

SPECIFICATIONS

Alterations to First Floor Restroom For Nutley Police Department

Located at

**Nutley Police Department
228 Chestnut Street
Nutley, NJ 07110**

**Date:
1/18/18**

for

Building Owner:

**Township of Nutley
1 Kennedy Drive
Nutley, NJ 07110**

Architect:

**Dassa Haines Architectural Group, LLC
16 Portland Place Montclair, NJ 07042
Phone (973) 233-9355 Fax (973) 233-9358**

DHAG No.: 17-115

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No work under this division.

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No work under this division.

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No work under this division.

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No work under this division.

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No work under this division.

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No work under this division.

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No work under this division.

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Alterations to First Floor Restroom

For Nutley Police Department

ADVERTISEMENT FOR BID

Nutley Police Department
228 Chestnut Street Nutley, N.J. 07110

1. Public notice is hereby given that sealed bids will be received by the Township of Nutley, Town Hall, Commission Chambers, 3rd Floor, One Kennedy Drive, Nutley, NJ 07110 Attn: Eleni Pettas, Municipal Clerk, for the alterations of an existing restroom to be made into an accessible restroom for the Nutley Police Department which includes: Selective Demolition of finishes, fixtures, mechanical, electrical, plumbing, walls, doors, trim, installation of new finishes, fixtures, mechanical, electrical, plumbing, walls, doors, and trim. Bids will be received until **3:00 P.M. on Wednesday February 21st** at which time they will be publicly read.
2. Bidding documents, including specifications and bidder's forms, which all bidders are required to use, may be obtained from the Nutley Purchasing Department, Township of Nutley, One Kennedy Drive, Nutley, NJ 07110 and will be at no cost. All bidding documents will be in a digital format on compact discs (CD) which will be available at the address noted above.
3. A pre-bid non-mandatory meeting and walk-through will be held at the Nutley Police Department, 228 Chestnut Street, entrance lobby, Nutley, New Jersey on February 1st 2018 at 10:00 A.M.
4. No bid will be accepted that does not conform to the specifications. Bids must be made on standard proposal forms in the manner designated by the specifications. Bids must be enclosed in sealed envelopes bearing the name and address of the bidder, the contract being bid indicated on the outside thereof, and addressed and delivered to Township of Nutley, Town Hall, One Kennedy Drive, Nutley, NJ 07110 Attn: Eleni Pettas, Municipal Clerk.
5. The Township of Nutley reserves the right to consider bids for 60 days after they are received and reserves the right to waive any informality to accept bids in accordance with the Law and the Statutes which it deems most favorable to its interest or reject any or all bids.
6. In the event of tie bids, the Township of Nutley Board of commissioners reserve the right to award the contract to one of the responsible offers.
7. The successful bidder will be required to furnish an acceptable performance and labor bond and maintenance payment bond, written by a surety listed in the most recent Circular No. 570, United States Department of Treasury, as the owner may prescribe and with such sureties as they may approve. Bids must be accompanied by a non-collusion affidavit and a certified check or bid bond for not less than ten (10%) percent of the amount bid, provided said check need not be more than \$20,000.00 nor shall not be less than \$500.00 and a consent surety from a surety company authorized to transact business in the State of New Jersey in a sum equal to one hundred (100%) percent of the amount bid, and be delivered at the place on or before the hour named above.

8. All bidders must be authorized to do business in the state of New Jersey. Any Bidder which is a corporation not chartered under the laws of the State of New Jersey must submit an affidavit certifying that said corporation is authorized to do business in the State of New Jersey.
9. In accordance with P.L. 2004, c. 57, all contracts entered into with the Township of Nutley on or after September 1, 2004, the contractor must be registered with the New Jersey Department of the Treasury, Division of Revenue and provide a business certificate with the bid. The contractor shall provide written notice to its subcontractors and supplier of the responsibility to submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project. Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.
10. Bidders are required to comply with the requirements of Public Law 1975, c. 127 which pertains to "Non-Discrimination" and "Affirmative Actions", and Public Law 1977, c. 33, which requires a Statement of Corporate Ownership.
11. Bidders are required to comply with the requirements of N.J.S.A. et seq. and N.J.A.C. 17:27

Eleni Pettas RMC
Municipal Clerk

Cc: Purchasing Department
Contract File

Post: Bulletin Board

Nutley Sun / Thursday Xxxx, 20XX/via E -Mail publicnotices@northjersey.com



AIA[®] Document A701[™] – 1997

Instructions to Bidders

for the following PROJECT:

(Name and location or address):

THE OWNER:

(Name and address):

THE ARCHITECT:

(Name and address):

TABLE OF ARTICLES

- 1 **DEFINITIONS**
- 2 **BIDDER'S REPRESENTATIONS**
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- 8 **FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 COPIES

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

§ 3.3 SUBSTITUTIONS

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

§ 4.2 BID SECURITY

§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

§ 4.3 SUBMISSION OF BIDS

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

§ 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

§ 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

§ 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

§ 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1** a designation of the Work to be performed with the Bidder's own forces;
- .2** names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- .3** names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 BOND REQUIREMENTS

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

§ 7.2 TIME OF DELIVERY AND FORM OF BONDS

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

Additions and Deletions Report for AIA[®] Document A701[™] – 1997

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 09:42:42 on 09/17/2008.

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Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Joseph L. Haines, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 09:42:42 on 09/17/2008 under Order No. 1000323775_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A701™ – 1997 - Instructions to Bidders, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Signed)

(Title)

(Dated)

TOWNSHIP OF NUTLEY
AMERICANS WITH DISABILITIES ACT
Equal Opportunity for Individuals with Disabilities

The Contractor and the Township of Nutley do hereby agree that the provision of Title II of the Americans With Disabilities Act of 1990 (the "ADA") (42 U.S.C. Section 12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any aid, benefit or service on behalf of the Township pursuant to this contract, the Contractor agrees that the performance shall be in strict compliance with the ADA. In the event that the Contractor, its agents, servants, employees or subcontractors violate or are alleged to have violated the ADA during the performance of this contract, the Contractor shall defend the Township in any action or administrative proceeding commenced pursuant to this ADA. The Contractor shall indemnify, protect and save harmless the Township, its agents, servants and employees from and against any and all suits, claims, losses, demands or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The Contractor shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Township grievance procedure, the Contractor agrees to abide by any decision of the Township which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Township or if the Township incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the Contractor shall satisfy and discharge the same at its own expense.

The Township shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Township or any of its agents, servants, and employees, the Township shall expeditiously forward or have forwarded to the Contractor every demand, complaint, notice, summons, pleading or other process received by the Township or its representatives.

It is expressly agreed and understood that any approval by the Township of the services provided by the Contractor pursuant to this contract will not relieve the Contractor of the obligation to comply with the ADA and to defend, indemnify, protect, and save harmless the Township pursuant to this paragraph.

It is further agreed and understood that the Township assumes no obligation to indemnify or save harmless the Contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this agreement. Furthermore, the Contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the Contractor's obligations assumed in this agreement, nor shall they be construed to relieve the Contractor from any liability, nor preclude the Township from taking any other actions available to it under any other provisions of this agreement or otherwise by law.

Initials _____

EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)
N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

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

The contractor, 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, upgrading, 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 sub-Contractor, 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 sub-Contractor 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 of the Contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The Contractor or sub-Contractor, 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.

The Contractor or sub-Contractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. 17:27-5.2.

Initials _____

The Professional or subProfessional agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The Professional or subProfessional agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the Professional or subProfessional agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The Professional shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

- Letter of Federal Affirmative Action Plan Approval
- Certificate of Employee Information Report
- Employee Information Report Form AA302
(electronically provided by the Division and distributed to the public agency through the Division's website at www.state.nj.us/treasury/contract_compliance)

The Professional and its subProfessionals shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the office 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 at N.J.A.C. 17:27.

Initials _____

(REVISED 9/07)

EXHIBIT B

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 take affirmative action to ensure that such applicants are recruited and employed, 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 action 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, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, 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 applicable employment goal prescribed by N.J.A.C. 17:27-7.3; 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 applicable employment goal established in accordance with N.J.A.C. 17:27-7.3. 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 attempt to hire or schedule minority and women workers directly, consistent with the applicable employment goal. 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 the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire or schedule minority and women workers directly, consistent with the applicable employment goal, 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 or is so notified by the Division that the union is not referring minority and women workers consistent with the applicable employment goal.

(B) If the hiring or scheduling of a workforce consistent with the employment goal has not or cannot be achieved 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 consistent with the applicable county employment goals:

(l) 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 until such time as the workforce is consistent with the employment goal;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and women employees remain on the site consistent with the employment goal; and to employ any minority and women workers laid off by the contractor on any other construction site on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing N.J.S.A. 10:5-31 et. seq.;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) 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 determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall hire or schedule those individuals who satisfy appropriate qualification standards. 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.

(ii) If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of any interested women or minority individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.

(iii) 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 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) provided to the public agency by the Division 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 Contract Compliance & EEO 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 Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

Exhibit C

NEW JERSEY PREVAILING WAGE ACT

The Bidder's attention is called to N.J.S.A. 34:11-56.25 et seq., an act known as the "New Jersey Prevailing Wage Act," which (on the basis of the "prevailing wage contract threshold amount" defined in N.J.S.A. 34:11-56.26 (11) (b)) applies to every contract with the Township of Nutley for an amount equal to \$2,000.00 or more.

A "public work" is defined in N.J.S.A. 34:11-56.26(5) to mean "construction, reconstruction, demolition, alterations, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program."

All workmen engaged in the performance of the Contract shall be paid not less than the prevailing wage rate, as ascertained from the Commissioner of Labor and Industry, for the craft or trade or classification of all workmen required to perform the Contract during the anticipated term thereof.

In the event it is found that any workman employed by the Contractor or any Subcontractor covered by the Contract is paid less than the required wage rate, the Township of Nutley may terminate 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 itself prosecute the work to completion or otherwise. The Contractor and his sureties shall be liable to the Township of Nutley for any excess cost occasioned thereby. The Contractor and its Subcontractors shall then be required to file written statements certifying to the amounts then due and owing to any and all workmen for wages due on account of the Public Work. The statements shall set forth the names of the persons whose wages are unpaid and the amount due to each. The statements shall be verified by the oaths of each Contractor and Subcontractor, as the case may be.

The Contractor and each and every Subcontractor shall keep an accurate record showing the name, craft or trade, and actual hourly rate of wages paid to each workman employed by it in connection with the Public Work. Records shall be preserved for two years from the date of payment.

The Contractor and all Subcontractors shall post the Prevailing Wage Rates for each craft and classification involved, as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the work and at such place or places as are used by them to pay workmen their wages.

Before final payment is made by the Township of Nutley to the Contractor under the Contract, the Contractor shall be required (1) to comply with the requirement of N.J.S.A. 52:32-44(d) that the Contractor submit to the Township of Nutley a complete and accurate list of the names and addresses and business registration certificates (or other forms or verifications evidencing registration with the Department of the Treasury)

of the Contractor's Subcontractors, as more particularly provided for in Section A.7. of the document entitled "Notice and Certification Relating to Business Registration" which is included as one of the Bid Documents and (2) to sign an affidavit, in the form requested by the Director, to the effect that all Subcontractors and workmen have been paid in accordance with the Prevailing Wage Rates.

The Prevailing Wage Rates in the locality for the craft or trade or classification of all workmen needed to perform the Contract during the anticipated term thereof shall be on file in the office of the Township of Nutley. Said Prevailing Wage Rates, as revised by the Commissioner of Labor and Industry, shall be made part of the Contract.

Please be advised that N.J.A.C. 12:60-2.1 and 6.1 and the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., require that all "public works" employers shall (within ten (10) days of the payment of wages) submit a certified payroll record thereof to the public body or lessor which contracted for the "public works" project.

The certified payroll records shall be filed with the Township of Nutley, One Kennedy Drive, Nutley, New Jersey 07110.

A sample of the certified payroll form is available from the Township of Nutley. The successful Bidder will receive certified Payroll Forms from the Township of Nutley at a Pre-Construction Meeting.

AFFIRMATIVE ACTION CERTIFICATION

This form is a summary of the successful applicant's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

The successful applicant shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the Professional is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the Professional in accordance with N.J.A.C. 17:27-4.

The successful applicant may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful applicant(s) shall submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the applicant copy is retained by the applicant.

The undersigned applicant certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27 and agrees to furnish the required forms of evidence.

The undersigned applicant further understands that his/her RFP shall be rejected as non-responsive if said applicant fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

Applicant/Firm's Name

Authorized Signature

Print Name

Title

Telephone

MEETING FEDERAL LABOR STANDARDS

FOR

COMMUNITY DEVELOPMENT BLOCK GRANT FUNDED

PROJECTS

JOSEPH N. DI VINCENZO, JR
Essex County Executive

GEORGE F. SERIO, JR.
DIRECTOR

**STATEMENT TO BE INCLUDED IN SPECIFICATIONS
FOR COMMUNITY DEVELOPMENT FUNDED PROJECTS**

The contract governing this work is funded by monies received by Essex County under Title I of the Housing and Urban-Rural Recovery Act of 1983 (P.L. 98-181). Under the said Act, the Davis-Bacon Act is applicable to the contracted work. Accordingly, the contractor must abide by the provisions of the Federal Labor Standards, which are included as a part of the conditions of the contract.

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I. Introduction

II. Sanctions

III. Rehabilitation Act of 1973

IV. Contractor Certification of Eligibility

V. General Terms and Conditions

VI. Federal Labor Standard Provisions

VII. Notice to Employees Sign

VIII. Job Safety and Health Protection Sign

IX. Bidders Notice

X. Contractors Clearance Requirements

XI. Affirmative Action Affidavit

XII. Section 3 Requirements

XIII Project Sign.....

ESSEX COUNTY DIVISION OF HOUSING AND COMMUNITY DEVELOPMENT
The Essex County Economic Development Center
20 Crestmont Road, Verona, New Jersey 07044
Tel (973) 655-0200 Fax (973) 655-0982

INTRODUCTION

This information packet has been prepared for the purpose of explaining the Federal Labor Standards Provisions as required by the Housing and Urban-Rural Recovery Act of 1983. In the following pages, the responsibilities and obligations of HUD, Title I recipients and contractors working on CDBG funded projects are detailed. Included are explanations of the statutory provisions and sanctions, general terms and conditions, Labor Standards Provisions that should become part of the contract documents, and the Contractor Certification of Eligibility for all contractors.

In addition, actual forms, which must be utilized, will be made available. Although the regulations and procedures may initially appear to be complicated, the intent of this implementation process stresses prevention and, if carefully followed, should be effective in preventing labor standard violations and minimizing the impact of those which do occur.

Any questions occurring during project implementation should be addressed to the Program Monitor assigned to the project.

SANCTIONS

The following sanctions are operable:

- A. Where the recipient's performance with respect to labor standards, administration, and enforcement is found not to be in conformance with the requirements of the Housing and Community Development Act of 1974 and the applicable implementing regulations of HUD, the provisions of Section 570:913 of the Regulations (Other remedies for noncompliance), are effective. Payments may be terminated, reduced, or otherwise limited.
- B. Violations of the Copeland Act by contractors could be the basis for termination of contract and could result in criminal prosecution by the Federal Government pursuant to 18 U.S.C. 874. Fraudulent execution of the requisite statements of compliance could result in prosecution under the False Information Act 18 U.S.C. 1001, 18 U.S.C. 1020, or 31 U.S.C. 231. The making of false statements is a felony.
- C. Violations of the Contract Work Hours and Safety Standards Act make the contractor and any subcontractor responsible and liable for unpaid wages and for liquidated damages to the United States in the Sum of \$10.00 per man per day for each violation. Intentional violations are a Federal misdemeanor, punishable for each and every offense by a fine of not more than \$1,000 or by imprisonment for not more than 6 months, or both. Violations may also be grounds for termination of contract.
- D. Violations of the Davis-Bacon Act may result in suspension of the project payment, advance or guarantee of funds until such time as the violations are discontinued or until sufficient funds are withheld to compensate employees for the wages to which they are entitled. Violations may also result in contract termination, suspension, or debarment of the contractor or subcontractor.
- E. Debarment recommendations pursuant to 29 CFR Part 5.6 shall be made by the appropriate HUD area office director accompanied by substantiating material and forwarded to the Regional Administrator, Attention Labor Relations Officer for Review. In turn, subject recommendation with comment shall be referred to the Assistant to the Secretary for Labor Relations for review and submission to the Department of Labor for appropriate action.

REHABILITATION ACT OF 1973

PUBLIC LAW 93-112

NONDISCRIMINATION UNDER FEDERAL GRANTS

Sec. 504. No otherwise qualified handicapped individual in the United States, as defined in Section 7 (6), shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal Financial Assistance.

Approved September 26, 1973.

See #5 of General Terms and Conditions - Architectural Barrier Act.



COUNTY OF ESSEX
DEPARTMENT OF ECONOMIC DEVELOPMENT,
TRAINING AND EMPLOYMENT

JOSEPH N. DI VINCENZO, JR
COUNTY EXECUTIVE

George F. Serio, Jr.
Deputy Director

DIVISION OF HOUSING & COMMUNITY DEVELOPMENT
20 Crestmont Road
Verona, NEW JERSEY 07044
Tel. (973) 655-0200
Fax (973) 655-0982

CONTRACTOR CERTIFICATION OF ELIGIBILITY

I, _____ of _____ by entering into this contract certify that neither I, nor my firm, nor any person or firm who has an interest in my firm is a person or firm ineligible to be awarded government contracts by virtue of section 3 (a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

No part of this contract shall be contracted to any person or firm ineligible for award of a government contract by virtue of section 3(a) of the Davis Bacon Act or 29 CFR 5.12 (a)(1).

THE PENALTY FOR MAKING FALSE STATEMENT IS PRESCRIBED IN THE US CRIMINAL CODE, 18 USC 1001.

DATE:

PROJECT AND YEAR:

TOWN:

TITLE:

SIGNATURE:

Essex County is an Equal Opportunity/Affirmative Action Employer

CONTRACT FOR COMMUNITY DEVELOPMENT PROJECTS

SUMMARY

Listed below are the terms, conditions, and provisions, which must be followed for projects, funded in whole or in part with Community Development Funds. A more complete explanation of each requirement is to be found on the following pages.

GENERAL TERMS AND CONDITIONS

1. Lead Base Paint Prohibition
2. Compliance with Air and Water Acts
3. Interest of Members of Congress
4. Interest of Members, Officers or Employees (present & former)
5. Architectural Barriers Act
6. Provisions for Training, Employment & Business Opportunities
7. Termination Contract for Cause
8. Termination for Convenience of Municipality/Borrowing Entity
9. Changes
10. Assignability
11. Reports and Information
12. Records and Audits
13. Copyright
14. Patent Rights
15. Compliance with Local Laws
16. Indemnification
17. Equal Employment Opportunity
18. Performance Bonds
19. Payment Bond
20. Bid Guarantee

SAMPLE STATEMENT

TO BE INCLUDED IN BIDDERS NOTICE:

The Contract governing the work is funded by monies received by Essex County under Title I of the Housing and Urban - Rural Recovery Act of 1983 (P.L. 98-181). Under the said Act the Davis Bacon Act is applicable to the contracted work. Accordingly, the contractor must abide by the provisions of the Federal Labor Standards, which are included as a part of the conditions of the contract.

All bidders will be required to obtain or submit their DUNS number (Data Universal Numbering System) as well as their SAMS CAGE code (System for Awards Management – Commercial And Government Entity). Prospective bidders without these numbers will not be able to be considered responsible bidders, thus eliminating them from any awards.

ESSEX COUNTY DIVISION OF HOUSING AND COMMUNITY DEVELOPMENT

CONTRACTOR CLEARANCE REQUIREMENTS

To be completed by all bidders on Community Development Block Grant Projects.

Name of Company:

Address:

I.R.S. Number:

DUNS #:

SAMS #:

Principals

TITLE	NAME	ADDRESS	SS#.
-------	------	---------	------

1.

2.

3.

Are any of the company principals on Federal or State List of Debarred or Suspended Contractors?

YES _____ NO

If yes, explain on separate sheet, and attach to this form.

Form completed by:

Print Name and Title

Signature

The above information is true to the best of my knowledge and belief. Any falsification of facts will result in Company's ineligibility to work on this project.

DATE: _____ PROJECT: _____

AFFIRMATIVE ACTION PLAN

The employment policies and practices of the _____ Agency are to recruit and to hire employees without discrimination because of race, religion, color, sex, age and national origin, and to treat them equally with respect to compensation and opportunities for advancement, including upgrading, promotion and transfer.

This agency submits this Plan to assure compliance with Title VI of the Civil Rights Act of 1964, or Title VII, as amended in March 1972 whichever is applicable to the agency, grant conditions and other provisions in OEO grants requiring non-discrimination in employment in all programs funded by OEO and Executive Order #11246 (where applicable), and/or other subsequent orders that may pertain to this program; and, to reaffirm its continued commitment to a program of equal opportunity and merit employment policies.

This agency agrees to assert leadership within the Community and to put forth the maximum effort to achieve full employment plus the utilization and development of the capabilities and productivity of all our citizens without regard to race, religion, color, sex, age and national origin.

This agency further recognizes that the effective application of a policy of merit employment involves more than just a policy statement and will, therefore, undertake a program of affirmative action to make known that equal opportunities are available on the basis of individual merit and to encourage all persons to seek opportunities with the Agency and to strive for advancement of this basis.

Signature of Agency Officer

P.L. 1975, C. 127 - Affirmative Action

CHECK THE APPROPRIATE BOX

() Fifty (50) or more employees in the entire firm or corporation.

() Less than fifty (50) employees in the entire firm or Corporation.

For Firms of Fifty (50) or More Employees: An employee information report (Form AA302) must be completed and returned to the (City, Town, Borough, Township) within seven (7) days after receipt of notification of intent to award contract or receipt of contract, whichever is sooner. An Affirmative Action Plan approved by the Federal Government or the New Jersey Affirmative Action Office is an acceptable alternate. In the space provided below, indicate whether your firm has met any of the requirements listed above. Indicate the number of New Jersey Affirmative Action Certificate of Approvals in the space provided.

For Firms of Less than Fifty (50) Employees: Vendors of less than Fifty (50) employees are required to complete and return with bid an affidavit of Affirmative Action, Exhibit "F" (enclosed). If during the term of contract the firm's workforce increases to fifty (50) or more employees, the public agency shall be notified. At this time, an Employee Information Report (AA302) must be completed and returned to the (City, Borough, Town, Township).

INDICATE IN THE APPLICABLE BOXES BELOW WHETHER YOU HAVE MET ANY CRITERIA FOR COMPLIANCE WITH NEW JERSEY AFFIRMATIVE ACTION REGULATIONS.

FIRMS OF FIFTY (50) OR MORE EMPLOYEES

___ A Federal Certificate of Approval has been received.
(Proof of this will be required at the time of award).

___ A New Jersey Affirmative Action Certificate of Approval
has been received. The number is ____.
(Proof of this will be required at the time of award).

I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

FIRM NAME:

SIGNATURE:

TITLE:

DATE: _____ BID IDENTIFICATION:

NOTE: IF YOU ARE THE SUCCESSFUL BIDDER, YOUR FIRM WILL BE REQUIRED TO PROVIDE THE ABOVE.

CONTRACT FOR COMMUNITY DEVELOPMENT PROJECTS
General Terms and Conditions

1. LEAD BASE PAINT PROHIBITION:

The use of lead base paint on applicable surfaces of any residential structure undergoing construction or reconstruction through funds provided in whole or in part under Title I of the Housing and Community Development Act of 1974 is prohibited. The contractor shall conform to the provisions of 24 CFR 35 and the "Lead Base Paint Poisoning Prevention Act" 42 USC 4841 (3).

2. COMPLIANCE WITH AIR AND WATER ACT:

Contractors and sub grants of amounts in excess of \$100,000 shall contain a provision which requires the recipient to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970 (42 USC 1857 et seq.) and the Federal Water Pollution Control Act 33 USC 1251 et seq. as amended. Violations shall be reported to the grantor agency and the Regional Office of the Environmental Protection Agency.

3. INTEREST OF MEMBERS OF CONGRESS:

No member of or delegate to the Congress of the United States of America or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit to arise therefrom, but this provision shall not be construed to extend this contract if made with a corporation for its general benefit.

4. INTEREST OF MEMBERS, OFFICERS, OR EMPLOYEES AND FORMER MEMBERS, OFFICERS, OR EMPLOYEES:

No member, officer, or employee of the County, Municipality, or the governing body of the locality in which the project is situated and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the project shall, during his tenure, or for one year thereafter, have any interest, direct or indirect, in this contract or the proceeds thereof.

5. ARCHITECTURAL BARRIERS ACT:

The design of any facility (building, outdoor recreation or restroom facility) must comply with the "American Standard Specifications for Making Building and Facilities Accessible and Usable by the Physically Handicapped". (See 41 CFR 101 -19.603).

6. PROVISIONS FOR TRAINING, EMPLOYMENT, AND BUSINESS OPPORTUNITIES:

A. The work to be performed under this contract is on a project assisted under a program providing direct federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 USC 170LU. Section 3 requires that to the greatest extent feasible opportunities for training and employment in given lower income residents of the project areas and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part, by persons residing in the area of the project.

B. Parties to this contract will comply with provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability, which would prevent them from complying with these requirements.

C. The contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

D. The contractor will include this Section 3 Clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR 135. The Contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

E. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract shall be a condition of the federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors, and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which federal assistance is provided, and to such sanctions as are specified in 24 CFR 135.

7. TERMINATION OF CONTRACT FOR CAUSE:

If through any cause, the contractor shall fail to fulfill in a timely and proper manner his obligations under this contract, or if the contractor shall violate any of the covenants, agreements, or stipulations of this contract, the Municipality shall thereupon have the right to terminate this contract by giving written notice to the contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. On such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the contractor under this contract shall, at the option of the Municipality, become its property and the contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the contractor shall not be relieved of liability to the Municipality for damages sustained by the Municipality by virtue of any breach of the contract by the contractor, and the Municipality may withhold any payments to the contractor for the purpose of set-off until such time as the exact amount of damages due the Municipality from the contractor is determined.

8. TERMINATION FOR CONVENIENCE OF MUNICIPALITY:

The Municipality may terminate this contract at any time by giving at least ten (10) days notice in writing from the Municipality to the contractor. If the contract is terminated by the Municipality, as provided herein, the contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the contractor covered by this contract, less payments of compensation previously made: Provided, however, that if less than sixty percent (60%) of the services covered by this contract have been performed upon the effective date of such termination, the contractor shall be reimbursed (in addition to the above payment) for the portion of the actual out-of-pocket expenses (not otherwise reimbursed under the contract) incurred by the contractor during the contract period which are directly attributable to the uncompleted portion of the services covered by this contract.

9. CHANGES

The Municipality may, from time to time, request changes in the scope of the services of the Contractor to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Municipality and the Contractor, shall be incorporated in written amendments to this contract.

10. ASSIGNABILITY

The contractor shall not assign any interest in this contract, and shall not transfer any interest in the same (whether by assignment or novation) without the prior written consent of the Municipality thereto: Provided, however, that claims for money due or to become due to contractor from the Municipality under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the Municipality.

11. REPORTS AND INFORMATION:

The contractor, at such times and in such forms as Essex County, the Secretary of HUD and/or the Municipality may require, shall furnish Essex County, the Department of HUD and/or the Municipality such periodic reports as it may request pertaining to the work or services undertaken pursuant to this contract, the costs and obligations incurred, or to be incurred, in connection therewith, and any other matters covered by this contract.

12. RECORDS AND AUDITS:

The contractor shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the contract and such other records as may be deemed necessary by the Municipality, Essex County, or the Department of HUD to assure proper accounting for all project funds, both federal and non-federal shares. These records will be made available for audit purposes to the Municipality, Essex County, or the Department of HUD, or the Comptroller General of the United States or any authorized representative, and will be retained for three (3) years after the expiration of this contract unless permission to destroy them is granted by both the Municipality, Essex County and Department of HUD.

13. COPYRIGHT

No report, maps or other documents produced in whole or in part under this contract shall be the subject of an application for copyright by or on behalf of the contractor.

14. PATENT RIGHTS

In the event that any invention, improvement, or discovery may be conceived or first actually reduced to practice by the contractor or its employees, in the course of or under this contract or any subcontract, the contractor shall give prompt notice thereof to Essex County. Any such invention, improvement, or discovery, together with all information, designs, specifications, know-how, data, patent rights, and findings in connection therewith which arose or were developed in the hereunder, shall be made available to the public through dedication, assignment to the Government of the United States of America, or such other means as HUD shall determine.

15. COMPLIANCE WITH LOCAL LAWS:

The contractor shall comply with all applicable laws, ordinance, and codes of the State and Local Governments.

16. INDEMNIFICATION

The contractor shall indemnify and hold harmless the Municipality and its agents and employees from against all claims, damages, losses, and expenses, including attorneys fees arising out of or resulting from performance of the work, provided that any such claim, damage, loss, or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom; and (b) is caused in whole or in part by any negligent act or omission of the contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Municipality or any of its agents or employees by any employee of the contractor, any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the contractor or any subcontractor under workmen's compensation acts, disability benefits acts, or other employee benefit acts.

17. EQUAL EMPLOYMENT OPPORTUNITY:

A. This clause applies to contracts not exceeding \$10,000:

The contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor shall take affirmative action to insure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, 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 shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Government setting forth the provisions of this nondiscrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin. The contractor shall incorporate the foregoing requirements of this paragraph in all of its subcontracts for work performed under the terms and conditions of this contract. A breach of this provision may be grounds for contract termination.

B. This Clause applies to contracts in excess of \$10,000:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, 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 setting forth the provisions of this Equal Opportunity Clause.

2. The Contractor 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 race, color, religion, sex or national origin.

3. The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the labor union of the Contractor's commitments under this Equal Opportunity clause and shall post copies of the Notice in conspicuous places available to employees and applicants for employment.

4. The contractor will comply with all provisions of Executive order 11246 of September 24, 1965, and all of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor or pursuant thereto, and will permit access to his/her books, records, and accounts by HUD and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the Contractor's noncompliance with the Equal Opportunity Clause of this contract, or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7. The contractor will include the statement preceding subparagraph 1 and the provision of subparagraph 1 through 8 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as HUD may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by HUD, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

8. A breach of Paragraph 1, 3, 4, 5, 6, and 7 may be grounds for termination of the contract and for debarment as provided in 20 CFR 5.6.

18. PERFORMANCE BOND

The contractor shall post a Performance Bond for 100% of the contract price.

19. PAYMENT BOND

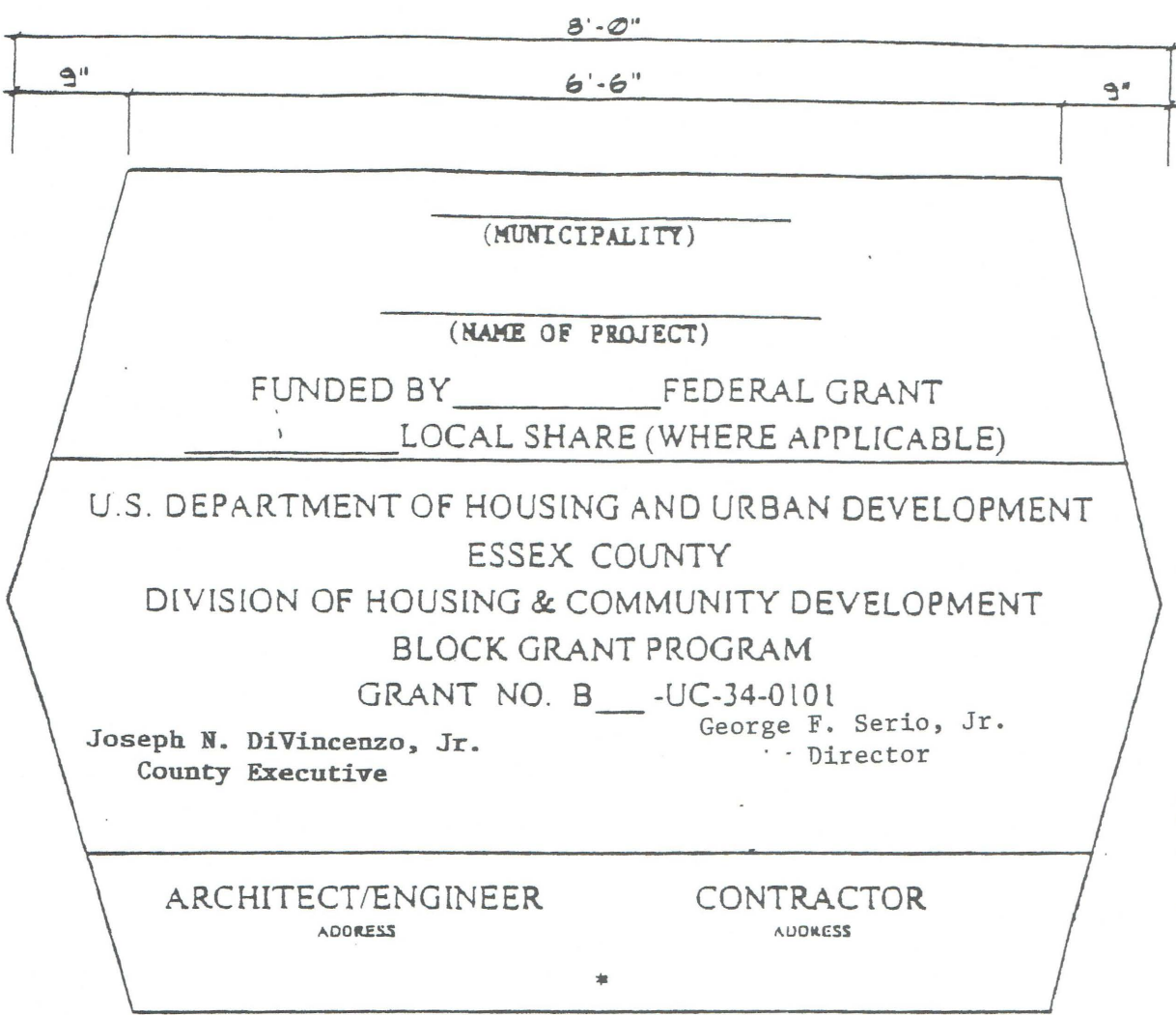
The contractor shall post a payment bond for 100% of the contract price to assure payment of all persons supplying labor and materials in the execution of work provided for in the contract.

20. BID GUARANTEE

The contractor shall post a bid guarantee bond for 10% of the bid price as assurance that the bidder will, upon acceptance of his/her bid, execute such contractual documents as may be required within the time specified.

21. MAINTENANCE BOND

Upon completion of projects the municipality involved will certify as to the acceptance of the job and will produce a maintenance bond prior to or at the time the final payment is requested. A percentage of the contract is usually held until the completion of the job. This is the retainage, which consists of the final payment request. If a maintenance bond is not secured by Contractor then the retainage will be held in lieu of maintenance bond, for a period of 1 year. The entire project file is reviewed prior to payment of final voucher assure compliance has been met with all Federal Labor Standards Provisions and the M & C procedures as set forth by this office. If items are missing, the contractor should be given written notice and a copy sent to the municipal contact person.



SPACING TO BOT. OF LETTER	LETTER HEIGHT AND COLOR
6"	(4" WHITE)
8"	(3" WHITE)
5"	(2" WHITE)
4"	(2" WHITE)
5"	(2" BLACK)
4"	(2" BLACK)
4"	(2" BLACK)
4"	(2" BLACK)
4"	(2" BLACK)
6"	(2" BLACK)
2"	(1" BLACK)
2"	(1" BLACK)
3"	(2" WHITE)
5"	(2" WHITE)
6 1/2"	(1" WHITE)

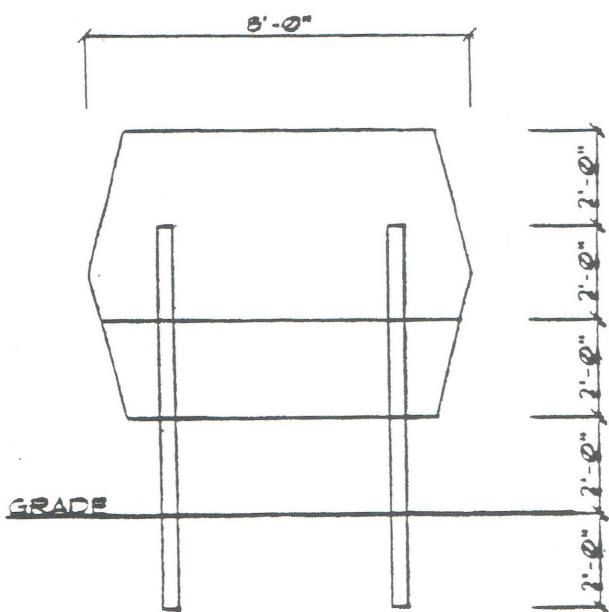
2'-0" RED

2'-10" WHITE

6'-0"

1'-2" BLUE

* INCLUDE LOCAL OFFICIALS IF DESIRED





Departamento de Trabajo
de los EE. UU.



Administración de
Seguridad y Salud
Ocupacional

Seguridad y Salud en el Trabajo

¡ES LA LEY!

Todos los trabajadores tienen el derecho a:

- Un lugar de trabajo seguro.
- Decir algo a su empleador o la OSHA sobre preocupaciones de seguridad o salud, o reportar una lesión o enfermedad en el trabajo, sin sufrir represalias.
- Recibir información y entrenamiento sobre los peligros del trabajo, incluyendo sustancias tóxicas en su sitio de trabajo.
- Pedirle a la OSHA inspeccionar su lugar de trabajo si usted cree que hay condiciones peligrosas o insalubres. Su información es confidencial. Algún representante suyo puede comunicarse con OSHA a su nombre.
- Participar (o su representante puede participar) en la inspección de OSHA y hablar en privado con el inspector.
- Presentar una queja con la OSHA dentro de 30 días (por teléfono, por internet, o por correo) si usted ha sufrido represalias por ejercer sus derechos.
- Ver cualquieras citaciones de la OSHA emitidas a su empleador.
- Pedir copias de sus registros médicos, pruebas que miden los peligros en el trabajo, y registros de lesiones y enfermedades relacionadas con el trabajo.

Este cartel está disponible de la OSHA para gratis.

Llame OSHA. Podemos ayudar.

Los empleadores deben:

- Proveer a los trabajadores un lugar de trabajo libre de peligros reconocidos. Es ilegal discriminar contra un empleado quien ha ejercido sus derechos bajo la ley, incluyendo hablando sobre preocupaciones de seguridad o salud a usted o con la OSHA, o por reportar una lesión o enfermedad relacionada con el trabajo.
- Cumplir con todas las normas aplicables de la OSHA.
- Reportar a la OSHA todas las fatalidades relacionadas con el trabajo dentro de 8 horas, y todas hospitalizaciones, amputaciones y la pérdida de un ojo dentro de 24 horas.
- Proporcionar el entrenamiento requerido a todos los trabajadores en un idioma y vocabulario que pueden entender.
- Mostrar claramente este cartel en el lugar de trabajo.
- Mostrar las citaciones de la OSHA acerca del lugar de la violación alegada.

Los empleadores de tamaño pequeño y mediano pueden recibir ASISTENCIA GRATIS para identificar y corregir los peligros sin citación o multa, a través de los programas de consultación apoyados por la OSHA en cada estado.



Chapter 194, Laws of New Jersey, 2009, Relating to

Employer Obligation to Maintain and Report Records

Regarding Wages, Benefits, Taxes and Other Contributions and Assessments Pursuant to State Wage, Benefit and Tax Laws

Wage Payment Law (N.J.S.A. 34:11-4.1 et seq.) and

Wage and Hour Law (N.J.S.A. 34:11-56a et seq.)

Each employer must keep a record of each employee which contains the following information:

1. The name of the employee;
2. The address of the employee;
3. The birth date of the employee if the employee is under the age of 18;
4. The total hours worked by the employee each day and each workweek*;
5. The earnings of each employee, including the regular hourly wage, gross to net amounts with itemized deductions, and the basis on which wages are paid;
6. Regarding each employee who receives gratuities, the total gratuities received by the employee during the payroll week;
7. Regarding each employee who receives gratuities, daily or weekly reports completed by the employee containing the following information:
 - (a) the employee's name,
 - (b) the employee's address,
 - (c) the employee's social security number,
 - (d) the name and address of the employer,
 - (e) the calendar day or week covered by the report, and
 - (f) the total amount of gratuities received; and
8. Regarding each employee for whom the employer claims credit for food or lodging as a cash substitute for the employee who receives food or lodging supplied by the employer, information substantiating the cost of furnishing such food or lodgings, including but not limited to the nature and amount of any expenditures entering into the computation of the fair value of the food or lodging and the date required to compute the amount of the depreciated investment in any assets allocable to the furnishing of the lodgings, including the date of acquisition or construction, the original cost, the rate of depreciation and the total amount of accumulated depreciation on such assets.

The employer may use any system of time keeping provided that it is a complete, true and accurate record.

The employer must keep the wage and hour records described above for a period of six years.

The employer must keep the wage and hour records described above at the place of employment or in a central office in New Jersey.

* This requirement does not apply with regard to those employees who are covered by the exceptions set forth at N.J.S.A. 34:11-4.6e. and 34:11-56a20, which includes but is not limited to individuals employed in a bona fide executive, administrative, professional or outside sales capacity.

Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.)

The Prevailing Wage Act applies to employers only under certain circumstances.

Specifically, it applies only when an employer enters into a contract in excess of the prevailing wage contract threshold amount for any public work (as the term “public work” is defined at N.J.S.A. 34:11-56.26) to which any public body is a party or for public work to be done on a property or premises owned by a public body or leased or to be leased by a public body.

Each public works contractor must submit to the public body or lessor which contracted for the public works project a certified payroll record containing the following employee information:

1. Name;
2. Address;
3. Social security number;
4. Craft or trade;
5. Actual hourly rate of pay;
6. Actual daily, overtime and weekly hours worked in each craft or trade;
7. Gross pay;
8. Itemized deductions;
9. Net pay paid to the employee;
10. Any fringe benefits paid to approved plans, funds or programs on behalf of the employee; and
11. Fringe benefits paid in cash to the employee.

Each public works contractor must, within 10 days of payment of wages, submit the certified payroll record to the public body or the lessor which contracted for the public works project.

Each public works contractor which employs one or more apprentices on a public works project must maintain with its records written evidence that the apprentice or apprentices are registered in an approved apprenticeship program while performing work on the project.

Unemployment Compensation Law (N.J.S.A. 43:21-1 et seq.),

Temporary Disability Benefits Law (N.J.S.A. 43:21-25 et seq.) and

Family Leave Insurance Benefits Law, P.L. 2008, c. 17.

Payroll records: Each employing unit must maintain a record for each worker engaged in employment, which record must contain the following information about the worker:

1. Full name, address and social security number;
2. Total remuneration paid in each pay period showing separately cash, including commissions and bonuses; the cash value of all compensation in any medium other than cash; gratuities received regularly in the course of employment if reported by the employee, or if not so reported, the minimum wage rate prescribed under applicable laws of this State or of the United States, or the amount of remuneration actually received by the employee, whichever is higher, and service charges collected by the employer and distributed to workers in lieu of gratuities and tips;
3. An entry under the heading “special payments” of the amount of any special payments, such as bonuses and gifts, which have been paid during the pay period but which relate to employment in a prior period. The following shall be shown separately under this heading: cash payments, cash value of other remuneration, the nature of such payments, the period during which the services were performed for which special payments were payable;
4. The date hired, rehired and returned to work after temporary layoff;
5. The date separated from employment and the reason for separation;

6. Such information as may be necessary to determine remuneration on a calendar week basis; and
7. The number of base weeks (as the term “base week” is defined in N.J.S.A. 43:21-19(t)) and wages.

All records referred to in 1. through 7. above must be kept safe and readily accessible at the New Jersey place of business of the employing unit.

All records referred to in 1. through 7. above must be retained for the current calendar year and for the four preceding calendar years.

Once an employer becomes inactive, the employer must keep all records referred to in 1. through 7. above for the subsequent six quarters.

Wage reporting: Each employer (other than employers of domestic service workers) must electronically file a WR-30, “Employer Report of Wages Paid,” with the Division of Revenue, within the Department of the Treasury, within 30 days after the end of each quarter. The WR-30 lists the name, social security number and wages paid to each employee and the number of base weeks worked by the employee during the calendar quarter.

Each employer of domestic service workers (as the term “domestic service worker” is defined at N.J.A.C. 12:16-13.7(b)) must file an annual, rather than quarterly, WR-30 with the Division of Revenue, within the Department of the Treasury.

Contribution reporting: Each employer (other than employers of domestic service workers) must electronically file an NJ-927, “Employer’s Quarterly Report,” with the Division of Revenue, within the Department of the Treasury, and remit the corresponding unemployment insurance, supplemental workforce fund, workforce development partnership fund, temporary disability insurance and family leave insurance contribution payments, within 30 days after the end of each quarter. The NJ-927 lists the total of all wages paid, the wages paid in excess of the taxable maximum, the taxable wages on which contributions are due, the number of workers employed during the pay period, the number of workers insured under a “private plan” for temporary disability insurance and the number of workers insured under a “private plan” for family leave insurance.

Each employer of domestic service workers (as the term “domestic service worker” is defined in N.J.A.C. 12:16-13.11(c)) must file an annual, rather than quarterly, NJ-927H, “Domestic Employer’s Annual Report,” with the Division of Revenue, within the Department of the Treasury.

Temporary Disability Insurance and Family Leave Insurance information: Each employer must retain all records pertaining to any election to discontinue a private plan for temporary disability insurance and/or family leave insurance benefits and must make such records available for inspection by the Division of Temporary Disability Insurance for a one-year period from the date that the private plan is terminated.

Each employer having a private plan for temporary disability insurance and/or family leave insurance must, within 10 days after the Division of Temporary Disability Insurance has mailed the employer a request for information with respect to a period of disability, furnish the Division with any information requested or known to the employer which may bear upon the eligibility of the claimant.

Each employer having two or more approved private plans in effect during a calendar half-year or any portion thereof must, on or before the 30th day following the close of the calendar half-year, file a report showing the amount of taxable wages paid during such calendar half-year to employees while covered under each such private plan.

Each employer who provides temporary disability insurance to its employees through a self-insured private plan must, for the six-month periods ending June 30 and December 31 of each calendar year during which the self-insured private plan is in effect, file a statement with the Division of Temporary Disability Insurance, on or before the 30th day following the end of the respective six-month period showing:

1. The number of claims received during the six-month period,
2. The number of claims accepted during the six-month period,
3. The amount of benefits paid during the six-month period, and
4. Such other information as the Division of Temporary Disability Insurance may require with respect to the financial ability of the self-insurer to meet the self-insured's obligations under the plan.

On or before the 30th day following the close of each calendar year during which a self-insured private plan for temporary disability insurance is in effect, the employer must file a report with the Division of Temporary Disability Insurance showing:

1. The amount of funds available at the beginning of that year for payment of disability benefits,
2. The amount contributed by workers during that year,
3. The amount contributed by the employer during that year,
4. The amount of disability benefits paid during that year,
5. Direct cost of administration of the plan during that year, and
6. The number of employees covered by the plan as of December 31.

Each employer who provides family leave insurance to its employees through a self-insured private plan must for the one-year period ending December 31 of each calendar year during which a self-insured private plan is in effect file a statement with the Division of Temporary Disability Insurance, on or before the 30th day following the end of the one-year period showing the following information with regard to each of the following types of claims: care of a sick child, care of a sick spouse, care of a sick domestic partner, care of a sick civil union partner, care of a sick parent, bonding by biological parent with a newborn child, bonding by domestic partner or civil union partner of biological parent with a newborn child, bonding by individual with newly adopted child:

1. The number of claims for family leave insurance benefits received during the one-year period,
2. The number of claims for family leave insurance benefits accepted during the one-year period,
3. The number of workers who received family leave insurance benefits during the one-year period,
4. The amount of family leave insurance benefits paid during the one-year period,
5. The average weekly family leave insurance benefit during the one-year period,
6. The amount of sick leave, vacation leave or other fully paid time, which resulted in reduced benefit duration during the one-year period,
7. With regard solely to family leave insurance benefit claims to care for sick family members, the amount of intermittent family leave insurance benefits paid during the one-year period, and
8. The average duration of family leave insurance benefits, in days, during the one-year period.

The information reported in 1. through 8. above must be broken down by sex and by age group, beginning at 25 years and under and increasing in increments of 10.

On or before the 30th day following the close of each calendar year during which a self-insured private plan for family leave insurance is in effect, the employer must file a report with the Division of Temporary Disability Insurance showing:

1. The amount of funds available at the beginning of that year for payment of family leave insurance benefits,
2. The amount contributed by workers during that year,
3. The direct cost of administration of the plan during that year,
4. The number of employees covered by the plan as of December 31, and
5. Such other information as the Division of Temporary Disability Insurance may require with respect to the financial ability of the self-insurer to meet the self-insured's obligation under the plan.

Workers' Compensation Law (N.J.S.A. 34:15-1 et seq.)

Upon the happening of an accident or the occurrence of any occupational disease, an employer who has insurance coverage or utilizes a third-party administrator shall promptly furnish the insurance carrier or the third-party administrator with accident or occupational disease information.

Within three weeks after an accident or upon knowledge of the occurrence of an occupational disease, every insurance carrier, third-party administrator, statutory non-insured employer, including the State, counties, municipalities and school districts, and duly authorized self-insured employer not utilizing a third-party administrator must file a report designated as "first notice of accident" in electronic data interchange media with the Division of Workers' Compensation through the Compensation Rating and Inspection Bureau in a format prescribed by the Compensation Rating and Inspection Bureau. When filed by an insurance carrier or third-party administrator, the report must also be sent to the employer. If the employer disagrees with the report, the employer may prepare and sign an amended report and file the amended report with the insurance carrier or third-party administrator. The amended report must then be filed electronically with the Division through the Compensation Rating and Inspection Bureau.

Every insurance carrier providing workers' compensation insurance and every workers' compensation self-insured employer shall designate a contact person who is responsible for responding to issues concerning medical and temporary disability benefits where no claim petition has been filed or where a claim petition has not been answered. The full name, telephone number, mailing address, email address and fax number of the contact person must be submitted to the Division of Workers' Compensation utilizing the Division's contact person form in the manner instructed on the form.

Each employer, when directed to do so by the Division of Workers' Compensation, must submit to the Division of Workers' Compensation copies of such medical certificates and reports as it may have on file.

Gross Income Tax Act (N.J.S.A. 54A:1-1 et seq.)

Employer's Quarterly Report: The Employer's Quarterly Report, NJ-927, reports New Jersey Gross Income Tax withheld, unemployment insurance, supplemental workforce fund, workforce development partnership fund, family leave insurance and temporary disability insurance wage and withholding information.

Each employer is required to electronically file an Employer's Quarterly Report, NJ-927, for each calendar quarter, regardless of the amount of tax actually due for a particular quarter. Quarterly reports are due on the 30th day of the month following the end of each quarter.

Employers of "domestic service workers" may report and pay New Jersey Gross Income Tax withheld on an annual, rather than quarterly, basis on an NJ-927H.

Records to be kept: Every employer is required to keep all pertinent records available for inspection by authorized representatives of the New Jersey Division of Taxation. Such records must include the following:

1. The amounts and dates of all wage payments subject to New Jersey Gross Income Tax;
2. The names, addresses and occupations of employees receiving such payments;
3. The periods of their employment;
4. Their social security numbers;
5. Their withholding exemption certificates;
6. The employer's New Jersey Taxpayer Identification Number;
7. Record of weekly, monthly, quarterly remittances and/or returns and annual returns filed;
8. The dates and amounts of payments made; and
9. Days worked inside and outside of New Jersey for all nonresident employees.

Contact Information

If an employee or an employee's authorized representative wishes to contact a State representative in order to provide information to or file a complaint with the representative regarding an employer's possible failure to meet any of the requirements set forth above, he or she may use the following contact information:

For possible failure to meet the record keeping or reporting requirements of the **Wage Payment Law, Wage and Hour Law or Prevailing Wage Act:**

Phone: 609-292-2305
E-mail: wage.hour@dol.state.nj.us
Mail: New Jersey Department of Labor and Workforce Development
Division of Wage and Hour Compliance
P.O. Box 389
Trenton, NJ 08625-0389

For possible failure to meet the record keeping or reporting requirements of the **Unemployment Compensation Law, Temporary Disability Benefits Law or Family Leave Insurance Benefits Law:**

Phone: 609-292-2810
E-mail: emplaccts@dol.state.nj.us
Mail: New Jersey Department of Labor and Workforce Development
Division of Employer Accounts
P.O. Box 947
Trenton, NJ 08625-0947

For possible failure to meet the record keeping or reporting requirements of the **Workers' Compensation Law:**

Phone: 609-292-2515
E-mail: dwc@dol.state.nj.us
Mail: New Jersey Department of Labor and Workforce Development
Division of Workers' Compensation
P.O. Box 381
Trenton, NJ 08625-0381

For possible failure to meet the record keeping or reporting requirements of the **Gross Income Tax Act:**

Phone: 609-292-6400
E-mail: nj.taxation@treas.state.nj.us
Mail: New Jersey Department of the Treasury
Division of Taxation
Information and Publications Branch
P.O. Box 281
Trenton, NJ 08625-0281



This notice must be conspicuously posted. Not later than December 7, 2011, each employee must also be provided a written copy of the notice or, for employees hired after November 7, 2011, a written copy of the notice must be provided at the time of the employee's hiring. See N.J.A.C. 12:2-1.3 for alternate methods of posting and distribution by electronic means.

New Jersey Department of Labor and Workforce Development

To be posted in a conspicuous place

Chapter 173, Laws of New Jersey, 1965: Relating to Payment of Wages

All Employers Must Pay Wages to All Employees in Full at Least Twice a Calendar Month.

Executive and supervisory employees, however, may be paid at least once a calendar month.

Payment shall be made on regular paydays designated in advance.

When a payday falls on a non-work day, payment shall be made on the immediately preceding work day, unless otherwise provided for in a collective bargaining agreement.

The end of the pay period for which payment is made on a regular payday shall be not more than 10 working days before such regular payday.

If payment is by check, suitable arrangements must be made for cashing the check without difficulty and for the full amount.

- Employees leaving or terminated for any reason, including labor disputes, shall be paid all wages due not later than the regular payday for the period in which the termination occurred.
- An additional 10 days may be allowed in the event of a labor dispute involving payroll employees.
- Employees paid on an incentive system shall be paid a reasonable approximation of wages due until exact amounts can be computed.
- Payment may be made through regular pay channels or by mail if requested by the employee.

It shall be unlawful to make any agreement for payment other than as provided in this act, except to pay at shorter intervals or to pay wages in advance.

Wages due a deceased employee may be paid to the survivors in the order of preference as outlined in the statute.

No Deductions Shall Be Made From Employees' Wages Except:

Amounts authorized by New Jersey or United States Law or payments to correct payroll errors.

Contributions or payments authorized by employees either in writing or under a collective bargaining agreement for:

Employee welfare • insurance • hospitalization • medical or surgical or both • pension • retirement • profit-sharing plans • plans establishing individual retirement annuities on a group or individual basis • individual retirement accounts at any State or federally chartered bank, savings bank, or savings and loan association • company-operated thrift plans • security option or security purchase plans to buy marketable securities • employee personal savings accounts such as a credit union, savings fund society, savings and loan or building and loan association • Christmas, vacation or other savings funds.

Purchase of company products or employer loans in accordance with a periodic payment schedule contained in the original purchase or loan agreement • safety equipment • U.S. government bonds • costs and fees to replace employee identification for access to sterile or secured areas of airports • contributions for organized and recognized charities • rental of work clothing or uniforms or for laundering or dry cleaning of work clothing or uniforms • labor union dues and fees • health club membership fees • child care services.

All Employers Shall:

Notify employees at time of hiring the rate of pay and the regular payday.

Notify employees of changes in pay rates or paydays prior to the changes.

Furnish each employee with statement of deductions each pay period.

Make and keep records for employees, including wages and hours, and make such records available for inspection.

Provide employees at time of hiring a required notice (form number MW-400) describing the employer's obligation to maintain and report records regarding wages, benefits, taxes and other contributions and assessments.

The Commissioner of Labor and Workforce Development shall enforce and administer the provisions of this act and the Commissioner or an authorized representative shall have the power to make all necessary inspections of establishments and records.

Any employer who knowingly and willfully violates any provision of this act shall be guilty of a disorderly persons offense and upon conviction shall be punished by a fine of not less than \$100 nor more than \$1,000. Each day during which any violation of this act continues shall constitute a separate and distinct offense.

As an alternative to or in addition to any other sanctions provided by law for violations, the Commissioner is authorized to assess and collect administrative penalties, up to a maximum of \$250 for a first violation and up to a maximum of \$500 for each subsequent violation.

The employer shall also pay the Commissioner an administrative fee equal to not less than 10% or more than 25% of any payment due to employees.

The Commissioner may, after affording the employer or successor firm notice and an opportunity for a hearing in accordance with the provisions of the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.), issue a written determination directing any appropriate agency to suspend any one or more licenses that are held by the employer or successor firm, for a period of time determined by the Commissioner.

Please Note: The Division of Wage and Hour Compliance does not investigate or inquire into the legal status of any worker. The Division applies New Jersey's labor laws without regard to a worker's legal status. The Division does not share information with "Immigration".

Enforced by:

New Jersey Department of
Labor and Workforce Development
Division of Wage and Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
(609) 292-2305

Additional copies of this poster or any other required poster may be obtained by contacting the New Jersey Department of Labor and Workforce Development, Office of Constituent Relations, PO Box 110, Trenton, New Jersey 08625-0110, 609/777-3200.
If you need this document in braille or large print, call 609/292-2305. TTY users can contact this department through New Jersey Relay 7-1-1.



MW-17 (R-10-13)

Conscientious Employee Protection Act “Whistleblower Act”

Employer retaliatory action; protected employee actions; employee responsibilities

1. New Jersey law prohibits an employer from taking any retaliatory action against an employee because the employee does any of the following:
 - a. Discloses, or threatens to disclose, to a supervisor or to a public body an activity, policy or practice of the employer or another employer, with whom there is a business relationship, that the employee reasonably believes is in violation of a law, or a rule or regulation issued under the law, or, in the case of an employee who is a licensed or certified health care professional, reasonably believes constitutes improper quality of patient care;
 - b. Provides information to, or testifies before, any public body conducting an investigation, hearing or inquiry into any violation of law, or a rule or regulation issued under the law by the employer or another employer, with whom there is a business relationship, or, in the case of an employee who is a licensed or certified health care professional, provides information to, or testifies before, any public body conducting an investigation, hearing or inquiry into quality of patient care; or
 - c. Provides information involving deception of, or misrepresentation to, any shareholder, investor, client, patient, customer, employee, former employee, retiree or pensioner of the employer or any governmental entity.
 - d. Provides information regarding any perceived criminal or fraudulent activity, policy or practice of deception or misrepresentation which the employee reasonably believes may defraud any shareholder, investor, client, patient, customer, employee, former employee, retiree or pensioner of the employer or any governmental entity.
 - e. Objects to, or refuses to participate in, any activity, policy or practice which the employee reasonably believes:
 - (1) is in violation of a law, or a rule or regulation issued under the law or, if the employee is a licensed or certified health care professional, constitutes improper quality of patient care;
 - (2) is fraudulent or criminal; or
 - (3) is incompatible with a clear mandate of public policy concerning the public health, safety or welfare or protection of the environment. N.J.S.A. 34:19-3.
2. The protection against retaliation, when a disclosure is made to a public body, does not apply unless the employee has brought the activity, policy or practice to the attention of a supervisor of the employee by written notice and given the employer a reasonable opportunity to correct the activity, policy or practice. However, disclosure is not required where the employee reasonably believes that the activity, policy or practice is known to one or more supervisors of the employer or where the employee fears physical harm as a result of the disclosure, provided that the situation is emergency in nature.

CONTACT INFORMATION

Your employer has designated the following contact person to receive written notifications, pursuant to paragraph 2 above (N.J.S.A. 34:19-4):

Name: _____

Address: _____

Telephone Number: _____

This notice must be conspicuously displayed.

Once each year, employers with 10 or more employees must distribute notice of this law to their employees. If you need this document in a language other than English or Spanish, please call (609) 292-7832.

La Ley de protección al empleado consciente

“Ley de protección del denunciante”

Acciones de represalia del empleador; protección de las acciones del empleado

1. La ley de New Jersey prohíbe que los empleadores tomen medidas de represalia contra todo empleado que haga lo siguiente:
 - a. Divulgue o amenace con divulgar, ya sea a un supervisor o a una agencia pública toda actividad, directriz o norma del empleador o de cualquier otro empleador con el que exista una relación de negocios y que el empleado tiene motivos fundados para pensar que violan alguna ley, o en el caso de un trabajador licenciado o certificado de la salud y que tiene motivos fundados para pensar que se trata de una manera inadecuada de atención al paciente;
 - b. Facilite información o preste testimonio ante cualquier agencia pública que conduzca una investigación, audiencia o indagación sobre la violación de alguna ley, regla o reglamento que el empleador o algún otro empleador con el que exista una relación de negocios; o en el caso de un trabajador licenciado o certificado de la salud que facilite información o preste testimonio ante cualquier agencia pública que conduzca una investigación, audiencia o indagación sobre la calidad de la atención al paciente; o
 - c. Ofrece información concerniente al engaño o la tergiversación con accionistas, inversionistas, usuarios, pacientes, clientes, empleados, ex empleados, retirados o pensionados del empleador o de cualquier agencia gubernamental.
 - d. Ofrece información con respecto a toda actividad que se pueda percibir como delictiva o fraudulenta, toda directiva o práctica engañosa o de tergiversación que el empleado tenga motivos fundados para pensar que pudieran estafar a accionistas, inversionistas, usuarios, pacientes, clientes, empleados, ex empleados, retirados o pensionados del empleador o de cualquier agencia gubernamental.
 - e. Se opone o se niega a participar en alguna actividad, directriz o práctica que el empleado tiene motivos fundados para pensar que:
 - (1) viola alguna ley, o regla o reglamento que dicta la ley o en el caso de un empleado licenciado o certificado en cuidado de la salud que tiene motivos fundados para pensar que constituya atención inadecuada al paciente;
 - (2) es fraudulenta o delictiva; o
 - (3) es incompatible con algún mandato establecido por las directrices públicas relacionadas con la salud pública, la seguridad o el bienestar o la protección del medio ambiente. Artículo 34:19-3 de las Leyes comentadas de New Jersey de protección del empleado consciente (N.J.S.A., por sus siglas en inglés)
2. No se puede acoger a la protección contra la represalia, cuando se hace una divulgación a un organismo público, a no ser que el empleado le informe al empleador de tal actividad, política o norma a través de un aviso por escrito y le haya dado al empleador una oportunidad razonable para corregir tal actividad, política o norma. Sin embargo, no es necesaria la divulgación en los casos en que el empleado tenga indicios razonables para creer que un supervisor o más de un supervisor del empleador tienen conocimiento de tal actividad, política o norma o en los casos en los que el empleado teme que tal divulgación pueda traer como consecuencia daños físicos a su persona siempre y cuando la naturaleza de la situación sea la de una situación de emergencia.

Información del Contacto

Su empleador ha designado a la siguiente persona para recibir notificaciones de acuerdo al parafó 2, de la ley (N.J.S.A. 34:19-4):

Nombre: _____

Dirección: _____

Número de teléfono: _____

Este aviso se debe exponer a la vista de todos.

Anualmente, patronos con 10 o más empleados, deberán distribuir notificación de esta ley a todos sus empleados. Si necesita este documento en algún otro idioma que no sea inglés o español, sírvase llamar al (609) 292-7832.

New Jersey SAFE Act

The New Jersey Security and Financial Empowerment Act (“NJ SAFE Act”), P.L. 2013, c.82, provides that certain employees are eligible to receive an unpaid leave of absence, for a period not to exceed 20 days in a 12-month period, to address circumstances resulting from domestic violence or a sexually violent offense. To be eligible, the employee must have worked at least 1,000 hours during the immediately preceding 12-month period. Further, the employee must have worked for an employer in the State that employs 25 or more employees for each working day during each of 20 or more calendar workweeks in the then-current or immediately preceding calendar year.

Leave under the NJ SAFE Act may be taken by an employee who is a victim of domestic violence, as that term is defined in N.J.S.A. 2C:25-19, or a victim of a sexually violent offense, as that term is defined in N.J.S.A. 30:4-27.6. Leave may also be taken by an employee whose child, parent, spouse, domestic partner, or civil union partner is a victim of domestic violence or a sexually violent offense.

Leave under the NJ SAFE Act may be taken for the purpose of engaging in any of the following activities as they relate to an incident of domestic violence or a sexually violent offense:

- (1) Seeking medical attention for, or recovering from, physical or psychological injuries caused by domestic or sexual violence to the employee or the employee’s child, parent, spouse, domestic partner or civil union partner
- (2) Obtaining services from a victim services organization for the employee or the employee’s child, parent, spouse, domestic partner, or civil union partner
- (3) Obtaining psychological or other counseling for the employee or the employee’s child, parent, spouse, domestic partner or civil union partner
- (4) Participating in safety planning, temporarily or permanently relocating, or taking other actions to increase the safety from future domestic violence or sexual violence or to ensure the economic security of the employee or the employee’s child, parent, spouse, domestic partner or civil union partner
- (5) Seeking legal assistance or remedies to ensure the health and safety of the employee or the employee’s child, parent, spouse, domestic partner, or civil union partner, including preparing for or participating in any civil or criminal legal proceeding related to or derived from domestic violence or sexual violence; or
- (6) Attending, participating in or preparing for a criminal or civil court proceeding relating to an incident of domestic or sexual violence of which the employee or the employee’s child, parent, spouse, domestic partner, or civil union partner, was a victim.

Leave under the NJ SAFE Act must be used in the 12-month period immediately following an instance of domestic violence or a sexually violent offense. The unpaid leave may be taken intermittently in intervals of no less than one day. The unpaid leave shall run concurrently with any paid vacation leave, personal leave, or medical or sick leave that the employee elects to use or which the employer requires the employee to use during any part of the 20-day period of unpaid leave. If the employee requests leave for a reason covered by both the NJ SAFE Act and the Family Leave Act, N.J.S.A. 34:11B-1 et seq., or the federal Family and Medical Leave Act, 20 U.S.C. 2601 et seq., the leave shall count simultaneously against the employee’s entitlement under each respective law.

Employees eligible to take leave under the NJ SAFE Act must, if the necessity for the leave is foreseeable, provide the employer with written notice of the need for the leave. The employee must provide the employer with written notice as far in advance as reasonable and practicable under the circumstances. The employer has the right to require the employee to provide the employer with documentation of the domestic violence or sexually violent offense that is the basis for the leave. The employer must retain any documentation provided to it in this manner in the strictest confidentiality, unless the disclosure is voluntarily authorized in writing by the employee or is authorized by a federal or State law, rule or regulation.

The NJ SAFE Act also prohibits an employer from discharging, harassing or otherwise discriminating or retaliating or threatening to discharge, harass or otherwise discriminate against an employee with respect to the compensation, terms, conditions or privileges of employment on the basis that the employee took or requested any leave that the employee was entitled to under the NJ SAFE Act, or on the basis that the employee refused to authorize the release of information deemed confidential under the NJ SAFE Act.

To obtain relief for a violation of the NJ SAFE Act, an aggrieved person must file a private cause of action in the Superior Court within one year of the date of the alleged violation.

This notice must be conspicuously displayed.

Right to be Free of Gender Inequity or Bias in Pay, Compensation, Benefits or Other Terms and Conditions of Employment

New Jersey and federal laws prohibit employers from discriminating against an individual with respect to his/her pay, compensation, benefits, or terms, conditions or privileges of employment because of the individual's sex.

FEDERAL LAW

Title VII of the Civil Rights Act of 1964 prohibits employment discrimination based on, among other things, an individual's sex. Title VII claims must be filed with the United States Equal Employment Opportunity Commission (EEOC) before they can be brought in court. Remedies under Title VII may include an order restraining unlawful discrimination, back pay, and compensatory and punitive damages.

The Equal Pay Act of 1963 (EPA) prohibits discrimination in compensation based on sex. EPA claims can be filed either with the EEOC or directly with the court. Remedies under the EPA may include the amount of the salary or wages due from the employer, plus an additional equal amount as liquidated damages.

Please be mindful that in order for a disparity in compensation based on sex to be actionable under the EPA, it must be for equal work on jobs the performance of which requires equal skill, effort, and responsibility, and which are performed under similar working conditions.

There are strict time limits for filing charges of employment discrimination. For further information, contact the EEOC at 800-669-4000 or at www.eeoc.gov.

NEW JERSEY LAW

The New Jersey Law Against Discrimination (LAD) prohibits employment discrimination based on, among other things, an individual's sex. LAD claims can be filed with the New Jersey Division on Civil Rights (NJDCR) or directly in court. Remedies under the LAD may include an order restraining unlawful discrimination, back pay, and compensatory and punitive damages.

Another State law, N.J.S.A. 34:11-56.1 et seq., prohibits discrimination in the rate or method of payment of wages to an employee because of his or her sex. Claims under this wage discrimination law may be filed with the New Jersey Department of Labor and Workforce Development (NJDLWD) or directly in court. Remedies under this law may include the full amount of the salary or wages owed, plus an additional equal amount as liquidated damages.

Please be mindful that under the State wage discrimination law a differential in pay between employees based on a reasonable factor or factors other than sex shall not constitute discrimination.

There are strict time limits for filing charges of employment discrimination. For more information regarding LAD claims, contact the NJDCR at 609-292-4605 or at www.njcivilrights.gov. For information concerning N.J.S.A. 34:11-56.1 et seq., contact the Division of Wage and Hour Compliance within the NJDLWD at 609-292-2305 or at <http://lwd.state.nj.us>.

This notice must be conspicuously displayed.



Acknowledgment of Receipt of Gender Equity Notification

I received a copy of the gender equity notification on the date listed below.
I have read it and I understand it.

Name (signature)

Name (print)

Date



NEW JERSEY DEPARTMENT OF
LWD
LABOR AND WORKFORCE DEVELOPMENT
nj.gov/labor

Derecho a estar exento de desigualdad o discriminación de género con respecto al pago, la remuneración, los beneficios o cualquier otro término o condición de empleo

Las leyes de New Jersey y federales prohíben a los empleadores discriminar contra cualquier persona con respecto a su pago, remuneración, beneficios o cualquier otro término, condición o privilegio de empleo debido a su género.

LEYES FEDERALES

El Título VII de la Ley de Derechos Civiles de 1964 prohíbe la discriminación laboral debido al género de la persona, entre otras cosas. Las reclamaciones acordes al Título VII deben ser presentadas ante la Comisión de Igualdad de Oportunidades en el Empleo de los Estados Unidos (EEOC, por sus siglas en inglés) antes de que puedan ser presentadas ante un tribunal. Entre los recursos legales conforme al Título VII están: una orden que prohíba los actos ilícitos de discriminación, que se pague remuneración con carácter retroactivo, y que se pague por daños compensatorios y punitivos.

La Ley de Igualdad Salarial de 1963 (EPA, por sus siglas en inglés) prohíbe la discriminación con respecto a la remuneración basado en el género de la persona. Las reclamaciones acordes a EPA se pueden presentar ya sea ante la EEOC o directamente ante los tribunales. Entre los recursos legales conforme a EPA están: la retribución de las sumas de salarios o sueldos que el empleador deba, además de una suma adicional equivalente por daños y perjuicios liquidados.

Se le ruega tener en cuenta que para que una reclamación por desigualdad de remuneración basado en el género proceda conforme a la EPA, tiene que ser por el mismo tipo de trabajo en empleos en los que su rendimiento exija las mismas destrezas, el mismo esfuerzo y las mismas responsabilidades, las cuales se realizan en las mismas condiciones de trabajo.

Existen estrictos límites en cuanto al plazo de tiempo del que se dispone para presentar reclamaciones por discriminación laboral. Para mayor información, comuníquese con la EEOC, llamando al 800-669-4000 o en www.eeoc.gov.

LEYES DE NEW JERSEY

La Ley contra la Discriminación en New Jersey (LAD, por sus siglas en inglés) prohíbe la discriminación laboral debido al género de la persona, entre otras cosas. Las reclamaciones conforme a LAD se pueden presentar a la División de Derechos Civiles de New Jersey (NJDCR, por sus siglas en inglés) o directamente ante los tribunales. Entre los recursos legales conforme a LAD están: una orden que prohíba los actos ilícitos de discriminación, que se pague remuneración con carácter retroactivo, y que se pague por daños compensatorios y punitivos.

Otra ley estatal, N.J.S.A. 34:11-56.1 y siguientes, también prohíbe la discriminación respecto a la tasa salarial o el método de pago de salarios al empleado debido a su género. Las reclamaciones conforme a esta ley contra la discriminación con respecto a los salarios se pueden presentar ante el Departamento de Trabajo y Desarrollo de la Fuerza Laboral de New Jersey (NJDLWD, por sus siglas en inglés) o directamente ante los tribunales. Entre los recursos legales conforme a esta ley están: la retribución de las sumas de salarios o sueldos que le deben, además de una suma adicional equivalente por daños y perjuicios liquidados.

Se le ruega tenga en cuenta que conforme a la ley estatal contra la discriminación con respecto a los salarios, no se considera discriminación el hecho de que exista un diferencial salarial entre los empleados basado en otros factores razonables que no sean el género de la persona.

Existen estrictos límites en cuanto al plazo de tiempo del que se dispone para presentar reclamaciones por discriminación laboral. Para mayor información relacionada con las reclamaciones conforme a LAD, comuníquese con NJDCR, llamando al 609-292-4605 o en www.njcivilrights.gov. Para obtener información acerca de N.J.S.A. 34:11-56.1 y siguientes, comuníquese con la División de Cumplimiento de Horarios y Salarios (DWHC), del NJDLWD, llamando al 609-292-2305 o en <http://lwd.state.nj.us>.

Este aviso se debe exponer a la vista de todos.



Acuse de recibo de la notificación de igualdad de género

Recibí una copia de la notificación de igualdad de género en la fecha que aparece a continuación.
Lo he leído y lo entiendo.

Nombre (firma)

Nombre (en letra de molde)

Fecha



NEW JERSEY DEPARTMENT OF
LWD
LABOR AND WORKFORCE DEVELOPMENT
nj.gov/labor



U.S. Department of Labor



Job Safety and Health IT'S THE LAW!

All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a work-related injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request an OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. OSHA will keep your name confidential. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

This poster is available free from OSHA.

Contact OSHA. We can help.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Report to OSHA all work-related fatalities within 8 hours, and all inpatient hospitalizations, amputations and losses of an eye within 24 hours.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

FREE ASSISTANCE to identify and correct hazards is available to small and medium-sized employers, without citation or penalty, through OSHA-supported consultation programs in every state.





HIGHLIGHTS OF HUD'S PROPOSED RULE

AMENDING SECTION 3 OF THE HOUSING AND URBAN DEVELOPMENT ACT OF 1968



What is Section 3?

Section 3 of the Housing and Urban Development Act of 1968 (Section 3) ensures that HUD-funded jobs training, and contracts are provided to local low-income residents, particularly those that reside in public housing, and businesses that substantially employ them.

Why is HUD Publishing a Proposed Rule to Amend the Current Section 3 Regulation?

The current Section 3 regulation at 24 CFR § 135 is vague in areas that have proved to be confusing and lead to differing interpretations. The Section 3 proposed rule seeks to: 1) clarify obligations for PHAs and other grantees; 2) incorporate HUD programs that have been created since the publication of the current regulation; and 3) codifies “best practices” that have proved successful for providing employment and contracting opportunities.

What is the Status of the Section 3 Proposed Rule?

On [insert date] the Section 3 Proposed Rule was published in the Federal Register for a 60 day public comment period. To review the Section 3 Proposed Rule or provide public comments, please visit:

www.huduser.org/portal/economicOpportunities.html

All comments must be received by:
May 26, 2015

What Are the Major Highlights of the Section 3 Proposed Rule?

The Section 3 Proposed Rule:

1. Establishes clearer guidelines for achieving compliance “to the greatest extent feasible”.
2. Requires “new hires” to work a minimum percentage of hours.
3. Revises the definition of a “Section 3 Business”.
4. Sets a new funding threshold for non-PHA grantees.
5. Removes the 3% minimum numerical goal for non-construction contracts.
6. Requires PHAs and other grantees to monitor contractor payroll data.
7. Mandates reference to Section 3 requirements in Project Labor Agreements.
8. Incentivizes job retention and the provision of apprenticeship opportunities for Section 3 residents.
9. Allows grantees to accept self-certifications or presume eligibility.
10. Imposes penalties for failure to submit Section 3 annual reports.
11. Imposes program sanctions on PHAs and grantees that fail to comply.
12. Stipulates that relief may possibly be provided to aggrieved entities.

How Do I Find Out More Information About Section 3?

Please visit: www.hud.gov/section3

BID FORM
Alterations to First Floor Restroom
for
Nutley Police Department
228 Chestnut Street
Nutley, NJ 07110

FROM:

NAME OF BIDDER _____

ADDRESS _____

TELEPHONE () _____

TO: Township of Nutley
Town Hall, Commission Chambers, 3rd Floor
One Kennedy Drive
Nutley, NJ 07110

ATTENTION: Eleni Pettas, Municipal Clerk

A 2.01 **BASE BID:** The undersigned having inspected the construction site and familiarized himself with all conditions likely to be encountered affecting the cost and schedule of work, and having examined all of the Contract Documents, hereby proposes to furnish all labor, materials, tools, equipment and services required to perform all of the work in strict accordance with the Contract Documents as prepared by:

Dassa Haines Architectural Group for the **Alterations to First Floor Restroom for Nutley Police Department** located at 228 Chestnut Street Nutley, NJ 07110 for the Base Bid Sum of:

_____ DOLLARS,
(Use Words)

(\$ _____), and if this proposal is accepted, will execute a formal contract in a form similar to that bound in the Contract Documents, to this effect.
(Use Figures)

A2.01.1 **BREAKDOWN OF BASE BID SUM**

The following breakdown of the Base Bid Sum is submitted for use by the Owner in evaluating this Proposal and is not intended as a basis for establishing prices for additions to or deletions from the Contract Sum. The amounts shown include all labor, materials, tools, equipment and services required for furnishing and installing each of the stated items or work, and include all other expenses, overhead and profit, properly distributed.

ITEMS

- 1. Select Demolition of Restroom, entrance to restroom, and adjacent Janitor's closet as required by proposed work. \$ _____
- 2. Plumbing work \$ _____
- 3. Mechanical supply and exhaust work \$ _____
- 4. Electrical work \$ _____
- 5. Rough / finish carpentry, framing, finish trim, millwork, floor / wall tile, ceiling tile, and restroom accessories, doors, patching and matching finishes. \$ _____

A 2.02 ALTERNATE ITEMS
(None)

A 2.03 UNIT PRICES (Including labor and materials. See Section 01270)

- 1) Unit Price: Additional Floor Tile work (Per Square Foot) \$ _____
(Per Sq. Ft)
- 2) Unit Price: Additional Wall Tile work (Per Square Foot) \$ _____
(Per Sq. Ft.)
- 3) Unit Price: Additional Ceiling Tile work (Per Square Foot) \$ _____
(Per Sq. Ft.)

A 2.04 CHANGES IN THE WORK

A. The undersigned proposes that for changes in the work subject to the applicable provisions of Article 7 of the General Conditions, the Overhead and Profit percentages to be added to the itemized estimates of cost will be the following:

- I To cover any additional work and supervision required to be performed by the Contractor's own forces. _____ %
- II Credit for omissions of work and supervision that would have been performed by the Contractor's own forces. _____ %
- III To cover any additional work and supervision required to be performed by the Subcontractor's own forces. _____ %
- IV Credit for omission of work and supervision that would have been performed by Subcontractor's own forces. _____ %

It is understood that changes in the work includes all costs for supervision, engineering, office expenses and any other general expense associated with and/or resulting from changes in the work.

A 2.05 ADDENDA: The undersigned acknowledges receipt of Addenda as listed below and represents that any additions or modifications to, or deletions from the work called for in these Addenda, are included in the Base Bid Sum, and Unit Prices, if affected thereby.

ADDENDUM NO.	DATED	ADDENDUM NO.	DATED
_____	_____	_____	_____
_____	_____	_____	_____

If no Addenda have been received, write in "NONE".

A 2.05a RFI's are required to be written and submitted by email to gb@dassahaines.com or faxed to 973-233-9358. RFI period will commence on the first day bids are advertised. RFI period will end at 5:00pm on February 7th 2018. Any RFI's submitted after 5:00pm on February 7th 2018 will not be accepted.

A 2.06 TAXES

A. Bidders are put on notice that the The Township of Nutley is an exempt organization under the provisions of the New Jersey State Sales and Uses Tax Act (N.J.S.54:32B-1 et seq.), and is not required to pay sales tax.

A 2.07 SCHEDULE

A. Refer to the contract specifications (Section 01100 Summary 1.3A.1) requiring completion in 35 calendar days. If, in the contractor's opinion, this schedule is not realistic, please complete the following.

B. The undersigned understands that early completion is important to The Township of Nutley and that the Schedule will be considered in evaluation of proposals. The undersigned proposes to perform the work in accordance with the following schedule of calendar days (all calendar days are measured from the date of award of the contract.)

C.

Calendar Days

- | | | |
|-----|---------------------------------|---|
| (1) | Submit permits | <u>Within 5-days of being awarded contract</u> |
| (2) | Start of work | <u>Start on day permit is received or as directed by township</u> |
| (3) | Substantially complete all work | <u>Day</u> _____ |
| (4) | Final completion of all work | <u>Day</u> _____ |

D. CONSTRUCTION SCHEDULE

The undersigned has enclosed herewith a construction schedule as required by Instructions to Bidders, which substantiates that the work can be accomplished within the scheduled dates quoted above. (See *Bidder's Return Checklist*)

A 2.08 ASSIGNMENT: The undersigned represents that no assignment, sub-lease, or transfer of all or any part of his interest in this proposal has been made or will be made without the written consent of the Township of Nutley.

A 2.09 BIDDING DOCUMENTS: The undersigned acknowledges receipt of the following bidding documents and affirms that all costs associated therewith are included in the applicable base bid sum and unit prices.

A 2.09a INSURANCE

Insurance shall be written in the following amounts:	<u>LIMITS</u>
Workmen's Occupational Diseases Act, Workmen's Compensation Act & Welfare Funds	Statutory Limits
Contractor's Public Liability (including contractual obligations)	\$1,000,000/2,000,000
Contractor's Contingent Public Liability (including contractual obligations)	\$1,000,000/2,000,000
Contractor's Property Damage Liability (including contractual obligations)	\$500,000/1,000,000
Contractor's Contingent Property Damage Liability (including contractual obligations)	\$500,000/1,000,000

The Contractor shall submit to the owner certificates of insurance and an endorsement added to the policy stating that the insurance policies carried by him were in force prior to the signing of the contract and certifying that these policies will not be canceled during the duration of this contract.

The Contractor shall save harmless and exonerate the The Township of Nutley of and from all liability, claims and demands for personal injury and property damage arising out of the work undertaken by the contractor, employees, agents, subcontractors, and arising out of any other operation no matter by whom performed, for and on behalf of the Contractor.

A 2.09.1 REQUIREMENTS OF THE TOWNSHIP OF NUTLEY

- A. Bid Bond (Exhibits 2, 2a)
- B. New Jersey Prevailing Wage Act (Exhibit C)
- C. Stockholder Disclosure Certification (Exhibit 3)
- D. Non-Collusion Affidavit (Exhibit 4)
- E. Consent of Surety (Exhibit 5)
- F. Bidder Information Sheet (Exhibit 6)

- G. List of Subcontractors (Exhibit 7)
- H. Bidder's Return Checklist (1 page)

A 2.09.2 REQUIREMENTS OF CONSTRUCTION DOCUMENTS

- A. Instructions to Bidders (AIA Document A701 – 8 pages)
- B. Bid Form (5 pages)
- C. Township of Nutley Contract Agreement (22 pages with attachments)
- D. Performance and Payment Bonds (AIA Document A312 – 9 pages)
- E. General Conditions (AIA Document A201 – 41 pages)
- F. Specifications, consisting of Divisions and Sections as listed on the Table of Contents.
- G. Drawing A1 dated 1/18/2018 Issued for Bidding.

A 2.10 PROPOSED SUBCONTRACTORS AND MAJOR SUPPLIERS: The undersigned submits in writing a listing of all prospective subcontractors and major suppliers, in accordance with the Instructions to Bidders, including the Subcontractor Certificate of Registration (see Bidder's Return Checklist).

A 2.11 DECLARATION: The undersigned declares, by executing this Proposal, that:

- A. This proposal shall remain valid, for acceptance by The Township of Nutley for a period not less than sixty (60) days from the bid due date.
- B. All requirements concerning licensing and all other local, state and national laws have been or will be complied with and that no legal requirements will be violated in the execution of the work if the proposal is accepted.
- C. No persons or company other than the firm listed below or otherwise indicated hereinafter shall have any interest whatsoever in the proposal or the contract that may be entered into as a result thereof. This proposal is submitted in good faith, without collusion or fraud.
- D. The person or persons signing this proposal is/are fully authorized to sign on behalf of the conditions and provisions thereof.

(Corporation)

The undersigned is a (Partnership) under the laws of the State of New Jersey having (Individual)

its principal office at _____

Company Name

Federal I.D.# or S.S.#

Address

Signature of Authorized Agent

Type or Print Name

Telephone Number

Date of Proposal

ENCLOSED: One (1) Construction Schedule and One (1) Schedule of Values

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
_____, Hereinafter called the Principal, as
Principal, and the _____, of
_____ a corporation duly
organized under the law of the State of _____,
hereinafter called the Surety, as Surety, are held and firmly bound unto _____
_____ hereinafter called the Obligee, in the sum of _____
_____ Dollars
(\$ _____), for the payment of which sum well and truly to be
made, the said Principal and the said Surety, bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by
these presents.

WHEREAS, The Principal has submitted a bid for _____

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such contract, for the prompt payment of labor and material furnished in the prosecution thereof and in the Maintenance thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference, not to exceed the penalty hereof, between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Exhibit 2a

SIGNED AND SEALED this _____ day of _____ A.D. 20_____

In the presence of:

_____(Seal)

PRINCIPAL

WITNESS

TITLE

_____(Seal)

SURETY

WITNESS

_____(Seal)
TITLE

STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of Organization: _____

Organization Address: _____

Part I Check the box that represents the type of business organization:

- Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type) Limited Liability Company (LLC)
- Partnership Limited Partnership Limited Liability Partnership (LLP)
- Other (be specific): _____

Part II

The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

OR

No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II other than for any publicly traded parent entities referenced above. The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the _____ *<name of contracting unit>* is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with _____ *<type of contracting unit>* to notify the _____ *<type of contracting unit>* in writing of any changes to the information contained herein; 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 am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the _____ *<type of contracting unit>* to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

PART 1

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 (any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity), 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 will render a bidder's proposal non-responsive.** If the Authority finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

Bidder/Company Name: _____

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 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 non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the Division of Purchase under penalty of perjury. **Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.**

PART 2

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 box below.

Name: _____ Relationship to Proposer: _____

Description of Activities: _____

Duration of Engagement: _____ Anticipated Cessation Date: _____

Proposer Contact Name: _____ Contact Phone Number: _____

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 Authority 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 Authority to notify the Authority in writing of any changes to the answers or 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 Authority and the Authority at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____

Title: _____ Date: _____

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY
COUNTY OF ESSEX

_____, BEING DULY SWORN deposes and says that:

1. The proposal has been arrived at by the contractor independently and has been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the invitation to bid, designed to limit independent bidding or competition; and
2. The contents or the proposal have not been communicated by the contractor or its employees or agents to any person not any employee or agent of the bidder or its surety on any bond furnished with the bid and will not be communicated to any such person prior to the official opening of the bid.
3. The undersigned is duly authorized to execute this affidavit on behalf of the contractor.

Authorized Signature

Printed Name of Signatory

Company Name

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

Address

Address

Notary Public

City State Zip Code

My Commission expires: _____

Area Code and Phone Number

CONSENT OF SURETY

A performance bond will be required from the successful bidder on this project, and consequently, all bidders shall submit, with their bid, a certificate in substantially the following form:

TO: _____
(OWNER)

RE: _____
(CONTRACTOR)

(PROJECT DESCRIPTION)

This is to certify that the _____
(SURETY COMPANY)

will provide to _____
(CONTRACTOR)

a performance bond in the full amount of the awarded contract in the event that said

contractor is awarded a contract for the above project.

(Authorized Agent of Surety Company)

**CERTIFICATE OF SURETY MUST BE SIGNED BY AN AUTHORIZED AGENT
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE
INDIVIDUAL OR COMPANY SUBMITTING THE BID.**

BIDDER INFORMATION SHEET

Date_____

Legal or corporate name of Bidder

Incorporated: Yes () ; No () In what State?_____

Business Address_____

Telephone Number_____

P.O. Box Number_____

Officers (if a corporation) President_____

Vice-President_____

Treasurer_____

Secretary_____

Specialty_____

Years at_____

Municipal Building Experience for type of construction being bid:

Other Building Experience (Projects of this size)

Bank Reference_____

Proposed Surety_____

Working Capital available for this project \$_____

Portion of work probably handled directly_____

Value of equipment owned_____

LIST OF SUBCONTRACTORS

The types of work, names, addresses, and telephone numbers of any subcontractors used on this project must be listed below:

- 1) Names: _____
Address: _____
Telephone Number: _____
Work to be Done by Subcontractor: _____
- 2) Names: _____
Address: _____
Telephone Number: _____
Work to be Done by Subcontractor: _____
- 3) Names: _____
Address: _____
Telephone Number: _____
Work to be Done by Subcontractor: _____
- 4) Names: _____
Address: _____
Telephone Number: _____
Work to be Done by Subcontractor: _____
- 5) Names: _____
Address: _____
Telephone Number: _____
Work to be Done by Subcontractor: _____

Name of Bidder

BIDDER'S RETURN CHECKLIST

Please Be Sure To Comply With The Following Requirements And Return All Required Documentation:

<u>Please Submit Items Checked in order as listed below</u>		Review/Completed (Initial)
1.	<input checked="" type="checkbox"/> Completed Signed Bid Form (BF-1 to BF-5) (Exhibit 1)	_____
2.	<input checked="" type="checkbox"/> All Bids Must Be Submitted With a Ten Percent (10%) Bid Bond , Certified Check or Cashier's Check (Sample Bid Bond Attached) (Exhibits 2, 2a)	_____
3.	<input checked="" type="checkbox"/> Americans with Disabilities Act	_____
4.	<input checked="" type="checkbox"/> Equal Employment Opportunity Language (Exhibit A)	_____
5.	<input type="checkbox"/> Mandatory Equal Employment Opportunity Language (Exhibit B)	_____
6.	<input type="checkbox"/> New Jersey Prevailing Wage Act (Exhibit C)	_____
7.	<input checked="" type="checkbox"/> Affirmative Action Certification	_____
8.	<input type="checkbox"/> Meeting Federal Labor Standards for Community Development Block Grant Funded Projects	_____
9.	<input checked="" type="checkbox"/> Statement of Ownership Disclosure (Exhibit 3)(Notarized)	_____
10.	<input checked="" type="checkbox"/> Disclosure of Investment Activities in Iran (Exhibit 3A)	_____
11.	<input checked="" type="checkbox"/> Non-Collusion Affidavit (Exhibit 4) (Notarized)	_____
12.	<input checked="" type="checkbox"/> Consent of Surety (Exhibit 5)	_____
13.	<input checked="" type="checkbox"/> Bidder Information Sheet (Exhibit 6)	_____
14.	<input checked="" type="checkbox"/> List of Subcontractors (Exhibit 7)	_____
15.	<input checked="" type="checkbox"/> Public Works Contractor Registration Act For Contractors & Subcontractors P.L. 1999, C.238 Copy of Certificate Of Registration Issued By The Commissioner Of Labor Or Authorized Representative.	_____
16.	<input checked="" type="checkbox"/> Construction Schedule	_____
17.	<input checked="" type="checkbox"/> Copy of Business Registration Certificate For Contractors & Subcontractors	_____
18.	<input checked="" type="checkbox"/> List of References	_____
19.	<input checked="" type="checkbox"/> Contractors Proof of Insurance	_____

Please Be Sure To Complete All Forms. Failure To Comply May Result In Your Bid Being Rejected.



AIA[®]

Document A312™ – 1984

Performance Bond

CONTRACTOR (*Name and Address*):

SURETY (*Name and Principal Place of Business*):

OWNER (*Name and Address*):

CONSTRUCTION CONTRACT

Date:

Amount:

Description (*Name and Location*):

BOND

Date (*Not earlier than Construction Contract Date*):

Amount:

Modifications to this Bond: None See Last Page

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

SURETY

Company: (Corporate Seal)

Signature:

Name and

Title:

(*Any additional signatures appear on the last page*)

Signature:

Name and

Title:

(*FOR INFORMATION ONLY - Name, Address and Telephone*)

AGENT or BROKER:

OWNER'S REPRESENTATIVE

(*Architect, Engineer or other party*):

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contract, Surety, Owner or other party shall be considered plural where applicable.

§ 1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Section 3.1.

§ 3 If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

§ 3.1 The Owner has notified the Contractor and the Surety at its address described in Section 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

§ 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Section 3.1; and

§ 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

§ 4 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

§ 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

§ 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

§ 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

§ 5 If the Surety does not proceed as provided in Section 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 6 After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Section 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

§ 6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

§ 6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 4; and

§ 6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

§ 8 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 10 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

§ 11 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 12 DEFINITIONS

§ 12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

§ 12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

§ 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

§ 13 MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

Signature: _____
Name and Title:
Address:

SURETY

Company: (Corporate Seal)

Signature: _____
Name and Title:
Address:

Payment Bond

CONTRACTOR (*Name and Address*):

SURETY (*Name and Principal Place of Business*):

OWNER (*Name and Address*):

CONSTRUCTION CONTRACT

Date:

Amount:

Description (*Name and Location*):

BOND

Date (*Not earlier than Construction Contract Date*):

Amount:

Modifications to this Bond: None See Last Page

CONTRACTOR AS PRINCIPAL
Company: (*Corporate Seal*)

SURETY
Company: (*Corporate Seal*)

Signature: _____
Name and Title:
(*Any additional signatures appear on the last page*)

Signature: _____
Name and Title:

(*FOR INFORMATION ONLY - Name, Address and Telephone*)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (*Architect, Engineer or other party*):

§ 1 The Contractor and the Surety, jointly and severally bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 With respect to the Owner, this obligation shall be null and void if the Contractor:

§ 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

§ 2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Section 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

§ 3 With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

§ 4 The Surety shall have no obligation to Claimants under this Bond until:

§ 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Section 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

§ 4.2 Claimants who do not have a direct contract with the Contractor:

- .1** Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
- .2** Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
- .3** Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Section 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

§ 5 If a notice required by Section 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

§ 6 When the Claimant has satisfied the conditions of Section 4, the Surety shall promptly and at the Surety's expense take the following actions:

§ 6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

§ 6.2 Pay or arrange for payment of any undisputed amounts.

§ 7 The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 8 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 9 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Section 4.1 or Section 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 15 DEFINITIONS

§ 15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

§ 15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

§ 16 MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL
Company: _____ (Corporate Seal)

SURETY
Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

Signature: _____
Name and Title: _____
Address: _____

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(Signed)

(Title)

(Dated)

AIA[®] Document A201[™] – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the

portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and

completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the

Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount

for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or

encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment

property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by

such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- 1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- 2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- 3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- 4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly 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 Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

TOWNSHIP OF NULEY CONTRACT – FORM

CONTRACT AGREEMENT

AN AGREEMENT DATED: _____

Between the Township of Nutley, a Municipal Corporation of the State of New Jersey, party of the first part; and

Party of the Second Part

The parties to this Contract, each in consideration of the agreements on the other herein contained, have agreed and hereby agrees as follows:

1. **DEFINITIONS:** Wherever in this Contract the words hereinafter enumerated are used, they shall severally mean and intend what is opposite them:

- | | | |
|--------------------|---|---|
| "THE MUNICIPALITY" |) | The Township of Nutley |
| "ARCHITECT" |) | Dassa Haines Architectural Group, L.L.C. |
| "CONTRACTOR" |) | The party of the second part and the legal Representatives, successors, or assigns, of the said party, or the agent appointed to act for the said party in the performance of the work. |

2. **CONTRACT:** The plans and proposals for bids, information for bidders, bid specifications and the drawings, if any, described in the specifications, and the bond are hereby made a part of this Contract with like effect as if herein set forth in full and the term "Contract" as herein used, includes all of said instruments. All work and materials mentioned in the specifications and not shown on the drawings, if any, and all work and materials shown on the drawings, if any, and not mentioned in the specifications, shall be furnished, performed and done as if the same were both mentioned in the specifications and shown on the drawings.

The Contract amount is \$_____ for the

**Alterations to First Floor Restroom
for Nutley Police Department**

3. **CONTRACTOR'S OBLIGATIONS:** The Contractor agrees to furnish all the labor, materials, machinery, tools, apparatus and every means of construction necessary and proper for the project and in substantial, workmanlike and satisfactory manner to do and perform all of the work required under this Contract, including the specifications, in strict and full accordance with its requirements, and to receive in full payment therefor, and for all loss or damages arising out of the nature of the work or from action of the elements or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all risks of any description connected with the work and for all expenses incurred by or in consequence of the suspension or discontinuance of the work, the Contract amount, set forth herein, and not to demand, sue for or receive therefor any compensation beyond said Contract Amount.
4. **AWARD OF CONTRACT:** The Contract for the **Alterations to First Floor Restroom for Nutley Police Department** will be awarded to successful bidder by the Governing Body in accordance with the requirements of law.
5. **EXECUTION OF CONTRACT, PRE-CONSTRUCTION MEETING AND COMMENCING OF PROJECT**

Four (4) Copies of the Contract will be furnished immediately upon the Governing Body's award of contract. The individual, firm, or corporation, to whom or to which the contract is awarded, shall sign the contract and furnish the necessary bonds and file the same in the office of the Municipal Clerk of Nutley prior to Pre-Construction Meeting for subject project.

A Pre-Construction Meeting for the **Alterations to First Floor Restroom for Nutley Police Department** will be held at Town Hall, One Kennedy Drive, Nutley, New Jersey 07110. At this time all necessary bonds and contracts should have been signed and filed, as previously mentioned. No Bid Proposals shall be binding upon the Governing Body until the execution of the contract and filing of said bond and acceptance of same by the Governing Body. At the Pre-Construction Meeting the individual, firm, or corporation will furnish to the Project Architect a schedule of work for subject project.

A commencement date of said project must be established at time of Pre-Construction Meeting. The Contractor shall commence work within seven (7) days from the date of a written notice from the Owner to commence work, and shall continue without interruption until work is completed, except as provided herein.

Work shall continue without interruption until the work is completed, except as provided in the Standard Specifications. The Contractor upon written request to the Architect is entitled to receive within seven (7) days of said request an authorization to proceed with the work.

6. **MODIFICATION OF CONTRACT:** This Contract, including the specifications here annexed and the drawing herein referred to, if any, may be modified and

changed from time to time, as may be agreed in writing between the parties, hereto in a manner not materially affecting the substance thereof, nor materially increasing the amount to be paid, in order to carry out and complete more fully and perfectly the work herein agreed to be done and performed.

7. EXTRA WORK: No claim for extra work or materials shall be made by or will be allowed to the Contractor, unless the same shall have been done or furnished under a written order by the Architect, given before the performance of such additional work or the furnishing of such additional materials.

All claims for additional work or materials in any month shall be made to the Architect, in writing before the 15th day of the following month. By failing to make such claims within the specified time, the Contractor waives any right for extra pay for such additional work or materials.

8. ARCHITECT TO DECIDE: Each and every feature of the execution of this Contract including all work to be done and materials to be furnished hereunder shall be subject to the inspection and approval of the Architect. He is authorized and empowered to reject and refuse any and all materials offered under or in fulfillment of this Contract that in his opinion may fail in any way particular to comply with the requirements thereof. The Architect shall give all orders or directions contemplated by this Contract or in relation to the execution or any of the provisions thereof. Orders and directions given to the superintendents and foremen having immediate charge of the men employed on the particular work in relation to which such orders are given shall be deemed to have been given to the Contractor and shall be obeyed by such superintendents and foremen. To prevent disputes and litigation, the Architect shall determine all questions in relation to said work and construction thereof, and he shall decide every question which may arise relative to the execution of this Contract on the part of the Contractor. He shall explain any doubt as to the meaning of intention of this Contract. His decision shall be final and conclusive upon the Contractor and in case any question shall arise between the parties hereto touching on the Contract, such decisions shall be a condition precedent to the right of the Contractor to receive any money thereunder.

9. ACCESS TO WORK AND PLACES OF MANUFACTURE: The Architect and his inspectors and agents shall at all times have access to the work and premises used by the Contractor and to all places of manufacture where materials are being used or fabricated for determining that all such materials are being made strictly in accordance therewith. The Contractor shall provide all necessary assistance to the Architect when required for inspection or verification of work done, without charge or expense to the Municipality.

10. REJECTED MATERIALS: Any materials furnished or work done, which in the opinion of the Architect does not comply with the Contract, shall

be immediately removed and satisfactorily replaced by the Contractor, at his own expense. The Contractor should neglect or refuse to remove or replace the same within ten (10) days, when notified to do so by written order, then the Architect may remove or cause the same to be removed and satisfactorily replaced by Contract or otherwise, as he may deem expedient, and charge the expense thereof to the Contractor.

11. INSPECTION BY Architect: Upon request of the Architect, the Contractor shall at any time before or after the completion of the work, made such openings over any part thereof as he may be directed in writing to do so and shall thereafter restore the work so disturbed to the satisfaction of the Architect. Should the work be found faulty in any respect the whole of the expense incurred shall be defrayed by the Contractor. In cases where the work is removed and not found faulty, the Municipality will pay for the removal and restoration of such work at the unit prices for similar work specified for any such work. The Municipality will pay for such part of the actual cost thereof, as determined by the Architect.
12. DEFECTIVE WORK AND MATERIALS: The inspection or approval of the work shall not relieve the Contractor of any of his obligations to fulfill this Contract as herein prescribed, and defective work shall be made good; and unsuitable materials may be rejected notwithstanding that such work or materials has been previously overlooked by the Architect and accepted or estimated for payment or that payments have been made upon them.
13. CONTRACTOR'S EMPLOYEES: The Contractor shall employ competent and faithful individuals to execute the Contract. The superintendents and foremen shall have knowledge of the English language sufficient to enable them to understand and execute orders given by the Architect. Wherever the Architect shall inform the Contractor in writing that any man engaged in the work is, in his opinion, disobedient, disorderly, disrespectful, incompetent or unethical, or that superintendents or foremen have an inadequate knowledge of the English language, the Contractor shall not further employ such individual upon any of the work.
14. TIME: Time is of the essence of this Contract. The work under the Contract shall be substantially completed within thirty (30) calendar days. The work consumed by the Contractor in wholly completing the Contract, which shall include the furnishing of all material, shall be determined from the date of the signing of this Contract. The Contractor shall carry on the work with such force and in such manner and order as may be directed by the Architect.

The Contractor shall fully and entirely perform this Contract before the expiration of the number of consecutive working days specified in the Proposal. The Architect shall determine the time, expressed in days or parts of days consumed by the Contractor in the full completion of the Contract. Sundays and holidays on which no work is done shall be excluded from the said

determination.

The Architect shall also determine what act or omission on the part of the Municipality temporarily interrupted or delayed the prosecution and completion of the work, or to what extent weather conditions interrupted or interfered with the performance of the work. No claim for extra compensation or for damages shall be made by or allowed to the Contractor for such delays. Such time allowances, as shall be determined by the Architect, which resulted from acts or omissions on the part of the Municipality, or delays beyond the control of the Contractor, shall be deducted from the days consumed in the entire completion of the Contract, and the Architect shall issue a certificate in writing of said calculated allowances. The Architect's determination and certificate thereof shall be binding and conclusive upon the Contractor.

15. LIQUIDATED DAMAGES: In case the Contractor shall fail to complete the work hereunder in accordance with the term of this Contract within the time aforesaid, the Contractor shall pay to the Municipality the sum of \$200.00 for each and every working day that the time consumed in such completion may exceed the time herein before allowed for that purpose, which said sum, in view of the difficulty of ascertaining the loss which the Municipality will suffer by reason of delay in the performance of the work hereunder, is hereby agreed upon and determined by the parties hereto as the liquidated damages that the Municipality will suffer by reason of delay in the performance of the work hereunder and not as a penalty.
16. WAIVER: Neither the inspection of the Municipality or Architect or any of its employees, nor any order, measurement or certificate of the Architect, nor any order by the Municipality or the payment of money, nor any payment for, nor acceptance of, the whole or any part of the work by the Architect or Municipality or any extension of time, nor any possession taken by the Municipality or its employees shall operate as a waiver or any provision of this Contract, or of any power herein reserved to the Municipality, or any right to damages herein provided, nor shall any waiver of any breach of this Contract be held to be a waiver or any other or subsequent breach. Any remedy provided in this Contract shall be taken and construed as cumulative, that is, in addition to each and every other remedy herein provided. The Municipality shall also be entitled as of right to a writ of injunction against any breach of any of the provisions of this Contract.
17. SUSPENSION: The Municipality reserves the right of suspending the whole or any part of the work, if it shall deem it for the best interest of the Municipality so to do, without compensation to the Contractor for such suspension, other than extending the time for contemplating the work, as much as it may have been in the opinion of the Architect, delayed by such suspension. During such suspension, all materials delivered upon, but not placed in the work, shall be neatly piled so as not to obstruct public travel, or shall be removed from the

site of the work at the direction of the Architect, and unless so removed by the Contractor within ten (10) days of written notice from the Architect, they may be removed by him at the Contractor's expense.

18. PARTIAL USE IN WORK: The Municipality shall have the right to use and place in use any of the work as soon as the same is available, and such use shall not be considered as an acceptance of the work or any part thereof, nor shall it affect the maintenance period, where such period is called for in this Contract.
19. MAINTENANCE PERIOD: The period of maintenance for all work shall be two years from the date of final completion and acceptance of the entire project.
20. REPAIRS: If at any time during the progress of the work, or during the period of maintenance, any repairs to any part of the work, in the opinion of the Architect, due to defects in material and workmanship, shall be required, the Architect shall, by mail or in person, notify the Contractor to make the repairs so requested. If the Contractor shall neglect to make satisfactory repairs within three (3) days from the date of the notice, or if the required repairs are so urgent in character as to preclude incurring the delay incident to the issuing of said notice and awaiting action by the Contractor, then the Municipality has the right to employ such other persons or persons as may be deemed proper to make the repairs at the expense of the Contractor.
21. LIABILITY OF CONTRACTOR, ETC.: The Contractor shall take all responsibility of the work, and take all precautions for preventing injuries to persons and property in or about the work; shall bear all losses resulting to him on account of the character of the work, or because of the nature of the land in or on which the work is done is different from that which was estimated or expected, or on account of weather, elements, fires, or other causes; and he shall assume the defense of, and indemnify the Municipality, and save harmless the Municipality and its officers and agents, from all claims relative to labor and materials furnished for the work; to inventions, patents, and patent rights used during the work; to injuries to any person or corporation received or sustained by or from the Contractor and his employees in doing the work or in consequence of any improper materials, implements of labor, or labor used therein; and to any act, omission or neglect of the Contractor and his employees therein. The Contractor shall be responsible for any and all damage to existing structures or equipment at the site of the work and shall at his own expense repair all such damage.
22. PAYMENTS WHEN MADE: The Contractor will not be entitled to demand or receive payment for any portion of the work or materials unless the same shall be fully completed in the manner set forth in this Contract, and such completion shall be duly certified in writing by the Architect to the Municipality and until each and every one of the stipulations herein before mentioned are complied with. A certificate setting forth the date of completion and acceptance shall be

issued to the Contractor by the Architect and a copy of it filed with the Clerk. The said date of completion shall determine the commencement of the maintenance period. The Municipality will pay and hereby binds itself to pay to the Contractor on or before the expiration of thirty days from the filing in the office of the Clerk of said final Ninety-eight (98%) percent of the monies accruing to the Contractor under this Contract.

The remaining two (2 %) percent of the cost of the work shall be retained for two years after the date of completion of the work as certified by the Architect. Within ten days after the expiration of the maintenance period, the Architect shall file with the Clerk, provided that any repairs necessitated by defects in material or workmanship, as directed by the Architect, shall have been made, the last and final certificate and voucher, signed by the Architect. Upon filing of said certificate and voucher, the Municipality will pay to the Contractor the whole of the sum retained or such part thereof as may remain after the expense of making repairs in the manner prescribed herein shall have been paid therefrom.

A guarantee bond in the penal sum of twenty-five (25%) percent of the amount of the final estimate will be acceptable by the Municipality instead of the retention of the ninety (90%) percent. This bond shall be duly executed and delivered to the Municipality with ten days after the Contractor has been notified by the Architect that the final estimate is ready for payment. Should the Contractor fail to file and execute this bond within the time limited, then the Municipality will retain the ten (10%) percent as noted above.

23. PARTIAL PAYMENT: In order to enable the Contractor to prosecute the work advantageously, the Architect may from time to time, as work progresses, but not more often than once a month, make in writing an estimate, such in his opinion, shall be just and fair, of the amount of the work done by the Contractor in the performance of this Contract. No allowance will be made in these estimates for materials furnished and delivered until such materials shall have been permanently incorporated in the work. The first estimate will be of the amount of the work done since the Contractor commenced the performance of this Contract on his part, and every subsequent estimate, except the final one, will be of the amount of work done since the last preceding estimate was made. Such estimates of amount and quality will not be required to be made by strict measurement, but they shall be made by measurement or by estimation, or partly by one and partly by the other, and it shall be sufficient if they are approximate only and estimates so called. Upon each estimate being made and certified by the Architect in writing and filed with the Clerk, the Municipality will pay the Contractor Ninety-eight (98%) percent of the amount stated in such estimate or certificate. The value of the work herein certified to have been done in each such estimate shall amount to more than one thousand dollars (\$ 1,000).
24. DEDUCTIONS: Any amount at any time due the Municipality from the Contractor under the Contract, or under any law or ordinance, including

liquidated and other damages and amounts which the Municipality is entitled to deduct hereunder, and any expense for repairs or otherwise which the Municipality or any agent thereof is authorized to incur on behalf of the Contractor, shall be deducted, retained and paid by the Municipality out of the monies due or to become due the Contractor under this Contract, or if such monies are not sufficient, the additional money shall be furnished by the Contractor and if he refuses and neglects to provide the same they shall be provided by the sureties.

25. **ABANDONMENT:** If the work to be done under this Contract shall be abandoned by the Contractor, or if this Contract shall be assigned, or the work sublet by him otherwise than as herein specified, or if at any time the Architect shall be of the opinion, or shall so certify in writing to the Council, that the performance of the Contract is unnecessary or unreasonably delayed, or that the Contractor is willfully violating any of the conditions or covenants of this Contract, or is executing the same in bad faith, or not in accordance with the terms thereof, or if the work be not fully completed within the time named in this Contract for its completion, the Council may notify the Contractor not to resume or to discontinue all work, or any part thereof, under this Contract, by a written notice to be served upon the Contractor as provided in this Contract. Thereupon the Contractor shall not resume or shall discontinue the work, or such part thereof, and the Municipality shall thereupon have the power to contract for the completion of this Contract in manner prescribed by law, or to place such and so many persons as they may deem advisable, by contract or otherwise, to work at and complete the work herein described, or such part thereof, and to use such materials that they may find at the work site, and to procure other materials and labor, materials and equipment of the Contractor. The expense so charged shall be deducted and paid by the Municipality out of such monies as would have been available and payable under this Contract if it has been completed by the Contractor and he shall and will pay the amount of such excess to the Municipality; but, in case such expense and liquidated damages shall be less than the amount which would be payable to the Contractor if he had completed the Contract, he shall be entitled to receive the difference, subject however, to all other terms, covenants and conditions of said Contract.

Upon making the aforesaid written notice to the Contractor to discontinue all or any part of the work, for the purposes and reasons hereinbefore specified, no equipment and materials shall be removed so long as the same may be wanted by the Municipality to complete the work. In the computation of liquidated damages for delay in completion of the work, the time taken by the Municipality or allowed to the new Contractor to whom the Contract for the completion of the work may be awarded, as well as the time taken in advertising and awarding such new contract, shall be added to the time consumed by the Contractor up to the date when the Municipality shall have taken the action provided in this clause, and from such total time shall be deducted for the time allowed in this Contract for its completion. Then the

particular part of the work which the Contractor has been previously directed to discontinue is being completed by the Municipality under the terms of another Contract or otherwise, as herein provided, the Contractor agrees to prosecute and continue the remainder of the work in conformity with the terms of this Contract and in such manner as in no way to hinder or interfere with the persons or work- men employed by the Municipality, as above provided. In the event the Municipality - undertakes to have the work or any part thereof performed under this clause of the Contract, its certificates as to the amount of the work performed, its cost, and of the excess cost, if any, of completing the work called for under this Contract shall be binding and conclusive upon the Contractor, his assigns and his sureties.

26. NON-ESTOPPEL: The Municipality shall not, nor shall any department or officer thereof be precluded or estopped, by any return or certificate made by the Architect or other officer, agent or appointee of the Municipality under any provision of this Contract from any time (either before or after completion and acceptance of the work and payment therefore pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this Contract, or for showing at any time that any such return or certificate is untrue or incorrect or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the Specifications; and that the Municipality shall not be precluded or stopped, notwithstanding any such return or certificate and payment in accordance herewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract.
27. TRADE NAMES AND PATENTS: Whenever an article of any class of materials is specified by the trade name of any particular patentee, manufacturer or dealer, or by reference to the catalogue of any such manufacturer or dealer, it shall be taken as intending to mean and specify the article or materials described or other equal thereto in quality, finish and durability and equally as serviceable for the purpose for which it is or they are intended.
28. LAWS AND ORDINANCES: The Contractor shall keep himself fully informed of, and shall at all times observe and cause his agents and employees to observe, all laws and ordinances, Federal, State, or Municipal, affecting those engaged or employed in the work, and all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in this Contract by the Contractor or any of his agents, in relation to any such law, ordinance, regulation, order or decree the Contractor shall forthwith report the same in writing to the Architect. He shall at all times himself observe and comply with, and shall cause his agents and employees to observe and comply with all such laws, ordinances, regulations, orders, and decrees, and the Contractor shall protect and indemnify the Municipality and its officers and agents against

any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or by his employees.

29. GUARDS AND WARNING SIGNS: The Contractor shall place proper guards and warning signs for the prevention of accidents, and shall put and keep at night suitable and efficient lights where necessary to prevent accidents or injuries to the person or property of another, and if warning signs and lights are inadequate or subject to displacement or removal, a watchman shall be located to insure maintenance of the proper safeguards. He shall indemnify and save harmless the Municipality from all sorts of suits of action, and damages or costs of every name and description to which the Municipality may be subjected, or put by reason of injury to the person or property of another, resulting from the negligence or carelessness on the part of the Contractor, his servants or agents. The Contractor, under this Contract, as may be considered necessary by the Architect, may be retained by the Municipality until all suits or claims for damages (if they arise) shall be settled or disposed of and evidence to that effect furnished to the satisfaction of the Municipality.

30. OTHER CONSTRUCTION: Prior to or during the progress of the work under this Contract the Architect reserves the right to undertake or grant permits for any construction of or making repairs to any structure or appurtenances thereof on or about the site of the work, and for such purposes or any other purpose, the Architect reserves the right of suspending work on any part of the work during construction of same, without compensation to the Contractor for such suspension other than extending the time for completing the work as it may have been, in the opinion of the Architect, delayed by such suspension. The Contractor shall not interfere with or place any impediment in the way of the person or persons who may be engaged therein but shall carry on the work herein specified in such manner as to afford all reasonable facilities for doing such work.

31. LABOR LAWS: The Contractor shall comply with the provisions of all labor laws or "codes" and that no laborer, workman, or mechanic in the employ of the Contractor, or other person doing or contracting to do the whole or any part of such work, shall not be permitted or required to work more than eight hours in any one calendar day, except in case of extraordinary emergency caused by fire, flood, or danger to life and property; that the wages paid for a legal day's work to all classes of such laborers, workmen, or mechanics, upon all such work, or upon any material to be used upon or in connection therewith, shall not be less than the prevailing rate for the day's work in the same trade or occupation in the locality within the region where such work is final or in completed form is to be situated, erected or used; and in the like event that this Contract shall be voided and of no effect unless the person or corporation making or performing the same shall comply with the provisions of all "labor laws" and "codes" relating to the work under this Contract.

32. WORKMAN'S COMPENSATION LAWS: This Contract shall be void and of no effect unless the person or corporation making or performing the same shall secure compensation for the benefit of, and keep insured during the life of this Contract, the employees engaged thereon, in compliance with the provisions of the Workman's Compensation Laws and Acts mandatory thereof, if the Contract shall fall within the purview of the said law.
33. ASSIGNMENTS: The Contractor shall not assign, transfer, convey, sublet or otherwise dispose of this Contract or any part thereof, or his right, title, or interest in or to the same or any part thereof, without the previous consent in writing of the Municipality endorsed upon or attached to the copies of this Contract filed in the office of the Clerk of the Municipality; and he shall not assign, by power of attorney or otherwise, any of the monies due, or to become due and payable under this Contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sublet or otherwise dispose of this Contract, or of his right, title, or interest therein, or any of the monies to become due under this Contract to any other company or corporation, this Contract may, at the option of the Municipality be revoked and annulled, and the Municipality will thereupon be relieved and discharged from any and all liability and obligation growing out of the same to the Contractor, and to his assignee or transferee; provided that nothing herein contained shall be construed to hinder, prevent or effect an assignment by the Contractor for the benefit of his creditors made pursuant to the statutes of the State of New Jersey.
34. LIENS: The Contractor shall pay promptly, and in cash, for all labor employed upon materials furnished and used in the work and no lien or encumbrance shall be placed upon the property under any provision of any lien law, or in favor of or upon the suit or proceedings at law by any labor or material man. If at any time before or within thirty (30) days after the whole work herein agreed to be performed, and all labor and material herein agreed to be delivered, have been performed or delivered or completed or accepted by the Municipality, any person claiming to have performed any labor or furnished any material toward the performance or completion of this Contract shall file with the Architect and with the Clerk any such notice as is described in the lien law or any other law of the State of New Jersey, then, and in every such case, the Municipality shall retain, anything herein contained to the contrary thereof notwithstanding, from the monies under its control and due or grow due under this agreement, so much of said monies as shall be sufficient to pay off, satisfy and discharge the amount in such notice alleged or claimed to be due to the persons filing such notice. Together with the reasonable cost of any action brought to enforce such claims, or the lien created by the filing of such notice. The monies so retained shall be retained by the Municipality until the lien thereon created by said act and the filing of said notice shall be discharged, pursuant to the provisions of said act.
35. AFFIRMATIVE ACTION PLAN:

- (a) If awarded a contract, the successful bidder/vendor will be required to comply with the requirements of N.J.S.A. 10.5-31 et seq. and N.J.A.C. 17:27 et seq.
- (b) All successful bidders (goods and services vendors, professional service vendors and construction contractors) are required to submit evidence of appropriate affirmative action compliance. Specifically, each vendor/contractor shall submit to the Township, prior to execution of the Township's contract, one of the following:

Goods, Professional Services and General Service Vendors

- 1. Letter of Federal Approval indicating that the vendor is under an existing Federally approved or sanctioned affirmative action program. A copy of the approval letter is to be provided by the vendor to the Township and the Division of Contract Compliance and Equal Employment Opportunity in the Public Contracts ("Division"), (see Attachment #5)
This approval letter is valid for one year from the date of issuance, or
- 2. A Certificate of Employee Information Report (hereafter "Certificate"), issued in accordance with the N.J.A.X. 17:27-1.1 et seq. The vendor must provide a copy of the Certificate to the Township as evidence of its compliance with the regulations. The Certificate represents the review and approval of the vendor's Employee Information Report, Form AA-302 by the Division. (See Attachment #6) The period of validity of the Certificate is indicated on its ace. Certificates must be renewed prior to their expiration date in order to remain valid, or
- 3. The successful vendor shall complete and Initial Employee Report, Form AA-302 and submit it to the Division with \$150.00 Fee and forward a copy of the Form to the Township (see Attachment #7). Upon submission and review by the Division, this report shall constitute evidence of compliance with the regulations.

After notification of award but prior to execution of goods and services and professional services contracts, the Equal Employment Opportunity (EEO/Affirmative Action (AA) evidence must be submitted.

Construction Contractors

The construction contractors shall complete and submit an Initial Project Workforce Report Form AA-201 (see Attachment #8) upon notification of award. Proper completion and submission of this report shall constitute evidence of the contractor's compliance with the regulations. Failure to submit this form may result in the contract being terminated. The contractor also agrees to submit a copy of the Monthly Project Workforce Report Form A-202 (see Attachment #9) once a month thereafter for the duration of the contract to the Division and to the Township's compliance officer.

After notification of award, but prior to signing a construction contract, the Equal

Employment Opportunity (EEO)/Affirmative Action (AA) evidence must be submitted. The Township shall retain the Affirmative Action evidence in their files for review by the Division.

For all goods, services and professional service vendors, vendors shall comply with the affirmative action language of Exhibit A.

For all construction contracts, the successful bidder shall comply with the affirmative action language of Exhibit B.

Sample Federal Letter of Approval

U.S. Department of Labor
Programs

Employment Standards Administration
Office of Federal Control Compliance

Newark Area Office
124 Evergreen Place, Fourth Floor
East Orange, NJ 07108



February 27, 20__

Dear

Our recent compliance review of your establishment's equal employment opportunity policies and practices was completed on February 27, 20__.

We found no apparent deficiencies or violations of Executive Order 11266, as amended, Section 503 of the Rehabilitation Act of 1973 or 38 USC 2012 (the Vietnam Era Veterans Readjustment Assistance Act). Accordingly, your establishment is deemed to be in compliance with these laws based on the material reviewed.

The Office of Federal Contract Compliance Programs sincerely appreciates the cooperation and courtesies extended by you and your staff during the conduct of the compliance review.

Sincerely,

Area officer Director

SAMPLE CERTIFICATE OF EMPLOYEE INFORMATION REPORT



Certification _____

CERTIFICATE OF EMPLOYEE INFORMATION REPORT

This is to certify that the contractor State has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 of esp, and the State Treasurer has approved said report. This approval will remain in effect for the period of _____.

VOID

[**VOID**]



State Treasurer

STATE OF NEW JERSEY
Division of Purchase & Property
Contract Compliance Audit Unit
EEO Monitoring Program

EMPLOYEE INFORMATION REPORT

IMPORTANT-READ INSTRUCTIONS CAREFULLY BEFORE COMPLETING FORM. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM AND TO SUBMIT THE REQUIRED \$150.00 FEE MAY DELAY ISSUANCE OF YOUR CERTIFICATE. DO NOT SUBMIT EEO-1 REPORT FOR SECTION B, ITEM 11. For instructions on completing the form, go to: http://www.state.nj.us/treasury/contract_compliance/pdf/aa302ins.pdf

SECTION A - COMPANY IDENTIFICATION

1. FID. NO. OR SOCIAL SECURITY	2. TYPE OF BUSINESS <input type="checkbox"/> 1. MFG <input type="checkbox"/> 2. SERVICE <input type="checkbox"/> 3. WHOLESALE <input type="checkbox"/> 4. RETAIL <input type="checkbox"/> 5. OTHER	3. TOTAL NO. EMPLOYEES IN THE ENTIRE COMPANY
4. COMPANY NAME		
5. STREET	CITY	COUNTY STATE ZIP CODE
6. NAME OF PARENT OR AFFILIATED COMPANY (IF NONE, SO INDICATE)		CITY STATE ZIP CODE
7. CHECK ONE: IS THE COMPANY: <input type="checkbox"/> SINGLE-ESTABLISHMENT EMPLOYER <input type="checkbox"/> MULTI-ESTABLISHMENT EMPLOYER		
8. IF MULTI-ESTABLISHMENT EMPLOYER, STATE THE NUMBER OF ESTABLISHMENTS IN NJ		
9. TOTAL NUMBER OF EMPLOYEES AT ESTABLISHMENT WHICH HAS BEEN AWARDED THE CONTRACT		
10. PUBLIC AGENCY AWARDDING CONTRACT		
	CITY	COUNTY STATE ZIP CODE
Official Use Only	DATE RECEIVED	INAUG. DATE ASSIGNED CERTIFICATION NUMBER

SECTION B - EMPLOYMENT DATA

11. Report all permanent, temporary and part-time employees ON YOUR OWN PAYROLL. Enter the appropriate figures on all lines and in all columns. Where there are no employees in a particular category, enter a zero. Include ALL employees, not just those in minority/non-minority categories, in columns 1, 2, & 3. **DO NOT SUBMIT AN EEO-1 REPORT.**

JOB CATEGORIES	ALL EMPLOYEES			PERMANENT MINORITY/NON-MINORITY EMPLOYEE BREAKDOWN										
	COL. 1 TOTAL (Cols 2 & 3)	COL. 2 MALE	COL. 3 FEMALE	MALE					FEMALE					
				BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	
Officials/ Managers														
Professionals														
Technicians														
Sales Workers														
Office & Clerical														
Craftworkers (Skilled)														
Operatives (Semi-skilled)														
Laborers (Unskilled)														
Service Workers														
TOTAL														
Total employment from previous Report (if any)														
Temporary & Part-Time Employees	The data below shall NOT be included in the figures for the appropriate categories above.													

12. HOW WAS INFORMATION AS TO RACE OR ETHNIC GROUP IN SECTION B OBTAINED? <input type="checkbox"/> 1. Visual Survey <input type="checkbox"/> 2. Employment Record <input type="checkbox"/> 3. Other (Specify)	14. IS THIS THE FIRST Employee Information Report Submitted? 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/>	15. IF NO, DATE LAST REPORT SUBMITTED MO. DAY YEAR
13. DATES OF PAYROLL PERIOD USED From: _____ To: _____		

SECTION C - SIGNATURE AND IDENTIFICATION

16. NAME OF PERSON COMPLETING FORM (Print or Type)	SIGNATURE	TITLE	DATE MO DAY YEAR
17. ADDRESS NO. & STREET	CITY	COUNTY	STATE ZIP CODE PHONE (AREA CODE, NO., EXTENSION)

STATE OF NEW JERSEY
 DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
 CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

FORM AA-201
 Revised 11/11

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

Official Use Only

Assignment _____

Code _____

For instructions on completing the form, go to: http://www.state.nj.us/treasury/contract_compliance/pdf/aa201ins.pdf

1. FID NUMBER		2. CONTRACTOR ID NUMBER		5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDED CONTRACT					
3. NAME AND ADDRESS OF PRIME CONTRACTOR (Name) (Street Address) (City) (State) (Zip Code)				Name: Address:					
				CONTRACT NUMBER DATE OF AWARD DOLLAR AMOUNT OF AWARD					
4. IS THIS COMPANY MINORITY OWNED [] OR WOMAN OWNED []				6. NAME AND ADDRESS OF PROJECT		7. PROJECT NUMBER			
				Name: Address:					
9. TRADE OR CRAFT		8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? YES <input type="checkbox"/>							
		COUNTY							
		PROJECTED TOTAL EMPLOYEES		PROJECTED MINORITY EMPLOYEES					
		MALE		MALE		PROJECTED PHASE - IN		PROJECTED COMPLETION	
		FEMALE		FEMALE		DATE		DATE	
		J AP		J AP		J AP		J AP	
1. ASBESTOS WORKER									
2. BRICKLAYER OR MASON									
3. CARPENTER									
4. ELECTRICIAN									
5. GLAZIER									
6. HVAC MECHANIC									
7. IRONWORKER									
8. OPERATING ENGINEER									
9. PAINTER									
10. PLUMBER									
11. ROOFER									
12. SHEET METAL WORKER									
13. SPRINKLER FITTER									
14. STEAMFITTER									
15. SURVEYOR									
16. TILER									
17. TRUCK DRIVER									
18. LABORER									
19. OTHER									
20. OTHER									

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

 (Signature)

10. (Please Print Your Name)

(Title)

(Area Code)

(Telephone Number)

(Ext.)

(Date)

State of New Jersey
Department of Labor & Workforce Development
Construction EEO Compliance Monitoring Program

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION

For instructions on completing the form, go to:

http://www.state.nj.us/treasury/contract_compliance/pdf/aa202ins.pdf

1. Name and address of Prime Contractor		2. Contractor ID Number	3. F ID or SS Number	
(NAME)			4. Reporting Period	
(ADDRESS)			5. Public Agency Awarding Contract	
(CITY)		(STATE)	(ZIP CODE)	Date of Award
		6. Name and Location of Project		7. Project ID Number
		County		

8. CONTRACTOR NAME (LIST PRIME CONTRACTOR WITH SUBS FOLLOWING)	9. PERCENT OF WORK COMPLETED	10. TRADE OR CRAFT	CLASSI- FICATION (SEE REVERSE)	11. NUMBER OF EMPLOYEES						12. TOTAL	13. WORK HOURS				15. CUM. WORK HRS			16. CUM. % OF WH		
				A	B	C	D	E	F	NO. OF MIN. EMP.	TOTAL WRK HOURS	A	B	A	B	TOTAL WORK HOURS	A	B	A	B
				TOTAL	BLACK	HISPANIC	AMERICAN INDIAN	ASIAN	FEMALES		MIN. WH	FEMALE WH	% OF MIN. WH	% OF FEMALE WH		MIN. HOURS	FEMALE HOURS	% OF MIN. WH	% OF FEM. WH	
			J																	
			AP																	
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			AP																	
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			AP																	
			J																	
			AP																	

17. COMPLETED BY (PRINT OR TYPE)

(NAME)	(SIGNATURE)	(TITLE)
(AREA CODE)	(TELEPHONE NUMBER)	(EXT.)
(DATE)		

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of alterations to an existing restroom located on the first floor of the Nutley Police Department located at 228 Chestnut Street, Nutley NJ in accordance with drawings & these specifications.
 - 1. Project Location: Nutley Police Department, 228 Chestnut Street, Nutley, NJ 07110
 - 2. Owner: Township of Nutley, 1 Kennedy Drive, Nutley, NJ 07110
- B. Architect Identification: The Contract Documents, dated 01/18/18 were prepared for the Township of Nutley by Dassa Haines Architectural Group, LLC, 16 Portland Place Montclair, NJ 07042.
- C. The Work consists of alterations to an existing restroom located on the first floor of the Nutley Police Department. The scope of work includes converting an existing restroom into a single occupant unisex accessible bathroom.
 - 1. The work includes but is not limited to select demolition, electrical, mechanical, plumbing, carpentry, new plumbing fixtures, lighting fixtures finishes, and restroom accessories.
- D. Project will be constructed under a general construction contract.

1.2 WORK SEQUENCE

- A. The Work shall be conducted in 1 phase.
 - 1. Phase 1: Work of this phase shall be substantially complete and ready for occupancy within 35 calander days of the Notice to Proceed.

1.3 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

1.4 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100

SECTION 01140 - WORK RESTRICTIONS

PART 1 - GENERAL

1.1 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
1. Limits: Facility will be open at 8:00 AM till 4:00 PM. Coordinate with Nutley Police Department if additional hours are necessary after 5:00 PM. Entrance to Facility will be through main reception entrance. Confine construction operations to proposed area of work on the 1st floor. Coordinate with the Nutley Police Department if accesses to other floors are required. Elevator useage is limited to passenger use only.
 2. Owner Occupancy: Allow for Owner occupancy of site and use by the public.
 3. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.2 OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.
- B. Partial Owner Occupancy: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.

2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will provide, operate, and maintain mechanical and electrical systems serving occupied portions of building.
4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01140

SECTION 01250 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. See Division 1 Section "Allowances" for procedural requirements for handling and processing allowances.
- C. See Division 1 Section "Unit Prices" for administrative requirements for using unit prices.

1.2 MINOR CHANGES IN THE WORK

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

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 5. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- C. Proposal Request Form: Use AIA Document G709.

1.4 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in purchase amount only where indicated as part of the allowance.
 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within 5 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 5 days after such authorization.

1. Do not include 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 the Contract Documents.
2. No change to 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.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01250

SECTION 01270 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. See Division 1 Section "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included at the end of this Section. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES (Not Used)

- A. Unit Price No. 1: (None)

END OF SECTION 01270

SECTION 01290 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Submittals Schedule and Application for Payment forms with Continuation Sheets.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.

- g. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
- 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
- 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
- 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
- 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- 7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- 8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
- 9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

- C. Payment Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days before the date for each progress payment.
- D. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Submittals Schedule (preliminary if not final).
 5. List of Contractor's staff assignments.
 6. Copies of building permits.
 7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 8. Certificates of insurance and insurance policies.
 9. Performance and payment bonds.
 10. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (Not Used)

Project: Alterations to First Floor Restroom for Nutley Police Department
2017-115 228 Chestnut Street Nutley, NJ

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PART 3 - EXECUTION (Not Used)

END OF SECTION 01290

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General Project coordination procedures.
 - 2. Coordination Drawings.
 - 3. Project meetings.
- B. See Division 1 Section "Summary of Multiple Contracts" for a description of the division of Work among separate contracts and responsibility for coordination activities not in this Section.
- C. See Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 COORDINATION

- A. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.

1.3 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Indicate relationship of components shown on separate Shop Drawings.
 2. Indicate required installation sequences.
 3. See Division 15 Section "Basic Mechanical Materials and Methods" for specific Coordination Drawing requirements for mechanical installations.
 4. See Division 16 Section "Basic Electrical Materials and Methods" for specific Coordination Drawing requirements for electrical installations.

1.4 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within 3 days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 3 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing.
 - d. Designation of responsible personnel.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for processing Applications for Payment.
 - g. Distribution of the Contract Documents.
 - h. Submittal procedures.
 - i. Preparation of Record Documents.
 - j. Use of the premises.
 - k. Responsibility for temporary facilities and controls.
 - l. Parking availability.
 - m. Office, work, and storage areas.
 - n. Equipment deliveries and priorities.
 - o. First aid.
 - p. Security.
 - q. Progress cleaning.
 - r. Working hours.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related Change Orders.
 - d. Purchases.
 - e. Deliveries.
 - f. Submittals.
 - g. Review of mockups.

- h. Possible conflicts.
 - i. Compatibility problems.
 - j. Time schedules.
 - k. Weather limitations.
 - l. Manufacturer's written recommendations.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities and controls.
 - q. Space and access limitations.
 - r. Regulations of authorities having jurisdiction.
 - s. Testing and inspecting requirements.
 - t. Required performance results.
 - u. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements.
 - 4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.

- 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
 - 14) Documentation of information for payment requests.
3. Reporting: 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.
- a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01310

SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Daily construction reports.
 - 4. Field condition reports.
 - 5. Construction photographs.
- B. See Division 1 Section "Summary of Multiple Contracts" for preparing a combined Contractor's Construction Schedule.
- C. See Division 1 Section "Payment Procedures" for submitting the Schedule of Values.
- D. See Division 1 Section "Closeout Procedures" for submitting photographic negatives as Project Record Documents at Project closeout.

1.2 DEFINITIONS

- A. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- B. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
- C. Fagnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- D. Major Area: A story of construction, a separate building, or a similar significant construction element.

1.3 SUBMITTALS

- A. Submittals Schedule: Submit 4 copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit 2 printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.
- C. Daily Construction Reports: Submit 2 copies at weekly intervals.
- D. Field Condition Reports: Submit 2 copies at time of discovery of differing conditions.

1.4 QUALITY ASSURANCE

- A. Photographer Qualifications: An individual of established reputation who has been regularly engaged as a professional photographer for not less than three years.
- B. Year 2000 (Y2K) Compliance: Computer software for scheduling shall be capable of accurately processing, sequencing, calculating, transmitting, and receiving date data from, into, and between all dates before, through, and after January 1, 2000, including leap-year calculations.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities including temporary lighting.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for Notice to Proceed to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 - 4. Startup and Testing Time: Include not less than 5 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 4. Work Restrictions: Show the effect on the schedule of the following:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Use of premises restrictions.
 - e. Provisions for future construction.
 - f. Seasonal variations.
 - g. Environmental control.
 5. Work Stages: Indicate important stages of construction for each major portion of the Work.
 6. Other Constraints: Review with owner allowable hours of operation, accessibility & security issues.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 5 days of date established for the Notice to Proceed. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one day before each regularly scheduled progress meeting.

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

3.2 CONSTRUCTION PHOTOGRAPHS

- A. Periodic Construction Photographs: Take photographs weekly, coinciding with cutoff date associated with each Application for Payment. Photographer shall select vantage points to best show status of construction and progress since last photographs were taken.
1. Field Office Prints: Retain one set of prints of periodic photographs in field office at Project site, available at all times for reference. Identify photographs the same as for those submitted to Architect.

END OF SECTION 01320

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. See Division 1 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule and construction photographs.
- C. See Division 1 Section "Quality Requirements" for submitting test and inspection reports and Delegated-Design Submittals and for erecting mockups.
- D. See Division 1 Section "Closeout Procedures" for submitting warranties Project Record Documents and operation and maintenance manuals.

1.2 DEFINITIONS

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

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- B. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal.
 - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Allow 15 days for processing each resubmittal.
 - 4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- D. Identification: Place a permanent label or title block on each submittal for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 - 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Unique identifier, including revision number.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Other necessary identification.
- E. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.

- F. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
 - 1. Additional copies submitted for maintenance manuals will **[not]** be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
 - 1. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
 - 2. Transmittal Form: Use AIA Document G810
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
 - 1. Number of Copies: Submit 4 copies of each submittal, unless otherwise indicated. Architect will return 3 copies. Mark up and retain one returned copy as a Project Record Document.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.

- c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with recognized trade association standards.
 - i. Compliance with recognized testing agency standards.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
- D. Coordination Drawings: Comply with requirements in Division 1 Section "Project Management and Coordination."
- E. Samples: Prepare physical units of materials or products, including the following:
1. Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
 2. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from

manufacturer's product line. Architect will return submittal with options selected.

3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Submit 4 sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 4. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Architect's sample where so indicated. Attach label on unexposed side.
 5. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- F. Product Schedule or List: Prepare a written summary indicating types of products required for the Work and their intended location.
- G. Delegated-Design Submittal: Comply with requirements in Division 1 Section "Quality Requirements."
- H. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation."
- I. Application for Payment: Comply with requirements in Division 1 Section "Payment Procedures."
- J. Schedule of Values: Comply with requirements in Division 1 Section "Payment Procedures."
- K. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Quality Requirements."
- B. Contractor's Construction Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- J. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results

of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

- K. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- L. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- M. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- N. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Division 1 Section "Closeout Procedures."
- O. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- P. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- Q. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections.
- R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- S. Construction Photographs: Comply with requirements in Division 1 Section "Construction Progress Documentation."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

- 1. **APPROVED**
APPROVED AS CORRECTED
REVISE AND RESUBMIT
REJECTED

- C. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 01330

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See Divisions 2 through 16 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.
- C. Reports: Prepare and submit certified written reports that include the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Ambient conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service

performance, as well as sufficient production capacity to produce required units.

- B. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- G. **Testing Agency Qualifications:** An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.

1.6 QUALITY CONTROL

- A. **Owner Responsibilities:** Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.

2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor and adjusted by change order.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Special Tests and Inspections: Owner will engage a testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner.
1. Testing agency will notify Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 2. Testing agency will submit a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 3. Testing agency will submit a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 4. Testing agency will interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 5. Testing agency will retest and reinspect corrected work.
- D. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including

retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.

- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 5. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field-curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
 - 2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not 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 tradespeople of the corresponding generic name.

- J. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless 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 standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect 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 requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must 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, obtain copies directly from publication source and make them available on request.
- E. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list:

ADAAG	Americans with Disabilities Act (ADA)
CFR	Code of Federal Regulations
CRD	Handbook for Concrete and Cement
DOD	Department of Defense Specifications and Standards
FED-STD	Federal Standard (See FS)
FS	Federal Specification
FTMS	Federal Test Method Standard (See FS)
MILSPEC	Military Specification and Standards
UFAS	Uniform Federal Accessibility Standards

1.3

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

AA	Aluminum Association, Inc. (The)
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AAN	American Association of Nurserymen (See ANLA)
AASHTO	American Association of State Highway and Transportation Officials

AATCC	American Association of Textile Chemists and Colorists (The)
ABMA	American Bearing Manufacturers Association
ACI	American Concrete Institute/ACI International
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AEIC	Association of Edison Illuminating Companies, Inc. (The)
AFPA	American Forest & Paper Association (See AF&PA)
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALA	American Laminators Association (See LMA)
ALCA	Associated Landscape Contractors of America
ALSC	American Lumber Standard Committee
AMCA	Air Movement and Control Association International, Inc.
ANLA	American Nursery & Landscape Association (Formerly: AAN - American Association of Nurserymen)
ANSI	American National Standards Institute

AOSA	Association of Official Seed Analysts
APA	APA - The Engineered Wood Association
APA	Architectural Precast Association
API	American Petroleum Institute
ARI	Air-Conditioning & Refrigeration Institute
ASCA	Architectural Spray Coaters Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	ASME International (The American Society of Mechanical Engineers International)
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWCI	AWCI International (Association of the Wall and Ceiling Industries International)
AWCMA	American Window Covering Manufacturers Association (See WCMA)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International)

CCC	Carpet Cushion Council
CCFSS	Center for Cold-Formed Steel Structures
CDA	Copper Development Association Inc.
CEA	Canadian Electricity Association
CFFA	Chemical Fabrics & Film Association, Inc.
CGA	Compressed Gas Association
CGSB	Canadian General Standards Board
CIMA	Cellulose Insulation Manufacturers Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association (Formerly: National Particleboard Association)
CPPA	Corrugated Polyethylene Pipe Association
CRI	Carpet & Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSA	CSA International (Formerly: IAS - International Approval Services)
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)
DHI	Door and Hardware Institute
EIA/TIA	Electronic Industries Alliance/Telecommunications Industry Association
EIMA	EIFS Industry Members Association

EJMA	Expansion Joint Manufacturers Association, Inc.
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association (See GANA)
FM	Factory Mutual System (See FMG)
FMG	FM Global (Formerly: FM - Factory Mutual System)
GA	Gypsum Association
GANA	Glass Association of North America (Formerly: FGMA - Flat Glass Marketing Association)
GRI	Geosynthetic Research Institute
GTA	Glass Tempering Division of Glass Association of North America (See GANA)
HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association (See NAAMM)
HPVA	Hardwood Plywood & Veneer Association
HPW	H. P. White Laboratory, Inc.
IAS	International Approval Services (See CSA International)
ICEA	Insulated Cable Engineers Association, Inc.
ICRI	International Concrete Repair Institute (The)
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council

ILI	Indiana Limestone Institute of America, Inc.
IRI	Industrial Risk Insurers
ITS	Intertek Testing Services
IWS	Insect Screening Weavers Association (Now defunct)
KCMA	Kitchen Cabinet Manufacturers Association
LGSI	Light Gage Structural Institute
LMA	Laminating Materials Association (Formerly: ALA - American Laminators Association)
LPI	Lightning Protection Institute
LSGA	Laminated Safety Glass Association (See GANA)
MBMA	Metal Building Manufacturers Association
MCA	Metal Construction Association
MFMA	Maple Flooring Manufacturers Association
MFMA	Metal Framing Manufacturers Association
MGPHO	Medical Gas Professional Healthcare Organization, Inc.
MHIA	Material Handling Industry of America
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association (See SSMA)
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NAAMM	North American Association of Mirror Manufacturers (See GANA)
NACE	NACE International (National Association of Corrosion Engineers International)
NAIMA	North American Insulation Manufacturers Association (The)

NAMI	National Accreditation and Management Institute, Inc.
NAPM	National Association of Photographic Manufacturers (See PIMA)
NBGQA	National Building Granite Quarries Association, Inc.
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCTA	National Cable Television Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NOFMA	National Oak Flooring Manufacturers Association
NPA	National Particleboard Association (See CPA)
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSA	National Stone Association
NSF	NSF International (National Sanitation Foundation International)

NTMA	National Terrazzo and Mosaic Association, Inc.
NWWDA	National Wood Window and Door Association (See WDMA)
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PIMA	Photographic & Imaging Manufacturers Association (Formerly: NAPM - National Association of Photographic Manufacturers)
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Association
SAE	SAE International
SDI	Steel Deck Institute
SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)
SPI	The Society of the Plastics Industry

SPIB	Southern Pine Inspection Bureau (The)
SPI/SPFD	The Society of the Plastics Industry Spray Polyurethane Foam Division (See SPFA)
SPRI	SPRI (Single Ply Roofing Institute)
SSINA	Specialty Steel Industry of North America
SSMA	Steel Stud Manufacturers Association (Formerly: ML/SFA - Metal Lath/Steel Framing Association)
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWI	Steel Window Institute
SWRI	Sealant, Waterproofing, and Restoration Institute
TCA	Tile Council of America, Inc.
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
TPI	Truss Plate Institute
TPI	Turfgrass Producers International
UFAC	Upholstered Furniture Action Council
UL	Underwriters Laboratories Inc.
UNI	Uni-Bell PVC Pipe Association
USITT	United States Institute for Theatre Technology, Inc.
USP	U.S. Pharmacopeia
WASTEC	Waste Equipment Technology Association
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association (Formerly: AWCMA - American Window Covering Manufacturers Association)

WDMA Window & Door Manufacturers Association
(Formerly: NWWDA - National Wood Window and Door Association)

WIC Woodwork Institute of California

WMMPA Wood Moulding & Millwork Producers Association

WWPA Western Wood Products Association

- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

BOCA BOCA International, Inc.

CABO Council of American Building Officials (See ICC)

IAPMO International Association of Plumbing and Mechanical Officials (The)

ICBO International Conference of Building Officials

ICC International Code Council
(Formerly: CABO - Council of American Building Officials)

SBCCI Southern Building Code Congress International, Inc.

- D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

CE Army Corps of Engineers

CPSC Consumer Product Safety Commission

DOC Department of Commerce

EPA Environmental Protection Agency

FAA Federal Aviation Administration

FCC Federal Communications Commission

FDA Food and Drug Administration

GSA	General Services Administration
HUD	Department of Housing and Urban Development
LBL	Lawrence Berkeley Laboratory (See LBNL)
LBNL	Lawrence Berkeley National Laboratory
NCHRP	National Cooperative Highway Research Program (See TRB)
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety & Health Administration
RUS	Rural Utilities Service (See USDA)
TRB	Transportation Research Board
USDA	Department of Agriculture
USPS	Postal Service

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

CAPU C	(See CPUC)
CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation
CPUC	California Public Utilities Commission
TFS	Texas Forest Service Forest Products Laboratory

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

Project: Alterations to First Floor Restroom for Nutley Police Department
2017-115 228 Chestnut Street Nutley, NJ

1/18

END OF SECTION 01420

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for selecting products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. See Division 1 Section "Closeout Procedures" for submitting warranties for contract closeout.
- C. See Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.2 DEFINITIONS

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

qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

- D. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.3 SUBMITTALS

- A. **Product List:** Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. **Completed List:** Within 10 days after date of commencement of the Work, submit 4 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 3. **Architect's Action:** Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.
- B. **Substitution Requests:** Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. **Substitution Request Form:** Use CSI Form 13.1A
 - 2. **Documentation:** Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include

- attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.
- C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

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

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products to allow for inspection and measurement of quantity or counting of units.
 6. Store materials in a manner that will not endanger Project structure.
 7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 9. Protect stored products from damage.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: Forms are included with the Specifications. Prepare a written document using appropriate form properly executed.

3. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures: Procedures for product selection include the following:
1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
 - a. Substitutions may be considered, unless otherwise indicated.
 2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.

3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
5. Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Product" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Substitutions may be considered, unless otherwise indicated.
8. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches satisfactorily.
 - a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.

9. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received within 10 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
- B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work.
 9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

- A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01600

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. General installation of products.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.
- B. See Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's or Owner's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful,

dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

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

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01700

SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. See Division 7 Section "Through-Penetration Firestop Systems" for patching fire-rated construction.
- C. See Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- D. Requirements in this Section apply to mechanical and electrical installations. See Divisions 15 and 16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.2 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 2 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 - 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
 - 7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - 1. Heating system
 - 2. Plumbing system
 - 3. Electrical system
- C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
 - 1. If possible, retain original Installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

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 Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 4. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION 01731

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes demolition and removal of the following:
 - 1. Selected portions of a building or structure.
 - 2. Selected site elements.
 - 3. Repair procedures for selective demolition operations.
- B. See Division 2 Section "Site Clearing" for site clearing and removal of above- and below-grade improvements.
- C. See Division 15 Sections for demolishing, cutting, patching, or relocating mechanical items.
- D. See Division 16 Sections for demolishing, cutting, patching, or relocating electrical items.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 SUBMITTALS

- A. Proposed Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate. Include measures for the following:
 - 1. Dust control.
 - 2. Noise control.
- B. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.
- C. Predemolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

1.5 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Predemolition Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Owner assumes no responsibility for condition of areas to be selectively demolished.

1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. Hazardous materials will be removed by Owner before start of the Work.
 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Hazardous Materials: Hazardous materials are present in building to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
1. Hazardous material remediation is specified elsewhere in the Contract Documents.
 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
 3. Owner will provide material safety data sheets for materials that are known to be present in buildings and structures to be demolished because of building operations or processes performed there.
- F. Storage or sale of removed items or materials on-site will not be permitted.
- G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

1.7 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.
1. If possible, retain original Installer or fabricator to patch the exposed Work listed below that is damaged during selective demolition. If it is impossible to engage original Installer or fabricator, engage another recognized experienced and specialized firm.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
 - 1. Provide at least 72 hours' notice to Owner if shutdown of service is required during changeover.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utilities serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.
 2. If utility services are required to be removed, relocated, or abandoned, provide temporary utilities before proceeding with selective demolition that bypass area of selective demolition and that maintain continuity of service to other parts of building.
 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
- D. Utility Requirements: Refer to Division 15 and 16 Sections for shutting off, disconnecting, removing, and sealing or capping utilities. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

- A. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
- C. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
- D. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
1. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

- B. Existing Facilities: Comply with building manager's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.

- C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site.
5. Protect items from damage during transport and storage.

- D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.6 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Patching: Comply with Division 1 Section "Cutting and Patching."
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
 - 1. Completely fill holes and depressions in existing masonry walls that are to remain with an approved masonry patching material applied according to manufacturer's written recommendations.
- D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.
- E. Floors and Walls: Where walls or partitions that are demolished extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
- F. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

END OF SECTION 01732

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of Owner's personnel.
 - 6. Final cleaning.
- B. See Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
- C. See Division 1 Section "Construction Progress Documentation" for submitting Final Completion construction photographs and negatives.
- D. See Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 8. Complete startup testing of systems.
 9. Submit test/adjust/balance records.
 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 11. Advise Owner of changeover in heat and other utilities.
 12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 13. Complete final cleaning requirements, including touchup painting.
 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.
 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

1.5 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.
 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 3. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 4. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Note related Change Orders and Record Drawings, where applicable.
- D. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.6 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
 - 1. Operation Data: Include emergency instructions and procedures, system and equipment descriptions, operating procedures, and sequence of operations.
 - 2. Maintenance Data: Include manufacturer's information, list of spare parts, maintenance procedures, maintenance and service schedules for preventive and routine maintenance, and copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.7 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Provide instructors experienced in operation and maintenance procedures.
 - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
 - 3. Schedule training with Owner, through Architect, with at least seven days' advance notice.
 - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.

- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline.
 - 1. Include instruction for system design and operational philosophy, review of documentation, operations, adjustments, troubleshooting, maintenance, and repair.

3.2 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Sweep concrete floors broom-clean in unoccupied spaces.
 - h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and

- other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- j. Remove labels that are not permanent.
 - k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - l. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Replace parts subject to unusual operating conditions.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

SECTION 01781 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. See Division 1 Section "Closeout Procedures" for operation and maintenance manual requirements.
- C. See Divisions 2 through 16 Sections for specific requirements for Project Record Documents of products in those Sections.

1.2 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up Record Prints.
 - 2. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Initial Submittal: Submit one set of marked-up Record Prints. Architect will initial and date each and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity

who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare marked-up Record Prints.

- a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

2.2 RECORD SPECIFICATIONS

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

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Drawings, and Product Data where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

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

END OF SECTION 01781

SECTION 01782 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Emergency manuals.
 - 2. Operation manuals for systems, subsystems, and equipment.
 - 3. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
- B. See Divisions 2 through 16 Sections for specific operation and maintenance manual requirements for products in those Sections.

1.2 SUBMITTALS

- A. Manual: Submit 1 copy of each manual in final form at least 10 days before final inspection. Architect will return copy with comments within 15 days after final inspection.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit 1 copy of each corrected manual within 15 days of receipt of Architect's comments.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.
 - 6. Name and address of Architect.

7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to content of volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for type of emergency, emergency instructions, and emergency procedures.

- B. Type of Emergency: Where applicable, include instructions and procedures for each system, subsystem, piece of equipment, and component for fire, gas leak, water leak, power failure, water outage, and equipment failure.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include instructions on stopping, shutdown instructions for each type of emergency, operating instructions for conditions outside normal operating limits, and required sequences for electric or electronic systems.

2.3 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function.
 - 5. Operating characteristics.
 - 6. Limiting conditions.
 - 7. Performance curves.
 - 8. Engineering data and tests.
 - 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include startup, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance

procedures, repair materials and sources, and warranties and bonds, as described below.

- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations for inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in the manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment.
- D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting

instructions, and demonstration and training videotape if available, that detail essential maintenance procedures.

- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

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

1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- F. Comply with Division 1 Section "Closeout Procedures" for the schedule for submitting operation and maintenance documentation.

END OF SECTION 01782

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Wood framing.
2. Wood supports.
3. Wood blocking.
4. Wood nailers.
5. Wood furring.
6. Wood grounds.
7. Wood sheathing.
8. Wood subflooring.
9. Wood underlayment.
10. Plywood backing panels.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product indicated.

1. Include data for wood-preservative and fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that materials comply with requirements.

B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses.

C. Research/Evaluation Reports: For the following:

1. Treated wood.
2. Engineered wood products.
3. Foam-plastic sheathing.
4. Power-driven fasteners.
5. Powder-actuated fasteners.
6. Expansion anchors.
7. Metal framing anchors.
8. Building wrap.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by grading agency.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
 4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.
- B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
1. Allowable Design Stresses: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Wood Structural Panels:
1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
 2. Oriented Strand Board: DOC PS 2.
 3. Comply with "Code Plus" provisions in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial."

2.3 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWWA C2 (lumber) and AWWA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWWA C31 with inorganic boron (SBX).

- B. Kiln-dry material after treatment to a maximum moisture content of 15 percent for lumber and 15 percent for plywood.
- C. Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing members less than 18 inches (460 mm) above grade.
 - 4. Wood floor plates that are installed over concrete slabs directly in contact with earth.

2.4 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
 - 2. Use treatment that does not promote corrosion of metal fasteners.
 - 3. Use Exterior type for exterior locations and where indicated.
 - 4. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.5 DIMENSION LUMBER

- A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.
- B. Non-Load-Bearing Interior Partitions: Construction, Stud, or No. 2 and any of the following species:
 - 1. Mixed southern pine; SPIB.
 - 2. Eastern softwoods; NELMA.
 - 3. Northern species; NLGA.
 - 4. Western woods; WCLIB or WWPA.

- C. Framing Other Than Non-Load-Bearing Partitions: Construction or No. 2 grade and the following species:
 - 1. Douglas fir-larch, Douglas fir-larch (north), or Douglas fir-south; NLGA, WCLIB, or WWPA.
 - 2. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.
 - 3. Southern pine; SPIB.
 - 4. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA.
- D. Framing Other Than Non-Load-Bearing Partitions: Any species of machine stress-rated dimension lumber with a grade of not less than 2400f-2.0E.
- E. Framing Other Than Non-Load-Bearing Partitions: Any species and grade with a modulus of elasticity of at least 1,300,000 psi (8970 MPa) and an extreme fiber stress in bending of at least 850 psi (5.86 MPa) for 2-inch nominal (38-mm actual) thickness and 12-inch nominal (286-mm actual) width for single-member use.

2.6 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Furring.
 - 4. Grounds.
- B. For items of dimension lumber size, provide Construction No. 2 common grade lumber with 15 percent maximum moisture content of any species.
- C. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:
 - 1. Mixed southern pine, No. 2 grade; SPIB.
 - 2. Eastern softwoods, No. 2 Common grade; NELMA.
 - 3. Northern species, No. 2 Common grade; NLGA.
 - 4. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.7 ENGINEERED WOOD PRODUCTS

- A. Laminated-Veneer Lumber: Composite of wood veneers with grain primarily parallel to member lengths, manufactured with exterior-type adhesive complying with ASTM D 2559. Allowable design values determined according to ASTM D 5456.

1. Available Manufacturers:
 - a. Boise Cascade Corporation.
 - b. Georgia-Pacific Corporation.
 - c. Louisiana-Pacific Corporation.
 - d. Pacific Woodtech Corp.
 - e. Trus Joist MacMillan.
 - f. Union Camp Corp.; Building Products Division.
 - g. Willamette Industries, Inc.
2. Extreme Fiber Stress in Bending, Edgewise: 2600 psi (17.9 MPa) for 12-inch nominal- (286-mm actual-) depth members.
3. Modulus of Elasticity, Edgewise: 1,800,000 psi (12 400 MPa).

2.8 SHEATHING

- A. Plywood Wall Sheathing: Structural I sheathing.
- B. Paper-Surfaced Gypsum Wall Sheathing: ASTM C 79/C 79M, with water-resistant material incorporated into core and with water-repellent paper bonded to core's face, back, and long edges.
 1. Available Manufacturers:
 - a. American Gypsum Co.
 - b. G-P Gypsum Corporation.
 - c. National Gypsum Company.
 - d. United States Gypsum Co.
 2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
 3. Edge and End Configuration: Square.
- C. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/C 1177M.
 1. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" by G-P Gypsum Corp.
 2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.

2.9 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Underlayment for Ceramic Tile: DOC PS 1, Exterior, C-C Plugged, 5/8 inch (15.9 mm) thick, for ceramic tile set in epoxy mortar.
- B. Plywood Underlayment for Carpet: DOC PS 1, Exterior, C-C Plugged.
- C. Particleboard Underlayment: ANSI A208.1, Grade PBU.

- D. Hardboard Underlayment: AHA A135.4, Class 4 (Service), Surface S1S; with back side sanded.

2.10 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch (12.7 mm) thick.

2.11 MISCELLANEOUS MATERIALS

A. Fasteners:

1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M of Type 304 stainless steel.
2. Power-Driven Fasteners: CABO NER-272.
3. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 hex nuts and, where indicated, flat washers.

B. Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

1. Available Manufacturers:

- a. Alpine Engineered Products, Inc.
- b. Cleveland Steel Specialty Co.
- c. Harlen Metal Products, Inc.
- d. KC Metals Products, Inc.
- e. Silver Metal Products, Inc.
- f. Simpson Strong-Tie Company, Inc.
- g. Southeastern Metals Manufacturing Co., Inc.
- h. United Steel Products Company, Inc.

2. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
3. Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

C. Building Paper: Asphalt-saturated organic felt complying with ASTM D 226, Type I (No. 15 asphalt felt), unperforated.

1. Available Manufacturers:
 - a. Celotex Corporation (The); Building Products Division.
 - b. DuPont (E. I. du Pont de Nemours and Company).
 - c. Parsec, Inc.
 - d. Raven Industries, Inc.
 - e. Reemay, Inc.
 - f. Simplex Products.
 - g. Sto-Cote Products, Inc.
 - h. Tenneco Building Products.
 2. Thickness: Not less than 3 mils (0.08 mm).
 3. Permeance: Not less than 10 perms (575 ng/Pa x s x sq. m).
 4. Flame-Spread Index: 25 or less per ASTM E 84.
 5. Allowable Exposure Time: Not less than three months.
- D. Building Wrap Tape: Pressure-sensitive plastic tape recommended by building wrap manufacturer for sealing joints and penetrations in building wrap.
- E. Sheathing Tape: Pressure-sensitive plastic tape for sealing joints and penetrations in sheathing and recommended by sheathing manufacturer for use with type of sheathing required.
- F. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.
- G. Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturers.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Apply field treatment complying with AWPAC M4 to cut surfaces of preservative-treated lumber and plywood.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. CABO NER-272 for power-driven fasteners.
 2. Published requirements of metal framing anchor manufacturer.
 3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in the Uniform Building Code.
 4. Table 2305.2, "Fastening Schedule," in the BOCA National Building Code.
 5. Table 2306.1, "Fastening Schedule," in the Standard Building Code.
 6. Table 602.3(1), "Fastener Schedule for Structural Members," and Table 602.3(2), "Alternate Attachments," in the International One- and Two-Family Dwelling Code.
- D. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.
- E. Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.
- F. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- G. Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.
1. Comply with "Code Plus" provisions in above-referenced guide.
- H. Fastening Methods:
1. Combination Subfloor-Underlayment: Glue and nail to wood framing.
 2. Subflooring: Glue and nail to wood framing.
 3. Sheathing: Nail to wood framing.
 4. Underlayment: Nail to subflooring.
 5. Plywood Backing Panels: Nail or screw to supports.
- I. Apply building paper horizontally with 2-inch (50-mm) overlap and 6-inch (150-mm) end lap; fasten to sheathing with galvanized staples or roofing nails. Cover upstanding flashing with 4-inch (102-mm) overlap.
- J. Building Wrap Application: Cover wall sheathing with building wrap as indicated. Cover upstanding flashing with 4-inch (102-mm) overlap. Seal seams, edges, and penetrations with tape.
- K. Apply sheathing tape to joints between sheathing panels and at items penetrating sheathing. Apply at upstanding flashing to overlap both flashing and sheathing.

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END OF SECTION 06100

SECTION 06105 - MISCELLANEOUS CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Wood framing.
2. Miscellaneous lumber.
3. Interior wood trim.
4. Shelving and clothes rods.
5. Panel products.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product indicated.

1. Include data for wood-preservative and fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that materials comply with requirements.

B. Research/Evaluation Reports: For the following:

1. Preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Provide dressed lumber, S4S, unless otherwise indicated.
4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

B. Wood Structural Panels:

1. Plywood: DOC PS 1 or DOC PS 2, unless otherwise indicated.
2. Oriented Strand Board: DOC PS 2.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWWA C2 (lumber) and AWWA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWWA C31 with inorganic boron (SBX).
- B. Kiln-dry material after treatment to a maximum moisture content of 15 percent for lumber and 15 percent for plywood.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 3. Wood framing members less than 18 inches (460 mm) above grade.
 4. Wood floor plates that are installed over concrete slabs directly in contact with earth.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWWA C20 (lumber) and AWWA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
1. Use Exterior type for exterior locations and where indicated.
 2. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.4 DIMENSION LUMBER

- A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.
- B. Other Framing: Construction or No. 2 grade and any of the following species:

1. Douglas fir-larch, Douglas fir-larch (north), or Douglas fir-south; NLGA, WCLIB, or WWPA.
2. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.
3. Southern pine; SPIB.
4. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA.

2.5 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber for support or attachment of other construction, including the following:
 1. Rooftop equipment bases and support curbs.
 2. Blocking.
 3. Cants.
 4. Nailers.
 5. Furring.
 6. Grounds.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 15 percent maximum moisture content of any species.
- C. For exposed boards, provide lumber, with 15 percent maximum moisture content, of eastern white pine, Idaho white, lodgepole, ponderosa, or sugar pine; Finish or 1 Common (Colonial) grade; NELMA, NLGA, WCLIB, or WWPA.
- D. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:
 1. Mixed southern pine, No. 2 grade; SPIB.
 2. Eastern softwoods, No. 2 Common grade; NELMA.
 3. Northern species, No. 2 Common grade; NLGA.
 4. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.6 INTERIOR WOOD TRIM

- A. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish): Clear, kiln-dried, white maple finished lumber (S4S), selected for compatible grain and color.
- B. Lumber Trim for Opaque Finish (Painted): Finished lumber (S4S), either finger-jointed or solid lumber, of one of the following species and grades:
 1. Grade Finish or 2 Common eastern white pine; NELMA or NLGA.
 2. Grade 2 Common (Sterling) Idaho white, lodgepole, ponderosa, or sugar pine; NLGA or WWPA.

3. Grade A Finish alder, aspen, basswood, cottonwood, gum, magnolia, soft maple, sycamore, tupelo, or yellow poplar; NHLA.
- C. Moldings: Made to patterns included in WMMPA WM 7. Wood moldings made from kiln-dried stock and graded according to WMMPA WM 4.
1. Moldings for Transparent Finish (Stain or Clear Finish): N-grade eastern white, Idaho white, lodgepole, ponderosa.
 2. Moldings for Opaque Finish (Painted): P-grade eastern white, Idaho white, lodgepole, ponderosa, or sugar pine.

2.7 SHELVING AND CLOTHES RODS

- A. Shelving: 3/4-inch (19-mm) particleboard shelving with radiused and filled front edge or boards of same species and grade indicated above for exposed boards.
- B. Clothes Rods: 1-1/2-inch- (38-mm-) diameter, aluminum tubes.

2.8 PANEL PRODUCTS

- A. Miscellaneous Concealed Plywood: Exposure 1 sheathing, span rating to suit framing in each location, and thickness as indicated but not less than 1/2 inch (13 mm).
- B. Particleboard Underlayment: ANSI A208.1, Grade PBU.
- C. Hardboard Underlayment: AHA A135.4, Class 4 (Service), Surface S1S; with back side sanded.
- D. Miscellaneous Exposed Plywood: DOC PS 1, A-D Interior, thickness as indicated but not less than 1/2 inch (13 mm).
- E. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch (12.7 mm) thick.

2.9 FASTENERS

- A. General: Where carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Power-Driven Fasteners: CABO NER-272.
- C. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- C. Countersink fastener heads on exposed carpentry work and fill holes with wood filler.
- D. Wood Structural Panels: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.
- E. Wood Trim Installation: Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Cope at returns and miter at corners to produce tight-fitting joints. Use scarf joints for end-to-end joints.
 - 1. Match color and grain pattern across joints.
 - 2. Install trim after gypsum board joint-finishing operations are completed.
 - 3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.6-mm) maximum offset for reveal installation.

END OF SECTION 06105

SECTION 06200 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Standing and running trim.
- B. See Division 6 Section "Exterior Architectural Woodwork" for exterior woodwork not specified in this Section.
- C. See Division 6 Section "Interior Architectural Woodwork" for interior woodwork not specified in this Section.

1.2 SUBMITTALS

- A. Product Data: For each type of factory-fabricated product and process indicated.
- B. Samples: For the following:
 - 1. Each type of finish required.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," for lumber and with applicable grading rules of inspection agencies certified by the American Lumber Standards Committee Board of Review.
- B. Softwood Plywood: Comply with DOC PS 1, "U.S. Product Standard for Construction and Industrial Plywood."
- C. Hardwood Plywood: Comply with HPVA HP-1, "Interim Voluntary Standard for Hardwood and Decorative Plywood."
- D. Preservative Treatment: Comply with NWWDA I.S. 4 for exterior finish carpentry to receive water-repellent preservative treatment.
- E. Fire-Retardant Treatment: Where indicated, use materials impregnated with fire-retardant chemicals per AWPA C20; exterior type or interior Type A as required.

2.2 STANDING AND RUNNING TRIM

- A. Interior Standing and Running Trim: Finished lumber and moldings.
 - 1. Species and Grade or Cut: C Select, eastern white pine; NELMA or B & Btr. Select or Supreme, Idaho white, lodgepole, ponderosa, or sugar pine; WWPA.
 - 2. Moldings for Painted Finish: P-Grade.
- B. Shelving: 3/4-inch (19-mm) particleboard shelving with radiused and filled front edge.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Condition finish carpentry to average prevailing humidity conditions in installation areas before installation, for a minimum of 24 hours.
- B. Prime and backprime lumber for painted finish exposed on the exterior. Comply with requirements for surface preparation and application in Division 9 Section "Painting."

3.2 INSTALLATION

- A. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where required for alignment. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts.
- B. Standing and Running Trim: Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Stagger joints in adjacent and related trim. Cope at returns and miter at corners.
- C. Paneling: Install according to manufacturer's written recommendations. Select and arrange units on each wall for best match of adjacent units where grain character or color variations are noticeable. Install with uniform tight joints between units.
- D. Siding: Install siding and flashing according to manufacturer's written recommendations. Do not allow nails to penetrate more than one thickness of siding, unless otherwise recommended by siding manufacturer. Seal joints at inside and outside corners and at trim locations.
- E. Repair damaged or defective finish carpentry where possible to eliminate functional or visual defects. Where not possible to repair, replace finish carpentry. Adjust joinery for uniform appearance.

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END OF SECTION 06200

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes interior woodwork including for the following applications:
 - 1. Standing and running trim.
 - 2. Wood cabinets.
 - 3. Plastic-laminate cabinets.
 - 4. Plastic-laminate countertops.
 - 5. Frames and jambs.
 - 6. Shop finishing of woodwork.
- B. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips, unless concealed within other construction before woodwork installation.
- C. Rough carriages for stairs are interior architectural woodwork.
 - 1. See Division 6 Section "Rough Carpentry" for platform framing and other rough framing associated with stairwork.

1.2 SUBMITTALS

- A. Product Data: For the following:
 - 1. Cabinet hardware and accessories.
 - 2. Handrail brackets.
 - 3. Finishing materials and processes.
- B. Shop Drawings: Include location of each item, plans and elevations, large-scale details, attachment devices, and other components.
- C. Samples:
 - 1. Lumber and panel products for transparent finish, for each species and cut, finished on one side and one edge.
 - 2. Lumber and panel products with shop-applied opaque finish, for each finish system and color, with exposed surface finished.
 - 3. Plastic-laminate-clad panel products, for each type, color, pattern, and surface finish.
 - 4. Thermoset decorative-overlay surfaced panel products, for each type, color, pattern, and surface finish.

5. Solid-surfacing materials.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of woodwork.
- B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork, construction, finishes, and other requirements.
 1. Provide AWI certification labels or compliance certificate indicating that woodwork complies with requirements of grades specified.
- C. Quality Standard: Unless otherwise indicated, comply with WIC's "Manual of Millwork" for grades of interior architectural woodwork, construction, finishes, and other requirements.
 1. Provide WIC-certified compliance certificate indicating that woodwork complies with requirements of grades specified.
 2. Provide WIC-certified compliance certificate for installation.

1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 WOODWORK FABRICATORS

- A. Fabricators: Subject to compliance with requirements, provide interior architectural woodwork by company with 5 years experience minimum

2.2 MATERIALS

- A. Wood for Transparent Finish:
 1. Species and Cut: White oak, rift sawn or cut.
- B. Wood for Opaque Finish:
 1. Species: Any closed-grain hardwood.
- C. Wood Products:
 1. Hardboard: AHA A135.4.

2. Medium-Density Fiberboard: ANSI A208.2, Grade MD. Selecting "Exterior Glue" in subparagraph above and below will minimize formaldehyde but may increase costs. Willamette's "Premier Plus" fiberboard is made with exterior glue. Particleboard with exterior glue is made by Rodman Industries; Div. of Fiberesin Industries.
 3. Particleboard: ANSI A208.1, Grade M-2.
 4. Softwood Plywood: DOC PS 1, Medium Density Overlay.
 5. Hardwood Plywood and Face Veneers: HPVA HP-1.
- D. Thermoset Decorative Overlay: Particleboard or medium-density fiberboard with surface of thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.
- E. High-Pressure Decorative Laminate: NEMA LD 3.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Formica Corporation.
 - b. International Paper; Decorative Products Div.
 - c. Laminart.
 - d. Pioneer Plastics Corp.
 - e. Westinghouse Electric Corp.; Specialty Products Div.
 - f. Wilsonart International; Div. of Premark International, Inc.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Lumber and Plywood: Materials impregnated with fire-retardant chemical formulations to comply with AWWA C20 (lumber) and AWWA C27 (plywood), Exterior Type or Interior Type A. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Kiln-dry material after treatment.
- B. Fire-Retardant Particleboard: Panels made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture with flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.
- C. Fire-Retardant Fiberboard: ANSI A208.2 medium-density fiberboard panels made from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture with flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E 84.

2.4 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials for a complete installation of architectural woodwork, except for items specified in Division 8 Section "Door Hardware."
- B. Hardware Standard: Comply with BHMA A156.9 for items indicated by referencing BHMA numbers or items referenced to this standard.
- C. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, self-closing.
- D. Nylon Pulls: Back mounted, 4 inches (100 mm) long, 5/16 inches (8 mm) in diameter.
- E. Adjustable Shelf Standards and Supports: See Contract Drawing Documents
 - 1. Drawer Slides: Side-mounted, full-extension, zinc-plated steel drawer slides with steel ball bearings, BHMA A156.9, B05091.
- F. Exposed Hardware Finishes: Complying with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.

2.5 INSTALLATION MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, fire-retardant-treated, kiln-dried to less than 15 percent moisture content.

2.6 FABRICATION

- A. General: Complete fabrication to maximum extent possible before shipment to Project site. Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.
 - 1. Interior Woodwork Grade: Custom complying with the referenced quality standard.
 - 2. Shop cut openings to maximum extent possible. Sand edges of cutouts to remove splinters and burrs.
 - 3. Seal edges of openings in countertops with a coat of varnish.
 - 4. Install glass to comply with applicable requirements in Division 8 Section "Glazing" and in GANA's "Glazing Manual." For glass in wood frames, secure glass with removable stops.
 - 5. For trim items wider than available lumber, use veneered construction. Do not glue for width.

6. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
7. Assemble casings in plant except where limitations of access to place of installation require field assembly.

B. Plastic-Laminate Cabinets:

1. AWI Type of Cabinet Construction: Flush overlay.
2. WIC Construction Style: Style A, Frameless.
3. WIC Construction Type: Type I, multiple self-supporting units rigidly joined together.
4. WIC Door and Drawer Front Style: **Flush overlay.**
5. Laminate Cladding for Exposed Surfaces: High-pressure decorative of grade indicated.
 - a. Horizontal Surfaces Other Than Tops: HGS.
 - b. Postformed Surfaces: HGP.
 - c. Vertical Surfaces: HGS.
 - d. Edges: HGS matching laminate in color, pattern, and finish.
6. Materials for Semiexposed Surfaces Other Than Drawer Bodies: High-pressure decorative laminate , Grade VGS.
 - a. Drawer Sides and Backs: Thermoset decorative overlay.
 - b. Drawer Bottoms: Thermoset decorative overlay.
7. Colors, Patterns, and Finishes: As selected from manufacturer's full range

C. Plastic-Laminate Countertops:

1. High-Pressure Decorative Laminate Grade: HGS.
2. Colors, Patterns, and Finishes: As selected from manufacturer's full range
3. Edge Treatment: Same as laminate cladding on horizontal surfaces.
4. Core Material at Sinks: Exterior-grade plywood.

D. Fire-Rated Interior Frames and Jambs: Products fabricated from fire-retardant particleboard or fire-retardant medium-density fiberboard with veneered, exposed surfaces and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.

1. Test Pressure: Test at atmospheric pressure.
2. Fire Rating: 20 minutes.

2.7 SHOP FINISHING

- A. Finish architectural woodwork at fabrication shop. Defer only final touchup, cleaning, and polishing until after installation.
- B. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling.
- C. Transparent Finish: Comply with requirements indicated below for grade, finish system, staining, and sheen, with sheen measured on 60-deg ree gloss meter per ASTM D 523:
 - 1. Grade: Custom.
 - 2. AWI Finish System: TR-6, catalyzed polyurethane.
 - 3. WIC Finish System: #3, catalyzed polyurethane.
 - 4. Staining: Match sample.
 - 5. Wash Coat for Stained Finish: Apply a vinyl wash coat to woodwork made from closed-grain wood before staining and finishing.
 - 6. Open-Grain Woods: After staining (if any), apply paste wood filler to open-grain woods and wipe off excess. Tint filler to match stained wood.
 - 7. Sheen: Semigloss, 55-75 gloss units.
- D. Opaque Finish: Comply with requirements indicated below for grade, finish system, color, effect, and sheen, with sheen measured on 60-deg ree gloss meter per ASTM D 523.
 - 1. Grade: Custom.
 - 2. AWI Finish System: OP-6, catalyzed polyurethane.
 - 3. WIC Finish System: #3, catalyzed polyurethane.
 - 4. Color: As selected in finish system specified.
 - 5. Sheen: Semigloss, 55-75 gloss units.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas and examine and complete work as required, including removal of packing and backpriming before installation.
- B. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in this Section for type of woodwork involved.
- C. Quality Standard: Install woodwork to comply with WIC Section 26 for the same grade specified in this Section for type of woodwork involved.
- D. Install woodwork level, plumb, true, and straight to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm). Shim as required with concealed shims.

- E. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces and repair damaged finish at cuts.
- F. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- G. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base, if finished.
- H. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation.
 - 1. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches (400 mm) o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips.
- I. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop. Calk space between backsplash and wall with sealant specified in Division 7 Section "Joint Sealants."

END OF SECTION 06402

SECTION 08110 - STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes steel frames.

1.2 SUBMITTALS

- A. Product Data: For each product indicated. Include door designation, type, level and model, material description, label compliance, fire-resistance ratings, and finishes.
- B. Door Schedule. Use same reference designations indicated on Drawings.

1.3 QUALITY ASSURANCE

- A. Steel Frame Standard: Comply with ANSI A 250.8, unless more stringent requirements are indicated.
- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Amweld Building Products, Inc.
 - 2. Benchmark Commercial Doors; a division of General Products Co., Inc.
 - 3. Ceco Door Products; a United Dominion Company.
 - 4. Copco Door Co.
 - 5. Curries Company.
 - 6. Deansteel Manufacturing, Inc.
 - 7. Kewanee Corporation (The).
 - 8. Mesker Door, Inc.

9. Pioneer Industries Inc.
10. Republic Builders Products.
11. Steelcraft; a division of Ingersoll-Rand.

2.2 MATERIALS

- A. Hot-Rolled Steel Sheets: ASTM A 569/A 569M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- B. Cold-Rolled Steel Sheets: ASTM A 366/A 366M, Commercial Steel (CS), or ASTM A 620/A 620M, Drawing Steel (DS), Type B; stretcher-leveled standard of flatness.
- C. Metallic-Coated Steel Sheets: ASTM A 653/A 653M, Commercial Steel (CS), Type B, with an A40 (ZF120) zinc-iron-alloy (galvannealed) coating; stretcher-leveled standard of flatness.
- D. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, Commercial Steel (CS), Class B coating; mill phosphatized; suitable for unexposed applications; stretcher-leveled standard of flatness where used for face sheets.

2.3 FRAMES

- A. General: ANSI A250.8; conceal fastenings, unless otherwise indicated.
- B. Frame Steel Sheet Thickness:
 1. 0.053-inch- (1.3-mm-) unless otherwise indicated
- C. Door Silencers: Three silencers on single-door frames and two silencers on double-door frames.
- D. Plaster Guards: 0.016-inch- (0.4-mm-) thick, steel sheet plaster guards or mortar boxes to close off interior of openings.
- E. Supports and Anchors: Not less than 0.042-inch- (1.0-mm-) thick zinc-coated steel sheet.
 1. Masonry Wall Anchors: 0.177-inch- (4.5-mm-) diameter, steel wire complying with ASTM A 510 (ASTM A 510M) may be used in place of steel sheet.
- F. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Zinc-coat items that are to be built into exterior walls according to ASTM A 153/A 153M, Class C or D as applicable.

2.4 FABRICATION

- A. Prepare doors frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements in ANSI A250.6 and ANSI A115 Series specifications for door and frame preparation for hardware.
- B. Frame Construction:
 - 1. Fabricate knock-down frames with mitered or coped corners, for field assembly.
- C. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.
- D. Locate hardware as indicated or, if not indicated, according to ANSI A250.8.

2.5 FINISHES

- A. Prime Finish: Manufacturer's standard, factory-applied coat of rust-inhibiting primer complying with ANSI A250.10 for acceptance criteria.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Placing Frames: Comply with provisions in SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
 - 1. Wall Anchors: Provide at least three anchors per jamb. For openings **90 inches (2286 mm)** or more in height, install an additional anchor at hinge and strike jambs.
 - 2. Gypsum Board Partitions: For in-place partitions, install knock-down, drywall slip-on frames.
 - 3. Fire-Rated Frames: Install according to NFPA 80.
- B. Door Installation: Comply with ANSI A250.8. Shim as necessary to comply with SDI 122 and ANSI/DHI A115.1G.
 - 1. Fire-Rated Doors: Install within clearances specified in NFPA 80.
 - 2. Smoke Control Doors: Install to comply with NFPA 105.
- C. After installation, remove protective wrappings from doors and frames and touch up prime coat with compatible air-drying primer.

END OF SECTION 08110

SECTION 08711 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Commercial door hardware.
 - 2. Cylinders for doors specified in other Sections.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Include details of electrified door hardware and wiring diagrams.
- C. Samples: For each exposed finish.
- D. Door Hardware Schedule: Organized into door hardware sets indicating type, style, function, size, label, hand, manufacturer, fasteners, location, and finish of each door hardware item. Include description of each electrified door hardware function, including sequence of operation.
- E. Keying Schedule: Detail Owner's final keying instructions for locks.
- F. Product certificates.

1.3 QUALITY ASSURANCE

- A. Supplier Qualifications: Person who is or employs a qualified DHI Architectural Hardware Consultant.
- B. Source Limitations: Obtain electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.
- C. Keying Conference: Conduct conference at Project site. Incorporate keying conference decisions into final keying schedule.
- D. Preinstallation Conference: Conduct conference at Project site.
- E. Keys: Deliver keys to Owner by registered mail.
- F. Templates: Obtain and distribute templates for doors, frames, and other work specified to be factory prepared for installing door hardware.

- G. Standards: Comply with BHMA A156 series standards, Grade 1 unless Grade 2 is indicated.
- H. Certified Products: Provide door hardware that is listed in BHMA directory of certified products.

1.4 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within warranty period.
 - 1. Warranty Period for Locks: 5 years from date of Substantial Completion.
 - 2. Warranty Period for Manual Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Product: Subject to compliance with requirements, provide the product named for each door hardware item indicated in Door Hardware Sets.
- B. Basis-of-Design Product: Product named for each door hardware item indicated in Door Hardware Sets establishes the basis of design. Provide either the named product or a comparable product by one of the manufacturers specified for each type of hardware item.

2.2 DOOR HARDWARE

- A. Scheduled Door Hardware: Provide door hardware according to door hardware sets indicated in door and frame schedule. Manufacturers' names are abbreviated.

2.3 PIVOTS AND HINGES

- A. Manufacturers:
 - 1. Hinges:
 - a. Baldwin Hardware Corporation (BH).
 - b. Bommer Industries, Inc. (BI).
 - c. Cal-Royal Products, Inc. (CRP).
 - d. Hager Companies (HAG).
 - e. Lawrence Brothers, Inc. (LB).
 - f. McKinney Products Company; Div. of ESSEX Industries, Inc. (MCK).

- g. Mont-Hard Corporation; Div. of Fanal, SA (MH).
 - h. PBB, Inc. (PBB).
 - i. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
 - j. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
2. Pivots and Pivot Hinges:
- a. DORMA Door Controls Inc.; Member of The DORMA Group (DC).
 - b. Hager Companies (HAG).
 - c. Lawrence Brothers, Inc. (LB).
 - d. LCN Closers; an Ingersoll-Rand Company (LCN).
 - e. Markar Products, Inc. (MP).
 - f. McKinney Products Company; Div. of ESSEX Industries, Inc. (MCK).
 - g. NT Dor-O-Matic Hardware Div.; an Ingersoll-Rand Company (NTD).
 - h. Rixson-Firemark, Inc.; Div. of Yale Security Inc. (RIX).
 - i. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
 - j. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
- B. General: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- C. Hinge Base Metal: Unless otherwise indicated, provide the following:
- 1. Exterior Hinges: Stainless steel, with stainless-steel pin.
 - 2. Interior Hinges: Steel pin body and brass protruding heads. Steel, with steel pin.
- D. Nonremovable Pins: Provide set screw in hinge barrel that prevents removal of pin while door is closed; for outswinging corridor doors with locks.
- E. Screws: Phillips flat-head screws; screw heads finished to match surface of hinges.
- 1. Metal Doors and Frames: Machine screws (drilled and tapped holes).
 - 2. Wood Doors and Frames: Wood screws.
 - 3. Fire-Rated Wood Doors: Threaded-to-the-head wood screws.

2.4 MECHANICAL LOCKS AND LATCHES

- A. Manufacturers:
- 1. Accurate Lock and Hardware Co. (ALH).
 - 2. Adams Rite Manufacturing Co. (ARM).
 - 3. Architectural Builders Hardware Mfg., Inc. (ABH).
 - 4. Arrow Architectural Hardware; Div. of ESSEX Industries, Inc. (AAH).

5. Best Lock Corporation (BLC).
6. Brink, R. R. Locking Systems, Inc. (RRB).
7. Cal-Royal Products, Inc. (CRP).
8. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
9. Door Controls International (DCI).
10. Folger Adam Security Inc. (FAS).
11. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
12. Hager Companies (HAG).
13. Ives, H. B. (IVS).
14. Lockwood Architectural Hardware; Div. of Lloyd Matheson Inc. (LAH).
15. Marks USA (MKS).
16. McKinney Products Company; Div. of ESSEX Industries, Inc. (MCK).
17. Medeco High Security Locks, Inc. (MED).
18. NT Falcon Lock Co.; an Ingersoll-Rand Company (NTF).
19. PDQ Manufacturing Co. (PDQ).
20. Rockwood Manufacturing Company (RM).
21. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
22. Schlage Lock Company; an Ingersoll-Rand Company (SCH).
23. Security Door Controls (SDC).
24. Simplex; Div. of UNICAN (SIM).
25. Southern Steel Co.; Div. of Phelps-Tointon Inc. (SS).
26. Triangle Brass Manufacturing Company, Inc. (TBM).
27. Weiser Lock; Div. of Masco Building Products Corporation (WEI).
28. Yale Security Inc.; Div. of Williams Holdings (YAL).

- B. Bored Lockset Design: As scheduled.
- C. Dummy Trim: Match knob lock trim and escutcheons.
- D. Lock Throw: Comply with labeled fire door requirements.
- E. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.
- F. Exit Locks: Surface-mounted deadbolts or latchbolts; with battery-powered alarm that sounds when unauthorized use of door occurs. Provide red and white pressure-sensitive lettering reading "PUSH TO OPEN--ALARM WILL SOUND."

2.5 BOLTS

- A. Fire-Rated Doors: Comply with labeled fire door requirements.
- B. Surface Bolts: Flush bolt heads of minimum 1/2-inch- (12.7-mm-) diameter rods of brass, bronze, or stainless steel with minimum 12-inch- (305-mm-) long rod.
 1. Manufacturers:

- a. Burns Manufacturing Incorporated (BM).
 - b. Door Controls International (DCI).
 - c. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - d. Hager Companies (HAG).
 - e. Ives, H. B. (IVS).
 - f. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
 - g. Rockwood Manufacturing Company (RM).
 - h. Triangle Brass Manufacturing Company, Inc. (TBM).
- C. Flush Bolts: BHMA Grade 1, unless Grade 2 is indicated, designed for mortising into door edge.
1. Manufacturers:
 - a. Adams Rite Manufacturing Co. (ARM).
 - b. Burns Manufacturing Incorporated (BM).
 - c. Cal-Royal Products, Inc. (CRP).
 - d. Door Controls International (DCI).
 - e. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - f. Hager Companies (HAG).
 - g. Hiawatha, Inc. (HIA).
 - h. Ives, H. B. (IVS).
 - i. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
 - j. Rixson-Firemark, Inc.; Div. of Yale Security Inc. (RIX).
 - k. Rockwood Manufacturing Company (RM).
 - l. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
 - m. Triangle Brass Manufacturing Company, Inc. (TBM).

2.6 EXIT DEVICES

- A. Manufacturers:
1. Adams Rite Manufacturing Co. (ARM).
 2. American Device Manufacturing Company; Member of The DORMA Group (ADM).
 3. Arrow Architectural Hardware; Div. of ESSEX Industries, Inc. (AAH).
 4. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
 5. Door Controls International (DCI).
 6. DynaLock Corp. (DLC).
 7. Locknetics Security Engineering; a Harrow Company (LSE).
 8. NT Dor-O-Matic Hardware Div.; an Ingersoll-Rand Company (NTD).
 9. NT Monarch Hardware; an Ingersoll-Rand Company (NTM).
 10. Precision Hardware, Inc. (PH).
 11. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
 12. Securitron Magnalock Corp. (SMC).
 13. Von Duprin; an Ingersoll-Rand Company (VD).

14. Yale Security Inc.; Div. of Williams Holdings (YAL).

- B. Panic Exit Devices: Listed and labeled for panic protection, based on testing according to UL 305.
- C. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled for fire and panic protection, based on testing according to UL 305 and NFPA 252.
 - 1. Outside Trim: Pull with cylinder; material, finish, and design to match locksets and latchsets, unless otherwise indicated.
 - 2. Through Bolts: For exit devices and trim on fire-rated wood doors.

2.7 OPERATING TRIM

- A. Push-Pull Design: As scheduled.
 - 1. Manufacturers:
 - a. Baldwin Hardware Corporation (BH).
 - b. Burns Manufacturing Incorporated (BM).
 - c. Don-Jo Mfg., Inc. (DJO).
 - d. Forms + Surfaces (FS).
 - e. Hager Companies (HAG).
 - f. HEWI, Inc. (HEW).
 - g. Hiawatha, Inc. (HIA).
 - h. Ives, H. B. (IVS).
 - i. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
 - j. Rockwood Manufacturing Company (RM).
 - k. Stanley Commercial Hardware; Div. of The Stanley Works (STH).
 - l. Triangle Brass Manufacturing Company, Inc. (TBM).

2.8 CLOSERS

- A. Surface-Mounted Closers:
 - 1. Manufacturers:
 - a. Arrow Architectural Hardware; Div. of ESSEX Industries, Inc. (AAH).
 - b. Cal-Royal Products, Inc. (CRP).
 - c. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
 - d. DORMA Door Controls Inc.; Member of The DORMA Group (DC).
 - e. LCN Closers; an Ingersoll-Rand Company (LCN).
 - f. Norton Door Controls; Div. of Yale Security Inc. (NDC).
 - g. Rixson-Firemark, Inc.; Div. of Yale Security Inc. (RIX).
 - h. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).

- i. Yale Security Inc.; Div. of Williams Holdings (YAL).
- B. Closer Holder Release Devices: BHMA A156.15.
1. Manufacturers:
 - a. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
 - b. DORMA Door Controls Inc.; Member of The DORMA Group (DC).
 - c. LCN Closers; an Ingersoll-Rand Company (LCN).
 - d. Norton Door Controls; Div. of Yale Security Inc. (NDC).
 - e. Rixson-Firemark, Inc.; Div. of Yale Security Inc. (RIX).
 - f. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
 - g. Yale Security Inc.; Div. of Williams Holdings (YAL).
- C. Size of Units: Factory-sized, adjustable to meet field conditions and requirements for opening force.

2.9 STOPS AND HOLDERS

- A. Stops and Holders: Provide floor stops for doors, unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders.
1. Manufacturers:
 - a. Architectural Builders Hardware Mfg., Inc. (ABH).
 - b. Baldwin Hardware Corporation (BH).
 - c. Burns Manufacturing Incorporated (BM).
 - d. Door Controls International (DCI).
 - e. DORMA Door Controls Inc.; Member of The DORMA Group (DC).
 - f. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
 - g. Hager Companies (HAG).
 - h. Hanchett Entry Systems, Inc. (HES).
 - i. Hiawatha, Inc. (HIA).
 - j. Ives, H. B. (IVS).
 - k. LCN Closers; an Ingersoll-Rand Company (LCN).
 - l. Norton Door Controls; Div. of Yale Security Inc. (NDC).
 - m. NT Dor-O-Matic Hardware Div.; an Ingersoll-Rand Company (NTD).
 - n. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
 - o. Rixson-Firemark, Inc.; Div. of Yale Security Inc. (RIX).
 - p. Rockwood Manufacturing Company (RM).
 - q. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).

- r. Triangle Brass Manufacturing Company, Inc. (TBM).
- s. Yale Security Inc.; Div. of Williams Holdings (YAL).

B. Silencers for Door Frames: Neoprene or rubber; fabricated for drilled-in application to frame.

2.10 CYLINDERS, KEYING, AND STRIKES

A. Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

1. Manufacturers:

- a. Same manufacturer as for locks and latches.
- b. ABLOY High Security Locks; Div. of ASSA ABLOY, Inc. (ABL).
- c. Arrow Architectural Hardware; Div. of ESSEX Industries, Inc. (AAH).
- d. ASSA High Security Locks; Div. of ASSA ABLOY, Inc. (ASA).
- e. Best Lock Corporation (BLC).
- f. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
- g. Lockwood Architectural Hardware; Div. of Lloyd Matheson Inc. (LAH).
- h. Marks USA (MKS).
- i. Medeco High Security Locks, Inc. (MED).
- j. NT Falcon Lock Co.; an Ingersoll-Rand Company (NTF).
- k. Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).
- l. Schlage Lock Company; an Ingersoll-Rand Company (SCH).
- m. Weiser Lock; a Masco Building Products Corporation (WEI).
- n. Yale Security Inc.; Div. of Williams Holdings (YAL).

2. Number of Pins: Seven.

3. High-Security Grade: BHMA Grade 1A, listed and labeled as complying with UL 437 (Suffix A).

4. Permanent Cores: Manufacturer's standard; finish face to match lockset; interchangeable cores.

5. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.

6. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

- a. Replace construction cores with permanent cores, as directed by Owner.
- b. Furnish permanent cores to Owner for installation.

- B. Keying System: Factory-registered keying system; master key system.
 - 1. Keys: Provide nickel-silver keys permanently inscribed with a visual key control number and "DO NOT DUPLICATE" notation. In addition to one extra blank key for each lock, provide three change keys and five master keys.
- C. Strikes: Manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set.

2.11 FABRICATION

- A. Base Metals: Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials if different from specified standard.
- B. Fasteners: Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated. Provide steel machine or wood screws or steel through bolts for fire-rated applications.
- C. Spacers or Sex Bolts: For through bolting of hollow metal doors.
- D. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."
- E. Finishes: Comply with BHMA A156.18.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examine doors and frames for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- B. Steel Door and Frame Preparation: Comply with DHI A115 series. Drill and tap doors and frames for surface-applied hardware according to SDI 107.
- C. Wood Door Preparation: Comply with DHI A115-W series.
- D. Mounting Heights: Comply with the following requirements, unless otherwise indicated:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- E. Adjust and reinforce attachment substrates as necessary for proper installation and operation. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
1. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with accessibility requirements.
1. Door Closers: Adjust sweep period so that from an open position of 70 degrees, the door will take at least three seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

3.2 DOOR HARDWARE SETS

See Contract Drawing Documents

END OF SECTION 08711

SECTION 09210 - GYPSUM PLASTER

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Gypsum plastering.
 - 2. Metal lath.
 - 3. Metal and plastic accessories.
 - 4. Non-load-bearing steel framing and furring.
- B. See Division 5 Section "Cold-Formed Metal Framing" for load-bearing steel framing.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples: For each exposed finish and for each color and texture required.
- C. Material Certificates: For aggregates.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Where indicated, provide assemblies identical to those tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

1.4 PROJECT CONDITIONS

- A. Environmental Requirements, General: Comply with requirements of referenced plaster application standards and recommendations of plaster manufacturer for environmental conditions before, during, and after plaster application.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
2. Products: Subject to compliance with requirements, provide one of the products specified.

2.2 NON-LOAD-BEARING STEEL FRAMING

A. Steel Sheet Components, General: Metal complying with ASTM C 645 requirements.

1. Protective Coating: ASTM A 653/A 653M, G40 (Z120), hot-dip galvanized.

B. Suspended Ceiling and Soffit Framing: Size metal ceiling supports to comply with ASTM C 841, unless otherwise indicated.

1. Hanger Attachments to Concrete: Anchors fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by a qualified independent testing agency.

a. Type: Postinstalled, expansion anchor.

2. Wire for Hangers and Ties: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
3. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch (1.37 mm), a minimum 1/2-inch- (12.7-mm-) wide flange, and in depth indicated.
4. Furring Channels (Furring Members):
 - a. Cold-Rolled Channels: 0.0538-inch (1.37-mm) bare steel thickness, with minimum 1/2-inch- (12.7-mm-) wide flange, 3/4 inch (19.1 mm) deep.
 - b. Steel Studs: ASTM C 645, in depth indicated.

1) Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).

C. Partition Framing and Furring:

1. Steel Studs and Runners: ASTM C 645, in depth indicated.
 - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
2. Cold-Rolled Channels: 0.0538-inch (1.37-mm) bare steel thickness, with minimum 1/2-inch- (12.7-mm-) wide flange, and in depth indicated.

- a. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum bare steel thickness of 0.0312 inch (0.79 mm).
3. Hat-Shaped, Rigid Furring Channels: ASTM C 645, in depth indicated.
 - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
4. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (31.8 mm), wall attachment flange of 7/8 inch (22.2 mm), minimum bare metal thickness of 0.0179 inch (0.45 mm), and depth required to fit insulation thickness indicated.

2.3 LATH

- A. Expanded-Metal Lath: ASTM C 847, fabricated from uncoated or zinc-coated (galvanized) steel sheet and with uncoated steel sheet coated with corrosion-resistant coating after fabrication into lath.
 1. Diamond-Mesh Lath: Self-furring.
 - a. Weight: 3.4 lb/sq. yd. (1.8 kg/sq. m).
 - b. Paper Backing: Asphalt-impregnated paper factory bonded to back of lath, complying with FS UU-B-790, Type I, Grade D (vapor permeable), Style 2.

2.4 ACCESSORIES

- A. General: Complying with ASTM C 841; coordinate depth of accessories with thicknesses and number of plaster coats required.
- B. Metal Cornerbeads: Fabricated from zinc-coated (galvanized) steel.
 1. Small-nose corner with expanded flanges, unless otherwise indicated.
 - a. Curved Corners: Use small-nose corner with perforated flanges.
 - b. Columns: Use small-nose corner with expanded flanges reinforced by perforated stiffening rib.
 - c. Masonry Corners: Use small-nose corner with expanded flanges reinforced by perforated stiffening rib.
 2. Bull-nose corner, radius 3/4 inch (19 mm) minimum, with expanded flanges, at locations indicated.
- C. Plastic Cornerbeads: Small nose corner, with perforated flanges, fabricated from high-impact PVC.

- D. Strip Reinforcement: Smooth-edge strips of expanded-metal lath fabricated from uncoated or zinc-coated (galvanized) steel sheet, with uncoated steel sheet coated after fabrication.
 - 1. Cornerite: Strips bent lengthwise in center for internal plaster angles not otherwise reinforced by metal lath lapped or carried around.
 - 2. Stripite: Flat strips for reinforcing joints in gypsum lath, nonmetallic bases, and between dissimilar plaster bases.
- E. Casing Beads: Square-edged style, with short or expanded flanges to suit kinds of plaster bases indicated.
 - 1. Material: Zinc-coated (galvanized) steel.

2.5 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Bonding Compound: ASTM C 631.
- C. Steel Drill Screws:
 - 1. Complying with ASTM C 1002 for fastening metal or gypsum lath to wood or steel members less than 0.033 inch (0.84 mm) thick.
 - 2. Steel drill screws complying with ASTM C 954 for fastening metal lath to steel members 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
- D. Nails: ASTM C 514 for fastening gypsum lath to wood members.
- E. Sound Attenuation Blankets: ASTM C 665, unfaced mineral-fiber blanket insulation produced by combining mineral fibers with thermosetting resins of widths to completely fill void formed by framing members with fibers manufactured from glass, slag wool, or rock wool.
 - 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
- F. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
 - 1. Available Products:
 - a. ChemRex, Inc., Contech Brands; PL Acoustical Sealant.
 - b. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.

- c. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
- G. Acoustical Sealant for Concealed Joints: Nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
 - 1. Available Products:
 - a. Pecora Corp.; BA-98.
 - b. Tremco, Inc.; Tremco Acoustical Sealant.

2.6 PLASTER MATERIALS

- A. Base-Coat Plasters: ASTM C 28, as follows:
 - 1. Gypsum ready-mixed plaster with mill-mixed perlite aggregate.
 - a. Available Products:
 - 1) National Gypsum Co.; Gypsolite.
 - 2) United States Gypsum Co.; Structo-Lite.
 - 2. Gypsum neat plaster.
 - a. Available Products:
 - 1) National Gypsum Co.; Two-Way Hardwall Plaster.
 - 2) United States Gypsum Co.; Red Top Gypsum Plaster.
- B. Finish-Coat Plasters:
 - 1. Gypsum gauging plaster, ASTM C 28.
 - a. Available Products:
 - 1) National Gypsum Co.; Super-White Gauging Plaster.
 - 2) United States Gypsum Co.; Champion Gauging Plaster.
 - 2. Gypsum ready-mixed finish plaster, manufacturer's standard mill-mixed gauged interior finish.
 - a. Available Products:
 - 1) National Gypsum Co.; Gold Bond Kal-Kote
 - 2) United States Gypsum Co.; Red Top Finish.
- C. Finishing Hydrated Limes: ASTM C 206.
 - 1. Type: N, normal hydrated lime for finishing purposes.

2. Finishing Hydrated Limes, Type S:
 - a. Available Products:
 - 1) United States Gypsum Co.; Ivory Finish Lime.
3. Finishing Hydrated Limes, Type N:
 - a. United States Gypsum Co.; Grand Prize Normal Hydrate Finish Limes.

D. Aggregates for Base-Coat Plasters: ASTM C 35.

1. Type: Sand.

2.7 PLASTER MIXES AND COMPOSITIONS

- A. Plaster Base-Coat Compositions: Comply with ASTM C 842 and manufacturer's written instructions for plaster base-coat proportions.
 1. Three-Coat Work over Metal Lath: Scratch and brown coat, gypsum neat plaster with job-mixed sand.
 2. Two-Coat Work over Unit Masonry: Base coats, Gypsum neat plaster with job-mixed sand.
- B. Finish Coats: Proportion materials for finish coats to comply with ASTM C 842 and manufacturers written instructions for each type of finish coat and texture indicated.
 1. Floated Finishes:
 - a. Gypsum Gauging Plaster: 1 part plaster, 2 parts lime, 6 parts sand.
 - b. Gypsum Keene's Cement: 2 parts plaster, 1 part lime, 6 parts sand.

PART 3 - EXECUTION

3.1 INSTALLATION OF LATH AND FURRING, GENERAL

- A. Interior Lathing and Furring: Comply with ASTM C 841.
- B. Install supplementary framing, blocking, and bracing at terminations in Work and for support of fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, and similar work to comply with details indicated or, if not otherwise indicated, to comply with applicable written instructions of plaster manufacturer or, if not available, in USG's "Gypsum Construction Handbook."

- C. Isolation: Where lathing and metal support system abuts building structure horizontally and where partition or wall abuts overhead structure, isolate from structural movement to prevent transfer of loading from building structure.
 - 1. Frame both sides of control joints independently and do not bridge joints with furring and lathing or accessories.

3.2 NON-LOAD-BEARING FRAMING INSTALLATION

A. Ceiling Suspension Systems:

- 1. Coordinate installation of ceiling suspension system with installation of overhead structural systems to ensure inserts and other structural anchorage provisions have been installed to receive ceiling hangers in a manner that will develop their full strength and at spacings required to support ceiling.
- 2. Hanger Installation: Comply with ML/SFA 920, "Guide Specifications for Metal Lathing and Furring," and with referenced standards.
 - a. Do not attach hangers to metal deck tabs.
- 3. Install ceiling suspension system components of sizes and spacings indicated, but not in smaller sizes or greater spacings than those required by referenced lathing and furring installation standards.

B. Partition Framing and Furring: comply with ASTM C 754 and ML/SFA 920, "Guide Specifications for Metal Lathing and Furring."

- 1. Steel Stud Systems to Receive Lath:
 - a. Extend and attach partition support systems to structure above suspended ceilings, unless otherwise indicated.
- 2. Z-Furring with Thermal Insulation: Erect thermal insulation vertically and hold in place with Z-furring members spaced 24 inches (609 mm) o.c.

3.3 METAL LATHING

A. Install expanded-metal lath for the following applications where plaster base coats are required. Provide appropriate type, configuration, and weight of metal lath selected from materials indicated that comply with referenced lathing installation standards.

- 1. Suspended and Furred Ceilings: Use diamond-mesh lath.
- 2. Vertical Metal Framing and Furring: Use diamond-mesh lath and cold-rolled channel stud framing.

3.4 GYPSUM LATHING

- A. Install gypsum lath for the following applications where plaster base coats are required:
 - 1. Wood Framing and Furring: Attach lath to framing with screws to comply with lath manufacturer's written instructions.
 - a. Provide floating angle construction.
 - 2. Suspended and Furred Ceilings: Attach lath to furring members with screws.
 - 3. Vertical Metal Framing and Furring: Attach lath to framing with screws.

3.5 PLASTERING ACCESSORIES INSTALLATION

- A. General: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Miter or cope accessories at corners; install with tight joints and in alignment. Attach accessories securely to plaster bases to hold accessories in place and in alignment during plastering.
- B. Accessories:
 - 1. Cornerbeads: Install at external corners.
 - 2. Casing Beads: Install at terminations of plaster work, except where plaster passes behind and is concealed by other work and where metal screeds, bases, or frames act as casing beads.
 - 3. Control Joints: Install at locations indicated or, if not indicated, at spacings and locations required by referenced standard, recommended by plaster manufacturer, and approved by Architect. Do not exceed the following spacings between joints in either direction:
 - a. Partitions: 30 feet (9 m).
 - b. Ceilings with Perimeter Relief: 50 feet (15 m).
 - c. Ceilings without Perimeter Relief: 30 feet (9 m).
- C. Where sound-rated plaster work is indicated by STC ratings or other notation, seal work at perimeters, control joints, openings, and penetrations with a continuous bead of acoustical sealant. Comply with ASTM C 919 and plaster manufacturer's written instructions for location of sealant beads.
- D. Install sound attenuation blankets within stud cavities of sound-rated partition assemblies.

3.6 PLASTER APPLICATION, GENERAL

- A. Protect contiguous Work from damage and deterioration caused by plastering with temporary covering and other provisions necessary.

- B. Prepare monolithic surfaces for bonded base coats and use bonding compound to comply with requirements of referenced plaster application standards for conditioning monolithic surfaces.
- C. Tolerances: Do not deviate more than plus or minus 1/8 inch in 10 feet (3 mm in 3 m) from a true plane in finished plaster surfaces, as measured by a 10-foot (3-m) straightedge placed at any location on surface.
- D. Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, before lathing where necessary. Except where full grouting is indicated or required for fire-resistance rating, grout at least 6 inches (152 mm) at each jamb anchor.
- E. Sequence plaster application with installation and protection of other work so that neither will be damaged by installation of other.
- F. Plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where plaster is not terminated at metal frame by casing beads, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
- G. Concealed Plaster: Where plaster application will be concealed by wood paneling, above suspended ceilings and in similar locations, finish coat may be omitted; where concealed behind cabinets, similar furnishings, and equipment, apply finish coat; where used as a base for adhesive application of tile and similar finishes, omit finish coat, coordinate thickness with overall dimension as shown, and comply with tolerances specified.

3.7 PLASTER APPLICATION

- A. Plaster Application Standard: Comply with ASTM C 842.
- B. Mechanically mix cementitious and aggregate materials for plasters to comply with applicable referenced application standard and with recommendations of plaster manufacturer.
- C. Number of Coats:
 - 1. Metal Lath: Three coats.
 - 2. Gypsum Lath:
 - a. Two coats, unless otherwise indicated.
 - b. Three coats when lath is attached to ceiling supports spaced more than 16 inches (406 mm) o.c.
 - 3. Unit Masonry: Two coats.
- D. Finish Coats: Troweled.

3.8 CUTTING, PATCHING, AND CLEANING

- A. Cut, patch, replace, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, excessive crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.
- B. Leave plaster ready for painting.
- C. Remove temporary protection and enclosure of other work. Promptly remove plaster from door frames, windows, and other surfaces not to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 09210

SECTION 09260 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Interior gypsum wallboard.
 - 2. Tile backing panels.
 - 3. Non-load-bearing steel framing.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples: For each textured finish indicated and on same backing indicated for Work.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Sound Transmission Characteristics: For gypsum board assemblies with STC ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by a qualified independent testing agency.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.
 - 3. Product: Subject to compliance with requirements, provide the product specified.

2.2 STEEL FRAMING

A. Steel Framing, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Metal complying with ASTM C 645 requirements.
 - a. Protective Coating:
 - 1) Interior Applications: ASTM A 653/A 653M, G40 (Z120), hot-dip galvanized

B. Suspended Ceiling and Soffit Framing:

1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch- (1.59-mm-) diameter wire, or double strand of 0.0475-inch- (1.21-mm-) diameter wire.
2. Hanger Attachments to Concrete:
 - a. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by a qualified independent testing agency.
 - 1) Type: Postinstalled, expansion anchor.
 - b. Powder-Actuated Fasteners: Suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, a load equal to 10 times that imposed by construction as determined by testing according to ASTM E 1190 by a qualified independent testing agency.
3. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch (4.12-mm) diameter.
4. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch (1.37 mm), a minimum 1/2-inch- (12.7-mm-) wide flange, and in depth indicated.
5. Furring Channels (Furring Members):
 - a. Cold Rolled Channels: 0.0538-inch (1.37-mm) bare steel thickness, with minimum 1/2-inch- (12.7-mm-) wide flange, 3/4 inch (19.1 mm) deep.
 - b. Steel Studs: ASTM C 645, in depth indicated.
 - 1) Minimum Base Metal Thickness: 0.0312 inch (0.79 mm)

- c. Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch (22.2 mm) deep.
 - 1) Minimum Base Metal Thickness: 0.0312 inch (0.79 mm)
 - d. Resilient Furring Channels: 1/2-inch- (12.7-mm-) deep members designed to reduce sound transmission, and asymmetrical with single leg or hat shaped with two legs.
- C. Grid Suspension System for Interior Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.
- 1. Available Products:
 - a. Armstrong World Industries, Inc.; Furring Systems/Drywall.
 - b. Chicago Metallic Corporation; Drywall Furring 640 System.
 - c. USG Interiors, Inc.; Drywall Suspension System.
- D. Partition and Soffit Framing:
- 1. Steel Studs and Runners: ASTM C 645, in depth indicated.
 - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
 - 2. Deep-Leg Deflection Track: ASTM C 645 top runner with 2-inch- (50.8-mm-) deep flanges.
 - 3. Proprietary Deflection Track: Steel sheet top runner manufactured to prevent cracking of gypsum board applied to interior partitions resulting from deflection of structure above; in thickness indicated for studs and in width to accommodate depth of studs.
 - a. Available Products:
 - 1) Delta Star, Inc., Superior Metal Trim; Superior Flex Track System (SFT).
 - 2) Metal-Lite, Inc.; Slotted Track.
 - 3) Metal-Lite, Inc.; The System.
 - 4. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
 - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
 - 5. Cold-Rolled Channel Bridging: 0.0538-inch (1.37-mm) bare steel thickness, with minimum 1/2-inch- (12.7-mm-) wide flange, and in depth indicated.

- a. Clip Angle: 1-1/2 by 1-1/2 inch (38.1 by 38.1 mm), 0.068-inch- (1.73-mm-) thick, galvanized steel.
6. Hat-Shaped, Rigid Furring Channels: ASTM C 645, in depth indicated.
 - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
7. Resilient Furring Channels: 1/2-inch- (12.7-mm-) deep, steel sheet members designed to reduce sound transmission. Asymmetrical or hat shaped, with face attached to single flange by a slotted leg (web) or attached to two flanges by slotted or expanded metal legs.
8. Cold-Rolled Furring Channels: 0.0538-inch (1.37-mm) bare steel thickness, with minimum 1/2-inch- (12.7-mm-) wide flange, and in depth indicated.
 - a. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum bare steel thickness of 0.0312 inch (0.79 mm).
 - b. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch- (1.59-mm-) diameter wire, or double strand of 0.0475-inch- (1.21-mm-) diameter wire.
9. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (31.8 mm), wall attachment flange of 7/8 inch (22.2 mm), minimum bare metal thickness of 0.0179 inch (0.45 mm), and depth required to fit insulation thickness indicated.
10. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

2.3 PANEL PRODUCTS

- A. Panel Size, General: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Gypsum Wallboard: ASTM C 36.
 1. Regular Type: In thickness indicated and with long edges tapered.
 2. Type X: In thickness indicated and with long edges tapered and featured (rounded or beveled).
- C. Proprietary, Special Fire-Resistive Type: ASTM C 36, having improved fire resistance over standard Type X, complying with requirements of fire-resistance-rated assemblies indicated, in thickness indicated, and with long edges tapered.
- D. Tile Backing Panels:

1. Cementitious Backer Units: ANSI A118.9, in thickness indicated.

2.4 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Cornerbead: Use at outside corners, unless otherwise indicated.
2. Bullnose Bead: Use at outside corners
3. LC-Bead: Use at exposed panel edges.
4. L-Bead: Use where indicated
5. U-Bead: Use where indicated.
6. Expansion (Control) Joint: Use where indicated.
7. Curved-Edge Cornerbead: With notched or flexible flanges; use at curved openings.

B. Exterior Trim: ASTM C 1047, hot-dip galvanized steel sheet or rolled zinc.

1. Cornerbead: Use at outside corners.
2. LC-Bead: Use at exposed panel edges.
3. Expansion (Control) Joint: One-piece, rolled zinc with V-shaped slot and removable strip covering slot opening. Use where indicated.

C. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.

1. Available Products:
 - a. Fry Reglet Corp.; As indicated by designation on Drawings.
 - b. Gordon, Inc.; As indicated by designation on Drawings.
 - c. MM Systems Corporation; As indicated by designation on Drawings.
 - d. Pittcon Industries
2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), alloy 6063-T5.
3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.

2.5 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape:

1. Interior Gypsum Wallboard: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
4. Tile Backing Panels: As recommended by panel manufacturer.

- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 2. Embedding and First Coat: For embedding tape and first coat on joints, flanges of trim accessories, and fasteners, use setting-type taping compound
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 4. Finish Coat: For third coat, use setting-type, sandable topping compound.
- D. Joint Compound for Tile Backing Panels:
1. Water-Resistant Gypsum Backing Board: Use setting-type taping and setting-type, sandable topping compounds.
 2. Glass-Mat, Water-Resistant Backing Panel: As recommended by manufacturer.
 3. Cementitious Backer Units: As recommended by manufacturer.

2.6 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
1. Available Products:
 - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
 - b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
- C. Acoustical Sealant for Concealed Joints: Nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
1. Available Products:

- a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant.
 - b. Pecora Corp.; BA-98.
 - c. Tremco, Inc.; Tremco Acoustical Sealant.
- D. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- E. Isolation Strip at Exterior Walls:
1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
 2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch (3.2 mm) thick, in width to suit steel stud size.
- F. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

PART 3 - EXECUTION

3.1 NON-LOAD-BEARING STEEL FRAMING INSTALLATION

- A. General: Comply with ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
- B. Suspended Ceiling and Soffit Framing:
 1. Suspend ceiling hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and

hangers to support ceiling loads within performance limits established by referenced standards.

3. Attach hangers to structural members. Do not support ceilings from or attach hangers to permanent metal forms, steel deck tabs, steel roof decks, ducts, pipes, or conduit.
4. Screw furring to wood framing.
5. Wire-tie or clip furring channels to supports, as required to comply with requirements for assemblies indicated.
6. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

C. Partition and Soffit Framing:

1. Where studs are installed directly against exterior walls, install isolation strip between studs and wall.
2. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
3. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb, unless otherwise indicated.
 - b. Extend jamb studs through suspended ceilings and attach to underside of floor or roof structure above.
4. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

D. Z-Furring Members: Erect insulation vertically and hold in place with Z-furring members.

1. Until gypsum board is installed, hold insulation in place with 10-inch (250-mm) staples fabricated from 0.0625-inch- (1.59-mm-) diameter, tie wire and inserted through slot in web of member.

E. Polyethylene Vapor Retarder: Install to comply with requirements specified in Division 7 Section "Building Insulation."

3.2 PANEL PRODUCT INSTALLATION

- A. Gypsum Board: Comply with ASTM C 840 and GA-216.
1. Space screws a maximum of 12 inches (304.8 mm) o.c. for vertical applications.
 2. Space fasteners in panels that are tile substrates a maximum of 8 inches (203.2 mm) o.c.
 3. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
 4. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of board.
 - b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
 5. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
 6. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.
 7. Multilayer Fastening Methods: Fasten base layers and face layers separately to supports with screws.
 8. Laminating to Substrate: Comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.
- B. Exterior Ceilings and Soffits: Apply exterior gypsum panels perpendicular to supports, with end joints staggered and located over supports.
1. Fasten with corrosion-resistant screws.
- C. Tile Backing Panels:
1. Cementitious Backer Unit Application: ANSI A108.11.

3.3 FINISHING

- A. Installing Trim Accessories: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Finishing Gypsum Board Panels: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.

1. Prefill open joints, rounded or beveled edges, and damaged surface areas.
 2. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
 3. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.
 4. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.
- C. Cementitious Backer Units: Finish according to manufacturer's written instructions.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
1. Level 3: Embed tape and apply separate first and fill coats of joint compound to tape, fasteners, and trim flanges.

END OF SECTION 09260

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Ceramic mosaic tile.
 - 2. Glazed wall tile.
 - 3. Stone thresholds installed as part of tile installations.
 - 4. Cementitious backer units installed as part of tile installations.
 - 5. Metal edge strips installed as part of tile installations.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints.
- C. Samples:
 - 1. Each type, composition, color, and finish of tile.
 - 2. Assembled samples with grouted joints for each type, composition, color, and finish of tile.
 - 3. Stone thresholds in 6-inch (150-mm) lengths.

1.3 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
2. Products: Subject to compliance with requirements, provide one of the products specified.
3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
5. Basis-of-Design Product: The design for each tile type is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 TILE PRODUCTS

A. Available Manufacturers:

1. American Marazzi Tile, Inc.
2. American Olean; Div. of Dal-Tile International Corp.
3. Buchtal Corporation USA.
4. Cerim-Floor Gres Ceramiche.
5. Crossville Ceramics Company, L.P.
6. Daltile; Div. of Dal-Tile International Inc.
7. Florida Tile Industries, Inc.
8. GranitiFiandre.
9. Interceramic.
10. KPT, Inc.
11. Laufen USA.
12. Lone Star Ceramics Company.
13. Metropolitan Ceramics.
14. Monarch Tile, Inc.
15. Porcelanite, Inc.
16. Quarry Tile Company.
17. Seneca Tiles, Inc.
18. Summitville Tiles, Inc.
19. United States Ceramic Tile Company.
20. Winburn Tile Manufacturing Company.

B. ANSI Ceramic Tile Standard: Provide Standard grade tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.

C. Glazed Wall Tile: Flat tile as follows: See Contract Drawings Schedule of finishes. Match where existing.

- D. Glazed Wall Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing where applicable.
1. Base: See Contract Drawings Schedule of finishes. Match where existing.
 2. Wainscot Cap: See Contract Drawings Schedule of finishes. Match where existing.
 3. External Corners: See Contract Drawings Schedule of finishes. Match where existing.
 4. Internal Corners: See Contract Drawings Schedule of finishes. Match where existing.
- E. Accessories for Glazed Wall Tile: Provide vitreous china accessories of type and size indicated, in color and finish to match adjoining wall tile, and intended for installing by same method as adjoining wall tile.
1. One soap holder for each lavatory shower and tub indicated.
 2. One paper holder at water closet.

2.3 ACCESSORY MATERIALS

- A. Thresholds: Fabricate to provide transition between adjacent floor finishes. Bevel edges at 1:2 slope, limit height of bevel to 1/2 inch (12.7 mm) or less, and finish bevel to match face of threshold.
1. Marble Thresholds: ASTM C 503 with a minimum abrasion resistance of 10 per ASTM C 1353 or ASTM C 241 and with honed finish.
 - a. Description: Uniform, fine- to medium-grained white stone with gray veining.

2.4 SETTING AND GROUTING MATERIALS

- A. Available Manufacturers:
1. Atlas Minerals & Chemicals, Inc.
 2. Boiardi Products Corporation.
 3. Bonsal, W. R., Company.
 4. Bostik.
 5. C-Cure.
 6. Custom Building Products.
 7. DAP, Inc.
 8. Jamo Inc.
 9. LATICRETE International Inc.
 10. MAPEI Corporation.
 11. Southern Grouts & Mortars, Inc.

12. Summitville Tiles, Inc.
 13. TEC Specialty Products Inc.
- B. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.1A.
- C. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1.
1. For wall applications, provide nonsagging mortar.
- D. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
1. Prepackaged dry-mortar mix containing dry additive to which only water must be added.
- E. Standard Sanded Cement Grout: ANSI A118.6, color as indicated.

2.5 MISCELLANEOUS MATERIALS

- A. Elastomeric Sealants: Elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements in Division 7 Section "Joint Sealants."
1. One-Part, Mildew-Resistant Silicone: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for in-service exposures of high humidity and extreme temperatures.
 - a. Available Products:
 - 1) Dow Corning Corporation; Dow Corning 786.
 - 2) GE Silicones; Sanitary 1700.
 - 3) Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
 - 4) Tremco, Inc.; Tremsil 600 White.
 2. Multipart, Pourable Urethane Sealant for Use T: ASTM C 920; Type M; Grade P; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, O.
 - a. Available Products:
 - 1) Bostik; Chem-Calk 550.
 - 2) Mameco International, Inc.; Vulkem 245.
 - 3) Pecora Corporation; NR-200 Urexpan.
 - 4) Tremco, Inc.; THC-900.

- B. Cementitious Backer Units: ANSI A118.9 in maximum lengths available to minimize end-to-end butt joints.
 - 1. Thickness: Manufacturer's standard thickness, but not less than 1/4 inch (6.4 mm).
 - 2. Available Products:
 - a. C-Cure; C-Cure Board 990.
 - b. Custom Building Products; Wonderboard.
 - c. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
 - d. USG Corporation; DUROCK Cement Board.
- C. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials.
- D. Metal Edge Strips: Angle or L-shape, stainless steel; ASTM A 666, 300 Series exposed-edge material.
- E. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints that does not change color or appearance of grout.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.
- B. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions.
- C. Remove protrusions, bumps, and ridges by sanding or grinding.
- D. Blending: For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.
- E. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.2 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.
- B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Grind cut edges of tile abutting trim, finish, or built-in items. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.
- F. Lay out tile wainscots to next full tile beyond dimensions indicated.
- G. Expansion Joints: Locate expansion joints and other sealant-filled joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Locate joints in tile surfaces directly above joints in concrete substrates.
 - 2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."
- H. Grout tile to comply with requirements of ANSI A108.10, unless otherwise indicated.
 - 1. For chemical-resistant epoxy grouts, comply with ANSI A108.6.
- I. At showers, tubs, and where indicated, install cementitious backer units and treat joints to comply with ANSI A108.11.
- J. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.

1. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- K. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile, unless otherwise indicated.
 1. Set thresholds in latex-portland cement mortar for locations where mortar bed would otherwise be exposed above adjacent nontile floor finish.
- L. Metal Edge Strips: Install at locations indicated or where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.
- M. Install metal lath and scratch coat for walls to comply with ANSI A108.1A, Section 4.1.
- N. Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer that has gotten on tile faces by wiping with soft cloth.

3.3 FLOOR TILE INSTALLATION SCHEDULE

- A. Interior floor installation on concrete; thin-set mortar; TCA F113.
 1. Thin-Set Mortar: Dry-set portland cement mortar.
 2. Grout: Sand-portland cement grout.

3.4 WALL TILE INSTALLATION SCHEDULE

- A.
 1. Thin-Set Mortar: Dry-set portland cement mortar.
 2. Grout: Sand-portland cement grout.
- B. Interior wall installation over masonry or concrete; cement mortar bed (thickset) bonded to substrate; TCA W211.
 1. Bond Coat/Thin-Set Mortar: Dry-set portland cement mortar.
 2. Grout: Sand-portland cement grout.
- C. Interior bathtub wall installation; thin-set mortar; over cementitious backer units TCA B412.
 1. Thin-Set Mortar: Dry-set portland cement mortar.
 2. Grout: Sand-portland cement grout.

END OF SECTION 09310

SECTION 09912 - PAINTING (PROFESSIONAL LINE PRODUCTS)

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation and field painting of exposed interior items and surfaces.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples: For each type of finish-coat material indicated.

1.3 QUALITY ASSURANCE

- A. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5.
 - 1. Wall Surfaces: Provide samples on at least 100 sq. ft. (9 sq. m).
 - 2. Small Areas and Items: Architect will designate items or areas required.
 - 3. Final approval of colors will be from benchmark samples.

1.4 PROJECT CONDITIONS

- A. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.
- B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C).
- C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F (7 and 35 deg C).
- D. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.5 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective

covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

1. Quantity: 5 percent, but not less than 1 gal. (3.8 L) or 1 case, as appropriate, of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.
- B. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.
- C. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 1. Benjamin Moore & Co. (Benjamin Moore).
 2. Coronado Paint Company (Coronado).
 3. ICI Dulux Paint Centers (ICI Dulux Paints).
 4. Kelly-Moore Paint Co. (Kelly-Moore).
 5. M. A. Bruder & Sons, Inc. (M. A. B. Paint).
 6. PPG Industries, Inc. (Pittsburgh Paints).
 7. Sherwin-Williams Co. (Sherwin-Williams).

2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
- C. Colors: As selected from manufacturer's full range.

2.3 PREPARATORY COATS

- A. Concrete Unit Masonry Block Filler: High-performance latex block filler of finish coat manufacturer and recommended in writing by manufacturer for use with finish coat and on substrate indicated.

- B. Interior Primer: Interior latex-based or alkyd primer of finish coat manufacturer and recommended in writing by manufacturer for use with finish coat and on substrate indicated.
1. Ferrous-Metal Substrates: Quick drying, rust-inhibitive metal primer.
 2. Zinc-Coated Metal Substrates: Galvanized metal primer.
 3. Where manufacturer does not recommend a separate primer formulation on substrate indicated, use paint specified for finish coat.

2.4 INTERIOR FINISH COATS

A. Interior Semigloss Alkyd Enamel:

1. Benjamin Moore; Moorcraft Super Spec Alkyd Semi-Gloss Enamel No. 271.
2. Coronado; 27-Line Super Kote 5000 Alkyd Semi-Gloss Enamel.
3. ICI Dulux Paints; 1516-XXXX Ultra-Hide Alkyd Semi-Gloss Interior Wall & Trim Enamel.
4. Kelly-Moore; 1630--Kel-Cote Interior Alkyd Semi-Gloss Enamel.
5. M. A. B. Paint; Fresh Kote Semi-Gloss 403 Line.
6. Pittsburgh Paints; 6-1110 Series SpeedHide Interior Enamel Wall & Trim Semi-Gloss Oil.
7. Sherwin-Williams; ProMar 200 Interior Alkyd Semi-Gloss Enamel B34W200 Series.

B. Interior Full-Gloss Alkyd Enamel for Gypsum Board and Plaster:

1. Benjamin Moore; Moore's IMC Urethane Alkyd Enamel No. M22.
2. Coronado; 123 Line Super Kote 5000 High Gloss Alkyd Enamel.
3. ICI Dulux Paints; 4308-XXXX Devguard Alkyd Industrial Gloss Enamel.
4. Kelly-Moore; 1700 Kel-Guard Gloss Alkyd Rust Inhibitive Enamel.
5. M. A. B. Paint; Rich Lux Architectural Bright White Enamel 026-127 Line.
6. Pittsburgh Paints; 7-814 Series Pittsburgh Paints Industrial Gloss-Oil Interior/Exterior Enamel.
7. Sherwin-Williams; ProMar 200 Alkyd Gloss Enamel B35W200 Series.

C. Interior Full-Gloss Alkyd Enamel for Wood and Metal Surfaces:

1. Benjamin Moore; Moore's IMC Urethane Alkyd Enamel No. M22.
2. Coronado; 123 Line Super Kote 5000 High Gloss Alkyd Enamel.
3. ICI Dulux Paints; 4308-XXXX Devguard Alkyd Industrial Gloss Enamel.
4. Kelly-Moore; 1630--Kel-Cote Interior Alkyd Semi-Gloss Enamel.
5. M. A. B. Paint; Rich Lux Architectural Bright White Enamel 026-127 Line.

6. Pittsburgh Paints; 7-814 Series Pittsburgh Paints Industrial Gloss-Oil Interior/Exterior Enamel.
7. Sherwin-Williams; ProMar 200 Alkyd Gloss Enamel B35W200 Series.

2.5 INTERIOR WOOD STAINS AND VARNISHES

A. Open-Grain Wood Filler:

1. Benjamin Moore; Benwood Paste Wood Filler No. 238.
2. Coronado; none required.
3. ICI Dulux Paints; none required.
4. Kelly-Moore; none required.
5. M. A. B. Paint; Paste Wood Filler.
6. Pittsburgh Paints; none required.
7. Sherwin-Williams; Sher-Wood Fast-Dry Filler.
8. Sherwin-Williams; none recommended.

B. Interior Waterborne Clear Gloss Varnish: Acrylic-based polyurethane.

1. Benjamin Moore; Benwood Interior Wood Finishes Polyurethane Finishes High Gloss No. 428.
2. Coronado; 70-10 Aqua-Plastic Urethane Clear Gloss.
3. ICI Dulux Paints; 1808-0000 WoodPride Interior Waterborne Aquacrylic Gloss Varnish.
4. Kelly-Moore; 2096 Kel-Thane II Clear Acrylic Urethane--Gloss.
5. M. A. B. Paint; Rich Lux Water Based Gloss Polyurethane 088-899 Line.
6. Pittsburgh Paints; 77-45 Rez Full-Gloss Acrylic Clear Polyurethane.
7. Sherwin-Williams; Wood Classics Waterborne Polyurethane Gloss, A68 Series.

C. Paste Wax: As recommended by manufacturer.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with procedures specified in PDCA P4 for inspection and acceptance of surfaces to be painted.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
- C. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted.

If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
 2. Cementitious Materials: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 - c. If transparent finish is required, backprime with spar varnish.
 - d. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side.
 - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
 4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
 - a. Blast steel surfaces clean as recommended by paint system manufacturer and according to SSPC-SP 6/NACE No. 3.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.
 5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants.

Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

E. Material Preparation:

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.

F. Exposed Surfaces: Include areas visible when permanent or built-in fixtures, grilles, convactor covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.

1. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
2. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
3. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
4. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
5. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.

G. Sand lightly between each succeeding enamel or varnish coat.

H. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. Omit primer over metal surfaces that have been shop primed and touchup painted.
2. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance.

I. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

J. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide total dry film thickness of the entire system as recommended by manufacturer.

- K. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- L. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- M. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- N. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- O. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
- P. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.

3.2 CLEANING AND PROTECTING

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- B. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- C. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
 - 1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.3 INTERIOR PAINT SCHEDULE

- A. Concrete and Masonry (Other Than Concrete Unit Masonry):

1. Acrylic Finish: Two finish coats over a primer.
 - a. Primer: Interior concrete and masonry primer.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior concrete and masonry primer.
 - b. Finish Coats: Interior semigloss alkyd enamel.
- B. Gypsum Board:
1. Acrylic Finish: Two finish coats over a primer.
 - a. Primer: Interior gypsum board primer.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior gypsum board primer.
 - b. Finish Coats: Interior semigloss alkyd.
- C. Plaster:
1. Acrylic Finish: Two finish coats over a primer.
 - a. Primer: Interior plaster primer.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior plaster primer.
 - b. Finish Coats: Interior semigloss alkyd enamel.
- D. Wood and Hardboard:
1. Acrylic-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior wood primer for acrylic-enamel and semigloss alkyd-enamel finishes.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior wood primer for acrylic-enamel and semigloss alkyd-enamel finishes.
 - b. Finish Coats: Interior semigloss alkyd enamel.
- E. Ferrous Metal:

1. Acrylic Finish: Two finish coats over a primer.
 - a. Primer: Interior ferrous-metal primer.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior ferrous-metal primer.
 - b. Finish Coats: Interior semigloss alkyd enamel.
- F. Zinc-Coated Metal:
1. Acrylic Finish: Two finish coats over a primer.
 - a. Primer: Interior zinc-coated metal primer.
 - b. Finish Coats: Interior semigloss acrylic enamel.
 2. Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior zinc-coated metal primer.
 - b. Finish Coats: Interior semigloss alkyd enamel.
- G. All-Service Jacket over Insulation:
1. Acrylic Finish: Two finish coats. Add fungicidal agent to render fabric mildew proof.
 - a. Finish Coats: Interior flat latex-emulsion size.
- 3.4 INTERIOR STAIN AND NATURAL-FINISH WOODWORK SCHEDULE
- A. Stain-Varnish Finish: Two finish coats of varnish over a sealer coat and interior wood stain. Wipe wood filler before applying stain.
1. Filler Coat: Open-grain wood filler.
 2. Stain Coat: Interior wood stain.
 3. Sealer Coat: Clear sanding sealer.
 4. Finish Coats: Interior alkyd- or polyurethane-based clear satin varnish.
- B. Natural-Varnish Finish: Two finish coats of varnish over a sealer coat and a filler coat.
1. Filler Coat: Open-grain wood filler.
 2. Sealer Coat: Clear sanding sealer.
 3. Finish Coats: Interior alkyd- or polyurethane-based clear satin varnish.
- C. Wax-Polished Finish: Three finish coats of paste wax over a sealer coat and alkyd-based interior wood stain.

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1. Stain Coat: Interior wood stain.
2. Sealer Coat: Clear sanding sealer.
3. Finish Coats: Paste wax.

END OF SECTION 09912

SECTION 10801 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Toilet and bath accessories.
2. Warm-air dryers.
3. Infant-care products.
4. Underlavatory guards.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required. Use room designations indicated on Drawings.

1.3 WARRANTY

- A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace mirrors that develop visible silver spoilage defects within **15** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Products: The design for toilet and bath accessories described in Part 2 are based on products indicated. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

1. Toilet and Bath Accessories:
 - a. A & J Washroom Accessories, Inc.
 - b. American Specialties, Inc.
 - c. Bobrick Washroom Equipment, Inc.
 - d. Bradley Corporation.
 - e. General Accessory Manufacturing Co. (GAMCO).
 - f. McKinney/Parker Washroom Accessories Corp.
2. Warm-Air Dryers:
 - a. A & J Washroom Accessories, Inc.
 - b. American Dryer, Inc.
 - c. American Specialties, Inc.
 - d. Bobrick Washroom Equipment, Inc.
 - e. Bradley Corporation.
 - f. Excel Dryer Corporation.
 - g. General Accessory Manufacturing Co. (GAMCO).
 - h. McKinney/Parker Washroom Accessories Corp.
 - i. World Dryer.
3. Infant-Care Products:
 - a. American Infant Care Products Inc.
 - b. American Specialties, Inc.
 - c. Brocar Products, Inc.
 - d. General Accessory Manufacturing Co. (GAMCO).
 - e. Koala Corporation.
 - f. Safe-Strap Company, Inc.
4. Underlavatory Guards:
 - a. Brocar Products, Inc.
 - b. Truebro, Inc.

2.2 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, No. 4 finish (satin), 0.0312-inch (0.8-mm) minimum nominal thickness, unless otherwise indicated.
- B. Brass: ASTM B 19, ASTM B 16 (ASTM B 16M), or ASTM B 30 castings.
- C. Steel Sheet: ASTM A 366/A 366M, 0.0359-inch (0.9-mm) minimum nominal thickness.
- D. Galvanized Steel Sheet: ASTM A 653/A 653M, G60 (Z180).

- E. Chromium Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- F. Baked-Enamel Finish: Factory-applied, gloss-white, baked-acrylic-enamel coating.
- G. Mirror Glass: ASTM C 1036, Type I, Class 1, Quality q2, nominal 6.0 mm thick, with silvering, electroplated copper coating, and protective organic coating complying with FS DD-M-411.
- H. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- I. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed.
- J. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of **6** keys to Owner's representative.

2.3 TOILET AND BATH ACCESSORIES

- A. See Drawings for Accessories

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
 - 1. Install grab bars to withstand a downward load of at least **250 lbf (1112 N)**, when tested according to method in ASTM F 446.
- B. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective items. Remove temporary labels and protective coatings.

END OF SECTION 10801

SECTION 15050 - BASIC MECHANICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

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

1.2 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct shafts, 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 duct shafts.
- 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.

1.3 SUBMITTALS

- A. Welding certificates.

1.4 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 Mechanical 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.

PART 2 - PRODUCTS

2.1 PIPE, TUBE, AND FITTINGS

- A. Refer to individual Division 15 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 15 piping Sections for special joining materials not listed below.
- B. Pipe-Flange Gasket Materials: ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch (3.2-mm) maximum thickness unless thickness or specific material is indicated.
- C. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.
- D. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.

- E. Brazing Filler Metals: AWS A5.8, BCuP Series or BAg1, unless otherwise indicated.
- F. Welding Filler Metals: Comply with AWS D10.12.
- G. Solvent Cements for Joining Plastic Piping:
 - 1. ABS Piping: ASTM D 2235.
 - 2. CPVC Piping: ASTM F 493.
 - 3. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.
 - 4. PVC to ABS Piping Transition: ASTM D 3138.

2.3 DIELECTRIC FITTINGS

- A. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder-joint, plain, or weld-neck end connections that match piping system materials.
- B. Insulating Material: Suitable for system fluid, pressure, and temperature.
- C. Dielectric Unions: Factory-fabricated, union assembly, for 250-psig (1725-kPa) minimum working pressure at 180 deg F (82 deg C).
- D. Dielectric Flanges: Factory-fabricated, companion-flange assembly, for 150- or 300-psig (1035- or 2070-kPa) minimum working pressure as required to suit system pressures.
- E. Dielectric Couplings: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining; threaded ends; and 300-psig (2070-kPa) minimum working pressure at 225 deg F (107 deg C).
- F. Dielectric Nipples: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining; plain, threaded, or grooved ends; and 300-psig (2070-kPa) minimum working pressure at 225 deg F (107 deg C).

2.4 MECHANICAL SLEEVE SEALS

- A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
- B. Sealing Elements: EPDM interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
- C. NOT USED

- D. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.5 SLEEVES

- A. Galvanized-Steel Sheet: 0.0239-inch (0.6-mm) 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.
- E. Molded PVC: Permanent, with nailing flange for attaching to wooden forms.
- F. PVC Pipe: ASTM D 1785, Schedule 40.
- G. Molded PE: Reusable, PE, tapered-cup shaped, and smooth-outer surface with nailing flange for attaching to wooden forms.

2.6 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.

2.7 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 MECHANICAL DEMOLITION

- A. Refer to Division 1 Sections "Cutting and Patching" and "Selective Demolition" for general demolition requirements and procedures.
- B. Disconnect, demolish, and remove mechanical 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. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - 4. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.
 - 5. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - 6. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - 7. 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 15 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.
- M. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.
- N. Aboveground, Exterior-Wall Pipe Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
 - 1. Install steel pipe for sleeves smaller than 6 inches (150 mm) in diameter.
 - 2. Install cast-iron "wall pipes" for sleeves 6 inches (150 mm) 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.

- O. 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 (25-mm) 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.
- P. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Refer to Division 7 Section "Through-Penetration Firestop Systems" for materials.
- Q. Verify final equipment locations for roughing-in.
- R. 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 15 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. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.
- E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- F. 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.
- G. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- H. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- I. Plastic Piping Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
1. Comply with ASTM F 402, for safe-handling practice of cleaners, primers, and solvent cements.
 2. ABS Piping: Join according to ASTM D 2235 and ASTM D 2661 Appendixes.
 3. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.
 4. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 5. PVC Nonpressure Piping: Join according to ASTM D 2855.
 6. PVC to ABS Nonpressure Transition Fittings: Join according to ASTM D 3138 Appendix.
- J. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.
- K. Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.
- L. PE Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.
1. Plain-End Pipe and Fittings: Use butt fusion.
 2. Plain-End Pipe and Socket Fittings: Use socket fusion.
- M. Fiberglass Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.

3.4 PIPING CONNECTIONS

- A. Make connections according to the following, unless otherwise indicated:

1. Install unions, in piping NPS 2 (DN 50) and smaller, adjacent to each valve and at final connection to each piece of equipment.
2. Install flanges, in piping NPS 2-1/2 (DN 65) and larger, adjacent to flanged valves and at final connection to each piece of equipment.
3. Dry Piping Systems: Install dielectric unions and flanges to connect piping materials of dissimilar metals.
4. Wet Piping Systems: Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals.

3.5 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

- A. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.
- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- C. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.
- D. Install equipment to allow right of way for piping installed at required slope.

3.6 NOT USED

3.7 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Refer to Division 5 Section "Metal Fabrications" for structural steel.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.
- C. Field Welding: Comply with AWS D1.1.

3.8 ERECTION OF WOOD SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place wood grounds, nailers, blocking, and anchorages to support, and anchor mechanical materials and equipment.

- B. Select fastener sizes that will not penetrate members if opposite side will be exposed to view or will receive finish materials. Tighten connections between members. Install fasteners without splitting wood members.
- C. Attach to substrates as required to support applied loads.

3.9 GROUTING

- A. Mix and install grout for mechanical 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 15050

SECTION 15140 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes domestic water piping from locations indicated to fixtures and equipment inside the building.

1.2 SUBMITTALS

- A. Water Samples: Specified in "Cleaning" Article in Part 3.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- B. Comply with NFPA 24, "Installation of Private Fire Service Mains and Their Appurtenances," and NSF 61, "Drinking Water System Components-Health Effects; Sections 1 through 9," for combined fire-protection and domestic water service piping to building.
- C. Comply with NSF 14, "Plastics Piping Components and Related Materials," for plastic, potable domestic water piping and components.
- D. Comply with NSF 61, "Drinking Water System Components-Health Effects; Sections 1 through 9," for potable domestic water piping and components.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

- A. Transition Couplings: Coupling or other manufactured fitting the same size as, with pressure rating at least equal to and ends compatible with, piping to be joined.
- B. Not used

- C. Soft Copper Tube: ASTM B 88, Types K and L (ASTM B 88M, Types A and B), water tube, annealed temper.
 - 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
 - 2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint end. Furnish Class 300 flanges if required to match piping.
 - 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends.

- D. Hard Copper Tube: ASTM B 88, Types L and M (ASTM B 88M, Types B and C), water tube, drawn temper.
 - 1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
 - 2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint end. Furnish Class 300 flanges if required to match piping.
 - 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends.

2.2 VALVES

- A. Refer to Division 15 Section Valves for bronze and cast-iron, general-duty valves.

- B. Refer to Division 15 Section "Plumbing Specialties" for balancing and drain valves.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

- A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below, unless otherwise indicated.

- B. Flanges may be used on aboveground piping, unless otherwise indicated.

- C. Domestic Water Piping: Use any of the following piping materials for each size range:

1. NPS 1-1/2 (DN 40) and Smaller: Hard copper tube, Type M; copper pressure fittings; and soldered joints.
 2. Not used.
 3. Not used.
 4. Not used.
 5. Not used.
 6. Not used.
 7. NPS 2 (DN 50): Hard copper tube Type M; with grooved ends; copper grooved-end fittings; copper-tubing, keyed couplings; and grooved joints.
- D. Non-potable-Water Piping: Use Any of the following piping materials for each size range:
1. NPS 3-1/2 (DN 90) and Smaller: Steel pipe; gray-iron, threaded fittings; and threaded joints.
 2. NPS 3-1/2 (DN 90) and Smaller: Hard copper tube, Type M; copper pressure fittings; and soldered joints.

3.2 VALVE APPLICATIONS

- A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
1. Shutoff Duty: Use bronze ball or gate valves for piping NPS 2 (DN 50) and smaller. Use cast-iron butterfly or gate valves with flanged ends for piping NPS 2-1/2 (DN 65) and larger.
 2. Throttling Duty: Use bronze ball or globe valves for piping NPS 2 (DN 50) and smaller. Use cast-iron butterfly valves with flanged ends for piping NPS 2-1/2 (DN 65) and larger.
 3. Not used.
 4. Drain Duty: Hose-end drain valves.

3.3 PIPING INSTALLATION

- A. Refer to Division 2 Section "Water Distribution" for site water distribution and service piping.

- B. Refer to Division 15 Section Basic Mechanical Materials and Methods for basic piping installation.
- C. Extend domestic water service piping to exterior water distribution piping in sizes and locations indicated.
- D. Install cast-iron sleeve with water stop and mechanical sleeve seal at each service pipe penetration through foundation wall. Select number of interlocking rubber links required to make installation watertight. Refer to Division 15 Section Basic Mechanical Materials and Methods for sleeves and mechanical sleeve seals.
- E. Install wall penetration system at each service pipe penetration through foundation wall. Make installation watertight. Refer to Division 15 Section Basic Mechanical Materials and Methods for wall penetration systems.
- F. Install shutoff valve, hose-end drain valve, strainer, pressure gage, and test tee with valve, inside building at each domestic water service. Refer to Division 15 Section Plumbing Specialties for drain valves and strainers.
- G. Install water-pressure regulators downstream from shutoff valves. Refer to Division 15 Section "Plumbing Specialties" for water-pressure regulators.
- H. Install domestic water piping level with 0.25 percent slope downward toward drain without pitch and plumb.
- I. Fill water piping. Check components to determine that they are not air bound and that piping is full of water.
- J. Perform the following steps before operation:
 - 1. Close drain valves, hydrants, and hose bibs.
 - 2. Open shutoff valves to fully open position.
 - 3. Open throttling valves to proper setting.
 - 4. Remove plugs used during testing of piping and plugs used for temporary sealing of piping during installation.
 - 5. Remove and clean strainer screens. Close drain valves and replace drain plugs.
 - 6. Remove filter cartridges from housings, and verify that cartridges are as specified for application where used and that cartridges are clean and ready for use.
- K. Check plumbing equipment and verify proper settings, adjustments, and operation. Do not operate water heaters before filling with water.
- L. Check plumbing specialties and verify proper settings, adjustments, and operation.

1. Water-Pressure Regulators: Set outlet pressure at 80 psig (550 kPa) maximum, unless otherwise indicated.

M. Energize pumps and verify proper operation.

3.4 JOINT CONSTRUCTION

- A. Refer to Division 15 Section "Basic Mechanical Materials and Methods " for basic piping joint construction.
- B. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.

3.5 NOT USING

3.6 VALVE INSTALLATION

- A. Install sectional valve close to water main on each branch and riser serving plumbing fixtures or equipment. Use ball or gate valves for piping NPS 2 (DN 50) and smaller. Use butterfly or gate valves for piping NPS 2-1/2 (DN 65) and larger.
- B. Install shutoff valve on each water supply to equipment and on each water supply to plumbing fixtures without supply stops. Use ball or gate valves for piping NPS 2 (DN 50) and smaller. Use butterfly or gate valves for piping NPS 2-1/2 (DN 65) and larger.
- C. Install drain valves for equipment, at base of each water riser, at low points in horizontal piping, and where required to drain water piping.
 1. Install hose-end drain valves at low points in water mains, risers, and branches.
 2. Install stop-and-waste drain valves where indicated.
- D. Install balancing valve in each hot-water circulation return branch and discharge side of each pump and circulator. Set balancing valves partly open to restrict but not stop flow. Use ball valves for piping NPS 2 (DN 50) and smaller and butterfly valves for piping NPS 2-1/2 (DN 65) and larger. Refer to Division 15 Section "Plumbing Specialties" for balancing valves.
- E. Install calibrated balancing valves in each hot-water circulation return branch and discharge side of each pump and circulator. Set calibrated balancing valves partly open to restrict but not stop flow. Refer to Division 15 Section "Plumbing Specialties" for calibrated balancing valves.

3.7 HANGER AND SUPPORT INSTALLATION

- A. Refer to Division 15 Section "Mechanical Vibration and Seismic Controls" for seismic-restraint devices.
- B. Refer to Division 15 Section "Hangers and Supports" for pipe hanger and support devices. Install the following:
 - 1. Vertical Piping: MSS Type 8 or Type 42, clamps.
 - 2. Individual, Straight, Horizontal Piping Runs: According to the following:
 - a. 100 Feet (30 m) and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Feet (30 m): MSS Type 43, adjustable roller hangers.
 - c. Longer Than 100 Feet (30 m), if Indicated: MSS Type 49, spring cushion rolls.
 - 3. Multiple, Straight, Horizontal Piping Runs 100 Feet (30 m) or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
 - 4. Base of Vertical Piping: MSS Type 52, spring hangers.
- C. Install supports according to Division 15 Section "Hangers and Supports."
- D. Support vertical piping and tubing at base and at each floor.
- E. Rod diameter may be reduced 1 size for double-rod hangers, to a minimum of 3/8 inch (10 mm).
- F. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/4 (DN 32) and Smaller: 84 inches (2100 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 1-1/2 (DN 40): 108 inches (2700 mm) with 3/8-inch (10-mm) rod.
 - 3. NPS 2 (DN 50): 10 feet (3 m) with 3/8-inch (10-mm) rod.
 - 4. NPS 2-1/2 (DN 65): 11 feet (3.4 m) with 1/2-inch (13-mm) rod.
 - 5. NPS 3 and NPS 3-1/2 (DN 80 and DN 90): 12 feet (3.7 m) with 1/2-inch (13-mm) rod.
 - 6. NPS 4 and NPS 5 (DN 100 and DN 125): 12 feet (3.7 m) with 5/8-inch (16-mm) rod.
 - 7. NPS 6 (DN 150): 12 feet (3.7 m) with 3/4-inch (19-mm) rod.
 - 8. NPS 8 to NPS 12 (DN 200 to DN 300): 12 feet (3.7 m) with 7/8-inch (22-mm) rod.

- G. Install supports for vertical steel piping every 15 feet (4.5 m).
- H. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 3/4 (DN 20) and Smaller: 60 inches (1500 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 1 and NPS 1-1/4 (DN 25 and DN 32): 72 inches (1800 mm) with 3/8-inch (10-mm) rod.
 - 3. NPS 1-1/2 and NPS 2 (DN 40 and DN 50): 96 inches (2400 mm) with 3/8-inch (10-mm) rod.
 - 4. NPS 2-1/2 (DN 65): 108 inches (2700 mm) with 1/2-inch (13-mm) rod.
 - 5. NPS 3 to NPS 5 (DN 80 to DN 125): 10 feet (3 m) with 1/2-inch (13-mm) rod.
 - 6. NPS 6 (DN 150): 10 feet (3 m) with 5/8-inch (16-mm) rod.
 - 7. NPS 8 (DN 200): 10 feet (3 m) with 3/4-inch (19-mm) rod.
- I. Install supports for vertical copper tubing every 10 feet (3M).
- J. Install hangers for CPVC piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1 (DN 25) and Smaller: 36 inches (900 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 1-1/4 to NPS 2 (DN 32 to DN 50): 48 inches (1200 mm) with 3/8-inch (10-mm) rod.
 - 3. NPS 2-1/2 to NPS 3-1/2 (DN 65 to DN 90): 48 inches (1200 mm) with 1/2-inch (13-mm) rod.
 - 4. NPS 4 and NPS 5 (DN 100 and DN 125): 48 inches (1200 mm) with 5/8-inch (16-mm) rod.
 - 5. NPS 6 (DN 150): 48 inches (1200 mm) with 3/4-inch (19-mm) rod.
 - 6. NPS 8 (DN 200): 48 inches (1200 mm) with 7/8-inch (22-mm) rod.
- K. Install supports for vertical CPVC piping every 60 inches (1500 mm) for NPS 1 (DN 25) and smaller and every 72 inches (1800 mm) for NPS 1-1/4 (DN 32) and larger.
- L. Install hangers for PVC piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 2 (DN 50) and Smaller: 48 inches (1200 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 2-1/2 to NPS 3-1/2 (DN 65 to DN 90): 48 inches (1200 mm) with 1/2-inch (13-mm) rod.
 - 3. NPS 4 and NPS 5 (DN 100 and DN 125): 48 inches (1200 mm) with 5/8-inch (16-mm) rod.
 - 4. NPS 6 (DN 150): 48 inches (1200 mm) with 3/4-inch (19-mm) rod.

5. NPS 8 (DN 200): 48 inches (1200 mm) with 7/8-inch (22-mm) rod.
- M. Install supports for vertical PVC piping every 48 inches (1200 mm).
- N. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.

3.8 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment and machines to allow service and maintenance.
- C. Connect domestic water piping to exterior water service piping. Use transition fitting to join dissimilar piping materials.
- D. Connect domestic water piping to service piping with shutoff valve, and extend and connect to the following:
 1. Booster Systems: Cold-water suction and discharge piping.
 2. Water Heaters: Cold-water supply and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
 3. Plumbing Fixtures: Cold- and hot-water supply piping in sizes indicated, but not smaller than required by plumbing code. Refer to Division 15 Section "Plumbing Fixtures"
 4. Equipment: Cold- and hot-water supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection. Use flanges instead of unions for NPS 2-1/2 (DN 65) and larger.

3.9 FIELD QUALITY CONTROL

- A. Inspect domestic water piping as follows:
 1. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.
 2. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
 - a. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
 - b. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

3. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.
4. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

B. Test domestic water piping as follows:

1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
2. Leave uncovered and unconcealed new, altered, extended, or replaced domestic water piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
3. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
4. Repair leaks and defects with new materials and retest piping or portion thereof until satisfactory results are obtained.
5. Prepare reports for tests and required corrective action.

3.10 CLEANING

A. Clean and disinfect potable domestic water piping as follows:

1. Purge new piping and parts of existing domestic water piping that have been altered, extended, or repaired before using.
2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction or, if methods are not prescribed, procedures described in either AWWA C651 or AWWA C652 or as described below:
 - a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
 - b. Fill and isolate system according to either of the following:
 - 1) Fill system or part thereof with water/chlorine solution with at least 50 ppm (50 mg/L) of chlorine. Isolate with valves and allow to stand for 24 hours.
 - 2) Fill system or part thereof with water/chlorine solution with at least 200 ppm (200 mg/L) of chlorine. Isolate and allow to stand for three hours.
 - c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.

- d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedures if biological examination shows contamination.
- B. Prepare and submit reports of purging and disinfecting activities.
- C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

END OF SECTION 15140

SECTION 15150 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes soil and waste, sanitary drainage and vent piping inside the building.

1.2 SUBMITTALS

- A. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- B. Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping; "NSF-drain" for plastic drain piping; "NSF-tubular" for plastic continuous waste piping; and "NSF-sewer" for plastic sewer piping.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

- A. Flexible Transition Couplings for Underground Nonpressure Piping: ASTM C 1173 with elastomeric sleeve. Include ends of same sizes as piping to be joined and include corrosion-resistant metal band on each end.
- B. Transition Couplings for Underground Pressure Piping: AWWA C219 metal, sleeve-type coupling or other manufactured fitting same size as, with pressure rating at least equal to and ends compatible with, piping to be joined.
- C. Hub-and-Spigot Cast-Iron Pipe and Fittings: ASTM A 74, Service class.
 - 1. Gaskets: ASTM C 564, rubber.
- D. Hubless Cast-Iron Pipe and Fittings: ASTM A 888 or CISPI 301.

1. Couplings: ASTM C 1277 assembly of metal housing, corrosion-resistant fasteners, and ASTM C 564 rubber sleeve with integral, center pipe stop.
 - a. Not used.
 - b. Not used..
 - c. Heavy-Duty, Cast-Iron Couplings: ASTM A 48, 2-piece, cast-iron housing; stainless-steel bolts and nuts; and sleeve.
- E. Not used.
- F. Copper DWV Tube: ASTM B 306, drainage tube, drawn temper.
 1. Copper Drainage Fittings: ASME B16.23, cast copper or ASME B16.29, wrought copper, solder-joint fittings.
- G. Not used
- H. Not used.
- I. ABS Pipe: ASTM D 2661, Schedule 40, solid wall.
 1. ABS Socket Fittings: ASTM D 2661, made to ASTM D 3311, drain, waste, and vent patterns.
- J. Cellular-Core, ABS Pipe: ASTM F 628, Schedule 40.
 1. ABS Socket Fittings: ASTM D 2661, made to ASTM D 3311, drain, waste, and vent patterns.
- K. ABS Special Fittings: ASTM F 409, drainage-pattern tube and tubular fittings with ends as required for application.
- L. PVC Pipe: ASTM D 2665, solid-wall drain, waste, and vent.
 1. PVC Socket Fittings: ASTM D 2665, socket type, made to ASTM D 3311, drain, waste, and vent patterns.
- M. Cellular-Core, Schedule 40, PVC Pipe: ASTM F 891, Schedule 40.
 1. PVC Socket Fittings: ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Schedule 40 pipe.
- N. Cellular-Core, Sewer and Drain Series, PVC Pipe: ASTM F 891, Series PS 100.
 1. PVC Socket Fittings: ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Series PS 100 sewer and drain pipe.

- O. PVC Special Fittings: ASTM F 409, drainage-pattern tube and tubular fittings with ends as required for application.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

- A. Transition and special fittings with pressure ratings at least equal to piping pressure ratings may be used in applications below, unless otherwise indicated.
- B. Flanges may be used on aboveground pressure piping, unless otherwise indicated.
- C. Aboveground, Soil, Waste, and Vent Piping: Use any of the following piping materials for each size range:
 - 1. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): Use NPS 1-1/2 (DN 40) hubless, cast-iron soil piping and one of the following:
 - a. Not Used.
 - b. Couplings: Heavy-duty, FMG approved cast iron.
 - c. Not Used.
 - 2. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): Steel pipe; cast-iron, threaded drainage fittings; and threaded joints.
 - 3. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): Copper DWV tube, copper drainage fittings, and soldered joints.
 - 4. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): ABS pipe, ABS socket fittings, and solvent-cemented joints.
 - 5. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): Cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
 - 6. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): PVC pipe, PVC socket fittings, and solvent-cemented joints.
 - 7. NPS 1-1/4 and NPS 1-1/2 (DN 32 and DN 40): Cellular-core, Schedule 40, PVC pipe; PVC socket fittings; and solvent-cemented joints.
 - 8. NPS 2 to NPS 4 (DN 50 to DN 100): Service class, cast-iron soil piping; gaskets; and gasketed joints.

9. NPS 2 to NPS 4 (DN 50 to DN 100): Hubless, cast-iron soil piping and one of the following:
 - a. Not used.
 - b. Couplings: Heavy-duty, FMG approved cast iron.
 - c. Not used.
10. Not used.
11. Not used.
12. NPS 2 to NPS 4 (DN 50 to DN 100): Copper DWV tube, copper drainage fittings, and soldered joints.
 - a. Option for Vent Piping, NPS 2-1/2 and NPS 3-1/2 (DN 65 and DN 90): Hard copper tube, Type M (Type C); copper pressure fittings; and soldered joints.
13. NPS 2 to NPS 4 (DN 50 to DN 100): ABS pipe, ABS socket fittings, and solvent-cemented joints.
14. NPS 2 to NPS 4 (DN 50 to DN 100): Cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
15. NPS 2 to NPS 4 (DN 50 to DN 100): PVC pipe, PVC socket fittings, and solvent-cemented joints.
16. NPS 2 to NPS 4 (DN 50 to DN 100): Cellular-core, Schedule 40, PVC pipe; PVC socket fittings; and solvent-cemented joints.
17. NPS 5 and NPS 6 (DN 125 and DN 150): Service class, cast-iron soil piping; gaskets; and gasketed joints.
18. NPS 5 and NPS 6 (DN 125 and DN 150): Hubless, cast-iron soil piping and one of the following:
 - a. Not used.
 - b. Couplings: Heavy-duty, FMG approved cast iron.
 - c. Not used..
19. NPS 5 and NPS 6 (DN 125 and DN 150): Steel pipe; cast-iron, threaded drainage fittings; and threaded joints.

20. NPS 5 and NPS 6 (DN 125 and DN 150): Copper DWV tube, copper drainage fittings, and soldered joints.
 21. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) ABS pipe, ABS socket fittings, and solvent-cemented joints.
 22. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
 23. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) PVC pipe, PVC socket fittings, and solvent-cemented joints.
 24. NPS 5 and NPS 6 (DN 125 and DN 150): Cellular-core, Schedule 40, PVC pipe; PVC socket fittings; and solvent-cemented joints.
- D. Underground, Soil, Waste, and Vent Piping: Use any of the following piping materials for each size range:
1. NPS 1-1/2 (DN 40): Hubless, cast-iron soil piping and one of the following:
 - a. Not used.
 - b. Couplings: Heavy-duty, cast iron.
 - c. Not used.
 2. NPS 1-1/2 (DN 40): ABS pipe, ABS socket fittings, and solvent-cemented joints.
 3. NPS 1-1/2 (DN 40): Cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
 4. NPS 1-1/2 (DN 40): PVC pipe, PVC socket fittings, and solvent-cemented joints.
 5. NPS 1-1/2 (DN 40): Cellular-core, PVC pipe; PVC socket fittings; and solvent-cemented joints.
 6. NPS 2 to NPS 4 (DN 50 to DN 100): Service class, cast-iron soil piping; gaskets; and gasketed joints.
 7. NPS 2 to NPS 4 (DN 50 to DN 100): Extra-Heavy class, cast-iron soil piping; gaskets; and gasketed joints.
 8. NPS 2 to NPS 4 (DN 50 to DN 100): Hubless, cast-iron soil piping and one of the following:

- a. Not used..
 - b. Couplings: Heavy-duty, FMG approved cast iron.
 - c. Not used..
9. NPS 2 to NPS 4 (DN 50 to DN 100): ABS pipe, ABS socket fittings, and solvent-cemented joints.
 10. NPS 2 to NPS 4 (DN 50 to DN 100): Cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
 11. NPS 2 to NPS 4 (DN 50 to DN 100): PVC pipe, PVC socket fittings, and solvent-cemented joints.
 12. NPS 2 to NPS 4 (DN 50 to DN 100): Cellular-core, Schedule 40, PVC pipe; PVC socket fittings; and solvent-cemented joints.
 13. NPS 2 to NPS 4 (DN 50 to DN 100): Use NPS 3 and NPS 4 (DN 80 and DN 100) cellular-core, Sewer and Drain Series, PVC pipe; PVC socket fittings; and solvent-cemented joints.
 14. NPS 5 and NPS 6 (DN 125 and DN 150): Service class, cast-iron soil piping; gaskets; and gasketed joints.
 15. NPS 5 and NPS 6 (DN 125 and DN 150): Extra-Heavy class, cast-iron soil piping; gaskets; and gasketed joints.
 16. NPS 5 and NPS 6 (DN 125 and DN 150): Hubless, cast-iron soil piping and one of the following:
 - a. Not used.
 - b. Couplings: Heavy-duty, cast iron.
 - c. Not used.
 17. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) ABS pipe, ABS socket fittings, and solvent-cemented joints.
 18. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) cellular-core, ABS pipe; ABS socket fittings; and solvent-cemented joints.
 19. NPS 5 and NPS 6 (DN 125 and DN 150): PVC pipe, PVC socket fittings, and solvent-cemented joints.
 20. NPS 5 and NPS 6 (DN 125 and DN 150): Cellular-core, Schedule 40, PVC pipe; PVC socket fittings; and solvent-cemented joints.

21. NPS 5 and NPS 6 (DN 125 and DN 150): Use NPS 6 (DN 150) cellular-core, Sewer and Drain Series, PVC pipe; PVC socket fittings; and solvent-cemented joints.

3.2 PIPING INSTALLATION

- A. Not Used.
- B. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for basic piping installation.
- C. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers.
- D. Install cast-iron sleeve with water stop and mechanical sleeve seal at each service pipe penetration through foundation wall. Select number of interlocking rubber links required to make installation watertight. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for sleeves and mechanical sleeve seals.
- E. Install wall penetration system at each service pipe penetration through foundation wall. Make installation watertight. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for wall penetration systems.
- F. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
 1. Encase underground piping with PE film according to ASTM A 674 or AWWA C105.
- G. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if 2 fixtures are installed back to back or side by side with common drain pipe. Straight tees, elbows, and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited.
- H. Lay buried building drainage piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab in piping and pull past each joint as completed.

- I. Install soil and waste drainage and vent piping at the following minimum slopes, unless otherwise indicated:
 - 1. Building Sanitary Drain: 2 percent downward in direction of flow for piping NPS 3 (DN 80) and smaller; 1 percent downward in direction of flow for piping NPS 4 (DN 100) and larger.
 - 2. Horizontal Sanitary Drainage Piping: 2 percent downward in direction of flow.
 - 3. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.
- J. Sleeves are not required for cast-iron soil piping passing through concrete slabs-on-grade if slab is without membrane waterproofing.
- K. Install ABS soil and waste drainage and vent piping according to ASTM D 2661.
- L. Install PVC soil and waste drainage and vent piping according to ASTM D 2665.
- M. Install underground PVC soil and waste drainage piping according to ASTM D 2321.
- N. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

3.3 JOINT CONSTRUCTION

- A. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for basic piping joint construction.
- B. Cast-Iron, Soil-Piping Joints: Make joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
 - 1. Gasketed Joints: Make with rubber gasket matching class of pipe and fittings.
 - 2. Hubless Joints: Make with rubber gasket and sleeve or clamp.
- C. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.
- D. PVC Nonpressure Piping Joints: Join piping according to ASTM D 2665.

3.4 NOT USED.

3.5 HANGER AND SUPPORT INSTALLATION

- A. Refer to Division 15 Section "Mechanical Vibration and Seismic Controls" for seismic-restraint devices.
- B. Refer to Division 15 Section "Hangers and Supports" for pipe hanger and support devices. Install the following:
 - 1. Vertical Piping: MSS Type 8 or Type 42, clamps.
 - 2. Individual, Straight, Horizontal Piping Runs: According to the following:
 - a. 100 Feet (30 m) and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Feet (30 m): MSS Type 43, adjustable roller hangers.
 - c. Longer Than 100 Feet (30 m), if Indicated: MSS Type 49, spring cushion rolls.
 - 3. Multiple, Straight, Horizontal Piping Runs 100 Feet (30 m) or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
 - 4. Base of Vertical Piping: MSS Type 52, spring hangers.
- C. Install supports according to Division 15 Section "Hangers and Supports" Support vertical piping and tubing at base and at each floor.
- D. Rod diameter may be reduced 1 size for double-rod hangers, with 3/8-inch (10-mm) minimum rods.
- E. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/2 and NPS 2 (DN 40 and DN 50): 60 inches (1500 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 3 (DN 80): 60 inches (1500 mm) with 1/2-inch (13-mm) rod.
 - 3. NPS 4 and NPS 5 (DN 100 and DN 125): 60 inches (1500 mm) with 5/8-inch (16-mm) rod.
 - 4. NPS 6 (DN 150): 60 inches (1500 mm) with 3/4-inch (19-mm) rod.
 - 5. Spacing for 10-foot (3-m) lengths may be increased to 10 feet (3 m). Spacing for fittings is limited to 60 inches (1500 mm).

- F. Install supports for vertical cast-iron soil piping every 15 feet (4.5 m).
- G. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/4 (DN 32): 84 inches (2100 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 1-1/2 (DN 40): 108 inches (2700 mm) with 3/8-inch (10-mm) rod.
 - 3. NPS 2 (DN 50): 10 feet (3 m) with 3/8-inch (10-mm) rod.
 - 4. NPS 2-1/2 (DN 65): 11 feet (3.4 m) with 1/2-inch (13-mm) rod.
 - 5. NPS 3 (DN 80): 12 feet (3.7 m) with 1/2-inch (13-mm) rod.
 - 6. NPS 4 and NPS 5 (DN 100 and DN 125): 12 feet (3.7 m) with 5/8-inch (16-mm) rod.
 - 7. NPS 6 (DN 150): 12 feet (3.7 m) with 3/4-inch (19-mm) rod.
- H. Install supports for vertical steel piping every 15 feet (4.5 m).
- I. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/4 (DN 32): 72 inches (1800 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 1-1/2 and NPS 2 (DN 40 and DN 50): 96 inches (2400 mm) with 3/8-inch (10-mm) rod.
 - 3. NPS 2-1/2 (DN 65): 108 inches (2700 mm) with 1/2-inch (13-mm) rod.
 - 4. NPS 3 to NPS 5 (DN 80 to DN 125): 10 feet (3 m) with 1/2-inch (13-mm) rod.
 - 5. NPS 6 (DN 150): 10 feet (3 m) with 5/8-inch (16-mm) rod.
- J. Install supports for vertical copper tubing every 10 feet (3 m).
- K. Install hangers for ABS and PVC piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/2 and NPS 2 (DN 40 and DN 50): 48 inches (1200 mm) with 3/8-inch (10-mm) rod.
 - 2. NPS 3 (DN 80): 48 inches (1200 mm) with 1/2-inch (13-mm) rod.
 - 3. NPS 4 and NPS 5 (DN 100 and DN 125): 48 inches (1200 mm) with 5/8-inch (16-mm) rod.

4. NPS 6 (DN 150): 48 inches (1200 mm) with 3/4-inch (19-mm) rod.
- L. Install supports for vertical ABC and PVC piping every 48 inches (1200 mm).
- M. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.

3.6 CONNECTIONS

- A. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.
- B. Connect drainage and vent piping to the following:
 1. Plumbing Fixtures: Connect drainage piping in sizes indicated, but not smaller than required by plumbing code. Refer to Division 15 Section "Plumbing Fixtures".
 2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
 3. Plumbing Specialties: Connect drainage and vent piping in sizes indicated, but not smaller than required by plumbing code. Refer to Division 15 Section "Plumbing Specialties."
 4. Equipment: Connect drainage piping as indicated. Provide shutoff valve, if indicated, and union for each connection. Use flanges instead of unions for connections NPS 2-1/2 (DN 65) and larger.

3.7 FIELD QUALITY CONTROL

- A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
 1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
 2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.

- C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
- D. Test sanitary drainage and vent piping according to procedures of authorities having jurisdiction.
 - 1. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
 - 2. Prepare reports for tests and required corrective action.

3.8 CLEANING

- A. Clean interior of piping. Remove dirt and debris as work progresses.
- B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- C. Place plugs in ends of uncompleted piping at end of day and when work stops.

3.9 PROTECTION

- A. Exposed ABS and PVC Piping: Protect plumbing vents exposed to sunlight with two coats of water-based latex paint.

END OF SECTION 15150

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Raceways.
 2. Building wire and connectors.
 3. Supporting devices for electrical components.
 4. Electrical identification.
 5. Utility company electricity-metering components.
 6. Electrical demolition.
 7. Cutting and patching for electrical construction.

1.2 SUBMITTALS

- A. Shop Drawings: Dimensioned plans and sections or elevation layouts and single-line diagram of electricity-metering component assemblies specific to this Project.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

1.4 COORDINATION

- A. Coordinate chases, slots, inserts, sleeves, and openings for electrical supports, raceways, and cable with general construction work.
- B. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Coordinate installing large equipment that requires positioning before closing in the building.
- C. Coordinate location of access panels and doors for electrical items that are concealed by finished surfaces. Access doors and panels are specified in Division 8 Section "Access Doors and Frames."

- D. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.

PART 2 - PRODUCTS

2.1 RACEWAYS

- A. EMT: Electrical metallic tubing; ANSI C80.3, zinc-coated steel, with set-screw fittings.
- B. FMC: Flexible metal conduit; zinc-coated steel.
- C. IMC: Intermediate metal conduit; ANSI C80.6, zinc-coated steel, with threaded fittings.
- D. LFMC: Liquidtight flexible metal conduit; zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket.
- E. RMC: Rigid metal conduit; galvanized rigid steel; ANSI C80.1.
- F. RNC: Rigid nonmetallic conduit; NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings.
- G. Raceway Fittings: Specifically designed for raceway type with which used.

2.2 WIRES, CABLES, AND CONNECTIONS

- A. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
- B. Conductors, Larger than No. 10 AWG: Stranded copper.
- C. Insulation: Thermoplastic, rated 600 V, 75 deg C minimum, Type THW, THHN-THWN, or USE depending on application..
- D. Cable: Type MC with ground wire.
- E. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

2.3 SUPPORTING DEVICES

- A. Material: Cold-formed steel, with corrosion-resistant coating.
- B. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel.

- C. Slotted-Steel Channel: Flange edges turned toward web, and 9/16-inch- (14-mm-) diameter slotted holes at a maximum of 2 inches (50 mm) o.c., in webs. Strength rating to suit structural loading.
- D. Nonmetallic Slotted Channel and Angle: Structural-grade, factory-formed, glass-fiber-resin channels and angles with 9/16-inch- (14-mm-) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least one surface. Strength rating to suit structural loading.
- E. Slotted Channel Fittings and Accessories: Recommended by the manufacturer for use with the type and size of channel with which used.
 - 1. Materials: Same as channels and angles, except metal items may be stainless steel.
- F. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.
- G. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
- H. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for non-armored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.
- I. Expansion Anchors: Carbon-steel wedge or sleeve type.
- J. Toggle Bolts: All-steel springhead type.
- K. Powder-Driven Threaded Studs: Heat-treated steel.

2.4 ELECTRICAL IDENTIFICATION

- A. Identification Device Colors: Use those prescribed by ANSI A13.1, NFPA 70, and these Specifications.
- B. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape, not less than 1 inch wide by 3 mils thick (25 mm wide by 0.08 mm thick).
- C. Tape Markers for Conductors: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.

- D. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- E. Underground Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape compounded for permanent direct-burial service, and with the following features:
 - 1. Not less than 6 inches wide by 4 mils thick (150 mm wide by 0.102 mm thick).
 - 2. Embedded continuous metallic strip or core.
 - 3. Printed legend that indicates type of underground line.
- F. Engraved-Plastic Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch (1.6-mm) minimum thickness for signs up to 20 sq. in. (129 sq. cm) and 1/8-inch (3.2-mm) minimum thickness for larger sizes. Engraved legend in black letters on white background.
- G. Warning and Caution Signs: Preprinted; comply with 29 CFR 1910.145, Chapter XVII. Colors, legend, and size appropriate to each application.
 - 1. Interior Units: Aluminum, baked-enamel-finish, punched or drilled for mechanical fasteners.
 - 2. Exterior Units: Weather-resistant, non-fading, preprinted, cellulose-acetate butyrate with 0.0396-inch (1-mm), galvanized-steel backing. 1/4-inch (6-mm) grommets in corners for mounting.
- H. Fasteners for Nameplates and Signs: Self-tapping, stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 ELECTRICAL EQUIPMENT INSTALLATION

- A. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom.
- B. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.
- C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.

- D. Right of Way: Give to raceways and piping systems installed at a required slope.

3.2 RACEWAY APPLICATION

A. Outdoor Installations:

1. Exposed: RMC.
2. Concealed: RMC.
3. Underground, Single Run: RMC.
4. Underground, Grouped: RNC.
5. Connection to Vibrating Equipment: LFMC.
6. Boxes and Enclosures: NEMA 250, Type 3R or Type 4, unless otherwise indicated.

B. Indoor Installations:

1. Exposed: EMT except in wet or damp locations, use IMC.
2. Concealed in Walls or Ceilings: EMT.
3. In Concrete Slab: RMC
4. Below Slab on Grade or in Crawlspace: RMC
5. Connection to Vibrating Equipment: FMC; except in wet or damp locations: LFMC.
6. Boxes and Enclosures: NEMA 250, Type 1, unless otherwise indicated.

3.3 RACEWAY AND CABLE INSTALLATION

- A. Conceal raceways and cables, unless otherwise indicated, within finished walls, ceilings, and floors.
- B. Keep legs of raceway bends in the same plane and keep straight legs of offsets parallel.
- C. Use RMC elbows where RNC turns out of slab.
- D. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or woven polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wires.
- E. Install telephone and signal system raceways, 2-inch trade size (DN 53) and smaller, in maximum lengths of 150 feet (45 m) and with a maximum of two 90-degree bends or equivalent. Add pull boxes where necessary to accomplish this.

- F. Connect motors and equipment subject to vibration, noise transmission, or movement with a maximum of 72-inches (1830-mm) flexible conduit. Install LFMC in wet or damp locations. Install separate ground conductor across flexible connections.
- G. Set floor boxes level and trim after installation to fit flush to finished floor surface.

3.4 WIRING METHODS FOR POWER, LIGHTING, AND CONTROL CIRCUITS

- A. Application: Use wiring methods specified below to the extent permitted by applicable codes as interpreted by authorities having jurisdiction.
- B. Exposed Feeders: Insulated single conductors in raceway.
- C. Concealed Feeders in Ceilings: Walls, Gypsum Board Partitions: Insulated single conductors in raceway.
- D. Concealed Feeders in Concrete, below Floors on Grade, in Crawlspace: Insulated single conductors in raceway.
- E. Exposed Branch Circuits: Insulated single conductors in raceway.
- F. Concealed Branch Circuits in Ceilings Walls, Gypsum Board Partitions: Metal-clad cable.
- G. Concealed Branch Circuits in Concrete below Floors on Grade: Insulated single conductors in raceway.
- H. Underground Feeders and Branch Circuits: Insulated single conductors in raceway.
- I. Remote-Control Signaling and Power-Limited Circuits, Classes 1, 2, and 3: Insulated conductors in raceway unless otherwise indicated.

3.5 WIRING INSTALLATION

- A. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

3.6 ELECTRICAL SUPPORTING DEVICE APPLICATION

- A. Damp Locations and Outdoors: Hot-dip galvanized materials or nonmetallic, slotted channel system components.

- B. Dry Locations: Steel materials.
- C. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four with, 200-lb (90-kg) minimum design load for each support element.

3.7 SUPPORT INSTALLATION

- A. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
- B. Size supports for multiple raceway or cable runs so capacity can be increased by a 25 percent minimum in the future.
- C. Support individual horizontal single raceways with separate, malleable-iron pipe hangers or clamps except use spring-steel fasteners for 1-1/2-inch (38-mm) and smaller single raceways above suspended ceilings and for fastening raceways to slotted channel and angle supports.
- D. Install sleeves for cable and raceway penetrations of concrete slabs and walls unless core-drilled holes are used. Install sleeves for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.
- E. Secure electrical items and their supports to building structure, using the following methods unless other fastening methods are indicated:
 - 1. Wood: Wood screws or screw-type nails.
 - 2. Gypsum Board: Toggle bolts. Seal around sleeves with joint compound, both sides of wall.
 - 3. Masonry: Toggle bolts on hollow block and expansion bolts on solid block. Seal around sleeves with mortar, both sides of wall.
 - 4. New Concrete: Concrete inserts with machine screws and bolts.
 - 5. Existing Concrete: Expansion bolts or threaded studs driven by powder charge and provided with lock washers.
 - 6. Structural Steel: Spring-tension clamps Threaded studs driven by powder charge and provided with lock washers.
 - a. Comply with AWS D1.1 for field welding.
 - 7. Light Steel Framing: Sheet metal screws.
 - 8. Fasteners for Damp, Wet, or Weather-Exposed Locations: Stainless steel.
 - 9. Light Steel: Sheet-metal screws.
 - 10. Fasteners: Select so load applied to each fastener does not exceed 25 percent of its proof-test load.

3.8 IDENTIFICATION MATERIALS AND DEVICES

- A. Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in the Contract Documents or required by codes and standards. Use consistent designations throughout Project.
- C. Self-Adhesive Identification Products: Clean surfaces before applying.
- D. Tag and label circuits designated to be extended in the future. Identify source and circuit numbers in each cabinet, pull and junction box, and outlet box. Color-coding may be used for voltage and phase identification.
- E. Install continuous underground plastic markers during trench backfilling, for exterior underground power, control, signal, and communication lines located directly above power and communication lines. Locate 6 to 8 inches (150 to 200 mm) below finished grade. If width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches (400 mm), overall, use a single line marker.
- F. Install warning, caution, and instruction signs where required to comply with 29 CFR 1910.145, Chapter XVII, and where needed to ensure safe operation and maintenance of electrical systems and of items to which they connect. Indoors install engraved plastic-laminated instruction signs with approved legend where instructions are needed for system or equipment operation. Install metal-backed butyrate signs for outdoor items.
- G. Install engraved-laminated emergency-operating signs with white letters on red background with minimum 3/8-inch- (9-mm-) high lettering for emergency instructions on power transfer, load shedding, and other emergency operations.

3.9 FIRESTOPPING

- A. Apply fire-stopping to cable and raceway sleeves and other penetrations of fire-rated floor and wall assemblies to restore original undisturbed fire-resistance ratings of assemblies. Fire-stopping installation is specified in Division 7 Section "Through-Penetration Fire-stop Systems."

3.10 DEMOLITION

- A. Protect existing electrical equipment and installations indicated to remain. If damaged or disturbed in the course of the Work, remove damaged portions and install new products of equal capacity, quality, and functionality.

- B. Accessible Work: Remove exposed electrical equipment and installations, indicated to be demolished, in their entirety.
- C. Abandoned Work: Cut and remove buried raceway and wiring, indicated to be abandoned in place, 2 inches (50 mm) below the surface of adjacent construction. Cap raceways and patch surface to match existing finish.
- D. Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation.

3.11 CUTTING AND PATCHING

- A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.
- B. Repair, refinish and touch up disturbed finish materials and other surfaces to match adjacent undisturbed surfaces.

END OF SECTION 16050