections to equipment subject to vibration or movement.
- F. See Drawings for wire sizes.
- G. Where systems are being extended or otherwise modified, provide conductors and cables matching the existing system. If equipment manufacturer(s) conductor recommendations/requirements differ from type or specified size, adjust as necessary to meet manufacturers' requirements.
- H. Manufacturers
 - 1. American Insulated Corp.; Pawtucket, RI.
 - 2. AMP, Inc. ; Harrisburg, PA.
 - 3. Anixter Bros., Inc.; Skokie, IL.
 - 4. Belden Wire and Cable Co.; Richmond, IN.
 - 5. CommScope; Elm City, NC.
 - 6. Essex Group, Inc.; Fort Wayne, IN.
 - 7. Southwire Co.; Carrollton, GA.
 - 8. Triangle Wire and Cable, Inc. ; Lincoln, RI.

2.2 WIRING CONNECTORS

- A. Manufacturers - Spring Wire Connectors:
 - 1. 3M, Construction Markets Department; St. Paul, MN.
 - 2. Ideal Ind., Inc.; Sycamore, IL.
 - 3. Ilsco Div. of Bardes Corp.; Cincinnati, OH.
 - 4. Thomas & Betts; Memphis, TN.
- B. Use suitable cable fittings and connectors.
- C. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise. Conductor ampacity ratings shall be for type THWN (75°C) unless specifically noted otherwise.
- D. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 8 AWG to 16 gauge.

2.3 CABLES NOT ALLOWED

- A. The following types of conductors/cables shall not be used.
 - 1. Armored Cable (AC).
 - 2. Flat Cable Assemblies (FC).

3. Flat Conductor Cable (FCC).
4. Integrated Gas Spacer Cable (IGS).
5. Metal Clad Cable (MC).
6. Mineral-Insulated, Metal-Sheathed Cable (MI).
7. Nonmetallic-Sheathed Cable (NM, NMC, NMS).

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturers instructions.
- B. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- C. Clean conductor surfaces before installing lugs and connectors.
- D. Where existing systems are in place and alterations are being made, match existing type of system wiring with existing or as directed/recommended by equipment/system manufacturer.
- E. Use suitable cable fittings and connectors.
- F. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise. Conductor ampacity ratings shall be for type THWN (75°C/167°F ambient temperature) unless specifically noted otherwise.

3.2 FIELD QUALITY CONTROL & TESTING

- A. Inspect wire and cable for physical damage and proper connection.
- B. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- C. Test continuity of each branch circuit conductor prior to energizing.

END OF SECTION 260519

SECTION 260526 - GROUNDING & BONDING

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid:
 - 1. Contractor provide:
 - a. Proper grounding and bonding of all electrical devices, equipment, raceways, boxes, and systems as required.

1.2 RELATED WORK

- A. Specified Elsewhere:
 - 1. 260533 - Conduits, Raceways, & Fittings.
 - 2. 260534 - Device & Junction Boxes.

1.3 REFERENCES AND REGULATORY REQUIREMENTS

- A. Electrical Code Compliance: Comply with applicable local electrical code requirements of the authority having jurisdiction, and NEC as applicable to electrical grounding and bonding, pertaining to systems, circuits and equipment.
- B. UL Compliance: Comply with applicable requirements of UL 467, 486A and 869 pertaining to grounding and bonding of systems, circuits and equipment. Provide grounding and bonding products that are UL-listed and labeled for their intended usage.
- C. IEEE Compliance: Comply with applicable requirements and recommended installation practices of IEEE Standards 80, 81, 141 and 142 pertaining to grounding and bonding of systems, circuits and equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide one of the following (for each type of grounding and bonding product):
 - 1. Burndy Corporation.
 - 2. Cadweld Div.; Erico Products Inc.
 - 3. Harger; Grayslake, IL.
 - 3. Ideal Industries, Inc.
 - 4. Joslyn Corporation.
 - 5. Okonite Company.
 - 6. OZ Gedney Div.; General Signal Corporation.
 - 7. Thomas and Betts Corporation.

2.2 GROUNDING SYSTEMS

- A. Materials and Components:

General: Except as otherwise indicated, provide electrical grounding and bonding systems required; with assembly of materials, including, but not limited to, cables/wires, connectors, solderless lug terminals, grounding electrodes and plate electrodes, bonding jumper braid, and additional accessories needed for a complete installation. Where more than one type component meets indicated requirements, selection is Installer's option. Where materials or components are not indicated, provide products that comply with NEC and IEEE requirements and with established industry standards for those applications.

- B. Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding system connections that match power supply wiring materials and are sized according to NEC.
 - 1. Provide minimum 12 AWG ground wire for all general power or lighting circuits any of the following conditions exist:
 - a. Circuit is not utilizing raceway ground path
 - b. Set screw conduit fittings are used on existing conduit
 - c. A ground wire is indicated without size indication.
 - 2. Provide stranded ground wire for all flexible conduit connections.
- C. Electrical Grounding Connection Accessories: Provide electrical insulating tape, heat-shrinkable insulating tubing, welding materials, bonding straps, as recommended by accessories manufacturers for type service indicated.
- D. Provide grounding of electrical equipment, devices, and equipment furnished by others (FBO) with electrical connections per NEC.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install electrical grounding and bonding systems as required or indicated, in accordance with manufacturer's instructions and applicable portions of NEC and in accordance with recognized industry practices to ensure that products comply with requirements.
- B. Coordinate with other electrical work as necessary to interface installation of electrical grounding and bonding system with other work.
- C. Connect together system neutral, service equipment enclosures, exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables.
- D. Tighten grounding and bonding connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque specification values for connectors and bolts. Where manufacturer's torque requirements are not indicated, tighten connections to comply with tightening torque values specified in UL 486A to assure permanent and effective grounding.
- E. Route grounding connections and conductors to ground and protective devices in shortest and straightest paths possible to minimize transient voltage rises.
- F. Install clamp-on connectors on clean metal contact surfaces, to ensure electrical conductivity and circuit integrity.

END OF SECTION 260526

SECTION 260533 - CONDUITS, RACEWAYS, & FITTINGS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Contractor Provide:

1. Conduits and raceways for all electrical wiring required and/or indicated on drawings or in specifications for:
 - a. Electrical Power.
 - b. Connections to equipment furnished by other trades.

1.2 RELATED WORK

A. Specified Elsewhere:

1. Division 26 for HVAC.
2. 260500 - Basic Electrical Requirements.
3. 260519 - Wires & Cables.
4. 260526 - Grounding & Bonding.
5. 260534 - Device, Junction, & Pull Boxes.
6. 260553 - Electrical Identification.

1.3 REFERENCES

- A. NFPA 70 - National Electrical Code.
- B. ANSI C80.1 - Rigid Metal Conduit, Zinc Coated (RMC).
- C. UL 1660 - Liquidtight flexible metal conduit (LFMC).

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70 (NEC).
- B. Furnish products listed, classified, and labeled by Underwriter's Laboratories, Inc. or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and/or shown.

1.5 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on drawings.
- B. Conduit and raceway routing shown on drawings is diagrammatic. Route raceways, as required, to account for project conditions. Include raceway lengths and fittings for required rises and drops in elevation, and avoidance of obstructions.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products as required by Division 1 and under provisions of Section 260500.
- B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Provide conduit of 3/4" minimum size unless required or noted otherwise.

- B. Flexible conduit whips may be 3/4" minimum size for boilers, and pumps equipment, but shall not be longer than 24". They shall be 1/2" size for miscellaneous switches.
- C. Provide liquid tight flexible conduit for connections to equipment and pipe mounted devices.
- D. Where types, sizes, or grades are not indicated in these specifications or on drawings, provide proper selection determined by Installer to fulfill wiring requirements, and comply with applicable portions of NEC for raceways.

2.2 RIGID AND INTERMEDIATE METAL CONDUIT (RMC, IMC):

- A. Manufacturers:
 - 1. Allied Tube & Conduit Corp.; Harvey, IL.
 - 2. LTV Steel Co.; Cleveland, OH.
 - 3. Picoma Industries; Waynesboro, PA.
 - 4. Republic Conduit Div. Maverick Tube Corp.; Chesterfield, MO.
 - 5. Western Tube & Conduit Co.; Long Beach, CA.
 - 6. Wheatland Tube Co.; Collingswood, NJ.
- B. Rigid Metal Conduit (RMC): ANSI C80.1, galvanized steel or aluminum.
- C. Fittings and Conduit Bodies: ANSI/NEMA FB 1; material to match conduit. Fittings shall be threaded type.
- D. Rigid or Intermediate metal conduit (RMC or IMC), as defined in NEC Articles 342 and 344, shall be used for all electrical conductors in locations where EMT conduit would be subject to physical damage due to anticipated surrounding activities and processes, including during construction.

2.3 LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC):

- A. Manufacturers:
 - 1. Alflex, Commonwealth Industries, Inc.; Long Beach, CA.
 - 2. American Flexible Conduit; Div. Tyco International; New Bedford, MA.
 - 3. Anamet; Colborne, Ontario, Canada.
 - 4. Electri-Flex; Roselle, IL.
- B. Interlocked steel construction.
- C. Oil proof, sunlight resistant PVC jacket.
- D. Fittings: ANSI/NEMA FB 1.
- E. Liquidtight flexible metal conduit (LFMC), as defined in NEC Article 350, shall be used for the final 24" prior to connections to all motorized equipment or equipment subject to similar vibration, and exposed to weather, moisture, or oil/grease splatter. Support and secure as required by NEC Article 350.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install conduit/raceways in accordance with NECA "Standards of Installation" and NEC.
- B. Arrange supports to prevent misalignment during wire installation.

- C. Support conduit using coated steel or malleable iron straps.
- D. Fasten conduit supports to building structure and surfaces. Alternate single-hole conduit straps. Plastic anchors or inserts shall not be used to secure conduit supports.
- E. Do not support conduit with wire. Remove wires used for temporary support.
- F. Arrange conduit to maintain headroom and present neat appearance. Route all conduit and raceways parallel and perpendicular to structure.
- G. Cut conduit square using a saw or pipe cutter; de-burr and ream cut ends.
- H. Bring conduit to shoulder of fittings; fasten securely.
- I. Use fittings to fasten conduit and raceways to boxes.
- J. Install no more than the equivalent of three 90° bends between boxes. Provide junction and pull boxes as required. Use conduit bodies to make sharp changes in direction, as around sharp corners.
- K. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- L. Use only conduit specified as allowed by The National Electric Code. If it is not specified above do not use it.
- M. Verify sizes, routing, and termination locations of conduit prior to rough-in.
- N. Any penetration through walls shall be sealed airtight.
- O. All conduit terminations to a box or enclosure shall be secured with locknuts and bushings, per NEC.

END OF SECTION 260533

SECTION 260534 - DEVICE & JUNCTION BOXES

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Contractor Provide:
 - 1. Boxes required as noted and as required for changes to new motors.

1.2 RELATED WORK

- A. Specified Elsewhere:
 - 1. 260500 - Basic Electrical Requirements.
 - 2. 260519 - Wire & Cable.
 - 3. 260526 - Grounding & Bonding.
 - 4. 260533 - Conduits, Raceways, & Fittings.
 - 5. 260553 - Electrical Identification.
 - 6. 262726 - Wiring Devices.

1.3 REFERENCES

- A. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- B. ANSI/NFPA 70 - National Electrical Code.

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.5 PROJECT CONDITIONS

- A. Verify locations of boxes prior to rough-in.
- B. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.
- C. All interior device and junction boxes shall be NEMA 1 classification unless identified otherwise.

1.6 SUBMITTALS FOR REVIEW

- A. See Division 1 for procedures for submittals.
- B. Provide product information on all device, junction, and pull boxes with any dimension larger than 4".

PART 2 - PRODUCTS

2.1 PULL AND JUNCTION BOXES

- A. Cast Metal Boxes NEMA FB1 ferrous alloy or aluminum, Type FD with gasketed cover.

B. Manufacturers:

1. Appleton Electric Co.; Chicago, IL.
2. Bell Steel Co.; Pensacola, FL.
3. Hoffman Engineering Co.; Anoka, MN.
4. Steel City (Thomas & Betts); Memphis, TN.
5. E.M.Wiegmann & Co.; Freeburg, IL.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C. Align all boxes for switches and similar devices at uniform height.
- D. Coordinate box space requirements with existing construction.

3.2 TESTING

- A. Verify that boxes are properly grounded at completion of installation with Ohm meter. Entire ground path must meet requirements of specification section 260526.

END OF SECTION 260534

SECTION 260553 - ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid: Contractor provide:
 - 1. Identification of wiring for branch circuits.

1.2 RELATED WORK

- A. Specified Elsewhere:
 - 1. 260500 - Basic Electrical Requirements.
 - 2. 260519 - Wires & Cables.
 - 3. 260526 - Grounding & Bonding.
 - 4. 260533 - Conduits & Raceways.
 - 5. 262726 - Wiring Devices & Covers.

1.3 REFERENCES

- A. ANSI Std. A13.1.
- B. NEMA WC 1 & WC 2.
- C. NEC; NFPA 70 - National Electrical Code.
- D. UL Std. 969.

1.4 SUBMITTALS FOR REVIEW

- A. Division 1 - Submittals: Procedures for submittals.
 - 1. Product Data: Provide manufacturer's catalog information showing each different type of identification material to be used.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Provide Products listed and classified by a NRTL as suitable for the purpose specified and indicated.
- C. NEMA Std. Pub. No. WC 1 and WC 2: Comply with standards.
- D. Comply with ANSI Std. A13.1.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide electrical identification products of one of the following (for each type of marker):
 - 1. Alstate Sign & Plaque Corp.
 - 2. Brady, W.H. Co.
 - 3. Calpico Inc.
 - 4. Cole-Flex Corp.
 - 5. Direct Safety Co.
 - 6. EMED Co., Inc.
 - 7. Griffolyn Co.
 - 8. Ideal Industries, Inc.
 - 9. LEM Products, Inc.

10. Markal Co.
11. National Band and Tag Co.
12. Panduit Corp.
13. Seton Identification Products
14. 3M

2.2 WIRE MARKERS

- A. Provide tape type wire markers for wire identification.
 1. Provide identification at each end and at all pull or junction boxes.
 3. Branch circuit conductors shall be identified with adhesive tape numbers at branch panel gutters.
 4. Provide labeling in compliance with NEC.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify circuit numbers and feeder sources prior to labeling.

- 3.2 PREPARATION: Clean all surfaces prior to application of tags and labels.

END OF SECTION 260553

ATTACHMENT A.6

INSURANCE REQUIREMENTS
ROUTINE CONSTRUCTION, MAINTENANCE AND REPAIR PROJECTS

Contractor shall obtain insurance of the types and in the amounts listed below.

A. COMMERCIAL GENERAL AND UMBRELLA LIABILITY INSURANCE

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/location.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 10 93, or a substitute form providing equivalent coverage, and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

Owner shall be included as an insured under the CGL, using ISO additional insured endorsement CG 20 10 or a substitute providing equivalent coverage, and under the commercial umbrella, if any. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance afforded to Owner.

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

B. CONTINUING COMPLETED OPERATIONS LIABILITY INSURANCE

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each occurrence for at least one (1) year following substantial completion of the work.

Continuing CGL insurance shall be written on ISO occurrence form CG 00 01 10 93, or substitute form providing equivalent coverage, and shall, at minimum, cover liability arising from products-completed operations and liability assumed under an insured contract.

Continuing CGL insurance shall have a products-completed operations aggregate of at least two times its each occurrence limit.

Continuing commercial umbrella coverage, if any, shall include liability coverage for damage to the insured's completed work equivalent to that provided under ISO form CG 00 01.

C. BUSINESS AUTO AND UMBRELLA LIABILITY INSURANCE

Contractor shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each accident. Such insurance shall cover liability arising out of any auto including owned, hired and non-owned autos.

Business auto insurance shall be written on Insurance Services Office (ISO) form CA 00 01, CA 00 05, CA 00 12, CA 00 20, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01.

D. WORKERS COMPENSATION INSURANCE

Contractor shall maintain workers compensation as required by statute and employers liability insurance. The commercial umbrella and/or employers liability limits shall not be less than \$1,000,000 each accident for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease.

If Owner has not been included as an insured under the CGL using ISO additional insured endorsement CG 20 10 under the Commercial General and Umbrella Liability Insurance required in this Contract, the Contractor waives all rights against Owner and its officers, officials, employees, volunteers and agents for recovery of damages arising out of or incident to the Contractor's work.

E. GENERAL INSURANCE PROVISIONS

- 1. Evidence of Insurance.** Prior to beginning work, Contractor shall furnish Owner with a certificate(s) of insurance and applicable policy endorsement(s), executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth above.

All certificates shall provide for 30 days written notice to Owner prior to the cancellation or material change of any insurance referred to therein. Written notice to Owner shall be by certified mail, return receipt requested.

Failure of Owner to demand such certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Owner shall have the right, but not the obligation, of prohibiting Contractor or any subcontractor from entering the project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner.

Failure to maintain the required insurance may result in termination of this Contract at Owner's option.

With respect to insurance maintained after final payment in compliance with a requirement above, an additional certificate(s) evidencing such coverage shall be promptly provided to Owner whenever requested.

Contractor shall provide certified copies of all insurance policies required above within 10 days of Owner's written request for said copies.

- 2. Acceptability of Insurers.** For insurance companies which obtain a rating from A.M. Best, that rating should be no less than A VII using the most recent edition of the A.M. Best's Key Rating Guide. If the Best's rating is less than A VII or a Best's rating is not obtained, the Owner has the right to reject insurance written by an insurer it deems unacceptable.
- 3. Cross-Liability Coverage.** If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.
- 4. Deductibles and Self-Insured Retentions.** Any deductibles or self-insured retentions must be declared to the Owner. At the option of the Owner, the Contractor may be asked to eliminate such deductibles or self insured retentions as respects the Owner, its officers, officials, employees, volunteers and agents or required to procure a bond guaranteeing payment of losses and other related costs including but not limited to investigations, claim administration and defense expenses.
- 5. Subcontractors.** Contractor shall cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified above. When requested by the Owner, Contractor shall furnish copies of certificates of insurance evidencing coverage for each subcontractor.

F. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their officers, officials, employees, volunteers and agents from and against all claims, damages, losses and expenses including but not limited legal fees (attorney's and paralegal's fees and court costs), arising

out of or resulting from the performance of the Contractor's work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, other than the work itself, including the loss of use resulting therefrom and (2) is caused in whole or in part by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except to the extent it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph. Contractor shall similarly protect, indemnify and hold and save harmless the Owner, its officers, officials, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses including but not limited to legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of, any provision of the Contract.

SAMPLE LIABILITY INSURANCE ENDORSEMENT

The following spaces preceded by an asterisk (*) need not be completed if this endorsement and policy have the same inception date.

ATTACHED TO AND FORMING PART OF POLICY NUMBER	*EFFECTIVE DATE OF ENDORSEMENT	*ISSUED TO
--	-----------------------------------	------------

This endorsement changes the policy. Please read it carefully.

AUTOMATIC ADDITIONAL INSURED

The following provision is added to (SECTION II), Who Is An Insured.

5. Any entity you are required in a written contract (hereinafter called Additional Insured) to name as an insured is an insured but only with respect to liability arising out of your premises, "your work" for the Additional Insured, or acts or omissions of the Additional Insured in connection with the general supervision of "your work" to the extent set forth below.
- a. The Limits of Insurance provided on behalf of the Additional Insured are not greater than those required by such contract.
 - b. The coverage provided to the Additional Insured(s) is not greater than that customarily provided by the policy forms specified in and required by the contract.
 - c. All insuring agreements, exclusions and conditions of this policy apply.
 - d. In no event shall the coverages or Limits of Insurance in this Coverage Form be increased by such contract.

Except when required otherwise by contract, this insurance does not apply to:

- 1) "Bodily injury" or "property damage" occurring after
 - a) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the Additional Insured(s) at the site of the covered operations has been completed; or
 - b) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.
- 2) "Bodily injury" or "property damage" arising out of any act or omission of the Additional Insured(s) or any of their employees, other than the general supervision of work performed for the Additional Insured(s) by you.
- 3) "Property damage" to
 - a) Property owned, used or occupied by or rented to the Additional Insured(s);
 - b) Property in the care, custody or control of the Additional Insured(s) or over which the Additional Insured(s) is for any purpose exercising physical control; or

- c) “Your work” for the Additional Insured(s).

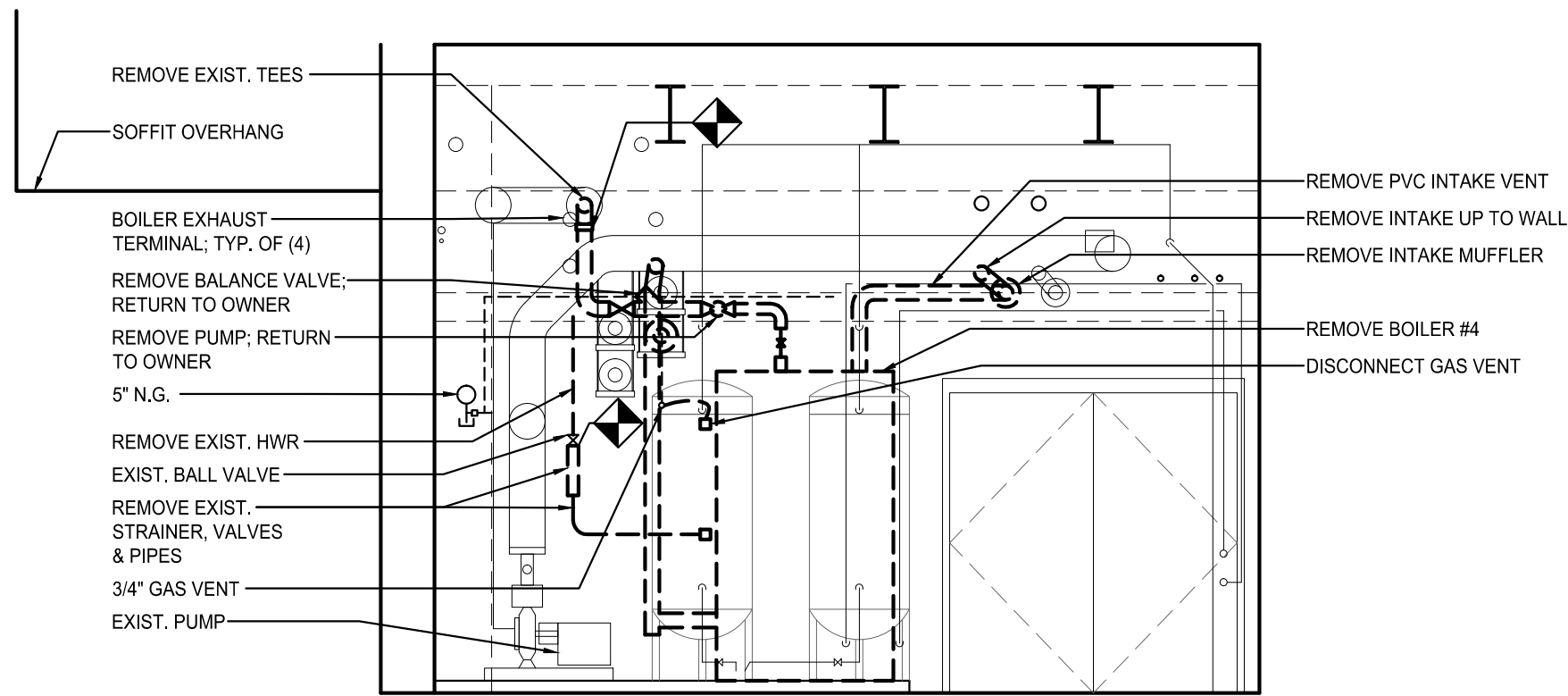
With respect to Additional Insureds who are architects, engineers or surveyors, this insurance does not apply “bodily injury”, “property damage”, “personal injury” or “advertising injury” arising out of the rendering of or the failure to render any professional services by or for you, including:

- a) The preparing, approving, or failing to prepare or approve maps, drawings, opinions, reports, surveys, change orders, designs or specifications; and
- b) Supervisory, inspection or engineering services.

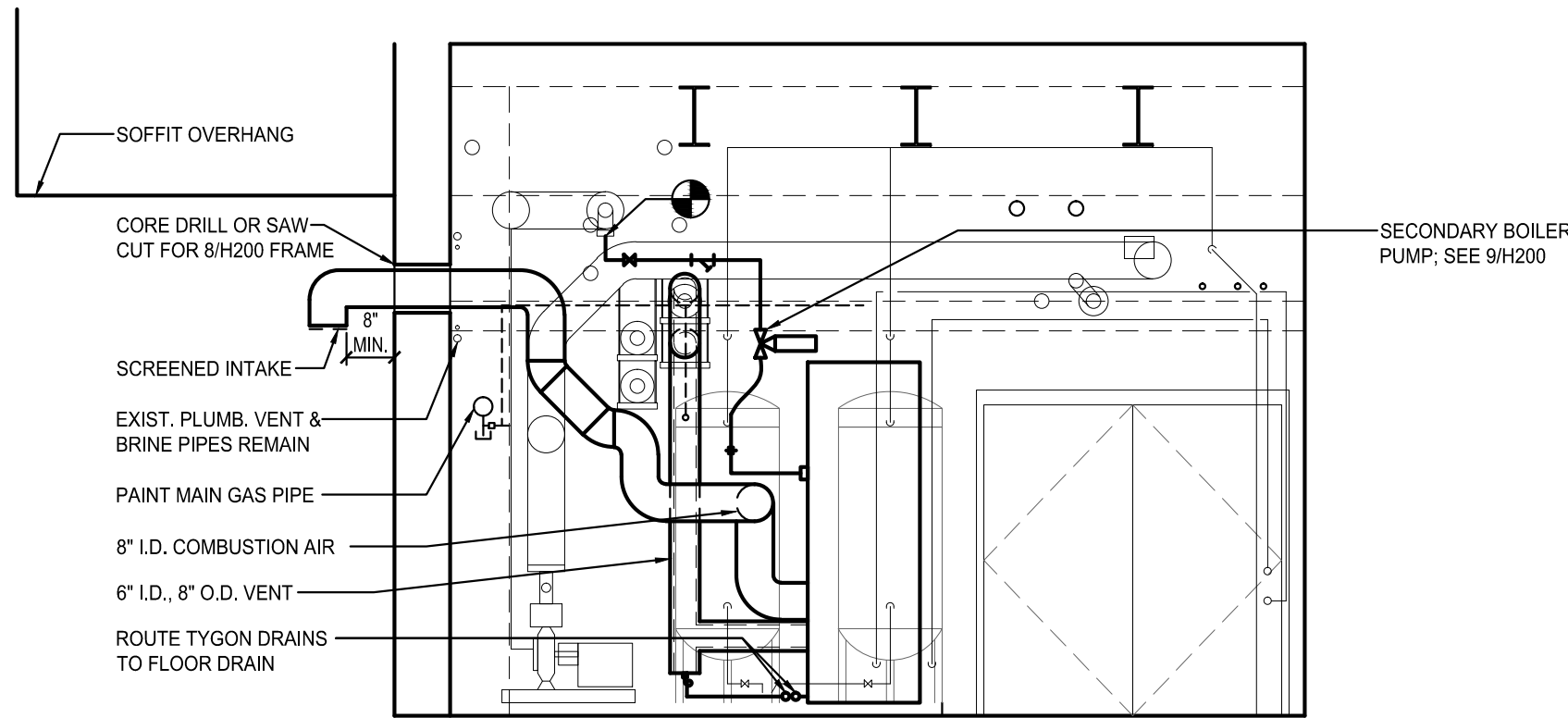
Any coverages provided hereunder shall be excess over any other valid and collectible insurance available to the Additional Insured(s) whether primary, excess, contingent or on any other basis unless a contract specifically requires that this insurance be primary or you request that it apply on a primary basis.

No person or organization is an Additional Insured with respect to the conduct of any current or past partnership or joint venture that is not shown as a Named Insured in the Declarations.

END OF ATTACHMENT A.6

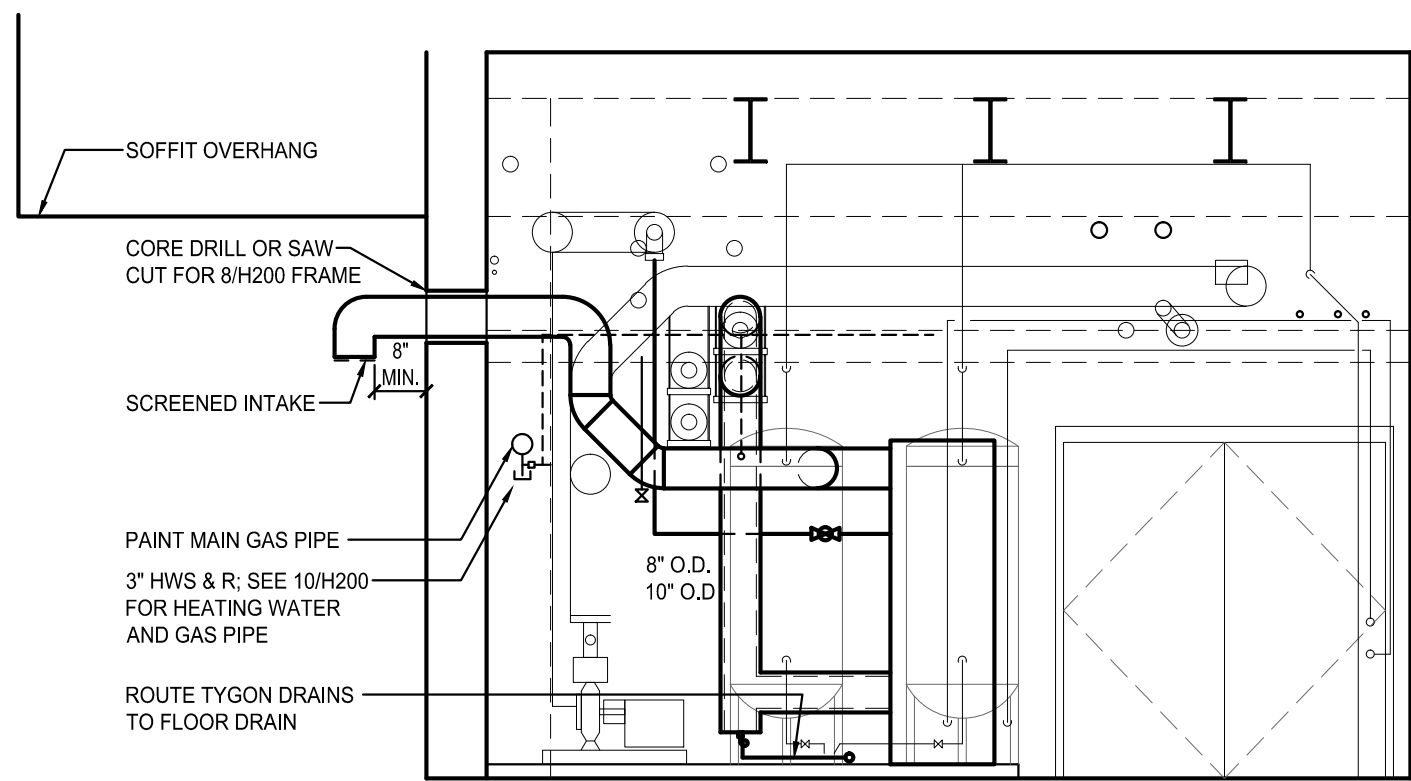


1 Section/Elevation Looking South
H200 scale: 1/4" = 1'-0"



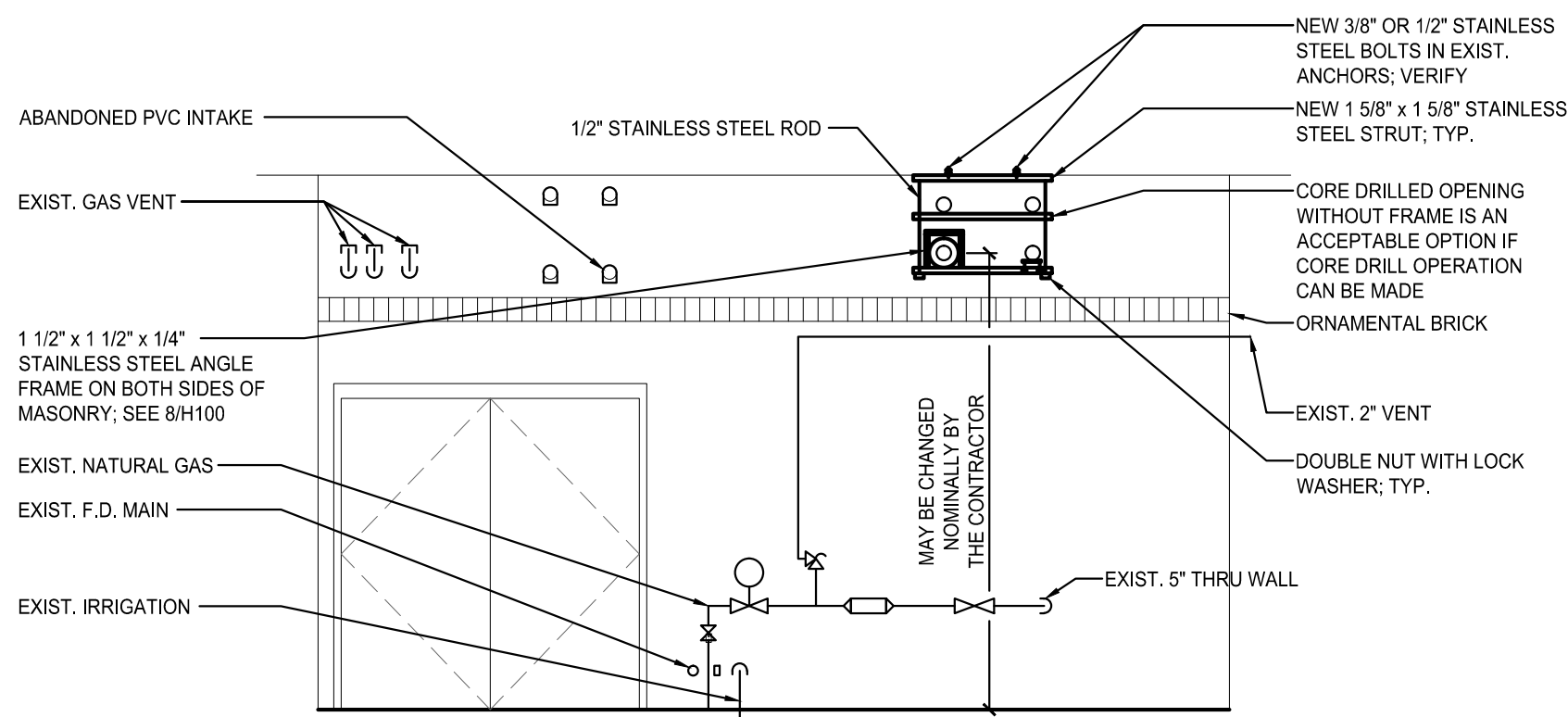
2 Revised Section/Elevation Looking South
H200 scale: 1/4" = 1'-0"

THERMAL SOLUTIONS BOILER

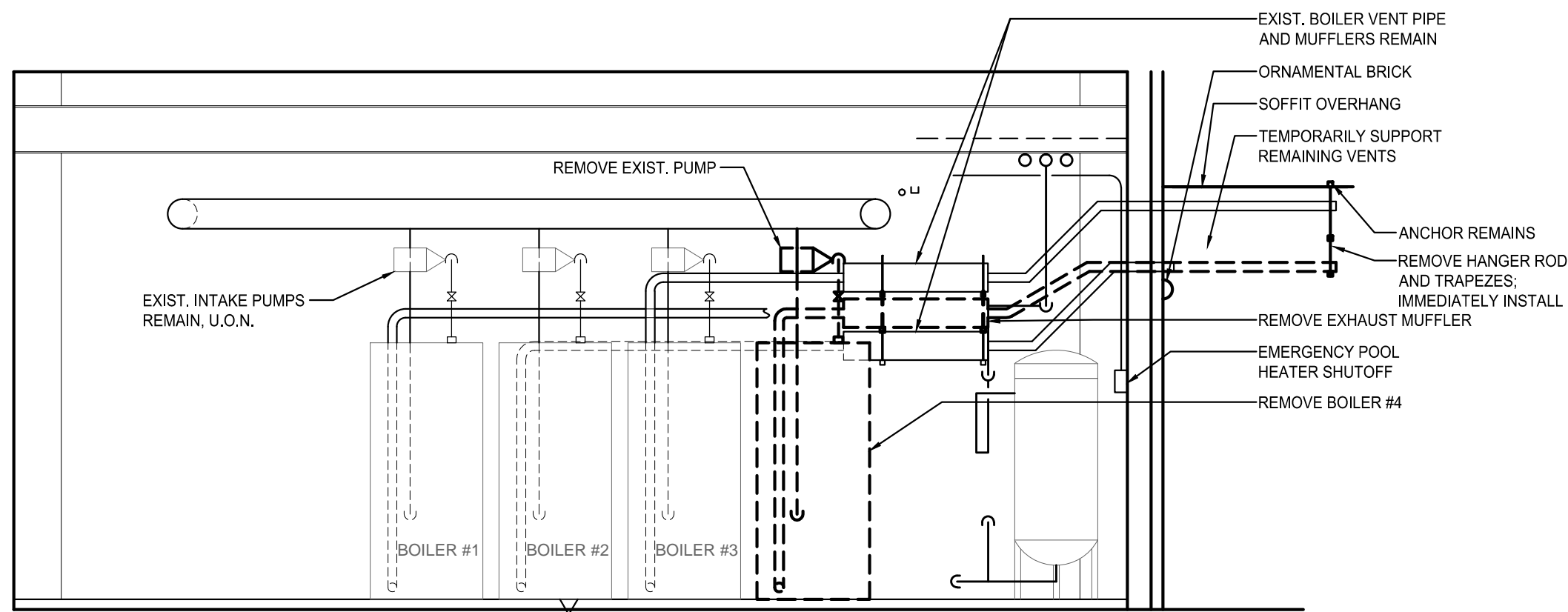


3 Revised Section/Elevation Looking South
H200 scale: 1/4" = 1'-0"

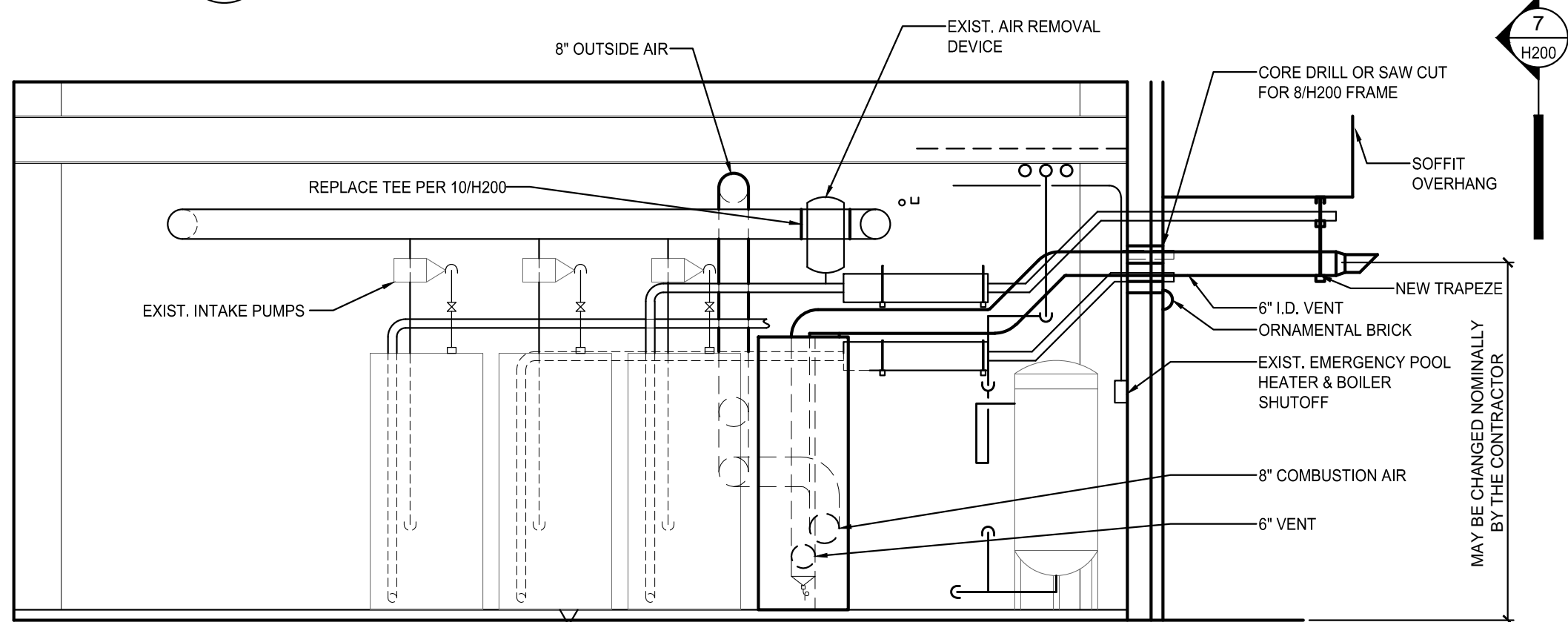
RAY PAK BOILER



7 Revised Section/Elevation Looking North
H200 scale: 1/4" = 1'-0"

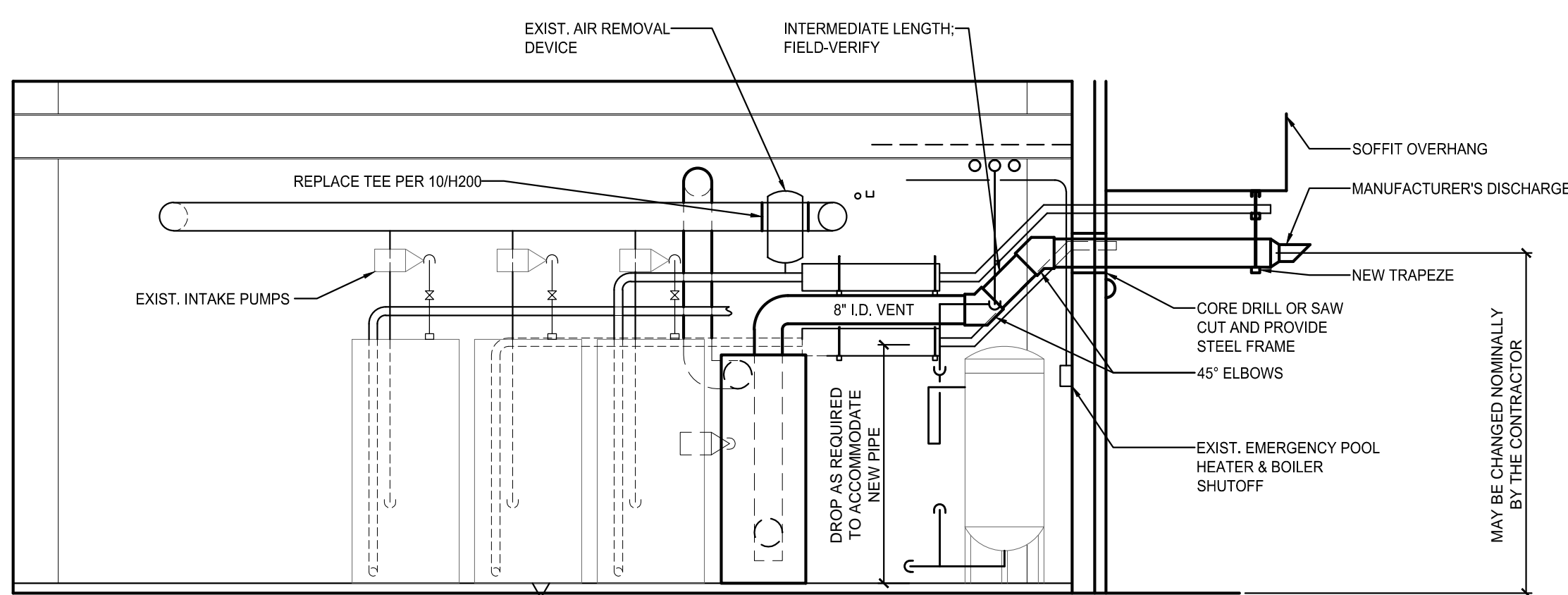


4 Section/Elevation Looking East
H200 scale: 1/4" = 1'-0"



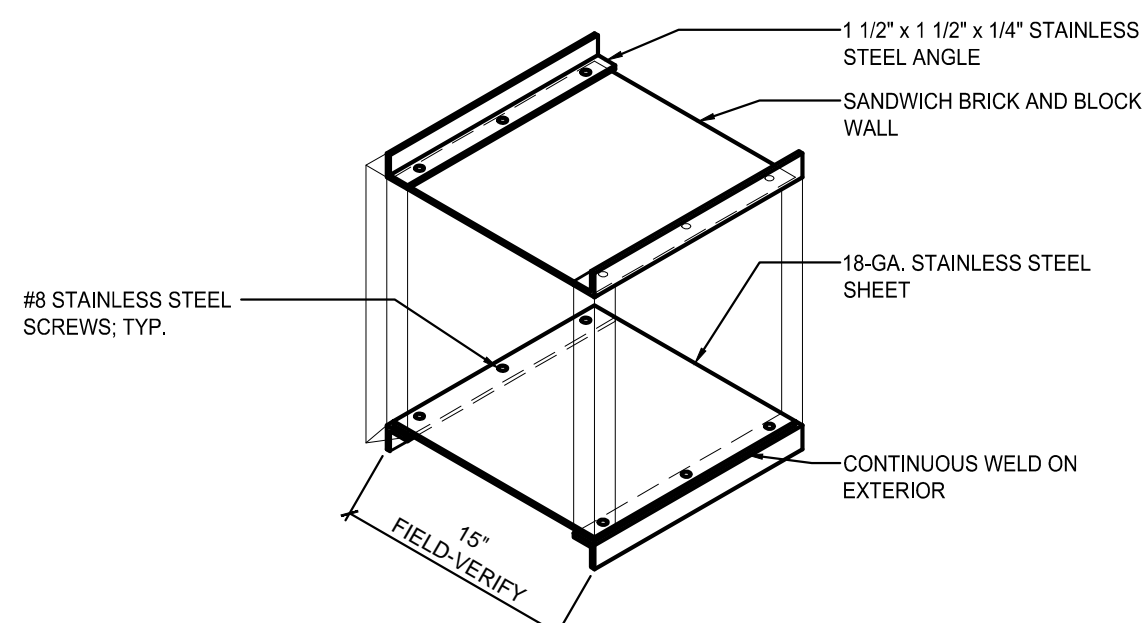
5 Revised Section/Elevation Looking East
H200 scale: 1/4" = 1'-0"

THERMAL SOLUTIONS BOILER

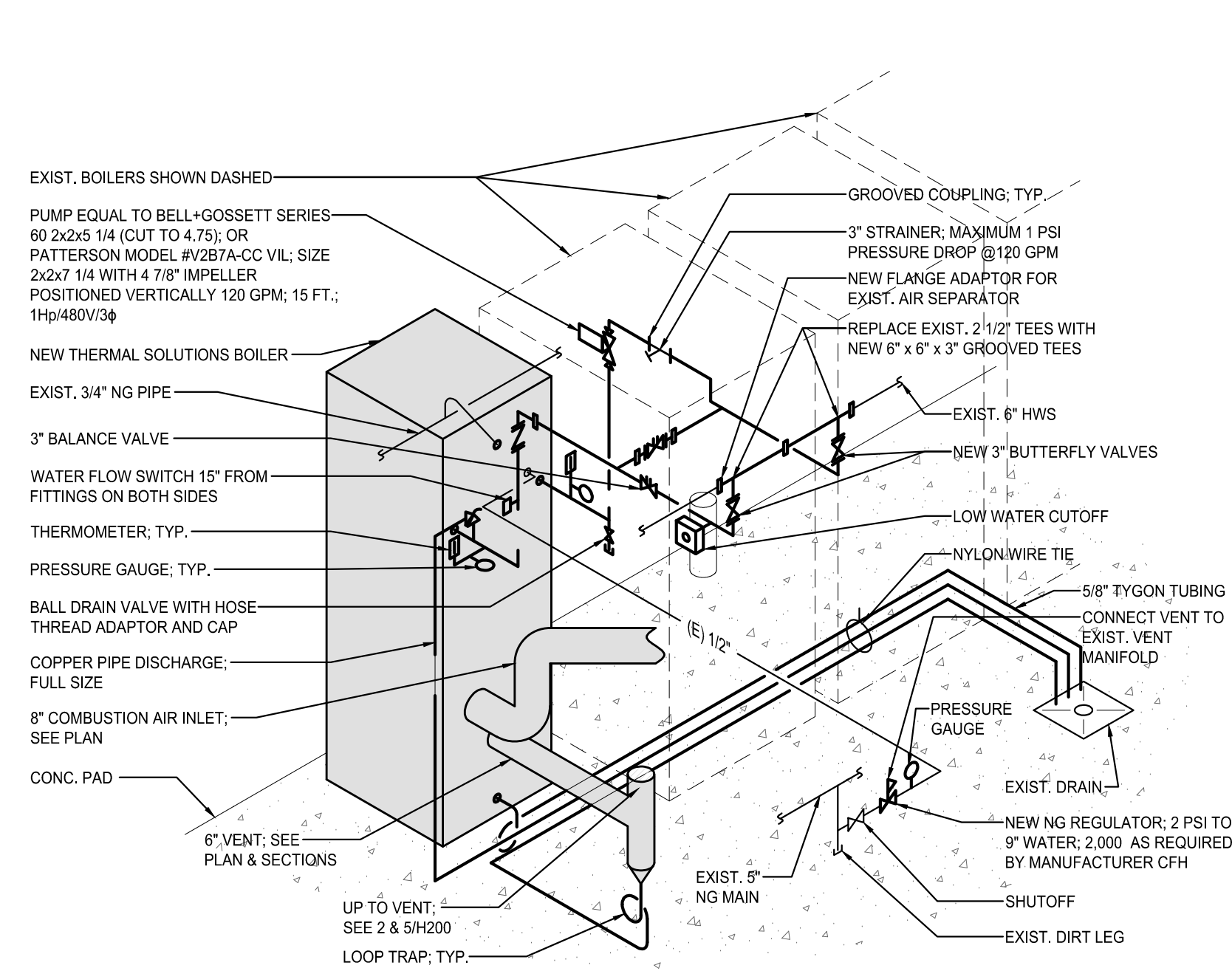


6 Revised Section/Elevation Looking East
H200 scale: 1/4" = 1'-0"

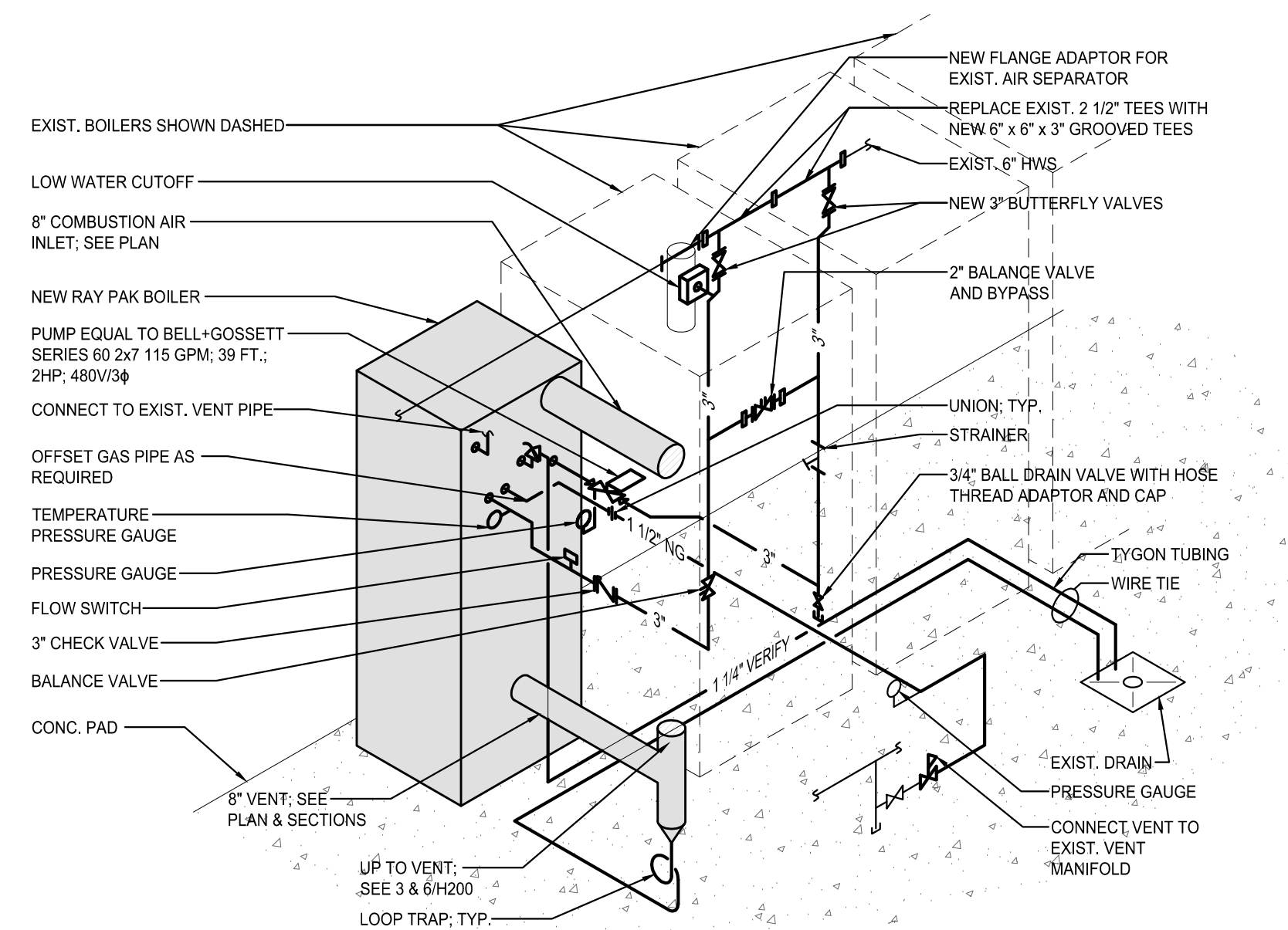
RAY PAK BOILER



8 Wall Penetration Support Detail
H200 not to scale

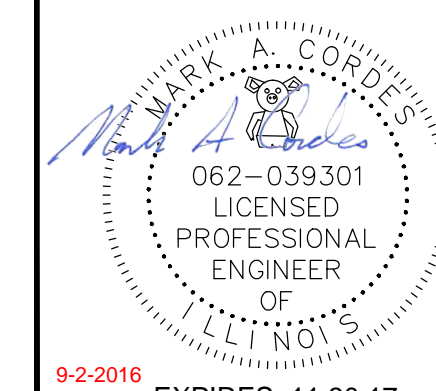


9 Thermal Solutions Boiler Schematic
H200 not to scale

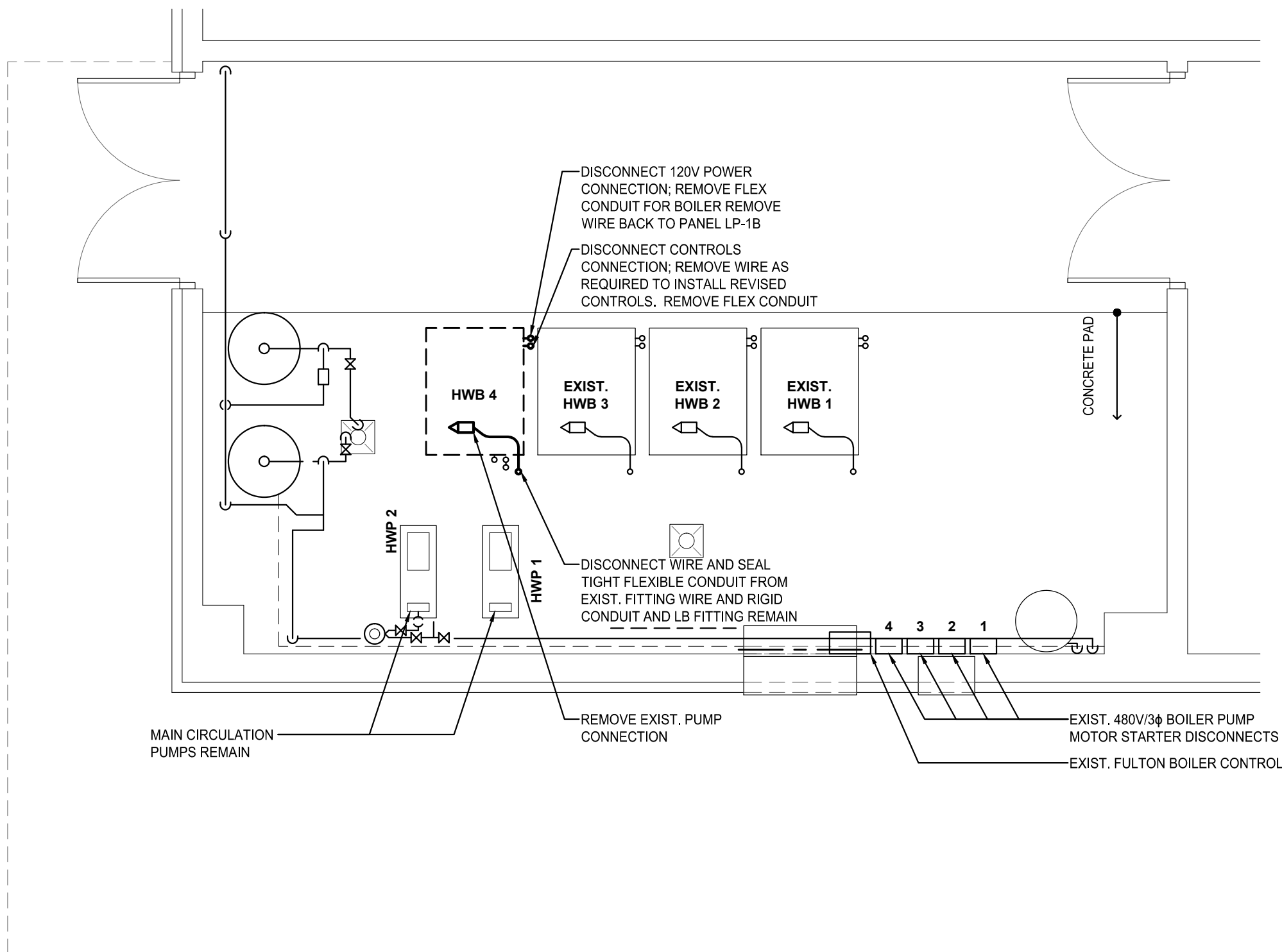


10 Ray Pak Boiler Schematic
H200 not to scale

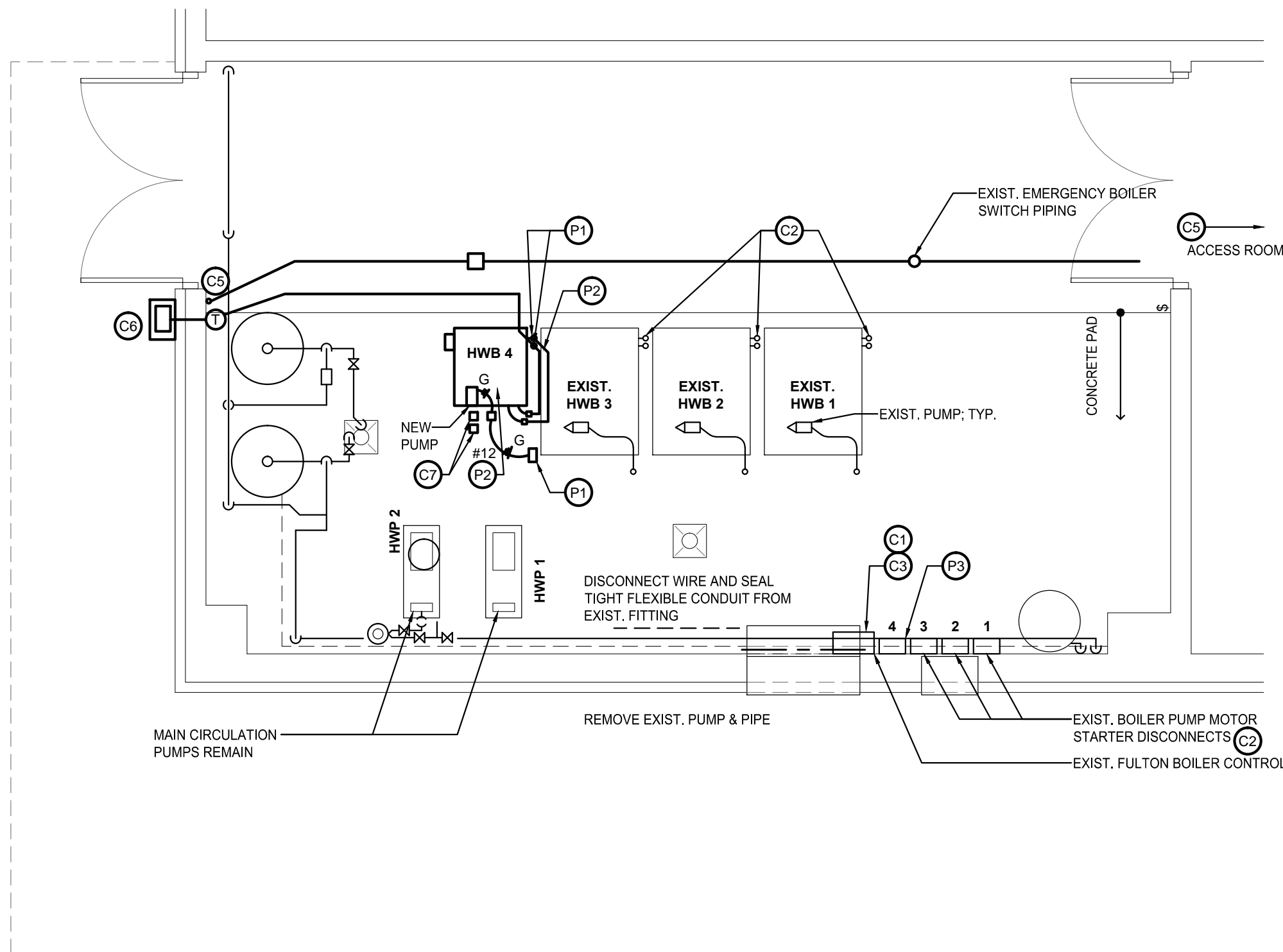
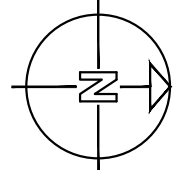
NO.	ISSUE	DATE
1	Bidding Documents	09.20.16



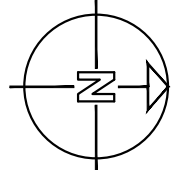
DATE	PROJECT NO.
09.20.16	2015904.03
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BAW	H200
CHECKED	2 OF 2
MAC	
APPROVED	
MAC	



1 Electric Demolition Plan
E100 scale: 1/4" = 1'-0"

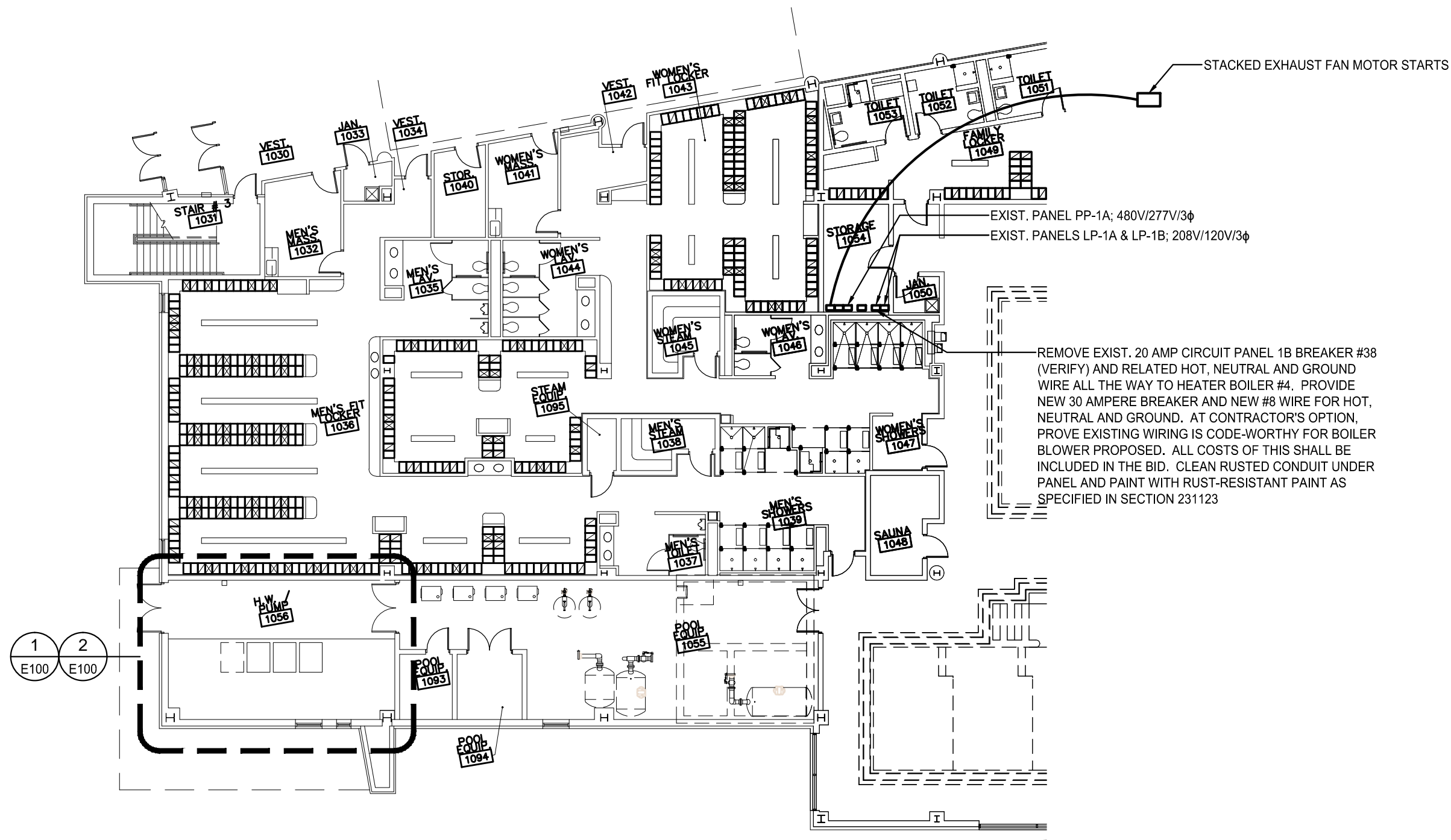


2 Revised Electric Plan
E100 scale: 1/4" = 1'-0"



ELECTRIC POWER CONTRACTOR WORK

- P1 CONNECT 4x2 CAST JUNCTION BOX WITH COVER TO EXIST. LB FITTING OR EXIST. RIGID END. EXTEND EXIST. WIRE INTO THIS JUNCTION BOX.
- P2 EXTEND NEW RIGID CONDUIT FROM NEW JUNCTION BOX TO WITHIN 30" OF MOTOR. COUPLE SEAL TIGHT CONDUIT TO RIGID CONDUIT. EXTEND NEW WIRE WITHIN NEW CONDUIT TO NEW EQUIPMENT CONNECTION. SUPPORT NEW CONDUIT INDEPENDENTLY FROM STRUCTURE.
- P3 REPLACE MOTOR STARTER OVERLOADS IN EXIST. CUTLER HAMMER STARTER DISCONNECT TO ACCOMMODATE NEW PUMP MOTOR.
- P4 REPLACE EXIST. 120V WIRING BACK TO PANEL LRP-1B AS SHOWN ON SHEET. CONNECT TO NEW BOILER USING MANUFACTURER'S DISCONNECT.
- C1 NEW BOILER CONTROL SHALL BE ENERGIZED TO OPERATE BY EXIST. FULTON CONTROLLER. NEW BOILER SHALL BE "FIRST TO ENERGIZE" AND LAST TO DE-ENERGIZE. NEW BOILER'S WATER TEMPERATURE SHALL RESET IN ACCORD TO NEW UNIT MOUNTED BOILER CONTROLLER.
- C2 WITH OWNER'S COOPERATION, CHOOSE ONE OF EXIST. BOILERS TO DISCONNECT AT BOILER AND PUMP. LOCK OUT THAT PUMP DISCONNECT. GIVE OWNER THE KEY. DISCONNECT THE SAME BOILER AT ITS CONNECTION POINT. NUT AND TAPE WIRES. PROVIDE LABEL IN POWER PANEL AND ON BOILER WHICH INDICATES BOILER IS DE-ENERGIZED BUT MAINTAINED FOR FUTURE.
- C3 REUSE EXIST. AS POSSIBLE OR PULL NEW WIRE AS NEEDED TO MAKE CONNECTIONS REQUIRED.
- C4 CONNECT BOILER "PUMP" CONTACTS IN BOILER CONTROL IN SERIES WITH HOLDING COIL OF EXISTING MOTOR STARTER IN STARTER DISCONNECT.
- C5 USE SIGNAL FROM EXIST. POOL HATER AND HEATING BOILER SHUTOFFS TO DE-ENERGIZE NEW BOILER #4. ADD RELAY AS REQUIRED. REWORK OR ALIGNMENT WIRE AND CONDUIT AS REQUIRED. RELIABLE EXIST. SWITCHES AS EMERGENCY SHUTDOWNS ALL BOILERS AND POOL HEATERS. PROVIDE A MIN. 3" x 3" RED PLASTIC PLACARD WITH 1/2"-TALL WHITE LETTERING.
- C6 OUTDOOR AIR SENSOR FURNISHED WITH NEW BOILER UNDER A SUNSHIELD. DRILL MASONRY. MOUNT JUST ABOVE ORNAMENTAL BRICK.
- C7 CONNECT LOW WATER CUTOFF AND FLOW SWITCH TO BOILER CONTROL PANEL.



3 Partial 1st Floor Electrical Power Plan
E100 scale: 1/16" = 1'-0"

EXISTING/DEMOLITION & REVISED ELECTRICAL PLANS

RiverPlex Boiler
Peoria Park District
Peoria, IL 61603

NO.	ISSUE	DATE
1	Bidding Documents	09.20.16

9-2-2016 EXPIRES: 11.30.17

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DRAWN BY	BAW	SHEET	E100
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APPROVED	MAC		1 OF 1