



Dennis Levinson
County Executive

Bidder's Name: _____
(PRINTED)

Address _____
(STREET)

Address _____
(STREET)

Address _____
(CITY, STATE, ZIP CODE)

County of Atlantic

Department of Facilities Management

BID 201719.1

CANALE FIRE TRAINING FACILITY FIRE PUMP REPLACEMENTS EGG HARBOR TOWNSHIP, NEW JERSEY (BID BOND & SURETY REQUIRED)

SPECIAL INSTRUCTIONS TO BIDDERS: THE FOLLOWING FORMS MUST BE COMPLETED AND SIGNED OR BID WILL BE REJECTED.

1. BID SECURITY IS REQUIRED TO BE SUBMITTED WITH THE BID. THE SECURITY MAY BE A CERTIFIED CHECK, CASHIER'S CHECK OR BID BOND.
2. DO NOT FAIL TO PROVIDE CONSENT OF SURETY FROM AUTHORIZED BONDING/INSURANCE COMPANY.
3. DO NOT FAIL TO COMPLETE, SIGN AND NOTARIZE ALL DOCUMENTS AND FORMS REQUIRED HEREIN, INCLUDING (BUT NOT LIMITED TO) THE DISCLOSURE STATEMENT, THE PROPOSAL FORM, SUBCONTRACTOR AFFIDAVIT, PLUMBING CONTRACTOR AFFIDAVIT AND THE CONTRACTOR'S EMPLOYEE BENEFITS AFFIDAVIT SEE THE BID INSTRUCTIONS FOR MORE DETAILS.
4. DO NOT FAIL TO INCLUDE A COPY OF CERTIFICATE FOR PUBLIC WORKS CONTRACTOR REGISTRATION.

GENERAL INSTRUCTIONS:

1. BIDDER'S NAME AND ADDRESS TOGETHER WITH PROPOSAL CATEGORY AND DUE DATE MUST APPEAR ON THE OUTSIDE OF THE BID ENVELOPE CONTAINING THE BID.
2. TOTAL PRICE OF EACH ITEM BID ON MUST BE EXTENDED AND THE GRAND TOTAL OF THE BID MUST BE SHOWN ABOVE SIGNATURE OF BIDDER. SHOULD ANY DISCREPANCY ARISE AS TO BID AMOUNT, UNIT PRICE SHALL PREVAIL.
3. NON-COLLUSION AFFIDAVIT MUST BE SIGNED AND NOTARIZED.
4. ANY QUESTIONS PERTAINING TO THIS SPECIFICATION MUST BE DIRECTED TO THE OFFICE OF BUDGET & PURCHASING, TELEPHONE (609) 343-2267 OR FAX (609) 343-2193.

NOTICE TO BIDDERS

Public Notice is hereby given that **SEALED BIDS** will be received by the Purchasing Agent of the County of Atlantic, New Jersey at 11:00am prevailing time on **April 20, 2017** the Conference Center; 3rd Floor; 1333 Atlantic Avenue; Atlantic City, NJ for:

**BID 201719.1 CANALE FIRE TRAINING FACILITY FIRE PUMP
REPLACEMENTS EGG HARBOR TOWNSHIP, NEW JERSEY
(BID BOND & SURETY REQUIRED)**

Specifications and blank Bid Forms may be obtained online at the following web address <http://bids.aclink.org>

A PRE-BID CONFERENCE SHALL BE HELD ON **APRIL 6, 2017 AT 9:00 AM** AT THE CANALE FIRE TRAINING CENTER ATLANTIC COUNTY 5033 ENGLISH CREEK AVENUE EGG HARBOR TOWNSHIP, NEW JERSEY 08234.

A site visit will follow:

It is highly recommended that all interested parties attend this pre-bid meeting.

Atlantic County will not be held responsible for vendors not receiving general information due to their not attending any pre-bid meetings

PROSPECTIVE BIDDERS SHALL ENSURE THAT ANY QUESTIONS THEY HAVE CONCERNING THIS PROJECT BE BROUGHT UP AT THE PRE-BID CONFERENCE. QUESTIONS PERTAINING TO THE PLANS OR SPECIFICATIONS ASKED AFTER THE PRE-BID MAY OR MAY NOT BE ADDRESSED DEPENDING ON AVAILABLE TIME.

Any questions concerning this specification must be directed to the Office of Budget & Purchasing, telephone (609) 343-2268 or fax (609) 343-2193

Bidders are required to comply with requirements of NJSA 10:5-31 et seq. and N.J.A.C. 17:27

Every bidder must abide by the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150.

The County of Atlantic reserves the right to reject any or all bids

By order of the County Executive of the County of Atlantic

Palma Conover, QPA,
Division of Budget & Purchasing
County of Atlantic, New Jersey

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Bidders Check List

THESE FORMS MUST BE COMPLETED AND SIGNED OR BID WILL BE REJECTED.

Proposal Form

P.F.

Acknowledgement of Receipt of Addenda

A.D.

Disclosure Statement

D.S.

Bid guarantee (bid bond or certified /cashier's check)

B.B.

Certificate from a Surety Company (Consent of Surety)

C.S.

Employee Benefit Affidavit

E.B.

Plumbers Affidavit

P.A.

Subcontractors Affidavit (N.J.S.A. 40A:11-16)

S.A.

Copy of St. Of New Jersey Certificate for Public Works Contractor Registration

THE FOLLOWING ITEMS SHOULD ALSO BE SUBMITTED WITH BID

Non-Collusion

N.C.

Affirmative Action Information

A.A.I.

Disclosure of Investment Activities in IRAN

IRAN

State Of New Jersey Business Registration Certificate

Note: All vendors SHOULD submit a copy of their NJ Business Registration Certificate with their packet. Vendor must submit a copy of their NJ Business Registration Certificate prior to award of any contract.

**COUNTY OF ATLANTIC, NEW JERSEY INVITATION TO BID,
INSTRUCTIONS TO BIDDERS, AND GENERAL CONDITIONS**

I. INVITATION TO BID

Sealed bids will be received by the Purchasing Agent of the County of Atlantic, New Jersey, 1333 Atlantic Avenue, Atlantic City, NJ 08401, at the time and date as specified in NOTICE TO BIDDERS, at which time and place the bids shall be publicly opened and read aloud for the following:

**CANALE FIRE TRAINING FACILITY
FIRE PUMP REPLACEMENTS
5033 ENGLISH CREEK AVENUE
EGG HARBOR TOWNSHIP, NEW JERSEY
(BID BOND & SURETY REQUIRED)**

To be performed in accordance with all of the terms, conditions, specifications and requirements set forth herein (referred to collectively as the "Work").

II. INSTRUCTIONS TO BIDDERS

1. Delivery of BIDS; Deadline for Submission of BIDS

Bid shall be submitted in a clearly marked sealed envelope, plainly marked on the outside as follows: Bidder's Name and Address, Bid Category and/or Project Name, and due date, in accordance with all of the requirements set forth herein.

All bids shall be delivered at time and date as stated on NOTICE TO BIDDERS to:

Atlantic County Division of Budget and Purchasing
Attn: Palma Conover, QPA
Atlantic City, New Jersey 08401

2. Late or Erroneous Bid Delivery

Late bids (i.e., any bid not delivered at the time, date and location specified above) shall be rejected. The County shall not be responsible for late courier delivery or late postal delivery, nor shall postmark dates or overnight dates be considered in honoring bids. The County shall not be responsible for Bidders hand-delivering bids which arrive late or to the wrong location.

3. Use of County Forms

Bids shall be received only on the bidding forms attached to this specification, or a true copy thereof. Bidders shall not alter the forms or use different forms. Failure to use the County's forms or true copies thereof, shall be grounds for rejection of the bid.

4. Addendums and Modifications of the Bid

The County reserves the right to issue Addendums, Modifications, Clarifications and Updates to this bid, and to add or remove materials, quantities, equipment, goods, services and divisions of Work, or parts thereof, or other components of the Work from the bid specifications or Contract Documents, as the County deems necessary to serve the County's needs and interests.

Bidders shall acknowledge receipt of any notice, modifications, revisions or addenda to the advertisement or to these bid documents that may be issued by the County in accordance with an acknowledgement form provided by the County.

5. Signatures

This Bid requires certain documents be provided to the County as required by law. Some of the documents shall **REQUIRE** original signatures at the time of the Bidder's submission of its bid proposal to the County, while other documents shall not. Below is a list of these documents. Refer to the bidders checklist to view the complete list of documents that must be included in the bid.

A. ORIGINAL SIGNATURES **REQUIRED** AT THE TIME OF SUBMISSION OF THE VENDOR'S BID. These documents shall **REQUIRE ORIGINAL SIGNATURES AT THE TIME OF THE BID SUBMISSION BY THE VENDOR TO THE COUNTY. FACSIMILE, COPY OR RUBBER STAMP SIGNATURES WILL NOT BE ACCEPTED AND SHALL BE CAUSE FOR AN AUTOMATIC REJECTION OF THE BIDDER'S PROPOSAL.** Any bid price showing any erasure or alteration must be initialed by the bidder in **INK**.

1. **Proposal Form**
2. **Disclosure Statement**
3. **Bid guarantee (bid bond or certified /cashier's check)**
4. **Certificate from a Surety Company (Consent of Surety)**
5. **Acknowledgement of Receipt of Addenda**
6. **Non-Collusion Affidavit**
7. **Employee Benefits Affidavit**
8. **Subcontractors Affidavit (N.J.S.A. 40A:11-16)**
9. **Plumber Affidavit**

B. ORIGINAL SIGNATURES **NOT REQUIRED** AT THE TIME OF SUBMISSION OF THE VENDOR'S BID PROPOSAL. These documents shall **NOT** require original signatures **at the time of the bid submission** by the Vendor. However, **THESE ORIGINAL DOCUMENTS WITH THE ORIGINAL SIGNATURES** shall be required by the County. This requirement is explained more fully in Section C, below.

1. Non-Collusion Affidavit;
2. Affirmative Action Information
3. Investment Activities in Iran Certification

C. ORIGINAL SIGNATURES REQUIREMENTS CLARIFICATION. In order for the County to prepare and sign a contract with the Vendor who is being recommended for the award of the contract, the County must have the original signatures on **ALL** of the documents listed in Sections A and B above, but at various times. The Proposal Page listed in Section A must have the original signature at the time that the Vendor submits his proposal to the County.

At the time of the submission of the proposal to the County, the items listed in Section B may be copies and do not need to have the original signatures. However, the Vendor must submit the originals of all the items in Section B **WITHIN FIVE (5) BUSINESS DAYS** after the date of the written Notice of the Recommendation of the award by the County to the Vendor. **THERE ARE NO EXCEPTIONS TO THESE RULES; FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL RESULT IN AN AUTOMATIC DISQUALIFICATION OF THE VENDOR**, and the County shall have the right to award the contract to the next lowest responsible vendor. There will be no negotiation of this requirement.

6. Incomplete Submissions; Updates & Addenda

It shall be the responsibility of the bidder to submit bids that are responsive to all bid specifications and forms, including any updates, clarifications or addenda thereto that may be issued by the County prior to the bid submission due date either directly from the Division of Budget and Purchasing or the Atlantic County Bid Portal.

The County shall not be responsible for any erroneous pages or pages missing from the bid documents, if the bidder has obtained the documents from a source other than directly from the County Division of Budget and Purchasing or the Atlantic County Bid Portal, or if such forms are missing or altered due to bidder error, neglect or any other cause.

The County shall not be held responsible if a Bidder fails to receive any updates or addenda to this Bid, due to the failure of the Bidder to secure its bid documents directly from the County Division of Budget and Purchasing or the Atlantic County Bid Portal, or due to bidder error or neglect.

7. Sealed Bid Submissions - No Phone, Fax or Unauthorized Submissions

As this is a Sealed Bid Submission pursuant to N.J.S.A. 52:34-12, Telephone, Facsimile (fax), Telegraph Bids or any other electronic mediums will not be accepted for publicly advertised bid requirements.

8. Pre-bid Meeting

Site visits are recommended, as indicated in the Advertisement for Bid. Site visits can be scheduled by contacting the project manager.

9. Pre-Bid Inquiries

In the event that a Bidder may have any questions regarding this Bid or the Work, all such questions should be submitted in writing to: Fax (609) 343-2193

Atlantic County Division of Budget and Purchasing
Attn: Palma Conover, QPA
1333 Atlantic Avenue, 6th Floor
Atlantic City, New Jersey 08401

Responses will be forwarded to all bidders who have obtained a bid package from the County Office of Budget and Purchasing or from the Atlantic County Bid Portal.

10. No Oral Instructions

Neither the County of Atlantic nor their authorized representatives will be responsible in any way for oral answers unconfirmed in writing to any inquiries regarding the intent or meaning of these specifications. All inquiries shall be submitted and addressed by the County Purchasing Agent, as specified above.

11. Communications with County Staff

No bidder intending to submit a bid, nor any employee of any firm intending to submit a bid, shall contact any County employee for any reason either directly or indirectly related to this Bid except as specified above.

12. Purchasing Agent's Interpretations Are Binding

Should any difference arise between the bidders and the County as to the meaning or intent of these instructions or specifications, the County Purchasing Agent's decision shall be final and conclusive to the fullest extent permitted by law.

13. Consent of Surety

Bidders are required to submit a consent of surety with each Bidder's bid, issued by a company authorized to transact business in the State of New Jersey. The Consent shall state that it will provide the contractor with a bond in a sum equal to the full amount of the bid submitted if the contract is awarded to such bidder, conditioned for the faithful performance of the contract, in strict accordance with the specifications, pursuant to N.J.S.A. 40A:11-22. **Failure to submit a consent of surety with the bid shall result in automatic rejection of such bid.**

14. Bid Bond

All Bids must be accompanied by a Certified Check, Cashier's Check or Bid Bond payable to the order of the "County Treasurer, County of Atlantic" in the sum of not less than Ten (10%) percent of the total amount of the bid, but not in excess of \$20,000.00, pursuant to N.J.S.A. 40A:11-21. Failure to submit a bid bond with the bid shall result in automatic rejection of such bid.

15. Bid Prices

Prices must be stated for all bid items, in numeric form, in accordance with the forms provided by the County. Bidders shall not alter the Bid format provided by the County.

Blank values, or responses which indicate that an item is not included, or subject to conditions or modifications not otherwise stated or permitted by this Bid shall be deemed non-conforming and shall be rejected.

Bid prices shall include all of the materials, goods, work and services to be delivered or performed by the Contractor to perform the Work and shall not be subject to additional charges or expenses unless such additional charges or expenses are explicitly authorized and approved in advance by the County, as set forth herein.

Each component of the bid, whether stated as a lump sum, a unit price, allowance or “as and where directed” quantity, shall include all related costs, including but not limited to profit and overhead associated with each such component of the bid.

All components of the Work assigned to the bidder under the Contract Documents shall be performed at no additional costs to the County and the Bidder shall not seek or impose additional costs or charges for any such component of the Work, unless such charges or costs are explicitly authorized by the Contract Documents.

16. Add and/or Deduct Alternates

In the event that this Bid includes or is amended by the County to include Add and/or Deduct Alternates, all Bidders shall be required to respond to such Add and/or Deduct Alternates in their bid proposals, in accordance with the Proposal forms supplied by the County. Failure to do so shall result in rejection of your bid. Bidders shall not alter the Add and/or Deduct Alternate form provided by the County. Bidders shall fully complete and execute the form provided by the County in accordance with all instructions applicable to bid submissions as stated herein. The County reserves the right, in its sole judgment and discretion, to award or reject all Add and/or Deduct Alternates, or any combination thereof.

17. Multiple Bids Not Allowed

Each bidder shall submit no more than one bid. Submission of multiple bids by or on behalf of any individual, firm, partnership, corporation or association shall be cause for rejection of all of such multiple bids. Nothing herein shall preclude separate and distinct corporate entities from submitting bids when such entities are partially or wholly owned by a parent entity.

18. Alternative Bids Not Allowed

No Bidder shall be allowed to offer more than one price on each item, even though he/she may believe that he/she has two or more types or styles of goods, materials, services or combinations thereof that will meet the requirements of these specifications. Bidders must determine for themselves which to offer. If a bidder submits more than one price on any item, the bidder’s bid for such alternatively priced items shall be rejected.

19. Fixed Pricing

Bid prices are to remain firm for a period of not less than sixty (60) days to allow the County to determine the lowest bid that shall most economically serve the intentions of this bid.

20. Bids Based Upon Specifications; Bid Deviations

It shall be presumed that all bids are based upon these specifications, unless the bidder explicitly states to the contrary in a letter format that shall be attached to the bidder’s bid submission.

Bidders shall not type changes upon, or make any other alterations to bid specifications and forms.

All proposed deviations, alterations or other changes from the specifications proposed by the bidder shall be explained in detail in the Bidder’s submission. At a minimum, the bidder shall describe the alternative(s) in a letter that shall be submitted with the bid, which shall be signed by the bidder and which shall explain the proposed deviations, alterations or other changes in detail and provide such additional data as necessary to verify that the proposed deviations, alterations or other changes will meet or exceed the requirements of this Bid. If the County determines, in its sole judgment, that the proposed deviation, change or alteration materially

alters the requirements of this Bid to the disadvantage of the County, or is otherwise deemed by the County to be inconsistent with the County's requirements, including but not limited to requirements imposed by law, the County reserves the right to reject the Bid.

21. Brand Names or Equivalents

If and whenever in the proposal a brand name, make, name of any manufacturer, or trade name is mentioned, it is for the purpose of establishing a grade or quality of merchandise. The County of Atlantic does not wish to rule out other competition and equal brands or makes, and therefore, the phrase **or equivalent** is added. If merchandise other than that specified is bid, it is the Bidder's responsibility to name such within the Bid and to provide information to the County that shall demonstrate that the said item(s) is equivalent to that specified. The County shall be the sole judge concerning the merits of the Bidder's proposed alternative, and reserves the right to reject such bids if, in the County's sole judgment, the proposed alternative materially alters the requirements of this Bid to the disadvantage of the County, or is otherwise deemed by the County to be inconsistent with the County's requirements, including but not limited to requirements imposed by law, the County reserves the right to reject the Bid.

22. Non-proprietary Equipment

All equipment purchased by the County of Atlantic shall be non-proprietary, unless Specified otherwise or unless non-proprietary equipment is not available.

23. FOB Prices

Prices quoted in all bids shall be delivered prices, F.O.B. destination, freight prepaid.

24. Price Adjustments

Bid prices shall not be subject to any increase during the life of the contract, unless an increase is specifically authorized by the Contract Documents. Should there be any reduction in the Bidder's costs to procure goods, supplies, materials, labor or any other component of the Work as submitted in the Bid, the unit prices charged to the County will be reduced to reflect any such reduction in actual costs incurred by the Contractor for all such goods, supplies, materials, labor or any other component of the Work, to the extent that such reductions are specified or required by the Contract Documents.

25. Discounts

All price discounts (if any), shall be calculated as of the date of acceptance by the County of any such discounted goods, supplies, materials, labor or any other component of the Work, regardless of the date of delivery or invoice.

26. Irrevocable Bids

All bids are irrevocable by the subscriber, or his, their or its personal or legal representatives. Said Bid and award thereunder is made to the subscriber by the County of Atlantic and shall bind the subscriber, his, their or its heirs, executors, administrators, successors or assigns.

27. Withdrawal of Bids Prior to Bid Opening

A written request for the withdrawal of a bid, or any party thereof, will be granted if the request is received by the County Purchasing Agent prior to the specified time of the bid opening.

28. Taxes

The County is exempt from all taxes including Federal Excise Tax, Transportation Taxes, State Excise and Sales Tax, and local taxes. Contractor shall pay all sales, income, consumer, use and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the State of New Jersey and United States which are applicable to the Contractor during the performance of the Work. Contractor shall not pass through to County any taxes for which the County is exempted by the laws of the State of New Jersey. County shall cooperate with Contractor in providing evidence of its tax-exempt status.

29. Bid Award

The County of Atlantic shall award all contracts on a **lump sum Basis** to the lowest responsible and responsive bidder per Location

30. Bid Ties

Where two or more bidders are tied in any bid submission or component thereof, the County reserves the right to make the award to either of the bidders.

31. Delivery Dates

All Bidders, where required, shall clearly stipulate the guaranteed delivery date of all items. Successful Bidder(s) failing to meet the delivery date specified by the Contract Documents shall be subject to the imposition of all sanctions and penalties provided for in the Contract Documents, or more generally at law or in equity.

33. Time for Award

The award of the contract or the rejection of the bids shall be made within sixty (60) days of the date of receiving bids; unless written extensions are requested by the Purchasing Agent and accepted by the Bidder(s). All bid securities shall be returned immediately if all bids are rejected. The successful Bidder(s) to whom the award is to be made shall be notified by receipt of the contract or a written "Notice to Proceed" from the County department for whom the work is being provided.

33. Funding Contingency

When award of contract is made in one fiscal year with an effective date in the next fiscal year, the award shall be contingent upon the availability of appropriation of sufficient funds for that purpose for the year in which said contract takes effect. When a contract shall be awarded for a period in excess of one year, said contract shall be contingent upon the annual availability and appropriation of sufficient funds for that purpose for each year of the contract, as required by law.

34. Modification of the Work

Prior to commencement of any specific component of the Work, the County reserves the right to remove such component from the Work, for the convenience of the County, by providing written notice to the Bidder. The Bidder shall not be entitled to compensation for removal of any such component of the Work as of the Notice date, provided, however, that the Bidder shall be entitled to payment for any materials purchased and delivered to the County for any such component of the Work prior to date of the County's notice.

35. Bid Rejection

The County reserves the right to reject all bids, when the County deems that rejection of all bids is advisable and in the best interest of the County. In addition, the County reserves the right to reject any or all items covered in the bid request, or any portion(s) thereof, waive informalities, re-advertise and/or take such other actions that the County deems advisable and in the best interest of the County, to the fullest extent permitted by law.

36. Withdrawal of Certain Bids on Public Works Projects, Pursuant to N.J.S.A. 40A:11-2 (42).

NOTE this provision only applies to "PUBLIC WORKS PROJECTS"

N.J.S.A. 40A:11-23.3 authorizes a Bidder to request withdrawal of certain bids, on public works projects only as defined by the said statute, due to a mistake on the part of the Bidder. A mistake is defined by N.J.S.A. 40A:11-2 (42) as a clerical error that is an unintentional and substantial quantity of labor, material, or both, from the final bid computation.

A Bidder claiming a mistake under N.J.S.A. 40A:11-23-3 must submit a request for withdrawal, in writing, by **US POSTAL SERVICE CERTIFIED OR REGISTERED MAIL** to Palma Conover, Division Director of Budget & Purchasing, 1333 Atlantic Ave., 6th Floor, Atlantic City, NJ 08401. The Bidder request for withdrawal of a bid due to a mistake, as defined by the law, must be postmarked within five (5) business days after the receipt and opening of the bids or the request will not be considered by the Purchasing Agent.

A Bidder's request to withdraw the bid shall contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the County Purchasing Agent pursuant to the Statutory criteria of N.J.S.A. 40A:11-23.3.

All of the following criteria provided must be met by the bidder in order for a bid to be withdrawn.

- A. Enforcement of the contract, if actually made, would be unconscionable;
- B. The mistake relates to a material feature of the bid;
- C. The mistake occurred notwithstanding the fact that the Bidder exercised reasonable care in preparation of the bid; and
- D. The Bidder making the mistake is able to get relief by way of withdrawing the bid without serious prejudice to the contracting unit, except for the loss of the bargain to the contracting unit.

37. Execution of Contract

The Contractor shall be required to sign the standard County Contract, a copy of which is attached, within ten (10) days after the County's issuance of a contract document to the successful bidder. Failure to execute the contract as required herein shall be subject to sanctions and remedies specified hereinafter.

Work shall not commence until the contract has been fully executed, excepted for any project administrative items the Contractor may begin upon receipt of a Notice to Proceed, i.e. submittals, developing draft schedule of values, further inspection of project site, developing staging areas, etc.

38. Modifications or Additions to the Contract Documents

If the Bidder desires to make any modifications to the County's contract, or has another contract form that he/she desires the County to sign, in lieu of or in addition to the County Contract form, a sample copy of the Contractor's proposed modifications or contract form must be submitted with the Bid, or it shall be presumed that the Contract Documents will consist exclusively of the County's attached form contract, along with all of the terms, conditions and requirements set forth herein (which, together with the contractor's bid and attachment thereto are collectively referred to as the "Contract Documents").

Modifications or additions to the Contract Documents shall not be entertained after submission of bids. The County reserves the right to reject any proposed modification, alteration or alternative contract forms which, in the County's sole judgment, fails to conform with or are inconsistent with the terms, conditions and requirements set forth herein, or which otherwise do not appear to be in the best interest of the County.

39. Performance Bond

The successful bidder shall be required to furnish the County with an executed Performance Bond of a Surety Company authorized to transact business in the State of New Jersey in the sum equal to the full amount of the contract. Said Bond is to be satisfactory to the County Counsel as to form, in full compliance with requirements of law and be conditioned upon the faithful performance of the contract to be entered into hereunder.

The obligations imposed upon the Contractor by this contract shall be obligations in addition to all other terms, covenants and conditions of said Bond to the same effect as though they had been incorporated in said Bond.

The performance bond shall be delivered within 20 days after award of a contract by the County. The Performance Bond shall be in an amount equal to the proposed costs of all materials and installation work required to provide the Services, as set forth in the Contract Documents.

This Bond shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations. All Bonds signed by an agent must be accompanied by appropriate power of attorney and surety disclosure statements

If the surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated or suspended in the State of New Jersey or otherwise ceases to meet the requirements of the Contract Documents, Contractor shall **within ten days** thereafter substitute another Bond and surety, both of which must be acceptable to the County.

40. Bid Deposit Retention

Should the successful bidder fail to enter into the Contract after acceptance of Bid by the County as specified herein, then the check or security deposit posted by the bidder shall, at the option of the County, be retained as liquidated damages, or if bid bond has been supplied, the principal and surety shall be liable for the amount of the bid bond. In addition, the County reserves the right to terminate the award of any Bidder who fails to execute the contract documents within the proscribed time without good cause, and to proceed with any other remedy that may be available at law or in equity.

41. Return of Bid Deposits

All bid deposits and bid security instruments shall be returned within three (3) days of award of contract except to the successful Bidder(s) whose bid security shall be returned after execution of a formal contract and delivery of certificates of insurance as required, or retention thereof pursuant to the preceding section.

42. Bid Preparation Costs

The County shall not be liable for any costs incurred by any Bidders in the preparation or submission of its Bid.

43. Ownership of Bids

All Bids shall become the property of the County upon receipt and will not be returned.

44. Dissemination of Bids Plans and Bid Information

Information included in this document or in any way associated with this Bid, including but not limited to any plans for the Work that may be supplied or obtained by the Bidder pursuant to this Bid, are intended for use only by the Bidders to submit Bids and complete the Work, and shall remain the property of the County. Under no circumstances shall any of said information be published, disseminated to persons not employed by the Bidder copied or used, except as necessary to reply to this Bid and perform the Work.

45. Public Works Contractor Registration Act

The Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48, specifies that no Contractor or subcontractor shall bid on or engage in any contract (or part thereof) for public work which is subject to the provisions of the "New Jersey Prevailing Wage Act PL 1963 C. 150 (C: 34:11-56.25)" for the construction, reconstruction, demolition, alteration, repair or maintenance of a Public Building regularly open to and used by the general public institution and includes any subcontractor or lower tier subcontractor unless they are registered with the Commissioner of Labor. Bidders submitting a Bid for a public works contract or performing public work **MUST** submit a **certificate of registration with their Bid. Failure to submit a copy of the certificate of registration will result in rejection of the Bid. Copies of the Bidder's subcontractor's certificate of registration will be required after submission of the Bid but prior to the award of the contract.**

Note: A copy of an application for registration is not acceptable as a substitute for the required certificate of registration.

46. Prevailing Wage Requirements

The New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 (P.L. 1963, Chapter 150) is hereby made a part of every Contract entered into by the County of Atlantic, except those Contracts which are not within the scope of the Act. The successful Contractor and any of its subcontractors shall be obligated to pay the prevailing wage, to submit certified payrolls and documentation of compliance, and to permit on-site monitoring, including interviews with employees and review of subcontracts, by County representatives. The Contractor's signature on the Contract is his guarantee that neither he nor any subcontractors he might employ to perform the work covered by this Bid are listed or are on record in the office of the Commissioner of the New Jersey State Department of Labor as one who has failed to pay prevailing wages in accordance with the provisions of this act. Every Contractor and subcontractor shall keep an accurate payroll record, showing the name, craft or trade, job title or classification, actual hourly rate of wages paid, hours worked, and total wages paid to each worker employed by him in connection with a public work. The prevailing wage as published by the Department of Labor shall be noted on the payroll journal next to the actual wage rate paid. Payroll records shall be presented for a period of two (2) years from the date of payment. The successful Contractor shall be responsible for ensuring that its subcontractors comply with the Act and shall cooperate with County or State requests for information to verify compliance.

47. Affidavit of Compliance on Contractor's Employee Benefits

The County of Atlantic has issued an Executive Order #2000-4, dated May 17, 2000, which designates contractor's doing business with the County shall provide for:

- A. An approved health and hospital insurance plan, licensed by the New Jersey Department of Banking and Insurance;
- B. An approved pension plan; or
- C. An approved apprentice training program pursuant to the Department of Labor and Industry of 1948 (N.J.S.A. 34:1A-34, et seq.).

This affidavit must be completed and submitted with bid package or bid shall be rejected.

48. Affidavit of Compliance Subcontractor Listing:

N.J.S.A 40A:11-16 REQUIRES THE LISTING OF ALL SUBCONTRACTORS TO WHOM THE BIDDER WILL SUBCONTRACT THE FURNISHING OF:

- 1) Plumbing and Gas Fitting and Kindred work.
- 2) Steam Power Plants, steam and hot water heating and ventilating apparatus and all kindred work.
- 3) Electrical Work
- 4) Structural Steel and Ornamental Iron Work

The general contractor must complete ALL of the sections on the following form "AFFIDAVIT OF COMPLIANCE" in order to provide the required information demonstrating that either its subcontractors, its own employees or the bidder himself possess the necessary or required qualifications

to perform work in each appropriate specialty trade category applicable to the contract. If the contract does not involve any of the specialty trade categories, insert the word "NONE" in each appropriate space provided. The completed form must be submitted with the general contractor's bid.

A general contractor that intends to utilize a specific subcontractor(s) to perform work in one or more of the specialty trade categories set forth on the following form shall provide the required information with regard to each subcontractor in the appropriate spaces of each specialty trade category applicable to the contract. Use additional copies of the affidavit page if necessary.

A general contractor that intends to perform work in one or more of the specialty trade categories set forth on the following form through the use of its own employees or the general contractor himself rather than utilization of a subcontractor shall write the word "IN HOUSE" next to each applicable category.

All bidders seeking to perform Plumbing work on a publicly bid contract are required to comply with N.J.S.A. 45:14C.1-4, See Plumbing Affidavit page P.A. (when applicable)

49. Affidavit of Compliance Plumbing Contractor:

Plumbing Affidavit is required for this bid. This Affidavit must have an original signature. Photo copies or faxed copy without an original signature will not be acceptable.

Public Law 1988, Chapter 442 (N.J.S.A. 4514C-1 through 4) defines plumbing contractor as a licensed master plumber that shall be the holder not less than 10% of the issued and outstanding shares of stock in the corporation, or not less than 10% of the capital of the partnership, or not less than 10% of the ownership of any other firm or legal entity engaging in the business of plumbing contracting in the State and shall employ either journeyman, plumbers or apprentice plumber or both.

50. New Jersey Business Registration Certificate

No contract shall be entered into by any contracting agency unless the contractor provides a copy of its business registration.

All non-governmental entities SHOULD submit a copy of their Business Registration Certificate or a copy of their 501(c) designation with their Bid. Bidder must submit a copy of their NJ Business Registration or 501(c) designation prior to award of the contract.

All bids must comply with the provisions mandated by applicable Federal Law and New Jersey Statutes.

Any provision in the specification which may be in conflict with any New Jersey statute are amended to conform to the minimum requirement of such statute.

51. Affirmative Action

The Bidder shall be required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27. Upon notification of award the Contractor shall complete an Initial Project Workforce Report Form AA-201 and submit a copy to the County and the NJ Division of Purchase and Property. Thereafter, the Contractor shall submit a copy of the Monthly Project Workforce Report Form AA-202 to the County and the NJ Division of Purchase and Property once per month for the duration of the contract. Forms, instructions and more information can be found at http://www.state.nj.us/treasury/contract_compliance.

52. Non-Discrimination

The provisions of N.J.S.A. 10:2-1 through 10:2-4, dealing with discrimination in employment on public contracts, and the Rules and Regulations promulgated pursuant thereto, are hereby made a part hereof and shall be binding upon the successful Bidder in the performance of the Project for the County.

53. NJ PEOSHA

The successful Bidder will be required to comply with all applicable provisions of the N.J. Public Employees Occupational Safety and Health Act, (N.J.A.C. 34:6A-25), when providing any materials, supplies or services as part of the Work.

54. Worker and Community Right to Know Act

The manufacturer or supplier of a substance or mixture shall supply the Chemicals Abstracts Service number of all the components of the mixture or substance and the chemical name to the County to insure that every container bears a proper label at a County facility, in accordance with P.L. 1982, Chap. 315, "Worker and Community Right to Know Act" sub sect. b, sect. 14. Further, all applicable Material Safety Data Sheets (MSDS), a/k/a Hazardous Substance Facts Sheets, must be furnished to the County.

55. Buy American

Only manufactured and farm products of the United States, wherever available, shall be used in connection with this undertaking, pursuant to 40A:11-18 of the Revised Statutes of the State of New Jersey.

56. One Call System–Call Before You Dig

Prior to performing any work that requires excavation; the Contractor shall be responsible for ascertaining underground utility locations and shall comply with the requirements of the New Jersey "One Call" system (Dial 8-1-1 or 1 (800) 272-1000).

57. Recycling

The Atlantic County Recycling Program and Solid Waste Management Plan. The Contractor shall be required to comply with the requirements of the Atlantic County Solid Waste Management Plan and Recycling Plan, adopted in accordance with N.J.S.A. 13:1E-1, et seq., and Atlantic County Ordinances #10 of 2009 and #9 of 2014. The said plans and ordinances specify requirements concerning disposal of solid wastes, along with materials that are identified as either mandatory recyclables or recommended to be recycled.

58. Americans with Disabilities Act

To request a reasonable accommodation of a disability, contact the ADA Coordinator at Telephone: (609) 645-7700 ext. 4519 (TTY uses NJ Relay 1-800-852-7899) at least five (5) business days prior to any meeting, inspection or other event.

59. Compliance with All Law

The Bidder's preparation and submission of its Bid, together with the Bidder's provision of all materials and goods, and the performance of all work and services as required to accomplish the Work as set forth herein, shall be subject to all applicable Federal, State and County ordinances, regulations and statutes. All statutes, rules and regulations that are applicable to the Work shall apply as if set forth in full herein. By submission of a Bid, the Bidder warrants and represents to the County that it is familiar with, and shall comply with all of the statutes, ordinances, rules and regulations that are applicable to the materials, goods, work and services required to accomplish the Work as set forth herein.

60. Left blank

61. Reference to Standards, Specifications and Regulations

Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or Laws or Regulations in effect at the time of opening of the Bids, except as may be otherwise specifically stated in the Contract Documents. The bidder, for itself and for its subcontractors and suppliers acknowledge their familiarity and experience with generally accepted published standards of quality and workmanship applicable to the portions of the Work performed and services provided by them. The requirements of any indicated reference standard are hereby incorporated into the Contract Documents and made a part thereof, to the extent indicated by the applicable reference thereto, provided that the same are not contrary to or otherwise in conflict with any other specification or requirement set forth in the Contract Documents. All work performed under this contract shall meet or exceed all applicable local, state and federal codes and regulations.

62. Bidder's Understanding of the Contract Documents

- A. By submitting a Bid, the Bidder warrants and represents that it has a thorough understanding of this Bid and of all goods, materials and operations necessary to provide the County with all materials, goods and services necessary to accomplish the Work as specified herein.
- B. It is the responsibility of the bidder, by personal examination of the work site at the County's pre-bid meeting(s), the documents and such other records and resources as may be reasonably prudent for the Bidder's development of its own knowledge and understanding of the materials, equipment and tasks necessary to accomplish the Work, and to satisfy him/herself as to the location of the work, quality, and quantity of the materials, equipment, staffing and all other resources, costs and tasks that will be required to perform the Work.
- C. The Bidder shall not at any time after the submission of its Bid make any claims whatsoever alleging insufficient data or incorrectly assumed conditions, nor shall the Bidder claim any misunderstanding with regard to the nature, conditions or character of the Work or any elements thereof to be provided or performed hereunder.

63. Captions and Headings

Captions and headings used throughout this document are for convenience only and shall not be used or interpreted as having any particular meaning or limitation upon the terms and conditions stated herein. Similarly, organization and division of various sections is only intended for organizational convenience and shall not be construed to affect or limit the specific terms and conditions of the various provisions herein.

III. GENERAL CONDITIONS

1. Contractor's Workforce

A. The Successful Bidder (also referred to as the "Contractor") hereby agrees that it shall provide the necessary workforce to accomplish the Project as set forth in the Contract Documents, and if necessary, to increase said workforce to complete the Project within the time schedule and performance requirements set forth in the Contract Documents. The Contractor shall furnish all materials, tools, equipment, transportation, supervision, and perform all labor and services necessary and incidental to the satisfactory completion of the Work in a proper workmanlike manner within the time stipulated as set forth in the specifications.

B. For any Work that requires access to County buildings and other facilities, the Contractor shall be responsible for ensuring that all of its employees, subcontractors and other agents engaged by the Contractor shall comply with the County's rules and procedures regarding access to such buildings and facilities.

C. The Contractor shall remove any of its employees or subcontractors from County property who are deemed not to meet the requirements and conditions set forth herein, including but not limited to unexcused violations of any laws, rules, or ordinances that are applicable to the Work.

2. Project Superintendent

Subject to and without limitation upon any more specific requirements of the Technical Specifications and County Special Conditions below, the Contractor shall provide and designate a duly qualified employee of the Contractor who shall serve as the Project Superintendent. The Project Superintendent shall oversee and manage performance of the Work on a day to day basis. The Contractor shall ensure that its Project Superintendent has sufficient credentials and experience in provision and supervision of the Work required hereunder. The Project Superintendent shall monitor all installations, all contract administration duties and shall oversee performance of the Work by the Contractor and any subcontractor or other third party performing any part of the Work by or on behalf of the Contractor. The Project Superintendent shall serve as the designated contact person at the Work site who shall be available during all working hours to review and respond to any instructions, directives, concerns or other matters raised by or on behalf of the County's Project Manager.

In the event that the designated Project Manager shall be unable to perform these responsibilities, due to injury, illness, severance of employment or any other reason, the Contractor shall promptly notify the County and shall designate another duly qualified employee to serve as a substitute Project Manager within 48 hours.

3. Subcontractors and Assignments

A. Assignment to any third party of any monies due or to grow due the bidder or any sub contract based upon this bid is prohibited and will not be recognized by the County. Any such assignment shall be considered a default by the County

B. The contractor shall not subcontract any portion of the work covered by these specifications without the prior written and explicit consent of the County of Atlantic. No subcontract will be effective or deemed permitted without the prior written consent of the County, and any authorized subcontract shall be considered a default by the County.

C. The successful Bidder must maintain and submit to Atlantic County a list of subcontractors and their addresses that may be updated from time to time during the course of contract performance. A

complete and accurate list shall be submitted before final payment is made for goods provided or services rendered or for construction of a construction project under this contract.

- D. All subcontractors shall provide a copy of their business registration to any contractor who shall forward it to the County. No contract with a subcontractor shall be entered into by any contractor under any contract with Atlantic County unless the subcontractor first provides proof of valid business registration. The successful Bidder as well as their subcontractors and each of their affiliates shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury the use tax due Pursuant to the "Sales and Use Tax Act" P.L.1966, c.30 (C.54:32B-1et seq. on all their sales of tangible personal property delivered into the state of New Jersey.
- E. The Contractor shall be partly, solely and fully responsible to the County for the performance of all requirements of the Contract Documents, at all times and in all respects, without regard to any subcontract or assignment agreement. If a subcontract or other assignment is authorized by the County, the assignee or subcontractor shall enter into an agreement affirming that it shall be bound by all of the terms, conditions and requirements set forth in the Contract Documents. The Contractor shall provide the County with copies of all subcontractor agreements upon the County's request.
- F. The Contractor shall pay all subcontractors for all materials, goods, services and labor provided by such subcontractors in connection with the Work, to the extent that such amounts are justly due and owing, subject only to such offsets, retainage and other adjustments that may be permitted by law.

4. Contractor's Duty to Perform

The Contractor's obligation to perform and complete the Work and provide all Services in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work or Services that are not in accordance with the Contract Documents, or as a waiver or release of Contractor's obligation to perform the Work and provide Services in accordance with the Contract Documents: observations made by the County, recommendation of any progress or final payment by the County, any determination that work is substantially completed or any payment by County to Contractor under the Contract Documents, any use of or reliance upon the Work or Services any part thereof by the County, any acceptance by the County, any failure to do so, any review and approval of a Shop Drawing, sample, submittal, substitution, or the issuance of a notice of acceptability, any inspection, test or approval by others, or any correction of defective Work by the County, any limitations of any Subcontractor's or Supplier's warranty, or similar actions or omissions by the County.

5. Reliance upon Drawings, Plans and Other Information Provided by the County

All information provided by the County to the Contractor is only offered to show conditions that are believed to exist, but it is not intended to be inferred that the conditions as shown thereon constitute a true and accurate representation by or on behalf of the County that such conditions actually exist. **The Contractor shall be solely responsible to inspect the job site prior to commencement of the Work and to field verify conditions and measurements that actually exist. If any discrepancy exists, the Contractor shall promptly notify the County and await clarification regarding resolution of any such discrepancy by the County,**

Subject to and without limitation upon any more specific requirements of the Technical Specifications and County Special Conditions below, the Contractor shall accept full responsibility for any loss sustained by it as a result of any variances between the conditions as shown in drawings and plans, if any, and any other information provided by the County to the Contractor and the actual conditions revealed during the progress of the Work, to the extent that such conditions should have been reasonably observed or discovered by the Contractor prior to commencement of work affected by such variations

6. Patent Fees, Licensee Fees and Royalties

Contractor shall pay all patent and license fees and royalties (if any) and assume all costs incident to the Contractor's use of all materials and equipment necessary for the Contractor's performance of the Work. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work, review and or approval thereof by the County shall be for the sole purpose and benefit of the County to assess apparent adequacy for the Work, and shall not be an approval of the use thereof by Contractor, in violation of any patent or other rights of any third person. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless the County and its officers, directors, employees, agents, and other Bidders of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights, or license fees or similar assessments incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents.

8. Permits

The Contractor shall be responsible for identifying, applying for and obtaining any governmental agency permits and consents, along with any utility company permits, authorizations, relocations or consents, that may be necessary to proceed with the work which have not been obtained by the County, including (but not necessarily limited to) permits under the Uniform Construction Code, the Uniform Fire Safety Code and Soil Conservation District. Costs of application and compliance with all such permits shall be the contractor's responsibility.

9. Prompt Performance

The Contractor's performance of the Work in a timely manner, without undue disruption of normal County operations and services is an essential component of the Work. The Contractor shall begin the Work promptly on the date of commencement as directed by the County and shall provide a level of effort necessary to carry the Work forward expeditiously, with adequate forces to achieve completion at the earliest possible date within the Contract Documents

10. Progress Schedule

Subject to and without limitation upon any more specific requirements of any Technical Specifications and County Special Conditions below, the Contractor shall develop and observe a task-oriented progress schedule that shall include a proposed start and completion date for the Work, with proposed progress milestones. The Contractor shall develop and maintain the schedule as necessary to complete the Work within any time limits set forth in these Specifications.

Upon execution of the contract, the Contractor shall submit its schedule to the County, which shall be subject to review and approval by the County. The Contractor shall be responsible for preparing updates and corrections to the progress schedule, to reflect the actual contract start and such other adjustments as may be necessary and appropriate to complete the Work in an orderly manner within the specified project time limits. Submission of the progress schedule and approval thereof by the County, including modifications and corrections thereto, shall not act as waiver of the contract time, the completion date or any other requirement of the Contract Documents, and shall not constitute a substitute for or evidence approval of any change order or contract modification.

At the County's request, the Contractor shall update the schedule when the County determines that an updated schedule is required.

11. Pre-Construction Meeting and Progress Meetings

Subject to and without limitation upon any more specific requirements of the Technical Specifications and County Special Conditions below and prior to commencing the Work, at a specific time and place as directed by the County, the Contractor shall meet with the County's Project Manager / County Engineer or his designee at a pre-construction meeting. In addition, Progress Meetings shall be held as Work proceeds on an as needed basis as directed by the County.

Pre-Construction and Progress Meetings shall be held to review and address issues related to the Work and may include: schedule compliance, critical sequencing, equipment or material deliveries, use of County property, contract compliance, quality control issues, avoidance of interference with County operations, requesting and processing contract modifications, and such other matters which are relevant to the orderly and expeditious performance of the Work.

The Contractor shall be responsible for preparation and distribution of meeting minutes which shall include issues and actions to be taken.

In addition, the Contractor's Project Manager shall maintain a daily job log, which shall record daily work progress, job conditions, weather conditions, subcontractors on site and any testing operations or inspections of the Work.

All meetings will be attended by the Contractor's Project Manager and by a duly authorized representative of the County.

12. Adherence to the Schedule; Modifications of the Schedule

A. Subject to and without limitation upon any more specific requirements of the Technical Specifications and County Special Conditions below, there shall be no modification of the Work schedule without the prior written approval of the County.

All requests for modifications shall be made by the Contractor in writing, subject to prior approval of the County, in its sole judgment as to whether good cause exists and whether such time extensions shall interfere with safe and orderly operation of the County Facility where the work is being performed.

B. Failure to comply with the schedule and complete the Work within the Contract Time shall constitute a default and shall result in assessment of liquidated damages for each day of delay, in accordance with the more specific requirements of the Technical Specifications and Contract Documents, along with imposition of any other remedy authorized by the Contract Documents.

C. Where Contractor is prevented from completing any part of the Work within the specified Installation Times due to delay beyond the control of Contractor, the Contract Time may be extended in an amount equal to the time lost due to such delay, provided that the Contractor shall have first secured County consent based upon notice to the County which shall include verification of the reasons asserted that delays are beyond the control of Contractor, due to acts or neglect of others, County directives that require modification of the schedule, fires, epidemics, abnormal weather conditions or acts of God that prevent schedule adherence (referred to below as "excusable cause"). Any such extension shall additionally be subject to and in accordance with the more specific requirements of the Technical Specifications

D. If in the opinion of the County, the Contractor is falling behind in the performance of Installation Work without excusable cause as set forth above, the County shall notify the Contractor, and the Contractor shall take such steps as may be necessary to improve his progress, which may include but not be limited to dedication of additional staff, additional hours, or other means, without additional cost to the County. Failure to comply shall constitute grounds for declaring the Contractor in default.

13. Work During Regular Business Hours

All work shall be performed during regular daylight business hours (defined as work occurring between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday), provided however, that Contractor may make application to the County to work on evening or weekend hours, which shall be subject to the County's approval and subject to any more specific requirements of the Technical Specifications and the County Special Conditions. If the Contractor's work extends for more than 9 consecutive hours within any regular business day, the Contractor shall be responsible for all costs associated with such extended hours, including but not limited to any salaries, overtime, inspections, traffic control and equipment costs incurred on account of the extended hours.

14. Construction Layout

Subject to and in accordance with any more specific requirements of the Technical Specifications, the Contractor shall, prior to commencement of work, review all design plans, investigate field conditions and perform all layout and mark-outs under the direction of a Licensed Professional Land surveyor, as necessary to accomplish the Work, at no additional costs to the County.

15. Hot Work

The term "hot work" means hot riveting, welding, burning, open flame use, or other mechanical spark-producing operations or those operations resulting in high temperature surfaces. It also includes opening electrical systems which have the potential of arcing or otherwise igniting a flammable material. Without limitation upon any other regulatory requirement or prudent practice applicable to the Contractor's Work, the Contractor shall perform all hot work in a fire-safe manner. The Contractor shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires when "hot work" is required. The Contractor shall comply with applicable federal, state, and local fire-prevention regulations.

16. Cutting, Selective Demolition, Patching

A. In addition to any more specific requirements and conditions set forth in the Technical Specifications or elsewhere in the Contract Documents, the Contractor shall be responsible for performing all cutting, demolition and patching operations necessary to accomplish the Work in accordance with all applicable Codes, Manufacturer warranties, industry practices and any specific requirements and limitations applicable to cutting and patching individual parts of that Work.

B. Contractor Submittals

Approval of procedures for Cutting, Demolition and Patching is required before proceeding. The Contractor shall submit a proposal describing procedures. Include the following information, as applicable, in the proposal:

1. List products to be used and firms or entities that will perform Work as well as a detailed description of the Work itself.
2. Indicate dates when cutting and patching is to be performed and the anticipated duration of the Work.
3. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
4. If cutting and patching involves additions and modifications to structural elements, submit details and engineering calculations to show how these additions will be integrated with the original structure. In all cases indicate any changes in the elevation of the ceiling, or the effect on mechanical and electrical distribution systems.
5. Prior to the cutting and patching of interior Architectural Elements building components or modification of exposed finishes, review the repair/restoration procedures with the Architect prior to the inception of Work.
6. Approval by the Architect to proceed with cutting and patching does not waive the Architect's or the Owner's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory or otherwise unacceptable.

The Contractor shall not cause or permit cutting, demolition or patching of any structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio, or which would otherwise fail to comply with the requirements of the Contract Documents. . The Contractor will assume all responsibility for the integrity of the assembly and related assemblies upon the start of cutting or demolition work. The Contractor will provide all required bracing and shoring as directed by the County Project Manager / County Engineer and by standard construction practices.

The Contractor shall not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

The Contractor shall not cut, damage, alter or patch any part of the Work in a manner that would, in the County's opinion, reduce the aesthetic qualities of any fixture or element of the Work, or result in visual evidence of cutting and patching that is not otherwise permitted or directed by the Contract Documents. The Contractor shall remove, repair and /or replace Work cut and patched in a visually unsatisfactory manner.

16. Unit Prices

A. Without limitation upon any more specific term or requirement set forth in the Technical Specifications, a unit price is an amount stated on the Contractor's Bid Form/ Unit Price Schedule as a price per unit of measurement for materials and services that will be added to or deducted from the Contract Sum by Change Order, in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.

B. Each Unit price shall include all necessary material, overhead, profit, all costs and applicable taxes, fees, licenses and royalties of any kind attributable to the performance or provision thereof,

C. The Contractor shall refer to individual Specification Sections for activities requiring the establishment of unit prices. Additional provisions regarding methods of measurement and payment for unit prices are specified in those sections.

D. In addition to any other right or remedy set forth in the Contract Documents, the County reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this Work measured or otherwise evaluated by an independent surveyor or Resident Engineer (at the County's expense).

17. Schedule of Values

A. Without limitation upon any more specific term or requirement set forth in the Technical Specifications, "Schedule of Values" shall mean an itemized list that shall be prepared by the Contractor that establishes the values allocated to the various portions of the Contractor's Work and supported by such substantiating data as the County may require.

B. The Contractor shall use the Project Manual Table of Contents (if any, as set forth in the Technical Specifications or such other format as the County may provide) as a guide to establish the format for the Schedule of Values.

C. The Contractor shall develop a schedule of values that shall be fully consistent with the Contractor's Construction Schedule, and shall include all unit prices, extensions thereof and lump sum prices as set forth in the Contractor's bid. The schedule of values shall include all divisions of the Work, and shall be based upon costs sufficient for all materials, labor, design costs (if any) profit and overhead reasonably necessary to perform each component of the Work, in accordance with the Contract Documents.

D. The Schedule of Values will include Identification: Include the following Project identification:

1. Project name and location.
2. Name of the Architect.
3. Project number.
4. Contractor's name and address.
5. Date of submittal.

E. The Schedule of Values shall be arranged in a tabular form with separate columns to indicate the following for each item listed:

1. Generic name;
2. Name of subcontractor
3. Name of manufacturer or fabricator.
4. Name of supplier
5. Change Orders (CO) and/or Requests Against Allowances (RAA) that have affected value.
6. Dollar value.
7. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to 100 percent.

In addition, the Contractor shall provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

F. The Contractor shall supply its proposed Schedule of Values to the County within ten (10) days after issuance of the Notice To Proceed or execution of contract, as agreed to between County and Contractor. In the event that the County rejects the Contractor's proposed Schedule of values, the Contractor shall promptly provide such amendments and corrections as may be necessary or required by the County.

G. The Contractor shall coordinate the schedule of values with other schedules and components of contract administration, including:

1. Contractor's Construction Schedule.
2. Application for Payment form.
3. List of subcontractors
4. List of products.
5. List of principal suppliers and fabricators.

H. The County will use the approved Schedule of Values in connection with the County's evaluation of the Contractor's Invoices and Work progress. The approved Schedule of values may also be used by the County as part of its assessment of any proposed change orders, Contract amendments and adjustments, as the County may deem necessary or advisable

18. Payment Applications

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the County Project Manager / County Engineer and paid for by the Owner.

B. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

C. Unless the County specifies otherwise, the Contractor shall use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment. The Contractor shall also submit a completed Atlantic County Standard Invoice with original signature.

D. The Contractor shall complete every entry on the payment application form. The form shall be executed by a person authorized to sign legal documents on behalf of the Contractor and County. Incomplete applications will be returned without action. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions have been made, and shall include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

E. Transmittal: The Contractor shall Submit three (3) signed and sealed, executed copies of each Application for Payment, one completed Atlantic County Standard invoice, to the Architect by means ensuring receipt within twenty-four (24) hours; one (1) copy shall be complete, including waivers of lien and similar attachments, when required.

F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment, include the following:

1. List of subcontractors.
2. Completed Security & Control forms for each worker anticipated to be on site. This list is to be updated as needed throughout the project.
3. List of principal suppliers and fabricators.
4. Schedule of Values.
5. Contractor's Construction Schedule.
6. Copies of building permits.
7. Certificates of insurance and insurance policies.
8. Performance and payment bonds.
9. Data needed to acquire the Owner's insurance.
10. Initial settlement survey and damage report.

H. Application for Payment at Substantial Completion: The County requires a Temporary Certificate of Occupancy (TCO), or Certificate of Occupancy (CO), or Certificate of Approval (CA) from the ruling construction code entity in order to consider the work substantially complete. Following issuance of the Certificate of Substantial Completion, the Contractor shall submit an Application for Payment. This application shall reflect any Certificates of Partial Substantial Completion issued previously for the County's use or occupancy of designated portions of the Work.

Administrative actions and submittals that shall proceed or coincide with this application include:

1. Occupancy permits and similar approvals.
2. Warranties (guarantees) and maintenance agreements.
3. Test/adjust/balance records.
4. Maintenance instructions.
5. Start-up performance reports.
6. Change-over information related to Owner's occupancy, use operation, and maintenance.
7. Final cleaning.

8. Application for reduction of retainage, and consent of surety.
 9. Advice on shifting insurance coverage.
 10. List of incomplete work, recognized as exceptions to Architect's Certificate of Substantial Completion. (Punch List issued by Architect with County review.)
- I. Administrative actions and submittal which must precede or coincide with submittal of the final payment Application for Payment include the following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Substantial Completion. These items should be specified in writing with estimated completion date as agreed to by County.
 3. Assurance that unsettled claims will be settled.
 4. Assurance that Work not complete and accepted will be completed without undue delay. These Punch List items must be completed within 30 days of Substantial Completion unless specifically agreed to by the County.
 5. Transmittal of required Project construction records to Owner.
 6. Proof that taxes, fees, and similar obligations have been paid.
 7. Removal of temporary facilities and services.
 8. Removal of surplus materials, rubbish, and similar elements.
 9. Correction of any Defective Work and Acceptance of all Work, as set forth below.

19. Contract Modification

Subject to any applicable conditions and requirements regarding Contract Modifications and Changes in the Work set forth in the Technical Specifications or elsewhere in the Contract Documents, this Section specifies administrative and procedural requirements for handling and processing Contract modifications.

A. MINOR CHANGES IN THE WORK:

Supplemental instructions authorizing minor changes in the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the County Project manager / County Engineer on AIA Form G710, Supplemental Instructions or in an equivalent format.

B. REQUESTS AGAINST ALLOWANCE

Owner initiated Requests Against Allowance and/or Contractor initiated Requests Against Allowance will require the Contractor to use the unit pricing on the Proposal Form. Should other types of work be requested by either party, it shall be priced at a time and material basis with the Contractor's mark-up in compliance with the New State bidding laws for Public Works contracts. All Requests Against Allowance MUST be approved by the COUNTY prior to initiating the work.

ANY WORK COMPLETED WITHOUT PRIOR WRITTEN
AUTHORIZATION WILL NOT BE PAID.

C. COUNTY INITIATED CHANGE ORDER PROPOSAL REQUESTS

Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the County Project manager / County Engineer with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary. Further information is available, though not limited to Section 01035 "MODIFICATION PROCEDURES."

1. **Proposal requests issued by the County Project Manager / County Engineer** are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
2. Unless otherwise indicated in the proposal request, within ten (10) days of receipt of the proposal request, submit to the County Project manager / County Engineer for review an estimate of cost necessary to execute the proposed change.
3. Include a list of quantities of products required and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
5. Include a statement indicating the effect the proposed change in the work will have on the Contract Time.
6. **CONTRACTOR MUST RECEIVE PRIOR WRITTEN APPROVAL FROM THE COUNTY PRIOR TO PERFORMING THE WORK. ANY WORK COMPLETED WITHOUT PRIOR APPROVAL WILL NOT BE PAID.**

D. Contractor-Initiated Change Order Proposal Requests:

When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the County Project manager / County Engineer.

1. Include a statement outlining the 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 Contract Time.
2. Include a list of quantities of products required and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include a statement indicating the effect the proposed change in the work will have on the Contract Time.
5. Comply with requirements in, though not limited to, Section 016000 "PRODUCT REQUIREMENTS" if the proposed change in the Work requires the substitution of one product or system for a product or system specified.

6. CONTRACTOR MUST RECEIVE PRIOR WRITTEN APPROVAL FROM THE COUNTY PRIOR TO PERFORMING THE WORK. ANY WORK COMPLETED WITHOUT PRIOR APPROVAL WILL NOT BE PAID.

E. Change Order Procedures:

1. Upon the County Project manager / County Engineer recommendation of a Change Order Proposal Request, the County will submit the proposed Change Order to the Atlantic County Board of Chosen Freeholders for review and approval.
2. No change order will be effective without the approval of the Board of Chosen Freeholders as provided in the Contract Documents.

20. SUMMARY:

This Section specifies administrative and procedural requirements for Project Closeout, including, but not limited to:

1. Inspection procedures.
2. Project Record Document submittal, (As-Built Drawings.)
3. Operation and Maintenance manual submittal.
4. Submittal of Warranties.
5. Final Cleaning.

A. **SUBSTANTIAL COMPLETION:**

The County determines the work substantially complete upon receipt of a Temporary Certificate of Occupancy (TCO), or Certificate of Occupancy (CO), or Certificate of Approval (CA) from the ruling construction code entity.

Preliminary Procedures: Before requesting inspection for Certificate of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
2. Advise the Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.

7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 8. Complete startup testing of systems and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mockups, and similar elements.
 9. Complete final cleanup requirements, including touch up painting. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedure: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
- C. Final Acceptance:
Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit consent of surety to final payment.
 4. Submit a final liquidated damages statement.
 5. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- D. Re-inspection Procedure: The Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed under circumstances acceptable to the Architect.

21. RECORD DOCUMENT SUBMITTALS:

- A. General: Do not use Record Documents for construction purposes; protect from deterioration and loss in a secure, fire-resistant location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 2. Mark new information that is important to the Owner, but was not shown on the Contract Drawings or the Shop Drawings.
 3. Note related change order numbers where applicable.
 4. Organize Record Drawing sheets into manageable sets, bind sets with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up Record Drawings and Specifications.
- D. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.
- E. Maintenance Manuals:
Organize Operation and Maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch, 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
1. Emergency Instructions.
 2. Spare Parts list.
 3. Copies of Warranties.
 4. Recommended Maintenance Procedures.
 5. Inspection Procedures.
 6. Shop Drawings and Product Data.
- F. CLOSEOUT PROCEDURES:
- Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedure, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
1. Maintenance Manuals.
 2. Training of County Personnel in Maintenance Procedures
 3. Record Documents.
 4. Spare Parts and Materials.

5. Tools.
6. Control sequences.
7. Cleaning.
8. Warranties and Bonds.

G. FINAL CLEANING:

1. General: General cleaning during construction is required by the General Conditions and is included in Specifications.
2. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
3. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
4. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
 - a. Where extra materials of value remaining after completion of associated work, have become the Owner's property, arrange for disposition of these materials as directed.

22. Completion and Acceptance of Work

Subject to and without limitation upon any more specific requirements of the Technical Specifications and County Special Conditions below, the Work to be performed by the Contractor shall be deemed complete when ALL of the following have been performed or supplied by the Contractor to satisfaction of the County:

- A. The Work has, in the judgment of the County, been completed satisfactorily, and all components that require testing have been successfully tested in all respects according to the Contract Documents;
- B. The Work is fully completed, operational and ready for use by the County in all respects in accordance with the Contract Documents, including correction of all punch list items and any other Defective or Unauthorized Work; and
- C. The Contractor has, to the County's satisfaction, executed and delivered to the County or its designated representative all documents, permits, certificates of completion, proofs of compliance, release of claims, surety consents and any other documents the County deems necessary assure compliance with these specifications.

23. Defective or Unauthorized Work

Any portion of the Work, including any materials, goods, equipment, labor, services or combination thereof which in the judgment of the County Project Manager / County Engineer, fails to meet the requirements of the Contract Documents, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be considered as Defective Work. Any Work including any materials,

goods, equipment, labor, services or combination thereof which in the judgment of the County is not authorized or required by the Contract Documents shall be classified as Unauthorized Work.

Any Work, including materials, goods, equipment, labor, services or combination thereof which in the judgment of the County or in the judgment of any Manufacturer, supplier or other entity that is intended to provide a warranty pertaining to the Work or any component thereof, fails to meet the requirements of the Contract Documents, including but not limited to any requirement necessary for the issuance of a required warranty, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be considered as Defective Work.

24. Removal and Correction of Defective or Unauthorized Work

A. Any Defective or Unauthorized Work performed by the Contractor, regardless of whether observed before or after completion of the Work and whether or not fabricated, installed or completed, shall be removed immediately and replaced by the Contractor with Work and materials which shall conform to the specifications, or shall be otherwise corrected and remedied in an acceptable manner authorized by the County or its designee. The Contractor shall bear all costs of correcting, removing or replacing such rejected Work, including compensation to the County for the County's additional costs made necessary thereby.

B. This clause shall have full effect regardless of the fact that the Defective or Unauthorized Work may have been performed, or the defective materials used, with the actual or implied knowledge of the County. The fact that the County or its designee may have previously overlooked such defective work shall not constitute an acceptance of any part of it by the County.

C. If, within one (1) year after the date of completion of the Work or designated portion thereof, or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty required by the Contract Documents, or within any such longer period of time that may be set forth elsewhere in the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the County to do so. Corrective work shall be completed expeditiously and within 30 days of the County's written notice, unless the County extends the time for completion of such repairs. Acceptance of the Work, or portions thereof shall not serve as waiver of the Contractor's obligation to remove, repair and replace Defective Work, unless the County has previously given the Contractor a specific and explicit written acceptance of such Defective Work condition. This obligation shall survive termination of the Contract. The County shall give such notice promptly after discovery of the condition.

D. Upon failure of the Contractor to immediately correct, remove or replace Defective or Unauthorized Work within the specified time limit, or to immediately comply with any order of the County made under the provisions of this Section, the County shall have authority to cause such Defective or Unauthorized Work to be corrected or removed and replaced, and the costs thereof, as well as those incurred in storing any rejected materials, shall be deducted from any monies due or to become due the Contractor. If the payments then or thereafter due the Contractor are not sufficient to cover such costs, the Contractor shall pay the difference to the County. The County reserves the right, should Defective or Unauthorized Work or materials used by or on the part of the Contractor be discovered, either before or after the Project has been accepted, or even after Final Payment has been made, to withhold from the Contractor's payments, or, if not payments remain due and owing to claim and recover by process of law such sums as may be sufficient to correct, remove or replace the Defective or Unauthorized Work or materials, at the Contractor's expense.

Incomplete / Punchlist Work,

Any Work included on a Punchlist shall be treated as Defective Work and shall be corrected by the Contractor, within 30 days after issuance of the Punchlist as set forth in the preceeding section.

25. Public Convenience and Safety; Avoidance of Damage to County Property and Property of Others

The safety, protection and convenience of the public and adjacent residents are of primary importance and shall be provided for by the Contractor in an adequate and satisfactory manner.

- A. Precautions shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws, rules and regulations, building and construction codes, shall be observed. The work site and all machinery, equipment and other hazards of any character associated with the Contractor's work shall be safeguarded by the Contractor.
- B. If any operation, practice or condition during the course of the Work is unsafe or is deemed by the County to be unsafe, the Contractor shall immediately take corrective action. Where any operation, practice or condition endangers persons or property, it shall be immediately discontinued by the Contractor and adequate remedial action taken before the affected part of the Work is resumed.
- C. All work shall be performed in a professional and workmanlike manner, with due regard to avoiding damage to County property and to the property of others. Should the Contractor's work cause any damage to County property or property of others, the Contractor shall promptly repair, restore or replace such damaged property to the satisfaction of the County.

26. Accident Reports

If death or injuries to workers or other persons, or damage to property is caused by or occurs in connection with the Contractor's Work, the accident shall be reported immediately by the Contractor to the County, and to the Contractor's insurance carrier, with full details and statements of witnesses (if any). If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the County, giving full details of the claim and the Contractor's response thereto.

27. County not Responsible for control of Contractors, for Construction Means and Methods

The County shall not be responsible for and shall not have control or charge of construction means, methods, techniques, sequences or procedures, or the safety precautions and programs in connection with the Work, and the County shall not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. Further, the County shall not be responsible in any way for the acts or omissions of the Contractor, and any subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

28. Independent Contractor

The Contractor shall be deemed and considered an Independent Contractor in respect to the Work covered by this Contract, and shall not be deemed to be an agent, partner or joint venture of the County. The Contractor shall assume all responsibility and expense for the Contractor's Work, and for all risks and casualties of every description arising out of the Contractor's performance of the Work.

29. Indemnification

- A. Contractor agrees to protect, defend, indemnify and save harmless the County and its officers, directors, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses and damages, fines, penalties and assessments (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any and all losses, claims, actions, costs, expenses, judgment, subrogation or other expenses by reason of any real or alleged injury or damage to the person or property of others arising out of or incidental to the Contractor's performance of the Work as set forth in the Contract Documents.
- B. If it becomes necessary for the Contractor, either as principal or by agent or employee, to enter upon the premises or property of the County, in order to construct, erect, inspect, make delivery or remove property hereunder, the Contractor hereby covenants and agrees to be responsible for, and to indemnify and save harmless the County from the payment of all sums of money by reason of any accidents, injuries damages or hurt that may happen or occur upon or about such work and all fines, penalties and loss incurred for or by reason of the violation of any municipal or County ordinance, regulations, or the laws of the State, or the United States, arising from or related to the Contractor's performance of its Work.
- C. The Contractor shall indemnify and save harmless the County against any and all claims for royalty, patent infringements or suits for information thereon which may be involved in the manufacture or use of the item to be furnished herein.
- D. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment.

30. Right to Audit Clause

The Contractor shall keep and maintain proper and adequate books, records and accounts accurately reflecting all costs and amounts billed to County with regard to this Project. County, its employees, officers, or representatives shall have the right upon written request and reasonable notice, to inspect and examine all books and records related to the Contractor's books and records specific to the agreement. Such records shall be retained by Contractor for at least seven (7) years. In no event shall books and records be disposed of or destroyed prior to seven (7) years or during any dispute or claim between County and Contractor with regard to this agreement.

31. Termination of Contract

- A. **Termination for Convenience:** The County may terminate a Contract, in whole or in part, without showing cause upon giving written notice to the Contractor, when the County determines that termination is in the best interest of the County. The County shall pay all costs incurred by the Contractor up to the date of termination, less any credits or setoffs that are due and owing to the County, as specified by the Contract Documents. **The Contractor will not be reimbursed for any anticipatory profits, or for any costs or expenses which have not been incurred for materials delivered or work performed for the County, as of the date of termination.**

B. Termination by the Owner for Cause: Without limitation upon any other right or remedy that may exist or be available to the County under the Contract Documents or generally as a matter of law or in equity, the County may terminate the Contract if the Contractor:

1. Persistently or repeatedly refused or fails to supply enough skilled workers or proper materials;
2. Fails to make payment to subcontractors for materials or labor in accordance with the respective agreements between the contractor and the subcontractor;
3. Persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
4. Otherwise is guilty of substantial breach of a provision of the contract documents.

The County shall pay all costs incurred by the Contractor up to the date of termination, less any credits or setoffs that are due and owing to the County, as specified by the Contract Documents. The Contractor will not be reimbursed for any anticipatory profits, or for any costs or expenses which have not been incurred for materials delivered or work performed for the County, as of the date of termination.

C. Notice of Termination. When any of the above reasons exists, the County may terminate the contract after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice of the Termination.

32. Waiver.

The failure of the County to enforce any of the terms and conditions of the Contract Documents shall not be deemed to be an express or implied waiver of any such requirements, nor shall it be deemed a waiver of such requirements or any other requirements in any subsequent circumstances, or a waiver of the right to thereafter claim damages for any deficiencies resulting from any misrepresentation, breach of warranty, or other failure to fulfill any requirements of the Contract Documents.

33. Severability.

Should any provision to the Contract Documents be held invalid or unenforceable by any court of competent jurisdiction, the remaining provisions shall remain in full force and effect, to the fullest extent possible and necessary to accomplish the overall intent and purposes of the Contract Documents. . The inapplicability or unenforceability of any provision of the Contract Documents shall not limit or impair the operation or validity of any other provision of the Contract Documents.

34. Truck Routes

The County of Atlantic requires that Contractor(s) and all subcontractors shall use major highways and County roads for trucking purposes in connection with this project. Therefore, Contractor shall anticipate this requirement while formulating his/her bid proposal.

After opening of Bids, the low Bidders will be required to submit preferred truck routes using major highways and County roads. The County will review the routes and either approve or mandate changes. The Bidder will be required to follow these routes thereafter. Any changes shall be approved in writing by the County Engineer, or his designee.

35. Ethical Standards

County employees are prohibited by policy from accepting gifts from vendors. Consequently, all bidder should be aware and should make all employees and representatives aware that they may not offer any item or material, irrespective of the perceived value of the item or material, to any County employee. Items and materials that have been or are intended to be discarded by the bidder shall not be offered or given to an employee. Bidders must report immediately any employee who approaches the bidder, the bidder's employees or representatives and solicits, requests or suggests in any way that the bidder provide something as a gift to the employee.

36. Warranties

Without limitation upon any other warranty, representation warranty or duty imposed upon or made by the Contractor in the Contract Documents, the Contract hereby warrants:

A. that this Contractor has not been solicited or secured, directly or indirectly, in a manner contrary to the laws of the State of New Jersey and that said laws have not been violated and shall not be violated as they relate to the procurement or the performance of this Contract by any conduct, including the paying or giving of any fee, commission, compensation, gift, gratuity or consideration of any kind, directly or indirectly, to any County, employee, officer or officials.

B. that the Contractor, for itself and its subcontractors, is qualified by training and experience to perform the services in accordance with all of the terms, conditions and requirements of the Contract Documents .

C. that the Contractor is ready, willing and able to perform all services in the timeframe and as required by this Contract, and that he and/or his subcontractors performing the work presently hold in good standing any and all necessary licenses for the lawful performance of the Project within the State of New Jersey.

37. Warranty against Defects.

In addition to any other warranty, the Contractor further agrees to extend to the County a one year warranty against defects in material and workmanship of the materials and equipment herein provided to the County, which shall commence upon final Acceptance of the Work by the County

38. Default

Without limitation upon any duty or obligation imposed upon the Contractor by the Contract Documents, a Default by the Contractor shall include the following:

- A. Failure by the Contractor to begin work under the Contract within the time specified in the Notice to Proceed, or otherwise according to the Contract;
- B. Failure by the contractor to perform the Work with sufficient workmen, equipment or materials to insure completion of the Work in accordance with the Contract;
- C. Violation by the Contractor of any of the conditions or covenants of the Contract, the Documents, or any order of the County authorized therein, and failure to execute the same in good faith or in accordance with the terms thereof;
- D. Unnecessary, unreasonable or negligent delay by the Contractor in performance of the Contract;

- E. Abandonment or discontinuation by the Contractor of performance of the Work without approval of the County, or failure to resume Work which has been discontinued within a reasonable time after notice to do so;
- F. Failure or refusal by the Contractor to remove materials or perform anew any Work rejected as defective or unsatisfactory;
- G. Failure by the Contractor to complete the Work within the time specified in the Contract, or within the extended time as otherwise provided according to the Contract;
- H. Insolvency or bankruptcy of the Contractor, or commission by him of any act of insolvency or bankruptcy;
- I. Failure by the Contractor to protect, repair or make good any damage or injury to property;
- J. Failure by the Contractor, for any cause whatsoever, to carry on the Work in an acceptable manner;
- K. Conviction of any principal of Contractor of any crime under the laws of the State of New Jersey which, if committed by a public official, would disqualify that person from public employment;
- L. Failure of Contractor to pay its subcontractors and/or suppliers, or any governmental authority any sums that are legally due and owing that are related to provision of goods or services related to this project.
- M. Assignment or subcontracting of the work or any part thereof or any monies due hereunder that is not authorized as set forth in this Contract.

If the Contractor becomes in Default and fails, refuses or is otherwise unable to cure such default within a time frame that ensures continuous and uninterrupted provisions of all required Work to the County as set forth in the Contract Documents , or shall otherwise fail to comply with any of the terms, conditions, provisions or stipulations of this Contract , according to the intent and meaning thereof, then the COUNTY shall be permitted to pursue any or all remedies that may be available under the Contract Documents, or at law or in equity, including but not limited to an action for specific performance, termination of the contract, or any action for damages arising from the Contractor's default.

Notwithstanding the foregoing, the County and Contractor shall seek to mediate claims and disputes, when resort to litigation is not authorized, as set forth in the Contract Documents.

The commencement of one or more remedy shall not preclude the County from pursuit of any other available remedy.

Should the County fail to make any payment when such payment is due in accordance with the Contract Documents, or otherwise fail to perform any material duty or obligation imposed upon the County by the Contract Documents. the Contractor shall be permitted to proceed with all remedies that may be available at law or in equity, provided that Contractor shall first provide the County with written notice of the circumstances that are alleged to constitute a default and a 30 day opportunity to cure.

39. Continuing the Work

During the pendency of any dispute or disagreement, the Contractor shall carry on the Work and adhere to the progress schedule, and shall not abandon, slow down or terminate its work, and no Work shall be delayed or postponed pending resolution of any disputes or disagreements, unless this Agreement is Terminated or such deviation from the Work or Work Schedule is directed by the County.

40. Liquidated Damages

Without limitation upon any other provision regarding liquidated damages in the Contract Documents, all amounts set forth in the Contract Documents as liquidated damages shall be a per day charge for every calendar day that the Contractor is in default in completing the Work or any designated portion thereof in excess of the number of days prescribed. The daily sums herein contracted to be paid by the Contractor to the County for any default or delay in the completion of this Work or portions of Services are stipulated to be not a penalty, but rather, liquidated compensation for damages which the County will suffer by reason of such default, loss of use of property, interest on monies borrowed, increased administrative and engineering costs, and other tangible and intangible losses.

The County may deduct the sum of liquidated damages from any monies due or that become due the Contractor under the Contract. If such monies are insufficient, the Contractor or his surety or sureties shall pay to the County any deficiency in such monies within thirty (30) calendar days. Assessment of Liquidated Damages are not intended and shall not be an exclusive, and are in addition to any other rights and remedies provided by law or under this Contract.

41. MEDIATION PROVISIONS FOR CONSTRUCTION CONTRACTS

Either party to this contract may demand that a dispute concerning whether a party has failed to make payments pursuant to the provisions of N.J.S.A. 2A:30A-1 et. seq., or perform Work required hereunder be submitted to non-binding mediation.

If mediation is demanded, it shall be demanded consistent with the county's provisions concerning Alternative Dispute Resolution for contracts to which N.J.S.A. 40A:11-50 is applicable. Those provisions are set forth below.

Alternative Dispute Resolution shall not be available with regard to disputes concerning the bid solicitation or award process or the formation of contracts or subcontracts entered into pursuant to the New Jersey Local Public Contracts Law. In addition, Alternative Dispute Resolution shall not prevent either party from pursuing any other remedy, including but not limited to injunctive relief or an action for specific performance, in the event that emergent circumstances exist or when necessary to protect the health, safety or welfare of the public.

The County's Alternative Dispute Resolution procedure is as follows:

- A. **Controversies and Claims Subject to Mediation.** Except as specified above, If a dispute between County and Contractor arises during the course of the contract, the parties will make a good faith effort to resolve the dispute through non-binding mediation prior to resorting to litigation,
- B. **Contract Performance Pending Mediation.** During mediation proceedings, Contractor shall continue to perform, and County shall continue to make payments pursuant to the terms of the contract.
- C. **When Mediation May be Demanded.** Prior to either party demanding mediation, the aggrieved party shall attempt to resolve the problem directly with the other party.

In the event that the parties are unable to directly resolve a problem within 10 days of the first notice of the dispute, the aggrieved party shall promptly submit a written notice of dispute to the other party. The other party shall respond in writing.

Demand for mediation of any claim shall not be made until the earlier of the following:

- (i) Five (5) business days after the other party has provided its written response to the aggrieved party's notice of dispute;
- (ii) Thirty (30) days have passed after submission of the original, written claim by the aggrieved party and the other party has not responded.

If the written response from the other party does not resolve the dispute, the aggrieved party shall have thirty (30) days from the delivery of the other party's response to file a demand for mediation. If the aggrieved party fails to do so, it shall be deemed to have waived its right pursuant to this contract to demand Alternative Dispute Resolution.

A party who files a "Notice of Demand for Mediation" must assert in the demand all claims then known to that party for which mediation may be demanded. If a party fails to include a claim because of excusable neglect, or when a claim has matured or been acquired subsequently, the mediator or mediators may permit amendments.

- D. **Procedure to Request Mediation.** Either party may demand mediation by written notice to the other party. The written notice shall contain at minimum 1) a brief statement of the nature of the dispute, and 2) the name, address and the phone number of that party's designated representative for purposes of mediation. The other party shall designate its representative for mediation in writing no later than five (5) business days after receipt of the demand for mediation. The respective designees shall thereupon promptly, and with due regard for the need for timely action, choose a mediator. If the parties cannot agree on a mediator, they shall choose a reputable mediation firm.

Any mediation firm so chosen shall present a list of at least five (5) proposed mediators to the parties and shall provide the parties with a summary of each person's qualifications to serve as mediator. Each party shall rank the proposed mediators in order of preference.

The fifth and any lower ranked persons on each list will be excluded from further consideration.

The chosen mediator shall be the remaining person who is the combined highest ranking mediator on both preference lists, after deleting all excluded persons.

In the event of a tie, the mediator shall be chosen by lot.

- E. **Procedures at Mediation.** The mediation shall be conducted in such reasonable and efficient manner as may be agreed between the parties and the mediator or, if the parties cannot agree, as may be determined by the mediator.

The parties will not be bound by the Rules of Evidence in presenting their positions before the mediator.

- F. **Cost of Mediation.** Each party will bear its own cost of participation in the mediation. The mediator's fee will be divided equally between the parties.
- G. **Failure of Mediation.** If a good faith effort to resolve the dispute through mediation is unsuccessful within 60 days after the initial request for mediation, then either party may terminate the mediation by written notice to the mediator and to the other party. Thereafter, either party may submit the dispute to the Superior court of New Jersey, Atlantic County, for adjudication, which court shall have exclusive original jurisdiction over the dispute.

During the performance of the Work, either party to this contract may demand that a dispute concerning whether a party has failed to make payments pursuant to the provisions of N.J.S.A. 2A:30A-1 et. seq., or perform Work required hereunder be submitted to non-binding mediation.

If mediation is demanded, it shall be demanded consistent with the county's provisions concerning Alternative Dispute Resolution for contracts to which N.J.S.A. 40A:11-50 is applicable. Those provisions are set forth below.

Alternative Dispute Resolution shall not be available with regard to disputes concerning the bid solicitation or award process or the formation of contracts or subcontracts entered into pursuant to the New Jersey Local Public Contracts Law. In addition, Alternative Dispute Resolution shall not prevent either party from pursuing any other remedy, including but not limited to injunctive relief or an action for specific performance, in the event that emergent circumstances exist or when necessary to protect the health, safety or welfare of the public.

42. CONTRACT PERIOD: For the Fire Pump Replacement at the Canale Fire Training Facility 5033 English Creek Avenue, EHT, New Jersey is as follows:

COMPLETION WITHIN 180 calendar days after notice to proceed

43. Atlantic County will not be held responsible for vendors not receiving general information due to their not scheduling any Pre-Bid viewing of the project area.

44. Investment Activities in Iran Certification - Pursuant to N.J.S.A. 52, 32-55, et seq., any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete a certification with their bid, in the form provided, to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division of Purchase and Property's website at www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf

NO UNSCHEDULED WALK-INS AT THE PROJECT SITE WILL BE ALLOWED.

TECHNICAL SPECIFICATIONS

BID SPECIFICATIONS



ANTHONY "TONY" CANALE FIRE TRAINING FACILITY FIRE PUMP REPLACEMENT

OWNER:

**Atlantic County
1127 Drexel Avenue
Atlantic City, NJ 08401**

ENGINEER:

Concord Engineering Group, Inc.

September 30, 2016



CONCORD ENGINEERING GROUP, INC.

2311 ATLANTIC AVENUE
ATLANTIC CITY, NJ 08401
TEL (609) 246-7255 FAX (609) 246-7413

**MICHAEL P. TOY, P.E., Ph.D.
NJPE #35807**

DOCUMENT 00001

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END OF DOCUMENT

DOCUMENT 00015

LIST OF DRAWINGS

PART 1 CONTRACT DRAWINGS

1.1 The following Drawings form the graphic portion of the Contract Documents.

<u>Number</u>	<u>Drawing Title</u>	<u>Date</u>
	Cover Sheet	9/30/16
FP-1	Fire Protection Notes, Legend and Details	9/30/16
FP-2	Fire Protection Demolition and New Work Plans	9/30/16
E-1	Electrical Notes, Legend, Schedules and Single Line Diagram	9/30/16
E-2	Electrical Demolition and New Work Plans	9/30/16

END OF DOCUMENT

SECTION 00030 – SUPPLEMENTARY GENERAL CONDITIONS

PART 1 - GENERAL

1.1 INSURANCE REQUIREMENTS

- A. The Contractor shall provide and pay for insurance coverage of such types and in such amounts as will completely protect the Contractor and the County against any and all risks of loss or liability arising out of this contract.
- B. The insurance must be furnished by insurance companies with an “A” or better rating, as published in the most recent edition of Bests Insurance Key Rating Guide and authorized to do business in the State of New Jersey.
- C. The Contractor shall furnish the County with Certificates of Insurance naming the County as an additional insured, and providing further that the liability insurance coverage shall be considered as primary and not as excess insurance, describing the types and amounts of insurance, identifying the coverage to this contract by reference and providing for thirty (30) days written notice to the County by registered mail prior to any modification, cancellation, non-renewal or other change in coverage.
- D. The Contractor and his Subcontractors, Comprehensive Liability Insurance shall be as specified in the General Instructions and Conditions for Construction Contracts.

1.2 PERFORMANCE AND PAYMENT BOND, EXECUTION OF CONTRACT

- A. Subsequent to the award, the successful Bidder shall execute and deliver to the County a Contract in such number of counterparts as the County may require.
- B. Having satisfied all conditions of award as set forth, the successful Bidder shall furnish a payment bond in a penal sum of at least 100% of the amount of the Contract as awarded, as security for the faithful performance of the Contract, and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature employed or used by him in performing the work. Such bond shall be in the form of bond included in the Specifications and shall bear the same dates as, or a date subsequent to, the date of the Contract.
- C. On each such bond, the rate of premium shall be stated, together with the total amount of the premium charged. The current power of attorney for the person who signs for any surety company shall be attached to such bond.
- D. The failure of any successful Bidder to execute such contract and to supply the required bond within ten days after the prescribed forms are presented for signature, or within such extended period as the County may grant based upon reasons determined adequate by the County, shall constitute a default, and the County may either award the contract to the next responsible Bidder or re-advertise for bids, and may charge against such Bidder the difference between the amount of the Bidder and the amount for which a contract for the work is subsequently executed.

1.3 ADDITIONAL OR SUBSTITUTE BOND

- A. If at any time the County, for justifiable cause, shall be or become dissatisfied with the Surety of Sureties for the Performance and/or Payment Bonds, the Contractor shall within five (5) days after the notice from the County to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other Surety or Sureties as may be satisfactory to the County. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new Surety or Sureties shall have furnished such an acceptable bond to the County.

1.4 OBSERVANCES OF LAWS

- A. The Contractor shall observe and comply with all Federal, State and local laws that affect those engaged or employed in this project, the materials and/or the conduct of the work.
- B. All such laws and/or ordinances affecting this Contract in any way shall be part of the Contract as if included herein.
- C. Specifications, instructions to bidders and all accompanying documents, including the awarded contract, shall be taken to be in accordance with the laws of the State of New Jersey.

1.5 PREVAILING WAGE RATES

- A. In accordance with N.J.S.A. 34:11-56-25, "Prevailing Wage", the prevailing wage rates, as determined by the Commissioner of Labor and Industry of the State of New Jersey, for the locality of the work of each craft or trade or classification of all workmen shall be paid not less than these prevailing wage rates.
- B. In the event it is found that any workmen employed by the Contractor, or any Subcontractor covered by this Contract is paid less than the required wage rates, the County may determine the Contractor's right to proceed with the work or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The Contractor and his sureties shall be liable to the County for any excess costs occasioned thereby.
- C. The Contractor and each Subcontractor shall keep an accurate record showing the name, craft, or trade and actual hourly rate of wages paid to each workman employed by him in connection with the work. Records shall be preserved for three years from the date of payment.
- D. The Contractor shall furnish and erect in a prominent and easily accessible place at the site of the work, a suitable bulletin board.
- E. Each Contractor shall post upon this bulletin board, the prevailing wage rates for each craft and classification involved in the work as determined by the Commissioner of Labor and Industry of the State of New Jersey, including the effective date of any changes thereof. Each Contractor and Subcontractor shall post similar prevailing wage rates at such place or places as are used by them to pay workmen their wages.
- F. Before Awarding Contract: A check will be made with the Commissioner of Labor and Industry for list of the Contractor's not paying prevailing wages. The Contract will not be awarded to such Contractor until three (3) years after date of such listing.

- G. Certified Payroll: The Contractor and /or all Subcontractors are required to forward within ten (10) calendar days after completion of each pay period, a certified copy of their payroll. This copy is to be forwarded to:

COUNTY OF ATLANTIC
DIVISION OF FACILITIES/CAPITAL PLANNING
AND PROPERTY MANAGEMENT
1227 DREXEL AVENUE
P.O. BOX 1107
ATLANTIC CITY, NEW JERSEY, 08404-1107

1.6 SPECIFICATIONS

- A. The titles to the Divisions of these Specifications are introduced merely for convenience and are not necessarily correct segregation of labor or materials. Such separations shall not operate to make the Engineer an arbiter to establish limits between the Contractor and Subcontractor.
- B. The Contractor shall classify and allocate the furnishing of materials and the performance of work to the various trades in accordance with local customs, jurisdictional awards, regulations and decisions insofar as they are applicable.
- C. The Contractor, all separate Contractor's, and all Subcontractors shall conduct all their operations on this project in such a manner that no jurisdictional disputes arise regarding delivery, unloading, handling, installations, and connections of the various items in the several trades involved.

1.7 INTERPRETATIONS

- A. Should the Specifications disagree in themselves or with each other, the better quality or quantity of work shall be provided.
- B. Large scale details shall govern small scale drawings.
- C. Where the work is indicated in detail on only a portion of the drawing, this work shall apply to other like portions of the building.
- D. Should any work be necessary for the proper execution of the Specifications or Drawings, the Contractor shall perform all such work as if fully specified or indicated.
- E. The Engineer shall be advised in writing of all discrepancies, errors, conflicts, and omissions in the Specifications and Drawings. The Engineer will promptly resolve the matter. Any work undertaken after the discrepancy has been discovered and prior to clarification by the Engineer will be done at the Contractor's risk.
- F. The Engineer shall decide as to the meaning or intention of any portion of the Specifications and Drawings. His decision shall be final.
- G. Throughout the Specifications and Drawings, references are made to nominal, not actual, sizes of commercial materials. In all such cases, Contractor shall supply materials in their commercial sizes in accordance with recognized and accepted standards as intended. Only if accurately dimensioned, or if particularly specified, will sizes other than usual commercial sizes be required.

- H. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturer's or vendor's name, trade name, catalog number or the like, it is so identified for the purpose of establishing a standard, and any material, article or piece of equipment of other manufacturers or vendors which will perform equally or better the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece or equipment so proposed is, in the opinion of the Engineer, of equal substance, appearance and function. It shall not be purchased or installed without the Engineer's written approval.

1.8 USE OF DOMESTIC MATERIALS

- A. The Contractor shall comply with the provisions of Chapter 33, Title 52 of the Revised Statutes (R.S. 52:33-1, et. seq.) and NJSA 18A:18A-20 requiring the preference be given to the use of domestic materials or as same be governed by Federal Law Regulation.
- B. "Domestic Construction Material" means an un-manufactured construction material which has been mined or produced in the United States, or a manufactured construction material which has been manufactured in the United States if the cost of its components which are mined, produced, or manufactured in the United States exceed 50 percent of the cost of the components. The cost of components shall include transportation costs to the place of incorporation into the construction material and, in the case of components of foreign origin, whether or not a duty free entry certificate may be issued.

1.9 GUARANTEE

- A. The Contractor shall guarantee all materials and workmanship installed and/or performed under this Contract to be free to defects which may impair the strength, durability or appearance of said work and/or may make it suitable for the intended purpose, for a minimum period of one (1) year from the date of final completion, unless otherwise noted in the other sections of this Specification.
- B. The Contractor shall repair and/or replace any such work to the satisfaction of the County at no additional cost to the County.
- C. The guarantee is in addition to and shall in no way limit any other warranty or guarantee required by the provisions of the Contract Documents.

1.10 PERMITS AND REGULATIONS

- A. Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor.
- B. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Drawings and Specifications are at variance therewith, he shall promptly notify the Engineer in writing and any necessary changes shall be adjusted as provided in Section 1.8. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall bear all costs arising there from.

1.11 REQUIRED PROVISIONS DEEMED INSERTED

- A. Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

1.12 SUSPENSION OF WORK

- A. Should the County be prevented or enjoined from proceeding with work or from authorizing its prosecution either before or after its prosecution, by reason of any litigation, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, but time for completion of the work will be extended to such reasonable time as the County may determine will compensate for time lost by such delay with such determination to be set forth in writing.

1.13 ANTI-KICKBACK ACT

- A. The parties to this contract agree to conform to the provisions of the Copeland "Anti-Kickback Act" (18 USC 374).

PART 1 - PRODUCTS

(Not Applicable).

PART 2 - EXECUTION

(Not Applicable).

END OF SECTION 00030

SECTION 01010 - SUMMARY OF WORK

PART 1 -GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and other Division 1 specifications apply to this section.

1.2 PROJECT GENERAL DESCRIPTION

- A. Replacement of existing fire pump and associated fire protection appurtenances at the Atlantic County Anthony "Tony" Canale Training Facility complex located in Egg Harbor Township, New Jersey, as specified on the Contract Drawings and within the Technical Specifications.
 - 1. The Contractor work shall include, but is not limited to, the replacement with new of two (2) electric fire pumps, one (1) electric fire protection pressure maintenance pump, two (2) fire pump controllers, one (1) fire protection pressure maintenance pump controller, one (1) fire protection check valve and associated miscellaneous electrical, piping and general construction work required, as indicated on the project's Contract Drawings and Technical Specifications.
 - 2. Contractor shall perform all necessary coring and concrete restoration work necessary for the complete installation of the new fire and pressure maintenance pumps, as indicated on the project's Contract Drawings and Technical Specifications.
 - 3. Contractor shall be responsible to provide all devices necessary for the new fire pumps' and pressure maintenance pump's controllers to be monitored wirelessly by County's third-party security company, Atlantic Coast Alarm. Contractor shall coordinate with Atlantic Coast Alarm to confirm all necessary controllers, devices, modems, etc., are provided.
 - 4. Contractor shall be responsible to patch/seal and insulate all exterior wall openings resulting from this project.
 - 5. Contractor shall patch and repair all new openings, or openings remaining due to demolition work, made in the building's walls, ceilings, floors, etc. All patched and/or repaired wall, ceilings, floors, etc., shall match existing building finishes. Contractor shall be responsible to "paint to match" all wall (interior and exterior) patches resulting from this project.

1.3 WORK SEQUENCE

- A. The County shall continuously occupy and operate the Atlantic County Canale Fire Training Facility complex throughout the construction schedule for this project including the outdoor train facility and adjacent administration building both served by the fire pumps located in the Fire Pump House. Contractor shall be responsible to maintain unencumbered fire suppression system's operation of the complex throughout the project.
- B. The work shall be conducted to provide the least possible interference to the activities of the County's personnel and public, and to permit an orderly installation and activation of the new fire pumps and associated controllers, equipment, devices and appurtenances, with minimal interruption to the County's operations of the complex.

- C. All contracted work shall start immediately upon written notification to proceed by the County of Atlantic.
- D. The project's Work Sequence and Construction Schedule shall be as follows:
 - 1. The preparation and submission for review and approval of equipment and systems' layout shop drawings shall begin immediately upon receipt of a Notice to Proceed from the County, and shall be completed and submitted to the Engineer within twenty eight (28) calendar days.
 - 2. The preparation and submission for review and approval of the project's schedule of values and proposed construction schedule shall begin immediately upon receipt of a Notice to Proceed from the County, and shall be completed and submitted to the Engineer within fourteen (14) calendar days.
 - 3. The installation of the new fire pump replacement work to the Atlantic County Canale Fire Training facility complex may begin immediately upon written Notice to Proceed and performed in such a manner that the complex remains open and unencumbered for the County's employees' and public's use. All work shall be substantially complete by no later than one hundred eighty (180) calendar days after Contractor's receipt of a Notice to Proceed from the County.
 - 4. All required work which may affect the public and non-public areas adjacent to the Canale Fire Training Facility complex must be scheduled with the County and Egg Harbor Township a minimum of two (2) weeks in advance of when work is to be performed.
 - 5. All miscellaneous electrical work shall be performed while the Canale Fire Training Facility complex is open and accessible to the County's employees and public. System testing, adjusting and "trouble-shooting" must be completed such that the Atlantic County Canale fire Training Facility complex's operations are not interrupted.
- E. All work of this Contract is to be substantially completed by no later than one hundred eighty (180) calendar days after Contractor's receipt of a Notice to Proceed from the County. Contractor shall include in their bid amount all necessary extra labor and material charges (including premium labor charges and quick-ship charges) that will be required to meet this schedule.

1.4 LIQUIDATED DAMAGES

- A. If the said Contractor shall neglect, fail or refuse to complete all work in accordance with the requirements of Division 1, Section 01800, "Construction Schedules and Milestones", or any proper extension thereof granted by the County, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the County \$250.00 per day, not as a penalty, but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated above in the contract for the delivery.
- B. The said amount is fixed and agreed upon by and between the Contractor and the County because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the County would in such event sustain, and said amount is agreed upon to be the amount of damages which the County would sustain and said amount shall be retained from time to time by the County from current periodical estimates.

- C. It is further agreed that time is of essence of each and every portion of this Contract and of the Specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract and additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the County determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the County; Provided further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of work is due:
1. To any preference, priority or allocation order duly issued by the Government.
 2. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, included, but not restricted to, acts of God, or of other public enemy, act of the County, acts of another Contractor in the performance of a contract with the County, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, and severe weather.
 3. To any delays of Subcontractors or supplies occasioned by any of the causes specified in subsections 1 and 2 of this article; Provided further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless that County shall grant a further period of time prior to the date of final settlement of the Contract, notify the County, in writing, if the cause of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

1.5 CONTRACTOR'S USE OF PREMISES

- A. General: During the construction period the Contractor shall have limited use of the premises for construction operation, including use of the site. The Contractor's use of the premises is limited only by the County's right to perform normal operations and limited construction/maintenance operations with its own forces.
- B. General: Limit use of the premises to construction activities in areas indicated; allow for continuous County occupancy and use by the Public.
1. Confine operations to areas where construction occurs. Portions of the site beyond areas in which construction operations occur are not to be disturbed.
 2. Keep parking lot, streets, driveways and entrances serving the premises clear and available to the Public and the County's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

1.6 COUNTY OCCUPANCY

- A. Full County Occupancy: The County will fully occupy the site, outdoor training facility and existing buildings during the entire construction period. Cooperate with the County during construction operations to minimize conflicts and facilitate County's unencumbered usage. Perform the work so as not to interfere with the County's operations including, but not limited to, the normal activities of the County's staff and of the public in the public and non-public areas adjacent to the existing building.

PART 2 - PRODUCTS

(Not Applicable).

PART 3 - EXECUTION

(Not Applicable).

END OF SECTION 01010

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. The Contractor's Construction Schedule and Submittal Schedule are included in Specification Section "Submittal".

1.3 SCHEDULE OF VALUES

- A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
- B. Contractor shall coordinate preparation of its Schedule of Values for its part of the work with preparation of the Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment form.
 - c. List of subcontractors.
 - d. List of products.
 - e. List of principal suppliers and fabricators.
 - 2. Submit the Schedule of Values to the Engineer within fourteen (14) calendar days after issuance of Notice to Proceed by the County, but in no case later than seven (7) days before the date scheduled for submittal of the initial Application for Payment.

- C. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Engineer.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
 - a. Generic name.
 - b. Name of subcontractor.
 - c. Name of manufacturer or fabricator.
 - d. Name of supplier.
 - e. Change Orders (numbers) that have affected value.
 - f. Dollar value.
 - g. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.
 3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by the County.
1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment-Application Forms: Use County of Atlantic Standard Invoice, AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.
- C. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the County. Incomplete applications will be returned without action.
1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions have been made.
 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

APPLICATIONS FOR PAYMENT

01027-2

- D. Transmittal: Submit 3 signed and sealed, executed copies of each Application for Payment to the Engineer by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.
- E. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.
- F. Retainage: For Contracts or agreements the total of which exceeds \$100,000.00, the Owner shall retain two (2%) of the total amount due on each partial payment pending completion of the contract or agreement. For contracts or agreements the totals of which are less than \$100,000.00, the Owner shall retain ten (10%) of the total amount due on each partial payment. The total retainage shall become due and payable to the Contractor as part of the Contractor's Final Payment upon final completion of all work to the satisfaction of the County and Engineer.

G. Initial Application for Payment: Contractor may submit for approval, up to 30% of contract value less contingency. Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment, include the following:

- 1. List of subcontractors.
- 2. List of principal suppliers and fabricators.
- 3. Schedule of Values.
- 4. Contractor's Construction Schedule.
- 5. Copies of building permits.
- 6. Certificates of insurance and insurance policies.
- 7. Performance and payment bonds (if required).
- 8. Data needed to acquire the County's insurance.
- 9. Initial settlement survey and damage report (if required).

F. Application for Payment at Substantial Completion: Contractor may request up to 98% of contract value. Following issuance of the Certificate of Substantial Completion, Contractor may submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for County occupancy of designated portions of the work.

G. Administrative actions and submittal that shall proceed or coincide with the Application for Payment at Substantial Completion include:

- 1. Occupancy permits and similar approvals.
- 2. Warranties (guarantees) and maintenance agreements.
- 3. Test/adjust/balance records.
- 4. Maintenance instructions.
- 5. Start-up performance reports.
- 6. Change-over information related to County's occupancy, use operation and maintenance.
- 7. Final cleaning.
- 8. Application for reduction of retainage, and consent of surety.
- 9. Advice on shifting insurance coverage.
- 10. List of incomplete work, recognized as exceptions to Engineer's Certificate of Substantial Completion.

- H. Final Payment Application: Administrative actions and submittal which must precede or coincide with submittal of the final payment Application for Payment include the following:
1. Completion of Project's closeout requirements.
 2. Completion of items specified for completion after Substantial Completion.
 3. Assurance that unsettled claims will be settled.
 4. Assurance that work not complete and accepted will be completed without undue delay.
 5. Transmittal of required Project construction records to County.
 6. Proof that taxes, fees and similar obligations have been paid.
 7. Removal of temporary facilities and services.
 8. Removal of surplus materials, rubbish and similar elements.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION 01027

SECTION 01035 - MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. Supplemental instructions authorizing minor changes in the work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Engineer on AIA Form G710.

1.4 CHANGE ORDER PROPOSAL REQUESTS

- A. County-Initiated Proposal Requests: Proposed changes in the work that will require adjustments to the Contract Sum or Contract Time will be issued by the Engineer, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
 - 1. Proposal requests issued by the Engineer are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
 - 2. Unless otherwise indicated in the proposal request, within 10 days of receipt of the proposal request, submit to the Engineer for the County's review an estimate of cost necessary to execute the proposed change.
 - a. Include a list of quantities of products required and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the work will have on the Contract Time.

- B. Contractor -Initiated Change Order Proposal Requests: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Engineer.
 - 1. Include a statement outlining the 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 Contract Time.
 - 2. Include a list of quantities of products required and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Comply with requirements in Section "Product Substitutions" if the proposed change in the work requires the substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests.

1.5 OWNER'S ALLOWANCES

- A. Submit claims for increased costs because of a prior approved change in scope or nature of the Owner's Allowance described in the Contract Documents, whether for the purchase order amount or the Contractor's handling, labor, installation, overhead, and profit. Submit all claims within 21 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. The County will reject claims submitted later than 21 days.
 - 1. Do not include the Contractor's or Subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in Contract Documents.
 - 2. No change to the Contractor's indirect expense is permitted for selection of higher or lower-priced materials or systems of the same scope and nature as originally indicated.

1.6 CHANGE ORDER PROCEDURES

- A. Upon the County's and Engineer's approval of a Change Order Proposal Request, the Engineer will issue a Change Order for signatures of the County and the Contractor on AIA Form G701, as provided in the Conditions of Contract.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

(Not Applicable)

END OF SECTION 01035

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:
 - 1. Coordination.
 - 2. Administrative and supervisory personnel.
 - 3. General installation provisions.
 - 4. Cleaning and protection.

1.3 COORDINATION

- A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different Sections of the Specifications that are dependent on each other for proper installation, connection, and operation.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work.
- D. Conservation: Coordinate construction operations to ensure that operations are carried out with consideration given to conservation of energy, water and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the work. Refer to other sections of disposition of salvage materials that are designated as County's property.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare and submit coordination drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the interrelationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspection materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level. Allow for expansion.
- E. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Engineer for final decision.
- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Engineer for final decision.

3.2 CLEANING AND PROTECTION

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.3 PROTECTION OF PERSONS AND PROPERTY

- A. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.
- B. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:
 - 1. All employees on the Work and all other persons who may be affected thereby.
 - 2. All the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor of any of his Subcontractors of Sub-subcontractors.
 - 3. All other property at the site or adjacent thereto, including trees, shrubs, lawns, walk, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- C. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Engineers and Users of adjacent utilities.
- D. When the use of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care in compliance with State and Local regulations and shall carry on such activities under the supervision of properly qualified personnel.

- E. All damage or loss to any property referred to herein caused in whole or in part by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them as be liable, shall be remedied by the Contractor.
- F. The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's Superintendent unless otherwise designated in writing by the Contractor to the Engineer.
- G. The Contractor shall comply in all respects with the state construction safety code and with applicable federal regulations, and shall see that all Subcontractors comply with the codes and regulations wherever and whenever they are applicable.
- H. The Contractor is specifically directed to comply with Section 7 of the Construction Safety Code which requires among other things, first aid kits to be available and the name of the nearest physician and ambulance service to be posted.
- I. The Contractor shall notify the Engineer immediately if any accident of injury occurring on the project.
- J. Where electric or gas welding or cutting work is done above or within ten feet of combustible material or above space that may be occupied by persons; interposed shields of incombustible materials shall be used to protect against fire damage or injury due to sparks or hot metal.
- K. Tanks supplying gases for gas welding or cutting shall be placed at no greater distance from the Work than is necessary for safety, securely fastened and maintained in an upright position where practicable. Such tanks, when stored for use, should be removed from any combustible material and free from exposures to the ray of the sun or to high temperatures. Remove all tanks from the building at the end of each day.
- L. Suitable fire extinguisher equipment shall be maintained near all welding and cutting operations. When operations cease for the noon hour or at the end of the day, the surroundings adjacent to welding and cutting operations should be thoroughly wet down.
- M. A workman equipped with suitable fire extinguishing equipment should be stationed near welding and cutting operations to see that sparks do not lodge in floor cracks, or pass through floor or wall openings or lodge in any combustible material. The workmen shall be kept at the source or work offering special hazards for 30 minutes after the job is completed, to make sure that no smoldering fires have been started.
- N. In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss.

END OF SECTION 01040

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for cutting and patching.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required and how it will be performed; indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
 - 4. Approval by the Engineer to proceed with cutting and patching does not waive the Engineer's right to later require complete removal and replacement of a part of the work found to be unsatisfactory.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Structural concrete.
 - b. Structural steel.
 - c. Timber and primary wood framing.
 - d. Miscellaneous structural metals.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Engineer's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace work cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect subject to the County's approval. Use materials whose installed performance will equal or surpass that of existing materials.
- B. All materials use for cutting, patching of existing surfaces shall equal existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.

- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
- D. Repair, patch and paint all disturbed existing walls, floor, ceilings, partitions, etc. to match existing surfaces and colors. All cutting and patching shall be done to the complete satisfaction of the County.
- E. Patch roof openings in a manner and with such materials that are in full compliance with the existing roof's manufacturer's recommendations and warranty requirements.

3.4 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty, and items similar in nature.

END OF SECTION 01045

SECTION 01095 - REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term indicated refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as shown, noted, scheduled, and specified are used to help the reader locate the reference. There is no limitation on location.
- C. Directed: Terms such as directed, requested, authorized, selected, approved, required, and permitted mean directed by the Engineer, requested by the Engineer, and similar phrases.
- D. Approved: The term approved, when used in conjunction with the Engineer's action on the Contractor's submittals, applications, and requests, is limited to the Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulations: The term regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term furnish means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. Install: The term install describes operations at the Project Site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.
- H. Provide: The term provide means to furnish and install, complete and ready for the intended use.

- I. Installer: An installer is the Contractor or another entity engaged by the Contractor, either as an employee, Subcontractor, or Contractor of lower tier, to perform a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. The term experienced, when used with the term installer, means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of the authority having jurisdiction.
 - 2. Trades: Using terms such as carpentry is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as carpenter. It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.
 - 3. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no choice or option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
 - a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.
- J. Project Site is the space available to the Contractor for performing construction activities either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. Testing Agencies: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on Construction Specifications Institute's 17-Division format and MASTER FORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 - 1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor and/or Seller. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
 - a. The words shall be are implied where a colon (:) is used within a sentence or phrase.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and where the standards establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different but apparently equal and other uncertainties to the Engineer for a decision before proceeding.
 1. 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 the requirements. Refer uncertainties to the Engineer for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. 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, authorities 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.

1.5 GOVERNING REGULATIONS AND AUTHORITIES

- A. Copies of Regulations: Obtain copies of the following regulations and retain at the Project Site to be available for reference by parties who have a reasonable need.

1.6 SUBMITTALS

- A. Permits, Licenses, and Certificates: For the County's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

Not Applicable)

END OF SECTION 01095

SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including but not limited to the following:
 - 1. Pre-Construction Conference.
 - 2. Progress Meetings.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. County shall schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than seven (7) calendar days after issuance of Notice to Proceed and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The County, Engineer and their consultants; the Contractor and its superintendent; major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the work.
- C. Agenda: Discuss items of significance that could affect progress, including such topics as:
 - 1. Tentative construction schedule.
 - 2. Designation of responsible personnel.
 - 3. Procedures for processing field decisions and Change Orders.
 - 4. Procedures for processing Applications for Payment.
 - 5. Distribution of Contract Documents.
 - 6. Submittal of Shop Drawings, Product Data, and Samples.
 - 7. Preparation of record documents.
 - 8. Use of the premises.

1.4 PROGRESS MEETINGS

- A. **Prime Contractor** shall conduct periodic progress meetings at the Project site at regularly prescheduled intervals. Notify the County and the Engineer of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

- B. Attendees: In addition to representatives of the County and Engineer, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.
- C. Agenda: **Prime Contractor** shall be responsible to review and correct minutes of the previous progress meeting. All parties involved shall review minutes and other items of significance that could affect progress and report any concerns or corrections to the Prime Contractor. Include topics for discussion as appropriate to the current status of the Project. **Prime Contractor** shall prepare agenda for each meeting and distribute to all parties no less than three (3) calendar days prior to the next meeting.
- D. Reporting: No later than 3 days after each meeting, the **Prime Contractor** shall prepare and distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

(Not Applicable)

END OF SECTION 01200

SECTION 01210 – ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Type of allowances include the following:
 - 1) Contingency allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Engineer of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the work.
- B. At Engineer's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Engineer or Owner from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for change orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Engineer or Owner for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins as limited by State Public Bidding Laws.
- C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.7 UNUSED MATERIALS

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit To Owner, after installation has been completed and accepted.
 - 1. If requested by Engineer of Owner, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Engineer or Owner, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 – PRODUCTS (Not Used)

PART 2 – EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. See Contract Drawings for Allowance descriptions.

END OF SECTION 01210

SECTION 01300 - SUBMITTALS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the work, including:
 - 1. Contractor's construction schedule.
 - 2. Submittal schedule.
 - 3. Daily construction reports.
 - 4. Shop Drawings.
 - 5. Product Data.
 - 6. Samples.
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Performance and payment bonds.
 - 4. Insurance certificates.
 - 5. List of Subcontractors.
- C. The Schedule of Values submittal is included in Section “Applications for Payment”.
- D. Inspection and test reports are included in Section “Quality Control Services”.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to Engineer using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

1.4 CONTRACTOR CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type of Contractor's construction schedule. Submit with initial application for payment.
- B. Distribution: Following response to the initial submittal, print and distribute copies to the Engineer, County, Subcontractors, and other parties required to comply with scheduled dates.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" by 11" but no larger than 36" by 48".
 - 7. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

1.6 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves. Where Product Data must specially be prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

1.7 ENGINEER'S ACTION

- A. Except for submittals for the record, information or similar purposes, where action and return is required or requested, the Engineer will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Engineer will stamp each submittal with a uniform, self-explanatory action stamp.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION 01300

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality control services.
- B. Quality control services include inspections and tests and related actions including reports performed by testing agencies, governing authorities and the Contractor. They do not include Contract enforcement activities performed by the Engineer.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

1.3 RESPONSIBILITIES

- A. Contractor's Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Sections and required by governing authorities. Costs for these services shall be included by the Contractor in the Contract Sum.
 - 1. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicated compliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.
 - a. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.
 - 2. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests, and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel.

- B. Duties of the Testing Agency: The testing agency engaged by the Contractor to perform inspections, sampling, and testing of materials and construction specified in individual Specification Sections shall cooperate with the Engineer and the Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.
- C. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition, the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1.4 SUBMITTALS

- A. The testing agency shall submit a certified written report of each inspection, test, or similar service to the Engineer, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

1.5 QUALITY ASSURANCE

- A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are pre-qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories and which specialize in the types of inspections and tests to be performed.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 01400

SECTION 01500 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary services include, but are not limited to, the following:
 - 1. Temporary door opening enclosures.
- C. Support facilities include, but are not limited to, the following:
 - 1. Storage sheds.
 - 2. Temporary enclosures.
 - 3. Temporary project identification signs and bulletin boards.
 - 5. Waste disposal services.
 - 6. Construction aids and miscellaneous services and facilities.

1.3 SUBMITTALS

- A. Implementation and Termination Schedule: Within fourteen (14) calendar days of the date established for commencement of the work, submit a schedule indicating implementation and termination of each temporary facility.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Local and State building code requirements.
 - 2. Local zoning requirements.
 - 3. Health and safety regulations.
 - 4. Utility company regulations.
 - 5. Police, fire department and rescue squad rules.
 - 6. State and Federal environmental protection regulations.

- B. Standards: Comply with NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations,” ANSI A10 Series standards for “Safety Requirements for Construction and Demolition”.
- C. Inspections: Arrange for authorities having jurisdiction to inspect the work. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Toilets: Contractor shall provide temporary toilet facilities for Contractor's use only.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Locate storage sheds, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion.
- B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - 1. If required, install tarpaulins securely with incombustible wood or metal framing. Close openings of 25 sq. ft. or less with fire treated plywood or similar materials.
- C. Project Identification and Temporary Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit unauthorized signs.

1. Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.
 2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- D Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.4 FIRE SUPPRESSION SYSTEMS

- A. The installation of replacement fire pumps and associated controllers, equipment, devices, etc., at the Canale Fire Training Facility complex shall be done in a manner which maintains continuous operation of the complex's fire suppression systems. Contractors shall include in their bid amount all necessary temporary work (for all trades), throughout the entire project, necessary to maintain the continued, uninterrupted operation of the facility's existing fire suppression systems during periods when the complex is occupied. Contractor shall be responsible to provide a fire watch during any period when the existing fire suppression system is temporarily inactive.

3.5 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal.

- C. Termination and Removal: Unless the County or Engineer requests that it be maintained longer, remove each temporary facility when the need has ended, when 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 the 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 the Contractor's property. The County reserves the right to take possession of project identification signs.
 - 2. At Substantial Completion, clean and renovate permanent facilities used during the construction period.

END OF SECTION 01500

SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories" and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
 - b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.
 - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the work.
 - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

- A. Product List: Prepare a list showing products specified in tabular form acceptable to the Engineer. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the work:
 - 1. No available domestic product complies with the Contract Documents.
 - 2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation
 - 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 - 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 - 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 - 2. Semi-proprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term "or equal" or "or approved equal," comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 - 3. Nonproprietary Specifications: When Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 - 4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 - 5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - 6. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes, or regulations specified.

7. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category.
8. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work.
 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

SECTION 01631 - PRODUCT SUBSTITUTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."
- C. Standards: Refer to Section: "Definitions and Standards" for applicability of industry standards to products specified.
- D. Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment."

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to be requests for "substitutions." The following are not considered to be requests for substitutions:
 - 1. Substitutions requested during the Bidding period, and accepted prior to award of the Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
 - 2. Revisions to the Contract Documents requested by the County or Engineer.
 - 3. Specified options of products and construction methods included in the Contract Documents.
 - 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: Requests received more than fifteen (15) days after Notification to Proceed shall be rejected. Requests for substitution if received within fifteen (15) days after Notification to Proceed shall meet the following requirements:
1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form and accordance to procedures required for Change Order proposals.
 2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. Coordination information, including a list of changes of modifications needed to other parts of the Work and to construction performed by the County and separate Contractor, that will become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
 - g. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Document, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
 3. Engineer's Action: Within one (1) week of receipt of the request for substitution, the Engineer will request additional information or documentation for evaluation of the request. Within two (2) weeks of receipt of the request, or one week of receipt of additional information or documentation, which ever is later the Engineer will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a Change Order.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Contractor's substitution request will be received and considered by the Engineer when one or more of the following conditions are satisfied, as determined by the Engineer; otherwise requests will be returned without action except to record noncompliance with these requirements.
1. Extensive revisions to the Contract Documents are not required.
 2. Proposed changes are in keeping with the general intent of the Contract Documents.
 3. The request is timely, fully documented, and properly submitted.
 4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered the County, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the County may be required to bear. Additional responsibilities for the County may include additional compensation to the Engineer for redesign and evaluation services, increased cost of other construction by the County or separate Contractor, and similar considerations.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
 9. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.
 11. Where a proposed substitution involves more than one Contractor and/or Subcontractor, each Contractor shall cooperate with the other Contractors involved to coordinate the work, provide uniformity and consistency, and assure compatibility of products.
- B. The Contractor's submittal and the Engineer's acceptance of Shop Drawings, Product Data, or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 - EXECUTION

(Not Applicable).

END OF SECTION 01631

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including, but not limited to:
1. Inspection procedures.
 2. Project record document submittal. (As-built drawings)
 3. Operation and maintenance manual submittal.
 4. Submittal of warranties.
 5. Final cleaning.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following and list exceptions in the request:
1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 2. Advise the County of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 4. Obtain and submit releases enabling the County unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Submit record as-built drawings, operation and maintenance manuals, final project photographs, damage or settlement survey, property survey and similar final record information.
 6. Deliver tools, spare parts, extra stock, and similar items.
 7. Make final changeover of permanent locks and transmit keys to the County. Advise the County's personnel of changeover in security provisions.
 8. Complete startup testing of systems and instruction of the County's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mockups, and similar elements.

9. Complete final cleanup requirements, including touch up painting. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Engineer will either proceed with inspection or advise the Contractor of unfilled requirements. The Engineer will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following and list exceptions in the request:
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit consent of surety to final payment.
 4. Submit a final liquidated damages settlement statement.
 5. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Re-inspection Procedure: The Engineer will re-inspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed under circumstances acceptable to the Engineer.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistant location; provide access to record documents for the Engineer's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the work.
 2. Mark new information that is important to the County, but was not shown on Contract Drawings or Shop Drawings.
 3. Note related change order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind sets with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

- C. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up record drawings and Specifications.
- D. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the County's records.
- E. Operation and Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch, 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
 - 1. Emergency instructions.
 - 2. Spare parts list.
 - 3. Copies of warranties.
 - 4. Recommended maintenance procedures.
 - 5. Inspection procedures.
 - 6. Shop Drawings and Product Data.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the County's personnel to provide instruction in proper operation and maintenance. If installers are not certified by manufacturers of equipment, devices and systems installed, provide instruction by manufacturer's certified representatives. Include a detailed review of the following items:
 - 1. Operation and Maintenance manuals.
 - 2. Record documents.
 - 3. Spare parts and materials.
 - 4. Tools.
 - 5. Control sequences.
 - 6. Cleaning.
 - 7. Warranties and bonds.

3.2 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions and is included in Section "Temporary Facilities."
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the County's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
 - 1. Where extra materials of value remaining after completion of associated work, have become the County's property, arrange for disposition of these materials as directed.

END OF SECTION 01700

SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to the General Conditions and individual Specification Sections for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section "Project Closeout."
 - 3. Specific requirements for warranties for the work and products and installations that are specified to be warranted, are included in the individual Specification Sections.
 - 4. Certifications and other commitments and agreements for continuing services to County are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 WARRANTY AND MAINTENANCE BOND REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted work that has failed or maintenance work covered by a maintenance bond that is required to be performed, remove and replace other work that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted or maintenance 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 Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether the County has benefited from use of the work through a portion of its anticipated useful service life.
- D. County's Recourse: Expressed warranties made to the County, 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 the time in which the County can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The County reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. The County 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.

1.4 SUBMITTALS

- A. Submit written warranties to the Engineer prior to the date certified for Substantial Completion. If the Engineer'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 Engineer.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the County through the Engineer for approval prior to final execution.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

(Not Applicable)

END OF SECTION 01740

SECTION 01800 - CONSTRUCTION SCHEDULES AND MILESTONES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section specifies the construction schedules and milestones governing the contractor's installation of a new fire protection utility service, new fire hydrant, supplemental site, electrical and fire alarm work, and all other specified and required miscellaneous work.
- B. The Contractor shall be responsible to coordinate the work and construction activities of both his "direct" employees and his "sub-contractors" to assure an efficient and timely installation of each phase of the work in accordance with the construction schedule specified herein.
- C. The Contractor shall furnish all required manpower to meet the construction schedule defined herein.
- D. Upon written notification to proceed by the County of Atlantic, the Contractor shall perform the following:
 - 1. All equipment, material and systems submittals shall be submitted to the Engineer for approval within twenty eight (28) calendar days of written notification to proceed by the County.
 - 2. Contractor shall provide the County and Engineer with the projected "lead times" of all new equipment and material immediately after receipt of approved submittals.
 - 3. A Construction Schedule and a Schedule of Values shall be prepared by the Contractor and submitted to the County and Engineer within fourteen (14) calendar days of written notification to proceed by the County. At that time, the County will review and coordinate with Contractor any dates required for limited systems shutdowns. The County reserves the right to alter the Contractor's proposed limited systems shutdown dates as may be necessary for the continued, uninterrupted operation of the Atlantic County Canale Fire Training Facility complex. The needs of the County will take precedence in determining the actual partial shutdown or disruption dates.
 - 4. The Atlantic County Canale Fire Training Facility complex shall remain operational continuously through the completion of the project. The facility's existing fire suppression systems must remain fully operational during periods of complex occupancy. Contractor shall provide a fire watch during all periods when fire suppression systems are inactive.

5. The Atlantic County Canale Fire Training Facility complex's new fire protection work may begin immediately upon written Notice to Proceed.
 6. Contractor shall coordinate and officially notify the County of the dates of any required utility or systems shut-downs and transfer of services, a minimum of fourteen (14) calendar days in advance of the scheduled work.
 7. All required work that may affect the public and non-public areas adjacent to the Atlantic County Canale Fire Training Facility complex, must be scheduled with the County and Egg Harbor Township a minimum of two (2) weeks in advance of when the work is to be performed.
 8. All work required in non-public or non-public areas shall be performed while the Atlantic County Canale Fire Training Facility complex is open and accessible to the County's employees and the public. System testing, adjusting and "trouble-shooting" must be completed such that the Atlantic County Canale Fire Training Facility complex's normal operations are not interrupted.
 9. All work of the project shall be substantially complete by no later than one hundred eighty (180) calendar days after written notification to proceed by the County.
- E. Refer to Section 01010, 1.3, "Work Sequence" for additional limited system's shutdown requirements and completion dates.
- F. Unless otherwise determined, Work under this Contract, other than maintenance work of a non-offensive nature, shall not be performed on Saturdays, Sundays and/or County and State Holidays, except in time of emergency, and then only under written permission from the County or the Engineer, who shall be the sole judge of the urgency of the emergency. On weekdays, that is Monday to Friday, the work shall consist of eight (8) hours maximum, beginning not before 7 A.M. and ending not after 6 P.M., except for any pile driving or other "noise nuisance" tasks, which will not commence before 8 A.M. nor extend beyond 6 P.M. Contractor shall take note that the construction site is located adjacent to a school and a residential neighborhood and the Contractor shall be responsible to take all due care to not create any "nuisance noise".
- G. County shall hold a pre-construction meeting within seven (7) days from the County's written Notice to Proceed.

END OF SECTION 01800

SECTION 210010 - BASIC FIRE PROTECTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this section.
- B. The General Conditions, Special Conditions, Supplementary Conditions, Division 1 Specification Sections, Conditions of Contract and other similar Contract Documents apply to and form a part of this Division.
- C. The applicable portions of the requirements described in this Sub-division 21 shall apply to all work included in the Fire Protection Documents.

1.2 SCOPE OF WORK

- A. The work shall include all fire protection work and incidental electrical construction as shown on the Contract Drawings and as mentioned in this Division of the Specifications
- B. Replacement of existing fire pump and associated fire protection appurtenances at the Atlantic County Anthony "Tony" Canale Training Facility complex located in Egg Harbor Township, New Jersey, as specified on the Contract Drawings and within the Technical Specifications.
 - 1. The Contractor work shall include, but is not limited to, the replacement with new of two (2) electric fire pumps, one (1) electric fire protection pressure maintenance pump, two (2) fire pump controllers, one (1) fire protection pressure maintenance pump controller, one (1) fire protection check valve and associated miscellaneous electrical, piping and general construction work required, as indicated on the project's Contract Drawings and Technical Specifications.
 - 2. Contractor shall perform all necessary coring and concrete restoration work necessary for the complete installation of the new fire and pressure maintenance pumps, as indicated on the project's Contract Drawings and Technical Specifications.
 - 3. Contractor shall be responsible to provide all devices necessary for the new fire pumps' and pressure maintenance pump's controllers to be monitored wirelessly by County's third-party security company, Atlantic Coast Alarm. Contractor shall coordinate with Atlantic Coast Alarm to confirm all necessary controllers, devices, modems, etc., are provided.
 - 4. Contractor shall be responsible to patch/seal and insulate all exterior wall openings resulting from this project.
 - 5. Contractor shall patch and repair all new openings, or openings remaining due to demolition work, made in the building's walls, ceilings, floors, etc. All patched and/or repaired wall, ceilings, floors, etc., shall match existing building finishes. Contractor shall be responsible to "paint to match" all wall (interior and exterior) patches resulting from this project.

6. The existing complex shall remain continuously operational during construction. Contractor shall maintain continuous operation of all existing complex's fire suppression systems during periods when the complex is occupied. Contractor shall provide a fire watch during periods when fire suppression system is inactive.
7. Contractor shall provide all necessary materials and services for installation of all new fire suppression equipment, devices, piping, fittings, etc., and fire alarm devices, wiring, conduits, etc., including, but not limited to wall, roof and floor openings. All wall, roof and floor openings and penetrations shall be properly sealed and where opening or penetration is through a fire rated assembly, the penetration shall be firesafed.
8. Contractor shall patch and repair all new openings made in the building's walls, ceilings, floors, etc. All patched and/or repaired wall, ceilings, floors, etc., shall match existing building finishes. Contractor shall be responsible to "paint to match" all wall (interior and exterior) patches resulting from this project.
9. Prior to Bid, Contractor shall thoroughly inspect the project's site and include in the Contractor's bid and scope of work all necessary relocations of interfering equipment, devices, piping, conduit, wiring, curbing, sidewalk, landscaping, etc., that are required so as to locate all new specified fire protection equipment, devices, piping and appurtenances in locations shown on Contract Drawings. Contractor shall take special care to coordinate all new site utilities with existing site utilities, and confirm same with the County and all local municipal utility companies which have services in the project area.
10. Contractor shall provide all necessary material and services for installation of incidental fire alarm and electrical work required for the complete installation of the aforementioned fire protection equipment, devices, piping, systems, etc.
11. Contractor shall acquire all permits and County shall pay all fees necessary to perform the specified work.
12. Contractors shall include in their bid amount a warranty of one (1) year from date of Substantial Completion for complete labor and materials for all of the project's new equipment, devices, piping, appurtenances, etc. Contractor shall provide all special warranties specified in technical specification sections and on drawings.

C. Coordinate all work in this Division with all related trades.

1.3 INTENT

- A. It is the intent of the Specifications and Drawings to call for finished work, tested and ready for operation.
- B. Any apparatus, appliance, material or work not shown on drawings but mentioned in the specifications, or vice versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation shall be furnished, delivered and installed by the Contractor without additional expense to the County.

1.4 DEFINITIONS

- A. The term "General Contractor", "Prime Contractor", "Fire Protection Contractor", "Fire Alarm Contractor" or "Contractor" when used in this Division refers to the contractor responsible for all Fire Protection systems work under this Division.
- B. The term "provide" shall mean to furnish and install.
- C. The term "furnish" when used separately shall mean to obtain and deliver the item to job site for installation by Other Trades.

1.5 SINGULAR NUMBER

- A. A reference made to any item in the singular number shall apply equally to as many identical items as the work requires.

1.6 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire suppression systems, including, but not limited to equipment, devices, piping, valves, appurtenances, etc., for not less than one (1) year, from date of Substantial Completion.
 - 2. Special Warranty: Provide manufacturer's full parts and labor warranty for all new fire pumps, fire pressure maintenance pumps, fire pump controllers and fire pressure maintenance pump controllers, for not less than five (5) years, from date of Substantial Completion.
- B. Contractor shall instruct the County's personnel on operation and maintenance of each new fire protection equipment and device installed by Contractor. Provide a minimum of one (1) day for instruction of County's personnel. Manufacturer shall provide a minimum of three (3) copies of their operation and maintenance instructions in booklet form.

1.7 VISIT TO SITE

- A. Prior to submission of bid, Contractor shall visit Site and become familiar with existing conditions. Bids as submitted will be interpreted to include all costs and charges made necessary by existing conditions such as installation space requirements and interferences.
- B. Contractor shall verify, in field, the location and elevation of all underground services affected by this work before proceeding with construction. Notify Engineer immediately in the event the location of existing site utilities vary appreciable from those shown on drawings.

1.8 REGULATIONS

- A. Entire installation including materials, equipment and workmanship shall conform to all applicable laws, codes and regulations of local municipal, county, state and federal authorities, also National Fire Protection Association, Factory Mutual, Underwriters Laboratories, National Electrical Code and other regulatory bodies having jurisdiction over this class of work. Where applicable by local building codes, materials and equipment shall bear stamps or seals of Nationally Recognized Testing Laboratories or construction standards from ARI, ASME, AGA, FM, IEEE, NFPA, NEMA, NSF, UL, ETL and other similar industry regulating groups.

- B. Minimum requirements of Codes and Regulations do not relieve the Contractor from providing higher grade of materials and workmanship as may herein be specified or shown on drawings.
- C. All work shall be inspected, tested and approved by the proper authorities. Contractor shall obtain all permits, certificates and inspections and determine all required service connection charges. County shall pay all connection charges, permits, certificates and inspection fees. Contractor shall prepare and obtain approval of specific drawings that may be required by the proper authorities. Deliver certificates of approval to Engineer before request for final payment.
- D. Pressure vessels shall conform to the latest applicable State and Local Codes and Regulations.
- E. All safety relief devices protecting pressure vessels shall conform to the latest applicable state, local and ASA-B9 codes.
- F. Construction Safety: All work shall be done in accordance with the following Federal regulations:
 - 1. Williams-Steiger Occupational Safety and health Act of 1970, Public Law 91-596.
 - 2. Part 1910 – Occupation Safety and Health Standards, Chapter XVII of Title 29, Codes of Federal Regulations.
 - 3. Part 1518 – Safety and Health Regulations for Construction, Chapter XIII of Title 29, Codes of Federal Regulations.
- G. Fire Ratings:
 - 1. All material used anywhere in the work must have NFPA ratings as follows:
 - a. Flame Spread – Not over 25.
 - b. Smoke Developed – Not over 50.
 - c. Fuel Contributed – Not over 25.
 - 2. All materials shall be “Self Extinguishing”.
- H. The requirements of authorities shall be the minimum acceptable requirements for the work and nothing described in these specifications or indicated on the drawings shall be construed to permit work not conforming to the most stringent of the applicable codes and regulations.
- I. When drawings or specifications call for materials or construction of better quality or larger size than required by codes, laws, rules and regulations, the drawings and specifications shall take precedence.
- J. Should any changes to the work indicated on the drawings or described in the specifications be necessary so as to comply with the above requirements, immediately notify the Engineer.

1.9 PROTECTION

- A. Effectively protect all material and equipment from dust, dirt, weather and damage until final acceptance as installed. Close all pipe and equipment openings, during construction, with suitable temporary closures. Provide suitable protective covering for equipment, piping, devices, sprinklers and material before, during and following installation. Provide new materials and equipment to replace similar damaged items without additional cost to the County.

1.10 COORDINATION

- A. Prior to bid, Contractor shall examine Fire Protection Drawings for proper coordination of all trades and include in bid price all necessary work required for proper field coordination of all trades.
- B. Prior to any construction work, Contractor shall reexamine all Fire Protection Drawings. The work of all other Sub-Contractors shall be carefully considered and the work of this Contractor and each his Sub-Contractors coordinated so that all parts of their work will be compatible with, and not interfere with the other trades.
- C. Review with the General Contractor and all other trades, locations of all equipment and materials so that all work may be installed in the most direct manner, and interferences are avoided between pipes, ducts, conduits, equipment, devices, associated appurtenances and architectural and structural features.
- D. Contractor shall jointly prepare with all of the project's Subcontractors, Coordination Drawings which shall include all Fire Protection systems installation layouts overlaid onto the architectural plans which are to then be submitted and review by all Trades for mark-up, comment and coordination. All Subcontractors shall submit, to the all other trades, all setting plans, templates, approved shop drawings, approved equipment layouts, etc., to insure proper space and functional relationship to all other equipment and services. Upon completion of coordination drawings, Contractor shall submit these coordination drawings to the Engineer for review and approval.**
- E. Contractor shall call for all existing utility markouts located within the project's site, then jointly prepare with all of the project's Subcontractors site coordination drawings which include all new and existing underground site utilities including, but not limited to underground utility domestic and fire mains, utility sanitary sewer lines, utility electric, telephone and cable lines, electric site lighting wiring, manholes, surveillance camera electric cabling, etc. Upon completion of coordination drawings, Contractor shall submit these coordination drawings to the Engineer for review and approval.**
- F. Contractor shall prepare dimensioned fire protection piping, conduit, equipment and devices "Layout Drawings" in 1/4" scale showing all inserts, sleeves in floors, walls, roofs, beams and columns as part of Contractor's coordination drawings. Drawings shall provide for proper alignment. Upon completion of coordination drawings, Contractor shall submit these coordination drawings to the Engineer for review and approval.**
- G. Coordinate with all trades, clear passages and code required clearances necessary to deliver, relocate, remove, install and erect equipment and materials.
- H. Where there will not be sufficient clearance for passage following erection of confining enclosures, deliver, set and protect equipment and materials before erection of confining enclosures. All equipment and materials so confined shall be inspected and tested prior to delivery. Should equipment or materials fail to meet the requirements of the Specifications, replace equipment or materials and pay all costs, including costs for modifications of completed areas that are required to provide clear passage.
- I. When interferences occur, prepare installation drawings in 1/4" scale of equipment and material in areas of interferences. Submit drawings to all other trades for their examination, comment, coordination and signed approval. Submit fully coordinated installation drawings to the Engineer for review before beginning any construction work. Meet as necessary with all other trades affected, coordinate work and correct interferences. Where interferences occur during construction because failure to coordinate work, rearrange work at no additional cost to the County.

- J. Upon completion and final coordination of Contractor's Coordination Drawings, Contractor shall submit final Coordination Drawings with all associated Layout Drawings to the Engineer for final approval. If the Contractor can not resolve coordination conflicts with his/her Subcontractors, Contractor shall request a coordination meeting with Engineer.**
- K. All modifications to the building, removal and relocation of equipment and materials that are required for clear passage and code required clearance of equipment shall be provided by the Contractor at no additional cost to the County. Contractor shall restore all disturbed building structures and surfaces, and reinstall and reconnect all equipment modified or disturbed by the work of this project.
- L. Coordinate the procurement of specified materials and equipment being supplied by Sub-Contractors, manufacturers and vendors. Items when provided as part of the equipment, shall meet the requirements of these specifications.

1.11 DRAWINGS

- A. Accompanying fire protection drawings are a part of the Contract Documents and are intended to show approximate and relative locations of materials and equipment. Drawings shall not be scaled to determine exact positions and clearances. Ascertain all dimensions in the field.
- B. Because of diagrammatic layout and small scale of drawings, not all rises, drops, offsets, and related specialties are indicated. Provide all such piping, fittings, valves, sprinklers and specialties required in such cases to insure a complete and properly operating installation in accordance with Codes and without extra cost to County.
- C. Examine all drawings and specifications pertaining to the work of all Other Trades. Contractor shall be responsible for installation and fitting into the building, without interference to the work of Other Trades, all materials and equipment provided under this Contract.
- D. When directed by the Engineer, the Contractor shall, without extra charge, make reasonable modifications in the layout as needed, to prevent conflict with the work of other trades or for proper execution of the work.
- E. Where variances occur between the drawings and the specifications or within either document itself, the item or arrangement of better quality and greater quantity shall be included in the Contract price. The Engineer will decide on the item and the manner in which work shall be installed.

1.12 SUBMITTALS

- A. The Contractor shall carefully prepare and review his schedule of submissions, determine the necessary lead time for preparing, submitting, checking, ordering and delivery of all materials and equipment for timely arrival. The Contractor shall be responsible for conformance with the overall construction schedule.
- B. Submittals will be checked for general compliance with specifications only. The Contractor shall be responsible for deviations from the drawings or specifications, and for errors or omissions of any sort in submittals.
- C. Submit a complete list of material and equipment proposed for the job, including manufacturer's names.
- D. Reference all listings to the specifications' article to which each is applicable.

- E. Submit on all materials and equipment, even if same is as specified or shown on the drawings.
- F. Include complete catalog information such as construction, ratings, insulation systems, etc., as applicable.
- G. Submit shop drawings in accordance with Division 1 of the project's Technical Specifications.
- H. Include with each submission and for each item the following information:
 - 1. Project name.
 - 2. Name of Contractor and/of Subcontractor making submission.
 - 3. Name of equipment being submitted. Identify by equipment number shown on drawing.
 - 4. The manufacturer's name for each piece of equipment.
 - 5. Complete performance data.
 - 6. Dimensions and operating weight of equipment.
 - 7. Materials and features of construction.
- I. As a minimum, submit shop drawings for the following:
 - 1. Fire Protection Pumps and Controllers.
 - 2. Fire Protection Pressure Maintenance Pump and Controller.
 - 3. Valves and Specialties.
 - 4. Fire Protection Piping, Fittings and Joining Materials.
 - 5. Piping Layouts (3/8" scale).
 - 6. Housekeeping Pads, Foundations and Supports.
- J. Refer to Specification Section 01300 - Submittals for additional information.

1.13 SHOP DRAWINGS

- A. Before starting installation, submit for review all information, including manufacturer's drawings and literature in required numbers of copies showing complete physical and performance data for all materials and equipment.
- B. Prepare and submit for review "Layout Drawings" (minimum of 1/4" scale) of piping and equipment prior to installation.
- C. Catalogs, pamphlets, or other documents submitted to describe items on which approval is being requested, shall be specific and identification in catalog, pamphlet, etc. of item submitted shall be clearly made in red ink. Each component, and all optional equipment required for the project, shall be indicated. Data of a general nature will not be accepted. Drawings shall be corrected in red ink.
- D. Prior to submitting for approval, contractor shall "mark-up" each copy of each shop drawing or data so as to "cross-reference" each item with its respective drawing item number and specification section number. Shop drawings or data submitted that are not adequately "marked-up" will be returned without review.
- E. Shop drawings of systems containing closely related items and components must be submitted as a single submission showing the interrelation of the components required for that system, for example: the grilles and registers with sheet metal drawings.

- F. Engineer's review of shop drawings, and their corrections and comments made thereon, does not relieve the Contractor from compliance with drawings and specifications. Contractor shall be responsible for confirming and correlating all quantities and dimensions, selecting fabrication procedures and techniques of construction.
- G. Refer to preceding Paragraph 1.12 - Submittals and Specification Section 01300 - Submittals for additional information.

1.14 AS-BUILT DRAWINGS

- A. Prior to final payment, the Contractor shall submit "As-Built" drawings as herein described.
- B. Maintain during construction a "clean" record set of installation prints. Record in colored ink on these prints all deviations from the contract drawings in sizing, location and details of underground utilities, piping, equipment, devices, etc. Submit as-built drawings to Engineer for review as part of project's close-out. Make correction following review and submit a complete set of "as-built" drawings, (1) set hard copy reproducible (1/8" = 1'-0" scale minimum), and (1) set electronic files produced in PDF format to the County and Engineer upon project completion.
- C. Specification Section 01300 - Submittals for additional information.

1.15 WORK RESPONSIBILITIES

- A. Examine the site and all fire protection, electrical and all other project drawings and accept such conditions and make allowance for them in preparing the bid. No extra charges will be considered for costs resulting from failure to comply with the above.
- B. The drawings indicate diagrammatically the desired locations or arrangement of piping runs, equipment, devices, etc., and are to be followed as closely as possible. Proper judgment must be exercised in executing the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations or interference with structural conditions. The Contractor is responsible for the correct placing of his work and the proper location and connection of his work in relation to the work of other trades.
- C. Locations shown on ceiling plans shall take precedence over fire protection plan locations, but where a major conflict is evident, notify the Engineer for instructions prior to commencing work on the same.
- D. In the event changes in the indicated locations or arrangements are necessary due to developed conditions in the building construction or rearrangement of furnishings or equipment, such changes shall be made without extra costs, providing the change is ordered before the piping runs, etc. and the work directly connected to same is installed and no extra materials are required.
- E. All scaled and figured dimensions are approximate of typical equipment of the type and capacity indicated. Before proceeding with any work, carefully check and verify all dimensions, sizes, weights, etc. with the drawings to see that the equipment will fit into the spaces provided without violation of applicable codes.

- F. Where equipment is furnished by others, verify voltage characteristics, piping connections, dimensions and the correct locations of this equipment before proceeding with the roughing-in of connections.
- G. Should changes be necessary to the work indicated on the drawings or described in the specifications so as to comply with the above requirements, immediately notify the Engineer.
- H. Perform all work competent and skilled personnel. All work shall be of the highest quality consistent with the best practices of the trade.
- I. Replace or repair, without additional compensation, any work which, in the opinion of the Engineer, does not comply with these requirements.
- J. The Contractor shall be responsible for the safety and good condition of all materials and equipment until final acceptance by the County; for providing adequate and proper storage facilities during the progress of the work; for replacing all damaged and defective work before applying for final acceptance; for erecting and maintaining suitable barriers, protective devices, light and warning signs for the protection of the public and employees; and for all loss, damage or injury to persons or property resulting from any neglect of these responsibilities.
- K. The contractor shall be responsible for all faults and deficiencies in his work during the guarantee period and shall repair, at no cost to the County, all such deficiencies that occur immediately upon notification by the County. All damage to other work there from, which may occur the construction and guarantee period, shall be repaired at once, at no cost to the County.

1.16 MATERIALS, STANDARDS OF QUALITY AND SUBSTITUTIONS

- A. All materials and equipment shall be new and of standards specified herein.
- B. Equipment shall be standard catalog products of an established manufacturer, regularly produced and recommended for service required, in accordance with engineering data or other comprehensive literature made available to the public, and in effect at the time of the bids. Where two or more units of same class equipment are required, these units shall be products of a single manufacturer.
- C. All equipment shall be installed in strict accordance with manufacturer's instructions for type and capacity of each piece of equipment used. Each Contractor shall obtain these instructions which shall be considered part of these specifications. Type, capacity and application of equipment shall be suitable and must operate satisfactorily for the purpose intended and be so guaranteed by the manufacturer through the Contractor.
- D. Coordinate the procurement of specified materials, devices and equipment being supplied by sub-contractors, manufacturers and vendors. Such items as gages, vibration isolation devices and valves, when provided as part of the equipment, shall meet these specifications. Direct subcontractors, manufacturers and vendors to provide such items.
- E. Equipment, devices and systems of same type, shall be the product of one manufacturer unless they are part of a factory assembled equipment package.
- F. Fire protection equipment and devices shall be provided from a single source manufacturer.

- G. The manufacturer or figure number named in the specifications and/or listed in equipment schedules on the drawings, are the items that have been used as the basis for design. Systems have been designed on the basis of the equipment specified. When manufacturer's names and figure numbers are used, they shall be considered as the standard of grade and quality required. Materials and equipment of other manufacturers' may be used, if accepted, but they must be equal in all respects, capacity, quality, design and type. **Should equivalent items of other manufacturers be submitted by the Contractor, it shall be the Contractor's responsibility to provide and bear at no extra cost to County, all changes to the designed fire protection systems, that are required by the use of the substituted items, including cost of Engineer's redesign efforts.**
- H. When one manufacturer or figure number is used or words such as "or equal" and/or "equal to" are used with a manufacturer's name or figure number, the contractor may submit an equivalent substitute product for approval, and shall show the prices of both the specified item and the substitute item. **Should equivalent items of other manufacturers be submitted by the Contractor, it shall be the Contractor's responsibility to provide and bear at no extra cost to County, all changes to the designed fire protection systems, that are required by the use of the substituted items, including cost of Engineer's redesign efforts.** Engineer's approval shall be final.
- I. When two or more manufacturers or figure numbers are used for a given material or equipment, select the manufacturer from the manufacturers named.
- J. Refer to Specification Section 01300 - Submittals for additional information.

1.17 PERFORMANCE OF EQUIPMENT, DEVICES AND SYSTEMS

- A. Equipment, devices and systems shall perform properly and in accordance with the intent of the Contract Documents.
- B. Equipment, devices and systems shall be installed and tested in accordance with manufacturer's instructions for type and capacity, also in accordance with requirements of these specifications. Manufacturer's instructions shall be considered a part of these specifications.
- C. Shop drawing submittals shall include manufacturer's complete physical and performance data. Performance shall be demonstrated "in-the-field" by the manufacturer.
- D. Refer to Specification Section 01300 - Submittals for additional information.

1.18 SEQUENCE OF WORK

- A. The sequence of work shall follow the project's phasing plan.
- B. The sequence in which work will be performed shall be prepared as a schedule by the Contractor and reviewed and approved by the County. Contractor shall submit a complete project construction schedule for approval fourteen (14) days after notification to proceed. Schedule shall show delivery of equipment to the site, erection of equipment and pertinent work related to installation and when the equipment will be placed in operation.
- C. Refer to Specification Section 01300 - Submittals for additional information.

1.19 WORK FORCE AND SUPERINTENDENCE

- A. Contractor shall, upon initiation of construction, keep a suitable force of men on the site at all times in order to provide all sleeves, inserts and provide all other materials as required for the satisfactory installation of the entire system.
- B. Contractor shall give his personal superintendence to the work or have a competent superintendent, satisfactory to the Engineer and County, on the work at all times during construction with authority to act for him. He shall provide an adequate organization for proper coordination and expediting of this work.

1.20 RUBBISH

- A. During the course of construction, all Contractors shall be responsible to remove from the premises all rubbish resulting from the work of the project. Contractors shall coordinate the continual cleanup of the project site with the Prime Contractor.
- B. At all times, keep the premises free from accumulations of waste materials and rubbish caused by agents and employees of the Contractor.
- C. At the completion of the work, remove from the site all rubbish in or about the building, in addition to tools, scaffolding and other specialties that were utilized or a result of Contractor's work.
- D. In the event of dispute of refusal to comply with the requirements of the above paragraphs, the County shall have the option of removing such rubbish from the premises, and back-charge the Contractor for doing such work.
- E. The Contractor shall, on a daily basis, remove from the site all rubbish, debris and discarded materials resulting from Contractor's work.

1.21 CLEANING OF PIPING, EQUIPMENT AND DEVICES

- A. Thoroughly clean all piping, equipment and devices of dirt, scale, plaster, concrete, paint and other foreign matter.
- B. Clean all strainers and other accessories that may collect foreign matter. Flush or blow-out all equipment and piping systems prior to charging piping and equipment.

1.22 TEMPORARY SERVICES FOR CONSTRUCTION

- A. Refer to General Conditions, Divisions 1 and 21 of the Technical Specification Sections and Conditions of the Contract.

1.23 CUTTING AND PATCHING

- A. Subcontractors shall furnish General Contractor information such as size, position and arrangement of materials and equipment, so that new openings in floors, walls, roofs, beams, ceilings can be properly provided and coordinated as construction progresses.
- B. Cutting and patching for new equipment and materials will be provided by Contractor.

- C. Cutting shall be coordinated with Other Trades, done neatly and to minimize damage to all construction. Provide lintels where required.
- D. Cutting and patching shall be done by Trades normally specializing in installation of materials being patched. Paint all patched surfaces.
- E. Review all cutting and patching with Engineer before beginning work.
- F. Cutting openings in concrete slabs and walls shall be done neatly using core boring machines.

1.24 FOUNDATIONS AND SUPPORTS

- A. Unless indicated otherwise, provide all concrete foundations and pads, structural steel and concrete supports required for equipment and materials provided under this Division. Provide isolation mountings for noisy or vibrating equipment. Submit shop drawings of foundation and pads for approval.
- B. All floor and grade mounted equipment shall be erected on minimum 4" high concrete pads over the complete floor area of the equipment, unless noted otherwise. All fire protection equipment and devices must be installed at minimum at or above the New Jersey adopted flood plain elevation for the project site.
- C. Concrete work, foundations, pads, shall include anchor bolts, and shall have sufficient size and mass to suit supported equipment. Foundations and pads shall be properly dwelled in with the floor construction, and shall have sloped bevels on all horizontal and vertical edges. Concrete shall be lightweight mix having a comprehensive strength of 5,000 PSI minimum at twenty-eight days. Placing of reinforcing steel and concrete shall be done according to recommendations of the American Concrete Institute and Concrete Reinforcing Steel Institute, and all materials shall conform to American Society for Testing and Materials Specifications (ASTM) applicable to this work.
- D. Structural steel supports shall include all beams, plates, angles, bearing plates and structural shapes of every description required to complete the steel work. Manual of construction by American Institute of Steel construction (AISC) shall be followed in design and construction. All structural steel shall conform to ASTM Specification A-36. All structural steel members shall have a shop coat of rust inhibitive paint.

1.25 STEEL SUPPORTS

- A. Unless indicated otherwise, provide all structural steel supports required for equipment, piping and materials provided. Provide isolation mountings for noisy or vibrating equipment. Submit shop drawings for approval.
- B. Structural steel supports shall include all beams, plates, angles, bearing plates and structural shapes of every description required to complete the steel work. Manual of construction by American Institute of Steel Construction shall be followed in design and construction. All structural steel shall conform to American Society for Testing Materials Specification A-36. All structural steel members shall have a shop coat of rust inhibitive paint.

1.26 CONCRETE WORK

- A. Unless noted otherwise, provide all concrete work for foundations, pads, supports, required for equipment and materials provided under this Division. Provide isolation mountings for all equipment that is either noisy or has rotating or vibrating components. Submit shop drawings for approval.

- B. Concrete work, foundations, pads, shall include anchor bolts, and shall have sufficient size and mass to suit supported equipment. Foundations and pads shall be properly dowelled in with floor construction, and shall have sloped bevels on all horizontal and vertical edges. Concrete shall be a lightweight mix having a compressive strength of 5,000 PSI minimum at twenty-eight days. Placing of reinforcing steel and concrete shall be done according to recommendations of the American Concrete Institute and Concrete Reinforcing Steel Institute, and all materials shall conform to American Society for Testing Materials Specifications, applicable to this work.
- C. Form work shall be of sufficient strength to maintain desired shape during pouring of concrete and tight enough to prevent leakage of the grout through joints.

1.27 SCAFFOLDING

- A. Provide temporary scaffolding, ladders and other equipment required for installation of equipment and materials including protection features as required by codes and trade associations' recommendations.

1.28 FLASHING REPAIRS

- A. All flashing methods and materials shall attain a complete watertight installation.
- B. Riser sleeves for piping and conduits in membrane waterproofed floors shall have flashing clamps attached to membrane. Where possible, sleeves shall be provided with top and bottom steel pipe sleeves. Large sleeves shall be shop fabricated. Sleeves shall extend 2 inches above finished door. At each field fabricated mop receptor, where applicable, provide a four pound lead pan, turned up 6 inches on all sides and soldered watertight. Attach drain flashing clamp.

1.29 ACCESS PANELS

- A. Furnish access panels required for access to valves and other fire suppression specialties requiring maintenance and service in ceilings.
- B. Panels shall have 16 gauge steel frame and 14 gauge flush steel door having concealed hinge and screwdriver operated cam locks, all with factory prime finish.
- C. Access panels shall be of sizes required for easy access to specialties, but in no case shall they be less than 18" x 18".
- D. Coordinate panel locations and sizes with Other Trades. Prior to installation, submit and review panel locations and sizes with Engineer.
- E. Panels shall be furnished to suit the surface into which installed.

1.30 WELDING

- A. All welding shall be done by qualified and certified welders in accordance with ASME Boiler Code - Section 9 or American Welding Society Code for Welding in Building Construction (AWS D1.0).
- B. Contractor shall secure all hot work permits as required for this project.
- C. The Contractor shall submit certified test records of each welder.

- D. Welding may be done by either the metal-arc or gas welding processes.
- E. The filler metal for welding steel piping shall conform to AWSW 6010 for metal arc welding and to specification GR 60 for gas welding. Filler metal shall be suitable for the metal welded.
- F. Welding shall not be done when the atmospheric temperature is less than 0 degrees F. when surfaces are wet, or during periods of high wind.
- G. Welds shall show a bright metallic luster after cleaning and shall have uniform contour. Except as necessary to correct defects, the surfaces shall not be dressed, smoothed, or finished for improving their appearance, unless so specified. Welds generally shall be free from gas pockets, oxides, slag inclusions, and surface porosity, except to the extent produced in passing qualification tests. The inside of the pipe shall be relatively free from globules of weld metal.

1.31 PAINTING

- A. All materials and equipment shall be protected from rust, corrosion and similar damage by either factory applied or field applied protective coatings. Clean and touch-up such protected surfaces that become scratched, marred or otherwise damaged and make surfaces ready for final painting.
- B. Finish painting of materials and equipment provided under this Division shall be the responsibility of this Division's Contractor.
- C. In unfinished-occupied areas, such as Mechanical and Electrical Rooms, on the roof and wherever exposed to the weather, all ferrous metal pipe, hangers and equipment shall be rust-protected with the manufacturer's prime coat and a extreme seacoast final coating. All exposed ferrous metal and canvas jackets shall receive two coats of paint in addition to prime coat, using heat resistant paint for high temperature pipe. Aluminum, galvanized and cuprous metals and plastic coated insulation shall not be painted.
- D. In unfinished unoccupied areas such as duct shafts, chases all ferrous metal, pipe, hangers and equipment except cast-iron pipe shall be rust protected with the manufacturer's coating or a prime coat. Aluminum, galvanized and cuprous metals and insulation shall not be painted.
- E. Do not paint over nameplates of equipment.

1.32 IDENTIFICATION

- A. Identify all concealed and exposed fire protection equipment, devices, piping and associated appurtenances with legibly stenciled lettering, applied, after finish painting where applicable, in color to contrast with basic color.
- B. Identify piping adjacent to valves and then at maximum 20-foot intervals. Indicate flow direction with arrows. Lettering shall be minimum 1/3 pipe diameter, but not less than 1/2-inch high.
- C. Identify all remote fire alarm devices regularly operated by County's personnel with nameplates as specified above.

- D. Provide for each valve, except those immediately adjacent to apparatus where use of valve is obvious, a 2-inch diameter non-ferrous metal or color coded plastic tag with figures and pipe identification stamped or engraved into tag. Tags shall be fastened with non-ferrous "S" hooks. Number each valve and provide two valve charts, framed behind glass, listing each valve, its location and data on what it controls.
- E. Submit list of titles and data for Engineer's review before beginning work.

1.33 OPERATING AND MAINTENANCE MANUALS

- A. At the completion of the project, deliver to the Engineer for transmittal to the County, three (3) complete sets of instruction manuals, for each piece of fire protection equipment, device, and all specialty items
- B. Each instruction manual shall consist of data supplied by the manufacturer giving complete information on the following:
 - 1. Installation procedure.
 - 2. Operating instructions.
 - 3. Maintenance instructions.
 - 4. Detailed parts lists.
 - 5. Recommended spare parts.
 - 6. Address and telephone numbers of nearest supply house.
 - 7. Address and telephone number of manufacturer's representative.
- C. Each set of instruction manuals shall be bound in an 8 1/2" x 11" hard cover, 3-ring binder. The binders shall be assembled using tabs to separate each equipment item. An index sheet shall be inserted in the front of the binder, listing every item included with the manual.

1.34 OPERATING AND MAINTENANCE INSTRUCTION

- A. After all tests, startups and adjustments have been successfully made, instruct the representatives of the County in all details of operation of all fire protection equipment, devices and systems. Provide competent instruction for a minimum of one (1) day, which shall not include time required for testing, adjusting, startup and balancing.
- B. Instruction in all details of operation of all equipment shall be recorded by means of video taping.

1.35 ELECTRICAL EQUIPMENT

- A. Contractor shall furnish all electrical equipment complete with integral motor, controllers, capacitor, starting equipment and control transformers, except where specifically listed otherwise on the Contract Drawings.
- B. Manufacturer's certified technician shall check the electrical equipment and systems for their conformance to the specifications, for proper installation and shall run the system in all modes of operation to ascertain that they will function properly. All necessary adjustment shall be made to insure trouble-free service.
- C. After completion of startup procedure, Manufacturer shall certify, in writing, that the electrical equipment and systems is installed in accordance with his requirements and is operating in accordance with the intent of the specifications. Final payment will not be made until this requirement is completed.

1.36 SELECTION OF ELECTRICAL MATERIALS AND EQUIPMENT

- A. Specified materials, equipment, devices, systems, etc., shall be selected within the operating capacities indicated on contract documents. In the absence of specific criteria, conservative commercial practice, in the opinion of the Engineer, will apply.
- B. All materials and equipment shall comply with all applicable standards and requirements of:
 - 1. National Electrical Manufacturers Association (NEMA).
 - 2. American National Standards Institution (ANSI).
 - 3. Underwriters laboratories, Inc. (UL).
 - 4. Institute of Electrical and Electronics Engineers (IEEE).
- C. Items of a similar application shall be of the same manufacturer.
- D. The label of listing by Underwriters Laboratories, Inc. shall appear on all materials and equipment for which standards have been established by that agency.
- E. Where local or other authorities have jurisdiction, have established label or approval requirements, furnish all materials and equipment with either the required labels affixed, or the necessary written approval.
- F. The equipment plans are designed around standard products of one or more of the manufacture's listed as being acceptable for the product involved. Where one or more manufacturer is listed as being acceptable for a product, each manufacturer listed for that product shall be considered as "equal" and acceptable.
- G. All materials to be free of asbestos and urea formaldehyde.

1.37 SLEEVES AND ELECTRICAL PENETRATIONS

- A. Locate all openings required for the installation of the electrical work during framing of the structure. Do any additional cutting and patching required due to improperly located or omitted openings without cost to the Owner, and with the approval of the Engineer.
- B. Cutting or drilling in any structural member is prohibited without written approval of Engineer.
- C. Location of Sleeves: Wherever conduits pass through concrete walls or suspended slabs, furnish and install sleeves of ample size to permit installation of conduit. Sleeves shall be installed prior to pouring of concrete and shall have ends flush with the wall or extend two (2") inches above floor surfaces. Verify location with the Engineer.
- D. Where sleeves pierce unrated slabs or walls separating machine room areas from or other quiet areas, the sleeves shall be packed with fiberglass insulation to prevent noise transfer.
- E. Where raceways for electrical power, telephone or fire alarm cables penetrate FIRE RATED walls, floors, partitions or slabs, fill and seal all such penetrations with a one-part intumescent caulk/putty sealant creating a fire stop equal to or exceeding fire rating of partition being penetrated. Fire sealant shall have ability to prevent spread of flame, smoke and water throughout the penetration and shall pass three (3) hour test, UL Test ASTM E814 and UL 1479. Fire sealant shall be 3M CP25 caulk and putty 303, installed in accordance with manufacturer's written instructions. Avoid all voids when arranging cables in penetration by using non-flammable fiber damming material wedged between cables.
- F. Type of sleeves: Steel pipe is acceptable.

- G. Finish Around Sleeves: Rough edges shall be finished smooth. Space between conduit and sleeves, where conduit passes through exterior walls and walls shall be sealed to permit movement of conduit, but prevent entrance of water.
- H. Space between conduit and sleeves, where conduit passes through interior walls and slabs, shall be sealed with an approved sealing compound that is fireproof and will remain pliable.
- I. Where faulty installation of sleeves, etc. occurs, the Electrical Contractor shall make all necessary changes and repairs, at no cost to the Owner, to the satisfaction of the Engineer.
- J. Where openings requested by the Electrical Contractor are left in floors or walls under other contracts, and are not used, such openings shall be filled in to match the adjoining work of the Electrical Contractor.
- K. All additional openings required and not requested while the work proceeds shall be cut as a part of the work of the appropriate trade and be paid for by the Electrical Contractor.

1.38 ELECTRICAL CLEANING AND PAINTING

- A. Conduit and equipment to be Installed: Clean conduit and equipment thoroughly to remove plaster, splattered paint, cement and dirt, on both exterior and interior.
- B. Conduit and Equipment to be Painted: Clean all conduit and equipment exposed to view in completed structure by removing plaster and dirt. Remove grease, oil and similar material from conduit and equipment by wiping with clean rags and suitable solvents in preparation for paint.
- C. All Factory Finished Items: Remove cement, grease and oil, and leave all surfaces, including cracks and corners, clean and polished. Touch up any scratched or bare spots to match finish.
- D. All electrical apparatus and equipment in equipment rooms shall be provided with a factory finish cost. All panels in public spaces, corridors, etc., shall be provided with a factory prime coat.
- E. Site Cleaning: Remove from site all packing cartons, scrap materials, and other rubbish relating to electrical installation.

1.39 ELECTRICAL TESTS

- A. Prior to energizing any motors, measure the service voltage for phase balance, and report immediately to the Engineer if unbalance exceeds one (1%) percent from mean.
- B. Upon completion of the work and adjustment of all equipment, conduct an operating test for approval at such time as the Engineer directs. Conduct the test in the presence of the Engineer. Demonstrate all systems and equipment to operate, in accordance with all requirements of the contract documents, and to be free from all electrical and mechanical defects.
- C. All electrical systems shall be free from short circuits and grounds, and shall show insulation between phase conductors and ground not less than the requirements of the National Electrical Code. Test all circuits for proper neutral connections.
- D. Complete all tests prior to final inspection of the project.

- 1.40 Preliminary Operations: Should Owner require any portion of the systems or equipment to be operated prior to final schedule dates for completion and acceptance of the work, the Contractor shall consent. Such operation shall be under the direct supervision of, and at the expense of the Contractor, and shall not be construed as an acceptance of any of the work by the Owner.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION 210010

SECTION 210050 - COMMON WORK RESULTS FOR FIRE SUPPRESSION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following: Adjust list below to suit Project.

1. Piping materials and installation instructions common to most piping systems.
2. Mechanical sleeve seals.
3. Sleeves.
4. Escutcheons.
5. Grout.
6. Fire-suppression equipment and piping demolition.
7. Equipment installation requirements common to equipment sections.
8. Painting and finishing.
9. Concrete bases.
10. Supports and anchorages.

1.3 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.
- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- F. The following are industry abbreviations for rubber materials:
 1. EPDM: Ethylene-propylene-diene terpolymer rubber.
 2. NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. Product Data: For the following:

1. Mechanical sleeve seals.
2. Escutcheons.

B. Welding certificates.

1.5 QUALITY ASSURANCE

A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."

B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."

1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

C. Electrical Characteristics for Fire-Suppression Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

1.7 COORDINATION

A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for fire-suppression installations.

B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.

C. Coordinate requirements for access panels and doors for fire-suppression items requiring access that are concealed behind finished surfaces.

1.8 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire suppression systems, including, but not limited to equipment, devices, piping, valves, appurtenances, etc., for not less than one (1) year, from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PIPE, TUBE, AND FITTINGS

- A. Refer to individual Division 21 piping Sections for pipe, tube, and fitting materials and joining methods.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.2 JOINING MATERIALS

- A. Refer to individual Division 21 piping Sections for special joining materials not listed below.
- B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
 - 1. ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is indicated.
 - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
 - 2. AWWA C110, rubber, flat face, 1/8 inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.
- C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- D. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

2.3 MECHANICAL SLEEVE SEALS

- A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
 - 1. Sealing Elements: Interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
 - 2. Pressure Plates: Carbon steel. Include two for each sealing element.
 - 3. Connecting Bolts and Nuts: Carbon steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.4 SLEEVES

- A. Galvanized-Steel Sheet: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.
- C. Cast Iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- D. Stack Sleeve Fittings: Manufactured, cast-iron sleeve with integral clamping flange. Include clamping ring and bolts and nuts for membrane flashing.
 - 1. Underdeck Clamp: Clamping ring with set screws.

2.5 ESCUTCHEONS

- A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, tube, and insulation of insulated piping and an OD that completely covers opening.
- B. One-Piece, Deep-Pattern Type: Deep-drawn, box-shaped brass with polished chrome-plated finish.
- C. One-Piece, Cast-Brass Type: With set screw.
 - 1. Finish: Polished chrome-plated.
- D. Split-Casting, Cast-Brass Type: With concealed hinge and set screw.
 - 1. Finish: Polished chrome-plated.
- E. One-Piece, Stamped-Steel Type: With set screw or spring clips and chrome-plated finish.
- F. Split-Plate, Stamped-Steel Type: With concealed hinge, set screw or spring clips, and chrome-plated finish.
- G. One-Piece, Floor-Plate Type: Cast-iron floor plate.
- H. Split-Casting, Floor-Plate Type: Cast brass with concealed hinge and set screw.

2.6 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
 - 1. Characteristics: Post-hardening, volume-adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
 - 2. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
 - 3. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 FIRE-SUPPRESSION DEMOLITION

- A. Refer to Division 1 Specification Sections for cutting and patching" and Division 21 Specification Sections for general demolition requirements and procedures.
- B. Disconnect, demolish, and remove fire-suppression systems, equipment, and components indicated to be removed.
 - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - 2. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - 3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - 4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - 5. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

3.2 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following requirements and Division 21 Specification Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- F. Install piping to permit valve servicing.
- G. Install piping at indicated slopes.
- H. Install piping free of sags and bends.
- I. Install fittings for changes in direction and branch connections.

- J. Install piping to allow application of insulation.
- K. Select system components with pressure rating equal to or greater than system operating pressure.
- L. Install escutcheons for penetrations of walls, ceilings, and floors according to the following:
 - 1. New Piping:
 - a. Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.
 - b. Chrome-Plated Piping: One-piece, cast-brass type with polished chrome-plated finish.
 - c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
 - d. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, stamped-steel type.
 - e. Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece or split-casting, cast-brass type with polished chrome-plated finish.
 - f. Piping in Unfinished Service Spaces: One-piece, cast-brass type with rough-brass finish.
 - g. Bare Piping in Equipment Rooms: One-piece, cast-brass type..
 - h. Bare Piping at Floor Penetrations in Equipment Rooms: One-piece, floor-plate type.
 - 2. Existing Piping: Use the following:
 - a. Chrome-Plated Piping: Split-casting, cast-brass type with chrome-plated finish.
 - b. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-casting, cast-brass type with chrome-plated finish.
 - c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-plate, stamped-steel type with concealed hinge and spring clips.
 - d. Bare Piping at Ceiling Penetrations in Finished Spaces: Split-casting, cast-brass type with chrome-plated finish.
 - e. Bare Piping in Unfinished Service Spaces: Split-casting, cast-brass type with rough-brass finish.
 - f. Bare Piping in Equipment Rooms: Split-casting, cast-brass type.
 - g. Bare Piping at Floor Penetrations in Equipment Rooms: Split-casting, floor-plate type.
- M. Sleeves are not required for core-drilled holes.
- N. Permanent sleeves are not required for holes formed by removable PE sleeves.
- O. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.

- P. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.
1. Cut sleeves to length for mounting flush with both surfaces.
 - a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.
 2. Install sleeves in new walls and slabs as new walls and slabs are constructed.
 3. Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation. Use the following sleeve materials:
 - a. Steel Pipe Sleeves: For pipes smaller than NPS 6.
 - b. Steel Sheet Sleeves: For pipes NPS 6 and larger, penetrating gypsum-board partitions.
 - c. Stack Sleeve Fittings: For pipes penetrating floors with membrane waterproofing. Secure flashing between clamping flanges. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor level.
 - 1) Seal space outside of sleeve fittings with grout.
 4. Except for underground wall penetrations, seal annular space between sleeve and pipe or pipe insulation, using joint sealants appropriate for size, depth, and location of joint.
- Q. Aboveground, Exterior-Wall Pipe Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
1. Install steel pipe for sleeves smaller than 6 inches in diameter.
 2. Install cast-iron "wall pipes" for sleeves 6 inches and larger in diameter.
 3. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.
- R. Underground, Exterior-Wall Pipe Penetrations: Install cast-iron "wall pipes" for sleeves. Seal pipe penetrations using mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
1. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.
- S. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials.
- T. Verify final equipment locations for roughing-in.
- U. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

3.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 21 Specification Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- E. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- F. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.4 CONCRETE BASES

- A. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to seismic codes at Project.
 - 1. Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.
 - 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of the base.
 - 3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
 - 4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 5. Install anchor bolts to elevations required for proper attachment to supported equipment.
 - 6. Install anchor bolts according to anchor-bolt manufacturer's written instructions.
 - 7. Use 3000-psi, 28-day compressive-strength concrete and reinforcement.

3.5 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor fire-suppression materials and equipment.
- B. Field Welding: Comply with AWS D1.1.

3.6 GROUTING

- A. Mix and install grout for fire-suppression equipment base bearing surfaces, pump and other equipment base plates, and anchors.
- B. Clean surfaces that will come into contact with grout.
- C. Provide forms as required for placement of grout.
- D. Avoid air entrapment during placement of grout.
- E. Place grout, completely filling equipment bases.
- F. Place grout on concrete bases and provide smooth bearing surface for equipment.
- G. Place grout around anchors.
- H. Cure placed grout.

END OF SECTION 210050

SECTION 210513 - COMMON MOTOR REQUIREMENTS FOR FIRE SUPPRESSION EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes general requirements for polyphase, general-purpose, horizontal, small and medium, squirrel-cage induction motors for use on ac power systems up to 600 V and installed at equipment manufacturer's factory.

1.3 COORDINATION

- A. Coordinate features of motors, installed units, and accessory devices to be compatible with the following:
 - 1. Motor controllers.
 - 2. Torque, speed, and horsepower requirements of the load.
 - 3. Ratings and characteristics of supply circuit and required control sequence.
 - 4. Ambient and environmental conditions of installation location.

1.4 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire pump motors, for not less than one (1) year, from date of Substantial Completion.
 - 2. Special Warranty: Provide manufacturer's full parts and labor warranty for motors serving all new fire pumps and fire pressure maintenance pumps, for not less than five (5) years, from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GENERAL MOTOR REQUIREMENTS

- A. Comply with NEMA MG 1 unless otherwise indicated.

2.2 MOTOR CHARACTERISTICS

- A. Duty: Continuous duty at ambient temperature of 40°C and at altitude of 3300 feet above sea level.
- B. Capacity and Torque Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, at installed altitude and environment, with indicated operating sequence, and without exceeding nameplate ratings or considering service factor.

2.3 POLYPHASE MOTORS

- A. Description: NEMA MG 1, Design B, medium induction motor.
- B. Efficiency: Energy efficient, as defined in NEMA MG 1.
- C. Service Factor: 1.15.
- D. Rotor: Random-wound, squirrel cage.
- E. Bearings: Regreasable, shielded, antifriction ball bearings suitable for radial and thrust loading.
- F. Temperature Rise: Match insulation rating.
- G. Code Letter Designation:
 - 1. Motors 15 HP and Larger: NEMA starting Code F for Code G.
 - 2. Motors smaller than 15 HP: Manufacturer's standard starting characteristics.
- H. Enclosure Material: Cast iron for motor frame sizes 324T and larger; rolled steel for motor frame sizes smaller than 324T.

2.4 POLYPHASE MOTORS WITH ADDITIONAL REQUIREMENTS

- A. Motors Used with Reduced-Voltage and Multispeed Controllers: Match wiring connection requirements for controller with required motor leads. Provide terminals in motor terminal box, suited to control method.
- B. Motors Used with Variable Frequency Controllers: Ratings, characteristics, and features shall be coordinated with and approved by controller manufacturer.
 - 1. Windings: Copper magnet wire with moisture-resistant insulation varnish, designed and tested to resist transient spikes, high frequencies, and short time rise pulses produced by pulse-width modulated inverters.
 - 2. Energy- and Premium-Efficient Motors: Class B temperature rise; Class F insulation.
 - 3. Inverter-Duty Motors: Class F temperature rise; Class H insulation.
 - 4. Thermal Protection: Comply with NEMA MG 1 requirements for thermally protected.

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 210513

SECTION 210553 - IDENTIFICATION FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Equipment labels.
 - 2. Warning signs and labels.
 - 3. Pipe labels.
 - 4. Stencils.
 - 5. Valve tags.
 - 6. Warning tags.

1.3 SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For color, letter style, and graphic representation required for each identification material and device.
- C. Equipment-Label Schedule: Include a listing of all equipment to be labeled and the proposed content for each label.
- D. Valve Schedules: Valve numbering scheme.

1.4 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire suppression systems, including, but not limited to equipment and piping labels, piping, appurtenances, etc., for not less than one (1) year, from date of Substantial Completion.

PART 2 – PRODUCTS

2.1 EQUIPMENT LABELS

- A. Plastic Labels for Equipment:
 - 1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8 inch thick, with predrilled holes for attachment hardware.
 - 2. Letter Color: Black.
 - 3. Background Color: White.
 - 4. Maximum Temperature: Able to withstand temperatures up to 160°F.
 - 5. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
 - 6. Fasteners: Stainless-steel rivets or self-tapping screws.
 - 7. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- B. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.
- C. Equipment-Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch bond paper. Tabulate equipment identification number and identify Drawing numbers where equipment is indicated (plans, details, and schedules) and the Specification Section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

2.2 WARNING SIGNS AND LABELS

- A. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8 inch thick, with predrilled holes for attachment hardware.
- B. Letter Color: White.
- C. Background Color: Red.
- D. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
- E. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
- F. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
- G. Fasteners: Stainless-steel rivets or self-tapping screws.

- H. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- I. Label Content: Include caution and warning information, plus emergency notification instructions.

2.3 PIPE LABELS

- A. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service and showing flow direction according to ASME A13.1.
- B. Pre-tensioned Pipe Labels: Pre-coiled, semi-rigid plastic formed to fully cover circumference of pipe and to attach to pipe without fasteners or adhesive.
- C. Self-adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
- D. Pipe-Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
 - 1. Flow-Direction Arrows: Integral with piping-system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.
 - 2. Lettering Size: At least 1/2 inch for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances].
- E. Pipe-Label Colors:
 - 1. Background Color: Safety Red.
 - 2. Letter Color: White.

2.4 VALVE TAGS

- A. Description: Stamped or engraved with 1/4-inch letters for piping-system abbreviation and 1/2-inch numbers.
 - 1. Tag Material: Brass, 0.032 inch thick, with predrilled holes for attachment hardware.
 - 2. Fasteners: Brass Beaded chain or S-hook.
 - 3. Valve-Tag Color: Safety Red.
 - 4. Letter Color: White.
- B. Valve Schedules: For each piping system, on 8-1/2-by-11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.
 - 1. Valve-tag schedule shall be included in operation and maintenance data.

2.5 WARNING TAGS

- A. Description: Preprinted or partially preprinted, accident-prevention tags, of plasticized card stock with matte finish suitable for writing.
 - 1. Size: Approximately 4 by 7 inches.
 - 2. Fasteners: Brass grommet and reinforced wire].
 - 3. Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."
 - 4. Color: Safety Yellow background with black lettering.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean piping and equipment surfaces of incompatible primers, paints, and encapsulants, as well as dirt, oil, grease, release agents, and other substances that could impair bond of identification devices.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be installed.
- B. Coordinate installation of identifying devices with locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.

3.3 EQUIPMENT LABEL INSTALLATION

- A. Install or permanently fasten labels on each major item of mechanical equipment.
- B. Locate equipment labels where accessible and visible.

3.4 PIPE LABEL INSTALLATION

- A. Pipe-Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
 - 1. Near each valve and control device.
 - 2. Near each new branch connection excluding short takeoffs. Where flow pattern is not obvious, mark each pipe at branch.
 - 3. Near penetrations and on both sides of through walls, floors, ceilings, and inaccessible enclosures.

4. At access doors, manholes, and similar access points that permit a view of concealed piping.
 5. Near major equipment items and other points of origination and termination.
 6. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
 7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.
- B. Directional Flow Arrows: Arrows shall be used to indicate direction of flow in pipes including pipes where flow is allowed in both directions.

3.5 VALVE-TAG INSTALLATION

- A. Install tags on valves and control devices in fire-suppression piping systems. List tagged valves in a valve-tag schedule.
- B. Valve-Tag Application Schedule: Tag valves according to size, shape, and with captions similar to those indicated in "Valve-Tag Size and Shape" Subparagraph below:
1. Valve-Tag Size and Shape: 1-1/2" round.

3.6 WARNING-TAG INSTALLATION

- A. Write required message on, and attach warning tags to, equipment and other items where required.

END OF SECTION 210553

SECTION 211313 - WET-PIPE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipes, fittings, and specialties.
 - 2. Valves.
 - 3. Alarm devices.
 - 4. Pressure gages.

1.3 DEFINITIONS

- A. Standard-Pressure Sprinkler Piping: Wet-pipe fire suppression system piping designed to operate at working pressure of 175-psig maximum.

1.4 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For wet-pipe suppression systems.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Include diagrams for power, signal, and control wiring.
- C. Delegated-Design Submittal: For wet-pipe sprinkler systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Qualification Data: For qualified Installer.
- E. Welding certificates.

- F. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13, 20 and 22. Include "Contractor's Material and Test Certificate for Aboveground Piping."
- G. Field quality-control reports.
- H. Operation and Maintenance Data: For fire pumps, jockey pump, controllers, wet-pipe fire suppression systems and specialties to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Installer's responsibilities include installation of replacement fire pumps, jockey pump, pump controllers and associated fire protection valves, devices, piping, etc., as well as all associated electrical work specified.
- B. Welding Qualifications: Qualify procedures and operators according to 2010 ASME Boiler and Pressure Vessel Code.

1.6 FIELD CONDITIONS

- A. Interruption of Existing Sprinkler Service: Do not interrupt sprinkler service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary sprinkler service according to requirements indicated:
 - 1. Notify Engineer and Owner no fewer than fourteen (14) days in advance of proposed interruption of fire suppression systems.
 - 2. Contractor shall not proceed with an interruption of fire suppression systems without Engineer's or Owner's written permission.

1.7 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire suppression systems, including, but not limited to equipment, devices, piping, valves, appurtenances, etc., for not less than one (1) year, from date of Substantial Completion.
 - 2. Special Warranty: Provide manufacturer's full parts and labor warranty for all new fire pumps, fire pressure maintenance pumps, fire pump controllers and fire pressure maintenance pump controllers, for not less than five (5) years, from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire suppression system equipment, specialties, accessories, installation, and testing shall comply with the following:
 - 1. NFPA 13.
 - 2. NFPA 20
 - 3. NFPA 22
- B. Standard-Pressure Piping System Component: Listed for 175-psig minimum working pressure.
- C. Seismic Performance: Sprinkler piping shall withstand the effects of earthquake motions determined according to NFPA 13, 20 and 22, and 2015 IBC as adopted by New Jersey.

2.2 DUCTILE-IRON PIPE AND FITTINGS

- A. Mechanical-Joint, Ductile-Iron Fittings: AWWA C110, ductile- or gray-iron standard pattern or AWWA C153, ductile-iron compact pattern.
 - 1. Glands, Gaskets, and Bolts: AWWA C111, ductile- or gray-iron glands, rubber gaskets, and steel bolts.

2.3 STEEL PIPE AND FITTINGS

- A. Standard-Weight, Black Steel Pipe: ASTM A 53/A 53M, Type E, Grade B. Pipe ends may be factory or field formed to match joining method.
- B. Black Steel Pipe Nipples: ASTM A 733, made of ASTM A 53, standard-weight, seamless steel pipe with threaded ends.
- C. Malleable-Iron Threaded or Flanged Fittings: ASTM A-197 Malleable iron with threads conforming to B1.20.1.
- D. Malleable- or Ductile-Iron Unions: UL 860.
- E. Steel Flanges and Flanged Fittings: ASME B16.5, Class 150.
 - 1. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick or ASME B16.21, nonmetallic and asbestos free or EPDM rubber gasket.
 - a. Class 125 and Class 250, Cast-Iron, Flat-Face Flanges: Full-face gaskets.
 - b. Class 150 and Class 300, Ductile-Iron or -Steel, Raised-Face Flanges: Ring-type gaskets.
 - 2. Metal, Pipe-Flange Bolts and Nuts: Carbon steel unless otherwise indicated.
- F. Steel Welding Fittings: ASTM A 234 and ASME B16.9.
 - 1. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

G. Grooved-Joint, Steel-Pipe Appurtenances:

1. Pressure Rating: 175 psig minimum.
2. Grooved-End Fittings for Steel Piping: ASTM A536 ductile iron with EDPM gaskets, with dimensions matching steel pipe.

2.4 GATE VALVES

A. UL-Listed or FM-Approved Gate Valves:

1. 175-psig, UL-Listed and FM-Approved, Iron, OS&Y, Gate Valves:
 - a. Description: Iron body and bonnet and bronze seating material.
 - b. Standards: UL 262 and "Approval Guide," published by FM Global, listing.
 - c. Pressure Rating: 175 psig minimum.
 - d. End Connections: Flanged or grooved.

2.5 CHECK VALVES

A. Description:

1. Standard: UL 312 and FM Global standard for swing check valves, Class Number 1210.
2. Minimum Pressure Rating: 175 psig.
3. Type: Single swing check.
4. Body Material: Flanged cast iron with fusion bonded epoxy coated finish.
5. Clapper: Bronze with resilient seated rubber faced disc.
6. Hinge Shaft: Bronze or stainless steel.
7. Hinge Spring: Stainless steel.
8. End Connections: Flanged.

2.6 ALARM DEVICES

A. Alarm-device types shall match piping and equipment connections.

B. Water-Motor-Operated Alarm:

1. Standard: UL 753.
2. Type: Mechanically operated, with Pelton wheel.
3. Alarm Gong: Cast aluminum with red-enamel factory finish.
4. Size: 8-1/2-inches diameter.
5. Components: Shaft length, bearings, and sleeve to suit wall construction.
6. Inlet: NPS 3/4.
7. Outlet: NPS 1 drain connection.

C. Electrically Operated Alarm Bell:

1. Standard: UL 464.
2. Type: Vibrating, metal alarm bell.
3. Size: 10-inch diameter.
4. Finish: Red-enamel factory finish, suitable for outdoor use.
5. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. Water-Flow Indicators:

1. Standard: UL 346.
2. Water-Flow Detector: Electrically supervised.
3. Components: Two single-pole, double-throw circuit switches for isolated alarm and auxiliary contacts, 7 A, 125-V ac and 0.25 A, 24-V dc; complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed.
4. Type: Paddle operated.
5. Pressure Rating: 250 psig.
6. Design Installation: Horizontal or vertical.

E. Pressure Switches:

1. Standard: UL 346.
2. Type: Electrically supervised water-flow switch with retard feature.
3. Components: Single-pole, double-throw switch with normally closed contacts.
4. Design Operation: Rising pressure signals water flow.

F. Valve Supervisory Switches:

1. Standard: UL 346.
2. Type: Electrically supervised.
3. Components: Single-pole, double-throw switch with normally closed contacts.
4. Design: Signals that controlled valve is in other than fully open position.
5. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.7 PRESSURE GAGES

- A. Standard: UL 393.
- B. Dial Size: 3-1/2- to 4-1/2-inch diameter.
- C. Pressure Gage Range: 0- to 250-psig.
- D. Label: Include "WATER" label on dial face.

2.8 SLEEVES

- A. Cast-Iron Wall-Pipe Sleeves: Cast or fabricated of cast iron and equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.

2.9 SLEEVE SEALS

- A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
- B. Sealing Elements: EPDM-rubber or NBR interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.

- C. Pressure Plates: Stainless steel.
- D. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements.

2.10 GROUT

- A. Standard: ASTM C 1107, Grade B, posthardening and volume adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink; recommended for interior and exterior applications.
- C. Design Mix: 5000-psi, 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

PART 3 – EXECUTION

3.1 PIPING INSTALLATION

- A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated on approved working plans.
 - 1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Engineer before deviating from approved working plans.
 - 2. Coordinate layout and installation of fire pumps, piping, controllers, etc., with other construction that penetrates ceilings, including light fixtures, HVAC equipment, and partition assemblies.
- B. Piping Standard: Comply with NFPA 13, 20 and 22 requirements for installation of fire suppression system piping.
- C. Install ductile-iron, water piping according to AWWA C600 and AWWA M41.
- D. Install seismic restraints on piping. Comply with NFPA 13 requirements for seismic-restraint device materials and installation.
- E. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- F. Install unions adjacent to each valve in pipes NPS 2 and smaller.
- G. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.
- H. Install alarm devices in piping systems.
- I. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements for hanger materials in NFPA 13.

- J. Install pressure gages on riser or feed main. Include pressure gages with connection not less than NPS 1/4 and with soft-metal seated globe valve, arranged for draining pipe between gage and valve. Install gages to permit removal, and install where they are not subject to freezing.
- K. Install sleeves for piping penetrations of walls, ceilings, and floors.
- L. Install sleeve seals for piping penetrations of concrete walls and slabs.
- M. Install escutcheons for piping penetrations of walls, ceilings, and floors.

3.2 JOINT CONSTRUCTION

- A. Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for aboveground applications unless otherwise indicated.
- B. Install unions adjacent to each valve in pipes NPS 2 and smaller.
- C. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.
- D. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- E. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.
- F. Flanged Joints: Select appropriate gasket material in size, type, and thickness suitable for water service. Join flanges with gasket and bolts according to ASME B31.9.
- G. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
- H. Welded Joints: Construct joints according to AWS D10.12M/D10.12, using qualified processes and welding operators according to "Quality Assurance" Article.
 - 1. Shop weld pipe joints where welded piping is indicated. Do not use welded joints for galvanized-steel pipe.
- I. Steel-Piping, Cut-Grooved Joints: Cut square-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe joints.
- J. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

3.3 VALVE AND SPECIALTIES INSTALLATION

- A. Install listed fire-protection valves, trim and drain valves, specialty valves and trim, controls, and specialties according to NFPA 13, 20 and 22, and as directed by authorities having jurisdiction.
- B. Install listed fire-protection shutoff valves supervised, open or locked open, located to control sources of water supply except from fire-department connections. Install permanent identification signs indicating portion of system controlled by each valve, where applicable.
- C. A check valve shall be installed in each water-supply connection.
- D. UL-Listed or FM-Approved Gate Valves: Comply with NFPA 24.
- E. UL-Listed or FM-Approved Valves Other Than Gate Valves: Comply with NFPA 24.
- F. Support above-ground valves and piping on piers.

3.4 VALVE SCHEDULE

- A. Drawings indicate valve types to be used. Where specific valve types are not indicated on drawings, the following requirements apply:
- B. Fire-suppression above-ground fire-suppression shutoff valves NPS 2 and smaller shall be UL-listed or FM-approved, OS&Y, bronze, gate valves.
- C. Standard-pressure, aboveground fire-suppression shutoff valves NPS 3 and larger shall be the following:
 - 1. 175-psig, UL-listed or FM-approved, iron, OS&Y gate valves.

3.5 IDENTIFICATION

- A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13.

3.6 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 - 1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - 3. Flush, test, and inspect fire suppression systems according to NFPA 13, "Systems Acceptance" Chapter.
 - 4. Energize circuits to electrical equipment and devices.
 - 5. Coordinate with fire-pump tests. Operate as required.
- B. Fire suppression piping system will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

3.7 CLEANING

- A. Clean dirt and debris from all fire protection equipment, piping, controllers, etc.

3.8 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire pumps, fire pressure-maintenance pumps, controllers, etc.

END OF SECTION 211313

SECTION 213213 - ELECTRIC-DRIVE, VERTICAL-TURBINE FIRE PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Vertical-turbine fire pumps.
 - 2. Fire-pump accessories and specialties.
 - 3. Fire-pump controllers.
 - 4. Flowmeter systems.

1.3 SUBMITTALS

- A. Product Data: For each type of product. Include rated capacities, operating characteristics, performance curves, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For fire pumps, motor drivers, controllers and fire-pump accessories and specialties.
 - 1. Include plans, elevations, sections, and mounting and attachment details.
 - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include diagrams for power, signal, and control wiring.
- C. Seismic Qualification Certificates: For fire pumps, accessories, and components, from manufacturer.
 - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 - 3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- D. Product Certificates: For each type of fire pump, from manufacturer.
- E. Source quality-control reports.
- F. Field quality-control reports.
- G. Operation and Maintenance Data: For fire pumps to include in operation and maintenance manuals.

1.4 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire pumps and fire pump controllers, for not less than one (1) year, from date of Substantial Completion.
 - 2. Special Warranty: Provide manufacturer's full parts and labor warranty for all new fire pumps, fire pump controllers and pressure sensors, for not less than five (5) years, from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. NFPA Compliance: Comply with NFPA 20.
- B. Seismic Performance: Fire pumps shall withstand the effects of earthquake motions determined according to 2015 IBC as adopted by New Jersey.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."
 - 2. Component Importance Factor: 1.5.
- C. Pump Equipment, Accessory, and Specialty Pressure Rating: 175 psig minimum unless higher pressure rating is indicated.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 ASSEMBLY DESCRIPTION

- A. Description: Factory assembled and tested fire-pump and driver unit.
- B. Base: Fabricated and attached to fire pump and driver unit, with reinforcement to resist movement of pump during seismic events, when base is anchored to building substrate.
- C. Finish: Red paint applied to factory-assembled and -tested unit before shipping.

2.3 VERTICAL-TURBINE FIRE PUMPS

- A. The vertical-turbine fire pumps shall be supplied with the specified drivers, controls and pump accessory items by the pump manufacturer. The pump, driver and control shall be Underwriters Laboratories (UL) Listed and Factory Mutual Research Corporation (FM) Approved for fire protection service.

- B. The fire pumps shall be installed as recommended in the National Fire Protection Association, (NFPA), Pamphlet 20, Standard for the Installation of Centrifugal Fire Pumps. The fire pump shall be designed to deliver 1000 U.S. gallons per minute (gpm) at a total differential pressure of 117 psi, equal to existing. The fire pump shall also be capable of delivering not less than 150% of rated flow at not less than 65% rated head.
- C. Fire Pump model shall be furnished with driver, controllers and accessories as detailed in this specification.
- D. Pump manufacturer shall have unit responsibility for the proper operation of the complete unit assembly as indicated by field acceptance tests.
- E. Each individual pump shall be run tested at the factory prior to shipment. Vertical turbine bowl and discharge head assemblies shall be hydrostatically tested at a pressure not less than one and one-half times the no-flow (shutoff) head of the pump's maximum diameter impeller but in no case less than 250 psig.
- F. A field acceptance performance test shall be conducted upon completion of pump installation. The test shall be made by flowing water through calibrated nozzles, approved flow meters or other such accurate devices as may be selected by the authority having jurisdiction. The test shall be conducted as recommended in NFPA Pamphlet 20 by the installing Contractor in the presence of the authority having jurisdiction and with that authority's final approval and acceptance. Failure to submit documentation of factory and field tests will be just cause for equipment rejection.
- G. The fire pumps shall be 4-stage, Peerless Pump Model 12MBF, vertical shaft turbine pumps which will replace in-kind the existing fire pumps. The pump shall be specifically labeled for fire service systems. The water supply for the fire pump shall be from a wet well located below the fire pumps. The total installed length of the pump from bottom of baseplate to bottom of suction inlet manifold shall be field verified by Contractor. The pump discharge head assembly shall be cast iron and fitted with a flanged discharge connection matching the existing fire pumps. The pump discharge head shall provide rigid mounting support for the complete pump assembly and for the vertical hollow shaft motor. The pump line shaft bearings shall be water lubricated by the liquid being pumped. Pump column pipe shall be in sections not longer than 10 feet each. Pump bowl assemblies shall include cast iron enameled bowls, cast bronze impellers and bowl lateral seal rings. Pump bowl assemblies shall be submerged as recommended in NFPA Pamphlet 20. Each pump shall be installed with a cast or fabricated nonferrous metal strainer having a free area of not less than four times the suction inlet area. Strainer openings shall be sized to restrict the passage of objects one-half inch sphere size.
- H. The pump driver shall be a vertical hollow shaft induction motor rated 100 horsepower, 3-phase, 60 Hertz with weather protected Type 1 NEMA enclosure for operation on 460-volt service. The motor locked rotor current shall not exceed the values stated in NFPA Pamphlet 20. The motor shall be constructed so that the total hydraulic and static thrust of the pump's rotating assembly can be carried by the motor thrust bearing(s). The motor shall mount directly on the pump discharge head assembly with a registered fit for correct shaft alignment. The motor shall be equipped with a top drive coupling and nut for axial adjustment of the pump impellers and shall have a non-reverse ratchet to prevent pump back-spin.
- I. Contractor shall provide all necessary piping accessory items for the pump installation which will adapt the pump connections to the existing fire protection system and test connection. Fittings subjected to pump discharge pressure shall be rated for a minimum of 175 psi. Fittings subjected to suction pressure shall be rated for a minimum of 125 psi. Provide fire pump manufacturer's optional automatic air release valve and suction and discharge pressure gauges.

2.4 ELECTRIC MOTOR CONTROLLERS

A. Approvals

1. The Fire Pump Controller shall meet the requirements of the latest edition of NFPA 20 and shall be listed by Underwriters Laboratories (UL) and approved by Factory Mutual Research (FM) and carry the CE marking for fire pump service.

B. Starting Type

1. The controller shall be of the combined manual and automatic type designed for Solid State Soft Start Starting. The controllers shall be fully rated for the associated fire pump's motor selection.

C. Ratings

1. The Controller shall have a withstand rating of 100,000 RMS symmetrical amperes at 480V.

D. Construction

1. The controller shall include a motor rated combination isolating switch and circuit breaker, mechanically interlocked and operated with a single externally mounted handle.
2. The isolating switch shall be rated to disconnect the motor load.
3. The isolating switch/circuit breaker combination shall be mechanically interlocked such that the enclosure door cannot be opened when the handle is in the on position except by a tool operated defeater mechanism.
4. The controller manufacturer shall manufacture the contactor, isolating switch, circuit breaker, pushbuttons, and enclosures. Brand-labeled components will not be accepted.

E. Enclosure

1. The controller shall be housed in a NEMA Type 2 (IEC IP11) drip-proof, powder baked finish, freestanding or wall-mounted enclosure. Provide a 6" concrete housekeeping pad under floor mounted controllers.

F. Microprocessor Control

1. The controller shall come complete with a 4 line by 40 character LCD display mounted on a panel opening in the front door. The LCD display shall indicate the following:
 - a. Main screen displaying system pressure, three- phase voltage and amperage readings, system frequency, date, and time.
 - b. Set point review screen displaying the pro- grammed pressure start and stop points, and weekly test time.
 - c. Controller statistics screen, including:
 - 1) Powered Time
 - 2) Motor Run Time
 - 3) Number of Calls to Start d. Number of Starts
 - 4) Last Motor Start Time
 - 5) Last Motor Run Time
 - 6) Last Low Pressure Start
 - 7) Minimum System Voltage i. Maximum System Voltage
 - 8) Minimum System Frequency k. Maximum System Frequency

- 9) Minimum System Pressure m. Maximum System Pressure
 - 10) Last System Startup o. Last Phase Failure
 - 11) Last Phase Reversal
 - 12) Last Locked Rotor Trip r. Maximum Run Current
 - 13) Last Locked Rotor Current
- d. Controller diagnostics screen, including:
- 1) Date & Time
 - 2) Firmware Version
 - 3) Shop Order Number
 - 4) Customer Order Number
 - 5) Transformer Output Voltage
 - 6) Current Transformer Outputs
 - 7) Pressure Transducer Calibrated Settings h. Input Status
 - 8) Output Status
- e. Display last messages screen that will display up to 10,000 alarms/messages stored in the controllers' memory.
- f. Display up to ten (10) custom messages of up to 100 characters each, which will continually scroll across the fourth line of the display.
- g. Remaining time left on active timers.
2. The controller shall be supplied with ten (10) green status LED's for the following:
- a. Power On
 - b. Pump Running
 - c. Local Start
 - d. Remote Start
 - e. Deluge Valve
 - f. Emergency Start
 - g. Interlock On
 - h. Low Pressure
 - i. Auto Shutdown Enabled
 - j. Programmable LED #1
3. The controller shall be supplied with ten (10) red alarm LED's to indicate the following:
- a. Phase Reversal
 - b. Phase Failure
 - c. Fail to Start
 - d. Undervoltage
 - e. Overvoltage
 - f. Low Room Temperature
 - g. Locked Rotor Trip
 - h. Low Suction Pressure
 - i. Source 2 Disconnected
 - j. Programmable LED #2

4. The microprocessor logic board shall be available with:
 - a. A USB port for transference of message history, controller status, diagnostics, and statistics and the ability to update firmware.
 - b. An optional Ethernet port for direct connection to a computer for data transfer.
 - c. An optional RS485 Serial port for communication to various external software programs.
5. The controller shall be available with an embedded web page to allow viewing of the controllers' current status, data values, programmed set points, and history.
6. A Fail-to-Start alarm shall occur if the motor controller sees less than 20% of the motor full load amps after an adjustable time delay of 1-90 seconds.
7. Locked rotor protection shall be provided. After a trip condition and restoration of power, the LCD display shall indicate "LOCKED ROTOR TRIP".
8. A sequential start timer and weekly test timer shall be provided as standard.
9. A restart time delay of two (2) seconds shall be provided to allow the residual voltage of the motor to decay prior to restarting the motor. In the event that the pump motor continues to run after a request to stop, then the controller must display a fail to stop message to indicate this condition.
10. Overvoltage (5-20%) and under-voltage (5-30%) sensing and alarming shall be provided as standard. K. The controller shall be supplied with interlock and shutdown circuits as standard. A flashing green LED shall indicate an interlock on condition.
11. Where shutdown of the pump(s) due to low suction pressure is required, it shall be accomplished without the addition of a separate panel or enclosure. The LCD display shall indicate low suction shutdown. Resetting of the condition shall be automatic or manual as selected by the user.
12. Means shall be provided to test the operation of all LED's to ensure their functionality.
13. Interconnect controller to existing combination fire alarm/security monitoring panel in Fire Pump House. Coordinate all work with Atlantic Coast Alarm who is the Owner's fire alarm and security vendor and currently monitors this building.

G. Programming Menu

1. The programming menu shall have the ability to provide programmed lead/lag/alternating start/stop functions between the two (2) electric fire pumps. The fire pump digital controllers shall be able to seamlessly communicate as necessary to provide the specified programmable lead/lag/alternate fire pumps' functions.
2. The programming menu shall have the ability to enable an entry password.
3. The programming menu shall be limited to two (2) levels of password protection.
4. The controller shall have three (3) languages as a standard, English, French, and Spanish, with the ability to add a fourth language.
5. The programming menu shall be grouped into 6 main menu headings as follows:
 - a. Regional Settings
 - b. Pressure Settings
 - c. Timer Values
 - d. Alarm Set points
 - e. Input/Output Menu
 - f. System Configuration (password protected)

H. Pressure Sensor

1. A solid-state 4-20mA pressure sensor shall be provided for remote installation and wired to fire pump controller. Pressure sensor shall be field mounted in discharge piping of fire pump and wired to fire pump's controller.
2. The pressure Start and Stop points shall be adjustable in increments of one (1) PSI. A low pressure pre-alarm, indicated with a flashing green LED, shall denote a potential pump starting condition and will remain lit once the pump has started to indicate the starting cause. Pressure start/stop settings shall be set to match existing.

I. Custom Inputs/Outputs

1. The controller shall come standard with nine (9) future inputs, two (2) future LED indicators, and one (1) future output, with the ability to add up to another 8 outputs via optional relay boards.
2. The user shall be able to program the future inputs/outputs through the main programming menu.
3. The inputs shall be selectable based on the following criteria:
 - a. User selected message or thirteen (13) predetermined messages.
 - b. Energize the common alarm relay when the input is received.
 - c. Link to a future relay and/or LED indicator.
 - d. Alarm latched until reset.
 - e. Normally open or closed input.
 - f. On-delay timer.
4. The LED indicators shall be selectable based on the following criteria:
 - a. Indication based on a minimum of twelve (12) predetermined alarms or a custom input.
5. The future relays shall be selectable based on the following criteria:
 - a. Output based on a minimum of twenty seven (27) predetermined alarms, controller status or a custom input.
 - b. Latched until reset.
 - c. Energized under normal conditions.
 - d. On or off delay timer on the output.

J. Alarm Relays

1. All relays shall be of the plug-in type. An LED on the relay panel shall indicate the energized state of the relay. All relay contacts shall be rated at 8A, 277VAC/30VDC. Two (2) sets of Form-C contacts shall be provided for each of the following:
 - a. Phase Reversal
 - b. Phase Failure
 - c. Common Alarm
 - d. Future #1
 - e. Pump Run (wired to rooftop status lights)
2. The Common Alarm and Phase Failure relays shall be energized under normal conditions.

K. Audible Alarm Buzzer

1. An audible alarm buzzer, capable of being heard while the motor is operating, shall operate if Fail to Start, Hardware Malfunction or any Common Alarm condition exists.

2.5 FLOWMETER SYSTEMS

- A. Description: UL-listed or FM-Approved, fire-pump flowmeter system able to indicate flow to not less than 175 percent of fire-pump rated capacity.
- B. Pressure Rating: 175 psig.
- C. Sensor: Annubar probe, orifice plate, or venturi unless otherwise indicated. Sensor size shall match pipe, tubing, flowmeter, and fittings.
- D. Permanently Mounted Flowmeter: Compatible with flow sensor; with dial not less than 4-1/2 inches in diameter. Include bracket or device for wall mounting.
 1. Tubing Package: NPS 1/8 or NPS 1/4 soft copper tubing with copper or brass fittings and valves.

2.6 GROUT

- A. Standard: ASTM C 1107, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink and recommended for interior and exterior applications.
- C. Design Mix: 5000-psi, 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

2.7 SOURCE QUALITY CONTROL

- A. Testing: Test and inspect fire pumps according to UL 448 requirements for "Operation Test" and "Manufacturing and Production Tests."
 1. Verification of Performance: Rate fire pumps according to UL 448.
- B. Fire pumps will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance of fire pumps.

- B. Examine roughing-in for fire-suppression piping systems to verify actual locations of piping connections before fire-pump installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Fire-Pump Installation Standard: Comply with NFPA 20 for installation of fire pumps, relief valves, and related components.
- B. Equipment Mounting:
 - 1. Install fire pumps on cast-in-place concrete equipment bases. Modify existing concrete bases as may be required.
 - 2. Comply with 2015 IBC requirements for vibration isolation and seismic control devices.
- C. Install fire-pump discharge piping equal to or larger than size required by NFPA 20.
- D. Support piping and pumps separately, so weight of piping does not rest on pumps.
- E. Install valves that are same size as connecting piping.
- F. Install pressure gage on pump-head discharge flange pressure-gage tapping.
- G. Install piping hangers and supports, anchors, valves, gages, and equipment supports according to NFPA 20.
- H. Install flowmeter-systems' components and make connections according to NFPA 20 and manufacturer's written instructions.
- I. Field install remote electronic pressure sensor in discharge piping of fire pump and make connections according to NFPA 20 and manufacturer's written instructions.
- J. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not factory mounted. Furnish copies of manufacturers' wiring diagram submittals to electrical Installer.
- K. Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

3.3 ALIGNMENT

- A. Align pump and driver shafts after complete unit has been leveled on concrete base, grout has set, and anchor bolts have been tightened.
- B. After alignment is correct, tighten anchor bolts evenly. Fill baseplate completely with grout, with metal blocks and shims or wedges in place. Tighten anchor bolts after grout has hardened. Check alignment and make required corrections.
- C. Align piping connection.

- D. Align pump and driver shafts for angular and parallel alignment according to HI 2.4 and to tolerances specified by manufacturer.

3.4 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to pumps and equipment to allow service and maintenance.
- C. Connect flowmeter-system meters, sensors, and valves to tubing.
- D. Connect fire pumps to their controllers.

3.5 IDENTIFICATION

- A. Identify system components. Comply with requirements for fire-pump marking according to NFPA 20.

3.6 FIELD QUALITY CONTROL

- A. Test each fire pump with its controller as a unit.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- C. Perform the following tests and inspections with the assistance of a factory-authorized service representative.
 - 1. After installing components, assemblies, and equipment including controller, test for compliance with requirements.
 - 2. Test according to NFPA 20 for acceptance and performance testing.
 - 3. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 4. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - 5. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Components, assemblies, and equipment will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports.

3.7 TARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Complete installation and startup checks according to manufacturer's written instructions for all new fire pumps, jockey pumps and pump controllers and associated devices.

3.8 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire pumps, jockey pumps and pump controllers.

END OF SECTION 213213

SECTION 213400 - PRESSURE MAINTENANCE PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Vertical, multistage, pressure-maintenance pump, (i.e., jockey pump).
 - 2. Pressure-maintenance pump controller.

1.3 SUBMITTALS

- A. Product Data: For each type of product. Include rated capacities, operating characteristics, performance curves, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For pumps, accessories, and specialties.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include diagrams for power, signal, and control wiring.
- C. Field quality-control reports.
- D. Operation and Maintenance Data: For pumps to include in operation and maintenance manuals.

1.4 GUARANTEE

- A. General Warranty: The special warranty specified in this Article shall not deprive the County of other rights the County may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Submit a written warranty, executed by the manufacturer and signed by the Contractor, agreeing to replace components that fail in materials or workmanship, within the specified warranty period, for the following:
 - 1. Base Bid: Manufacturer's full parts and labor warranty for all new fire suppression pressure maintenance pumps and controllers, for not less than one (1) year, from date of Substantial Completion.
 - 2. Special Warranty: Provide manufacturer's full parts and labor warranty for new fire pressure maintenance pump, (i.e., jockey pump), pump controller and pressure sensor, for not less than five (5) years, from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 VERTICAL, MULTISTAGE, PRESSURE-MAINTENANCE PUMPS

- A. Description: Factory-assembled and -tested, multistage, barrel-type vertical pump, designed for with pump and motor direct coupled and mounted vertically.
- B. Pressure maintenance submersible jockey pump shall be a 1-1/2 HP, 480V/3 ϕ , submersible multistage well pump with 4" motor and 23.5" pump end made for 4" and larger casings. Provide check valve, torque arrestor and pressure switch. Submersible pump shall include one (1) 1-1/4" NPT discharge with head capacity of up to 600', specifically engineered for both continuous and intermittent operation.
- C. The pressure maintenance submersible jockey pump shall be suitable for vertical installation with maximum 104°F liquid temperature operation. Pump shall be made entirely of high-grade corrosion-resistant Type 304 stainless steel with splined shaft construction and built-in radial thrust top bearing. The pump shall be fitted with a built-in jam-free check valve which prevents back-flow into the wet well once the pump is shut down. Over temperature protection shall be provided with bi-metallic overloads. Pump shall be provided with carbon/ceramic thrust bearings with heavy-duty 900 lb. thrust capacity which exceeds NEMA ratings. Provide pump with cable guards.
- D. Pressure maintenance submersible jockey pump's motor shall be a permanent split capacitor (PSC), 1-1/2 HP single phase MS 402 motor (3450 RPM) delivers 12 GPM at 300', incorporating motor protection and a starter device, thus allowing the Pump to be connected directly to the mains. Provide motor fill fluid, (SML2), which shall provide bearing lubrication, shall protect the motor from freezing down to 4°F, shall prevent the growth of bacteria and shall require no additional lubrication.
- E. Submersible pressure maintenance jockey pump shall be of Type 304 stainless steel construction for all vital components including impellers, diffuser, shaft, guide vanes, couplings and hardware.
- F. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- G. Motor: Single speed with permanently lubricated ball bearings and rigidly mounted to pump head.
- H. Power Cord: Factory-connected to motor for field connection to controller.
- I. Nameplate: Permanently attached to pump and indicating capacity and characteristics.
- J. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors.
 - 1. Motor Sizes: Minimum size as indicated; if not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.

2.2 ELECTRIC MOTOR CONTROLLERS

- A. The automatic electric motor controller shall be UL Listed and FM approved specifically for jockey pump service. The controller shall be designed for across-the-line type starting. The controller shall be fully rated for the associated jockey pump's motor selection. The controller shall be capable of interrupting a short circuit current at least equal to the available short circuit current in the controller supply circuit. This jockey pump's controller requires a withstand rating of not less than 100,000-amperes RMS symmetrical at an operating voltage of 480 volts. The controller shall be wall mounted for electrical connection to the

motor by the equipment installer, and wired to the motor by the pump manufacturer. Provide remote electronic pressure transducer to be field installed in discharge piping of jockey pump and field wired to jockey pumps' controllers. Pressure start/stop settings shall be set to match existing.

B. Standard Features - The following shall be included as standard with each controller:

1. NEMA Type 2 (IEC IP22) Painted Steel Enclosure.
2. Circuit Breaker.
3. Horsepower Rated Motor Starter(s).
4. Suitable for use as service equipment.
5. HAND-OFF-AUTO selector switch.
6. Minimum run timer.
7. On-Delay timer.
8. Pump restart timer.
9. Run/Start transition timer.
10. Control circuit transformer with 24VAC secondary.
11. Remote mounted digital 0-300 psi stainless steel solid state pressure transducer wired to jockey pump controller.
12. Overpressure indication.
13. Low Pressure indication.
14. Failed to start indication.
15. Main switch not in "Auto" alarm
16. Pressure recording.
17. Event log (3000 events stored in controller memory).
18. Data log (including cycle counter).
19. Door mounted display/user interface featuring a 128 x 64 pixel backlit LCD graphical display, membrane type user controller push-buttons and LED indication for:
 - a. Power ON
 - b. Pump Running
 - c. Alarm
20. Two (2) lines of user selectable display information.

PART 3 - EXECUTION

3.1 EQUIPMENT INSTALLATION

- A. NFPA Standard: Comply with NFPA 20 for installation of pressure-maintenance pumps.
- B. Equipment Mounting:
 1. Install multistage, pressure-maintenance pumps according to HI 1.4.
 2. Install isolation valves in outlet pipe near the pump.

3.2 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

- B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - 3. Pressure-maintenance pumps will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

3.3 ADJUSTING

- A. Lubricate pumps as recommended by manufacturer.
- B. Set field-adjustable pressure-switch ranges as indicated.

END OF SECTION 213400

CONTRACT **DOCUMENTS**

NOTE: INFORMATIONAL ONLY. THE SUCCESSFUL LOW BIDDER WILL BE REQUIRED TO SIGN AND SUBMIT THESE DOCUMENTS AFTER AWARD.

CONTRACT

THIS AGREEMENT made this ___ day of _____, 2017, between the COUNTY OF ATLANTIC a body corporate and politic of the State of New Jersey with offices located at 1333 Atlantic Avenue, Atlantic City, NJ 08401 (the "County" hereinafter), and _____, with offices located at _____ hereinafter referred to as "Contractor".

WITNESSETH:

WHEREAS, the County desires to engage the services of the Contractor to provide all goods and services necessary to perform all work concerning, demolition and construction/renovation of gazebo at Oscar McClinton Park in Atlantic County, as more specifically described in a County BID, attached herewith as Exhibit A; and

WHEREAS, the Contractor has represented that it is qualified by training and experience to perform the required services in the manner and on the terms and conditions set forth herein.

WHEREAS, execution of this contract has been authorized by the Board of Chosen Freeholders of Atlantic County pursuant to Atlantic County Resolution # _____.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, the parties hereto agree as follows:

1. SCOPE OF SERVICES AND CONTRACT DOCUMENTS

The Contractor shall provide to the County the for all goods, materials, services and labor necessary to perform In accordance with all of the terms, conditions, specifications and requirements incorporated herein (referred to collectively as the "Work").

2. CONSIDERATION

A. In accordance with the authorization for this Contract granted by Atlantic County Board of Chosen Freeholders Resolution No. _____ adopted on _____ 2017, the Contractor shall be compensated in an amount not to exceed \$ _____ in full consideration for performance of the Project, in accordance with the requirements of the Contract Documents.

B. The time and rate of compensation shall be as set forth in the County Bid Documents (Exhibit A) and the Contractor's Proposal, Exhibit B, attached herewith, for all goods, materials, labor and services satisfactorily provided hereunder. The Price stated in the Contract Documents constitutes the total compensation (subject to adjustments explicitly authorized by the Contract Documents) payable to Contractor for performing all of the duties, responsibilities and obligations assigned to or undertaken by Contractor and shall be performed at the Contractor's expense, without change in the Contract Price.

C. Even if the Agreement calls for the provision of services on an hourly rate or other unit price basis or if the Agreement allows for payment of specified reimbursable expenses, Contractor understands that Contractor shall not be entitled to payment for any goods, materials, labor or other level of services rendered in excess of the maximum compensation specified in 2.A unless additional compensation is expressly authorized by the County.

D. Any changes to the maximum compensation or scope of work specified or otherwise required by the Contract Documents shall only be effective if such additional compensation or modification is expressly authorized by an amendatory resolution duly adopted by the Atlantic County Board of Chosen Freeholders.

E. Any claim by Contractor for an adjustment in the Contract Price shall be subject to the specific requirements of the Technical Specifications and County Special Conditions. In addition, any adjustment shall additionally be based on written notice delivered by Contractor promptly (but in no event later than seven days) after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Contractor shall provide complete supporting data with respect to the claim, including all claims for equitable adjustment, not later than thirty (30) days after the start of such occurrence. All claims for adjustment in the Contract Price shall be determined by the County, in the event that the County and Contractor cannot otherwise agree on the amount involved. No claim of any kind for an adjustment in the Contract Price will be valid if it is not submitted in accordance with the procedures and requirements set forth in the Contract Documents, and Contractor waives all rights to recovery for any claim as to which this procedure is not followed.

F. It is the exclusive right of the County to determine that services have been performed in a proper and satisfactory manner in accordance with the terms and conditions set forth herein prior to approval and payment of invoice submitted by Contractor.

G. Payment shall be made only upon submission by the Contractor of the required executed standard County invoice, a bill on Contractor's letterhead, [the appropriate AIA forms](#) and any other documents deemed necessary by the County.

3. TERM

A. Upon its authorization and execution this Agreement shall be effective commencing on _____ and shall have contract term continuing for a period of **60 Consecutive Calendar Days**, as set forth in the County Special Conditions.

B. The Contractor acknowledges it shall complete the performance of the Work in accordance with the said time limits as specified in the Contract Documents.

C. The County Executive or his designee may extend the time for completion specified by Article 3 A. Such extensions shall only be effective if in writing, and shall not extend the Agreement term beyond the term specified in the authorizing resolution. In the event that the time for completion is extended, all of the original terms and conditions will remain in effect for the extended period.

4. TIME OF THE ESSENCE.

All time limits for the performance and completion of Work, as stated in the Contract Documents, are of the essence of this Contract. Expeditious performance and completion of this Contract are essential. The Contractor shall begin the Work promptly on the date of commencement and he shall carry the Work forward expeditiously with adequate forces and shall achieve completion at the earliest possible date within the Contract Time.

5. CONTRACT DOCUMENTS.

The Contract Documents consist of: A. the County Bid Documents, including the Bid Instructions, General Conditions, the technical specifications and the materials incorporated therein (Exhibit A) and the Contractor's Bid (Exhibit B) along with all attachments herewith, all of which are incorporated by reference and comprise the "Contract Documents". In the event of any dispute or inconsistency, the documents shall have the following priority:

- A. The terms and provisions of this Agreement,
- B. The requirements, terms and conditions set forth in the County Bid Documents (Exhibit A) is agreement;
- C. The approved Project Schedule;
- D. The Contractor's Bid (Exhibit B).

In addition to the Exhibits and submissions listed above, the Appendices to the Contract Documents shall additionally constitute integral parts of this Agreement and are hereby incorporated herein in their entirety: **CONTRACT**

(REVISED 4/10)

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)

N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

- (1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
- (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
- (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;
- (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
- (5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
- (6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:
 - (i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Division, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

CONTRACTORS INSURANCE REQUIREMENTS

A/. GENERAL REQUIREMENTS

1/ The Contractor(s) shall provide and pay for insurance coverage of such type and in such amounts as will completely protect the Contractor and the County, its elected officials, officers, agents, servants employees and assigns against any and all risks of loss (including costs of defense) or liability arising out of this contract.

2/ The insurance should be furnished by insurance companies with and "A- (Excellent) VII" or better or better rating as published in the most recent editions of Best Insurance Key Rating and shall be authorized to conduct business in the State of New Jersey.

3/ It is recognized that in some instances that insurance may be acceptable which is underwritten by an insurance company that is not reported in the BEST GUIDE , or the coverage is extended under a self insured program. This insurance, or self insurance, must be in conformity with the rules and regulations of the Commissioner of Insurance of the State of New Jersey. Any insurance or self insurance of this type is subject to the review and acceptance by the County Risk Manager or the County Counsel. Furthermore written proof of acceptability by the Office of the Commissioner of Insurance may be necessary.

4/ The Contractor(s) shall furnish the County with Certificates of Insurance, as shown under "B" Specific Coverage Requirements, policies for General Liability must be endorsed to include the County of Atlantic as an **Additional Insured, a copy of ISO Endorsements CG 20 10 is required along with the certificate.** The Certificates of Insurance shall set out the types of coverage, the limits of liability, describe the operation by reference to this contract and provide for (30 days) written notice to the County of cancellation and/or non-renewal. All of the Contractors. Deductibles or Retention's shall be the sole responsibility of the contractor, those in excess of \$10,000 are to be disclosed and are subject to approval by the County. If requested actual policy copies or incurred loss information may be required.

5/ The policies and specified limits of coverage must be effective prior to the commencement of work and must remain in force until final acceptance of the work under the contract. **Contracts that involve construction, installation, or maintenance repair must maintain completed operations insurance, endorsing the County as an additional insured for a term of two (2) years beginning on the date of the final acceptance. They also must include a copy of I.S O. Endorsement CG 2011 CG 2037 , or their equivalent.**

6/ The Contractor(s) shall obtain, and furnish the County, certificates of insurance from their subcontractor(s) or sub sub contractor(s) showing polices in force with coverage and limits as described under these insurance requirements.

7/ The Certificate of Insurance with a **A COPY OF THE ADDITIONAL INSURED ENDORSEMENTS** , are to be signed by a person authorized by the insuring company(s) to bind coverage on it's behalf. Neither approval by the County nor failure to disapprove Certificates of Insurance/ furnished by the Contractor shall release the Contractor from full responsibility for all

liability including costs of defense. Insurance is required as a measure of protection and the Contractor's liability is not limited thereby.

8/ The Certificates of Insurance, must be submitted to the County and shall be subject to the review and approval of the County Counsel or Risk Manager.

9/ If at any time during the term of this contract or any extension thereof, if any of the required policies of insurance should expire, change or be canceled, it will be the responsibility of the Contractor, prior to the expiration, change or cancellation, to furnish to the County a Certificate of Insurance indicating renewal or an acceptable replacement of the policy so that there will be no lapse in any coverage. In the event of interruption of any coverage for any reason, all payments and work under the contract shall cease and not be resumed until coverage has been restored and a current Certificate of Insurance received and approved.

10/ Any policy of insurance that is written on a claims made basis shall, under the terms of this contract, be renewed or the coverage extended for a period of not less than three years and shall provide coverage for the period operations were performed by the contractor. Proof of such extension shall annually be presented to the Risk Manager for the County of Atlantic and indicate the retroactive date of coverage or indicate that all prior acts coverage is provided.

11/ Insurance or Risk Funding maintained by the County shall be considered as Excess over Contractors Insurance. Insurance or Risk Funding Maintained by the County of Atlantic does not provide protection for Contractors liability.

12/ Certificates of Insurance and Evidence of Property Forms shall show the Certificate Holder as follows:

COUNTY OF ATLANTIC
COUNTY OFFICE BUILDING
1333 ATLANTIC AVENUE
ATLANTIC CITY, NEW JERSEY 08401
ATTN.: RISK MANAGER

Certificates of Insurance not reading as above will not be acceptable and will delay contract signature and/or payment.

13/ Questions regarding these insurance requirements may be directed to (609)-345-6700 Ext. 2495. Certificates for approval may be preliminarily submitted via fax to (609)-343-2164, or to (609)-343-2373.

B./ SPECIFIC COVERAGE REQUIREMENTS

1/ The following **checked** items are the minimum mandatory types of insurance coverage to be carried under the preceding requirements:

-----X------(a) Workers Compensation-Statutory Limits , Employers Liability - with minimum limits of - \$1,000,000,/1,000,000,/1,000,000.

-----X------(b) General Liability in a comprehensive form, with minimum limits as follows:

1/ Each Occurrence	\$1,000,000
2/ Damage to Rented or Leased Properties	\$ 100,000
3/ Medical Expense	\$ 5,000
4/ Personal & Adv. Injury	\$1,000,000
5/ General Aggregate	\$2,000,000
6/ Products-Completed Operations Aggregate	\$2,000,000

-----X------(c) Motor Vehicle Liability Insurance in a comprehensive form, endorsed to include pollution coverage, with minimum limits of \$1,000,0000 CSL

- 1/ Owned Vehicles
- 2/ Hired/Leased Vehicles
- 3/ Non-Owned Vehicles

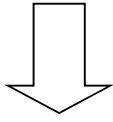
-----X----- - (d) Umbrella /Excess Liability over General / Automobile liability with minimum limits of \$1,000,000

January , 2011

BID

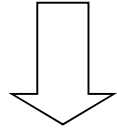
DOCUMENTS

BID CHECK LIST



Checked Items required with bid

Items submitted with bid
(Bidder's INITIALS)



**A FAILURE TO SUBMIT ANY OF THESE ITEMS IS
MANDATORY CAUSE FOR REJECTION OF BID**

X	Complete and sign Proposal page(s) <i>ORIGINAL SIGNATURES</i>	
X	Acknowledgement of Receipt of Addendum or Revision (if any)	
X	Corporate Disclosure Statement, Pursuant to N.J.S.A.40A:11-16	
X	Bid guarantee (bid bond or certified / cashier's check)	
X	Certificate from a Surety Company (Consent of Surety)	
X	Employee Benefit Affidavit (Executive order # 2000-4)	
X	Copy of Certificate for Public Works Contractor Registration	
X	Subcontractors Affidavit (N.J.S.A. 40A:11-16), includes Plumbing, HVAC, Electrical and Structural Steel	
X	Plumbers Affidavit	

**B MANDATORY ITEM(S) REQUIRED PRIOR TO AWARD OF
CONTRACT**

X	Copy of New Jersey Business Registration Certificate for bidder and designated subcontractors	
----------	--	--

**C FAILURE TO SUBMIT ANY OF THESE ITEMS AT TIME OF BID
MAY BE CAUSE FOR REJECTION**

X	Non-Collusion Affidavit	
X	Affirmative Action Page (AA 201 Completed & Submitted)	
X	References (if required)	
X	Deviations from Specifications, if applicable, attached in letter form	
	Other :	
X	Disclosure of Investment Activities in Iran	

Print Name of Bidder : _____ Date: _____

Signed By: _____

Print Name & Title: _____

**THIS CHECKLIST SHOULD BE INITIALED AND SIGNED
WHERE INDICATED AND RETURNED WITH ALL ITEMS**

PROPOSAL FORM

DATE: _____

The undersigned, having read the Notice to Bidders, Invitation to Bid, Instructions to Bidders, and Specifications attached thereto, hereby agrees to provide renovation to Atlantic County Justice Facility Center Control Room in strict accordance with this specification, as follows:

LUMP SUM PRICE

A. REPLACEMENT OF FIRE PUMP(S) \$ _____

B. ALLOWANCE CONTINGENCY (5%) \$ _____

TOTAL PROJECT COST (A + B) \$ _____

ALLOWANCE CONTINGENCY:

The County of Atlantic will determine an allowance (contingency) amount, equal to five (5%) percent of the lowest qualified base bid, that will be added to and awarded with the base bid. This allowance shall be set aside to pay for items that are unforeseen or additional work not in the specifications or shown on the drawings. Before any work is performed under this Allowance Contingency category, it has to be approved by the Director of Facilities/Capital Planning & Property Management, or his designee. Any work performed without this written approval will not be paid.

NOTE: The Substantial Completion Date is one hundred and eighty (180) days from notice to proceed.

NOTE: Certified Check, Cashier's Check or Bid Bond must be not less than ten percent (10%) of the total amount of the Bid, except that no check or bid bond shall be for more than \$20,000 and made payable to the Atlantic County Treasurer which the undersigned agrees is to be forfeited as liquidated damages and not a penalty if the Contract is awarded to the undersigned and the undersigned shall fail to execute the Contract for the project or furnish the required bond. Otherwise, said deposit shall be returned to the undersigned.

AUTHORIZED SIGNATURE: _____

COMPANY NAME: _____

NOTE: BIDDER MUST COMPLETE AND SIGN PAGES PF-1 AND PF-2 OR BID SHALL BE REJECTED.

PROPOSAL FORM

Total Lump Sum bid from page PF-1 _____

NAME OF BIDDER

The undersigned is a Partnership
Corporation under the laws of the State of
Individual

_____ having principal Offices at: _____

_____, and is authorized to conduct business in the State of
New Jersey.

Person Firm or Corporation

By: _____
Signature

Street Address City/State Zip Code

Telephone _____ Fax Number _____

AUTHORIZED SIGNATURE: _____

COMPANY NAME: _____

NOTE: BIDDER MUST COMPLETE AND SIGN PAGES PF-1 AND PF-2 OR BID SHALL BE REJECTED.

COUNTY OF ATLANTIC
ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA
VENDOR REQUIRED TO COMPLETE AND RETURN FORM WITH PROPOSAL
REGARDLESS OF WHETHER ADDENDA WAS ISSUED.
FAILURE TO COMPLETE AND RETURN FROM IS A FATAL DEFECT
WHICH CANNOT BE CURED AND PROPOSAL WILL BE REJECTED

The undersigned vendor hereby acknowledges receipt of the following Addenda:

Addendum Number	Dated	Initial
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

OR:

Vendor acknowledges to the best of this /her knowledge no addendum has been issued by the County

Dated _____ Initial _____

Vendor is required to complete, sign and submit form with bid regardless of whether addenda was issued. Failure to complete and return form is a fatal defect which cannot be cured and bid will be rejected .

See: N.J.S.A. 40 A:11-23.2

BY: _____
(Print or Type Name of Authorized Individual)

Title: _____

A.D.

STOCKHOLDER DISCLOSURE CERTIFICATION
This Statement Shall Be Included with Bid Submission

Name of Business: _____

Principle Place of Business: _____

Check the box that represents the type of business organization:

Partnership Corporation Limited Liability Corporation

I certify that no one stockholder, partner or member owns a 10% or greater interest in the respective Corporation, Partnership or Limited Liability Company.

OR

I certify that the list below contains the names and addresses of all:

- (1) stockholders in the corporation who own a 10% or more of its stock, of any class,
- (2) individual partners in the partnership who own a 10% or greater interest therein, or
- (3) members of the limited liability company who own a 10% or greater interest therein.

Further, that if one or more such stockholder, member or partner is itself a corporation, partnership or limited liability company, any stockholder, member or partner holding 10% or more therein, is also listed below, and

Further, if the bidder is publicly traded, the name and address of each person that holds a 10% or greater beneficial interest therein as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, below is listed links to the websites containing the last annual filings and the relevant page numbers of the filings that contain the information on each person that holds a 10% or greater beneficial interest.

Name	Home Address
_____	_____
_____	_____
_____	_____
_____	_____

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

(Notary Public)

My Commission expires:

(Affiant)

(Print name & title of affiant)

(Corporate Seal)

D.S.

**ATLANTIC COUNTY HAS PROVIDED THIS SAMPLE BID BOND
FOR SUBMISSION TO A BIDDER'S INSURANCE/BONDING COMPANY.
LANGUAGE SUCH AS THIS WILL BE ACCEPTED; HOWEVER,**

**LANGUAGE THAT LIMITS THE BID BOND TO THE "DIFFERENCE" BETWEEN
BID AMOUNT AND SUCH LARGER AMOUNT FOR WHICH THE COUNTY
COULD CONTRACT, SHALL NOT BE ACCEPTABLE.**

THIS BOND, made this _____ day of _____, 20_____.

WITNESSETH:

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____, as
Principal and _____ as Surety, are held
firmly bound unto the County of Atlantic, as Owner, in the sum of Ten Percent (10%) of Amount of Bid,
for the payment of which we hereby jointly and severally bind ourselves, our heirs, executors,
administrators, successors and assigns.

The condition of the above is such that whereas the Principal has submitted to the County of Atlantic a
certain Bid, attached hereto and hereby made a part hereof to enter into a contract in
writing for _____.

NOW, THEREFORE,

- (a) If said Bid be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the
Form of Agreement attached hereto (properly completed in accordance with said Bid) and
shall furnish a bond for the faithful performance of said Agreement and for the payment of
all persons performing labor or furnishing materials in connection therewith, and shall in all
other respects perform the agreement created by the acceptance of said Bid,

Then this obligation shall be null and void; otherwise the same shall remain in full force and effect; it
being expressly understood and agreed that the liability of the Surety for any and all claims hereunder
shall in no event exceed the amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its
bond shall in no way be impaired or affected by an extension of the time within which the Owner may
accept such bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and in
such of them as are corporations have caused their corporate seals to be hereto affixed and those present
to be signed by their proper officers, the day and year first set forth above.

by Principal: _____

by Surety: _____

B.B.

ATLANTIC COUNTY HAS PROVIDED THIS SAMPLE CONSENT OF SURETY FORM FOR SUBMISSION TO A BIDDER'S INSURANCE/BONDING COMPANY. LANGUAGE SUCH AS THIS WILL BE ACCEPTED; HOWEVER, LANGUAGE THAT LIMITS THE TIMEFRAME IN WHICH THE COUNTY CAN PROCESS CLAIMS AGAINST A PERFORMANCE BOND, OR LANGUAGE THAT STATES THE SURETY IS CONDITIONAL DEPENDING ON CONTRACT TERMS, WILL NOT BE ACCEPTED. (CONTRACT TERMS WILL BE AS OUTLINED IN THE BID SPECIFICATION)

County of Atlantic
1333 Atlantic Avenue
Atlantic City, NJ 08401

NAME OF INSURANCE/BONDING COMPANY

being duly qualified to transact business in the State of New Jersey, hereby certifies that if

CONTRACTOR NAME

is the successful bidder for _____

_____ it as surety will provide the bidder with
a bonds as are called for in the bid specifications.

Signed and Sealed _____, 20 ____.

NAME OF INSURANCE/BONDING COMPANY

by: _____
ATTORNEY-IN-FACT

POWER OF ATTORNEY MUST BE ATTACHED TO CONSENT OF SURETY

YOU MUST PROVIDE BELOW THE NAME, ADDRESS AND PHONE NUMBER OF A PERSON TO BE CONTACTED IN THE EVENT ANY QUESTIONS OR CLAIMS ARISE REGARDING THE BID AND / OR PERFORMANCE BOND.

NAME _____ TITLE _____

ADDRESS _____

PHONE # _____

C.S.

AFFIDAVIT OF COMPLIANCE ON CONTRACTOR'S EMPLOYEE BENEFITS

(CONTRACTOR MUST COMPLETE, SIGN AND NOTARIZE THIS FORM AND SUBMIT WITH BID PACKAGE OR BID SHALL BE REJECTED).

The County of Atlantic has issued an Executive Order, #2000-4, dated May 17, 2000, which designates contractor's doing business with the County shall provide for

- a. an approved health and hospital insurance plan, licensed by the New Jersey Department of Banking and Insurance,
- b. an approved pension plan, and
- c. an approved apprentice training program pursuant to the Department of Labor and Industry Act of 1948 (N.J.S.A. 34:1A-34, et. seq.).

I. a. I hereby acknowledge that compliance with this Executive Order is a material term and condition of my contract with the County of Atlantic.

I. b. I hereby certify that _____
Name of Company

currently provides a health plan, _____,
name of plan and group #

currently provides a pension plan, _____, and
name of plan

currently provides an apprenticeship program.

II. I hereby certify that any subcontractors that perform work for my company under the terms of this contract also provide the above items for their employees.

Signed and sealed
before me on

SIGNATURE

_____, 20____

NAME OF PERSON SIGNING (TYPE OR PRINT)

NOTARY

DATE

E.B.

AFFIDAVIT OF COMPLIANCE
PLUMBING CONTRACTOR

Public Law 1988, Chapter 442 (NJSA 45:14C-1 through 4) defines Plumbing Contractor as a licensed master plumber that shall be the holder of not less than 10% of the issued and outstanding shares of stock in the corporation, or not less than 10% of the capital of the partnership, or not less than 10% of the ownership of any other firm or legal entity engaging in the business of plumbing contracting in the State and shall employ either journeyman, plumbers or apprentice plumber or both.

Due to the enactment of Public Law 1988, Chapter 442, you must certify the following:

I certify that I own not less than (____) 10% of the issued and outstanding shares of stock in the corporation, or not less than (____) 10% of the capital of the partnership, or not less than (____) 10% of the ownership of any other firm or legal entity.

I certify that the foregoing statement made by me are true. I am aware that if any of the foregoing statement made by me is willfully false, I am subject to punishment.

SWORN AND SUBSCRIBED TO

SIGNATURE

BEFORE ME THE _____ DAY

NAME OF PERSON SIGNING
(type or print)

OF _____ 20__

Signature of Notary Public

TITLE OF PERSON SIGNING

My Commission Expires: _____

P.A.

LIST OF SUBCONTRACTORS

IF APPLICABLE

N.J.S.A. 40A:11-16 REQUIRES THE LISTING OF ALL SUBCONTRACTORS TO WHOM THE BIDDER WILL SUBCONTRACT THE FURNISHING OF:

- 1) Plumbing and gas fitting and all kindred work.
- 2) Steam power plants, steam and hot water heating and ventilating apparatus and all kindred work.
- 3) Electrical work
- 4) Structural steel and ornamental iron work

All bidders seeking to perform plumbing work on a publicly bid contract are required to comply with N.J.S.A. 45:14C.1-4 See Plumbing Affidavit page P.A. (when applicable)

In accordance with N.J.S.A. 40A:11-16 the following is a list of names of subcontractors to whom the bidder will subcontract the furnishing of the above referenced work required for the completion of the project. If more than one subcontractor is listed for an above referenced trade, the bidder must submit a list of names and addresses and the scope of work, goods and services for which the subcontractor has submitted a price quote and which the bidder has agreed to award each subcontractor should the bidder be awarded the contract.

Trade	Company	Address/Telephone #
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

I certify that the foregoing statement(s) made by me are true. I am aware that if any of the foregoing statement(s) made by me are willfully false, I am subject to punishment.

Signature _____

S.A.

NON-COLLUSION AFFIDAVIT

State of New Jersey)

) ss

County of _____

I, _____ of _____ in the County of

_____ and the State of _____, of full age, being duly sworn according to law on my oath, depose and say, that:

I am _____ of the Firm of _____, the bidder making the Proposal for the herein project, and that I executed the said Proposal with full authority to do so, that said bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project, and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the County of Atlantic relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I warrant that no requirement or commitment was made in reference to any political contribution to any party, person, or elected official and that no undisclosed benefits of any kind were promised to any one connected with County government or any political party in reference hereto.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by

NAME OF CONTRACTOR

I further warrant and represent that I have never been convicted of or acknowledge nor admitted to any payment of kickbacks or unlawful gifts to any government official or employee for which conduct the County of Atlantic deems me disqualified from doing business with County of Atlantic under such circumstances.

I also understand that the above disqualification does not apply to any vendor who cooperates with the prosecution and gives supporting testimony on behalf of the prosecution in the course of a judicial inquiry.

SWORN AND SUBSCRIBED TO
BEFORE ME THE _____ DAY
OF _____ 20____.

Signature of Notary Public

Notary Public of _____

My Commission Expires _____

SIGNATURE OF AFFIANT

PRINT OR TYPE NAME OF AFFIANT

AFFIRMATIVE ACTION INFORMATION

Please complete the following:

Company Name _____

1. Our Company has a Federal Affirmative Action Plan Approval:

YES _____ NO _____

a. If yes, submit a photographic copy of the Approval

2. Our Company has a New Jersey Certificate of Employee Information Report:

YES _____ NO _____

a. If yes, submit a Photographic copy of the Certificate

3. Our Company has neither of the above, therefore send us Form AA-302
(Affirmative Action Employee Information Report)

SEND AA-302 _____
(check if applicable)

I certify that the above information is correct to the best of my knowledge.

NAME: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the State of New Jersey, Department of Treasury, Division of Purchase and Property website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders must review this list prior to completing the below certification. **Failure to complete the certification may render a bidder's bid proposal non-responsive.** If the County of Atlantic determines that a person or entity has submitted a false certification concerning its engagement in investment activities in Iran pursuant to section 4 of P.L. 2012, c.25 (C.52:32-58), the local contracting unit shall report to the New Jersey Attorney General the name of that person or entity, and the Attorney General shall determine whether to bring a civil action against the person to collect the penalty prescribed in paragraph (1) of subsection a. of section 5 of P.L. 2012, c.25 (C.52:32-59). The County of Atlantic may also report to the county counsel the name of that person, together with its information as to the false certification, and the county counsel may determine to bring such civil action against the person to collect such penalty.

PLEASE CHECK THE APPROPRIATE BOX:

I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and I am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

OR

I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, ATTACH ADDITIONAL PAGES.

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____
_____ Duration

of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name _____ Contact Phone Number _____

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Certification:

I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the County of Atlantic is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the County of Atlantic to notify the County of Atlantic in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the County of Atlantic and that the County of Atlantic at its option may declare any contract(s) resulting from this certification void and unenforceable.

I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity.

Bidder: _____

Signature: _____

Print Name: _____

Title: _____

Date: _____