



Forcina Hall Elevator Equipment Purchase and Installation

TCNJ Advertised Bid # AB240013

COVER SHEET

INVITATION TO BID

MILESTONE SCHEDULE

CONSTRUCTION BID PROPOSAL FORM

GENERAL WORK DESCRIPTION

DRAWINGS

MANDATORY DOCUMENTS

CONTRACT

GENERAL CONDITIONS

February 29, 2024



Please place the following advertisement in the Legal Section of Classified Advertising. Please ensure that the invoice for this advertisement is prepared and an affidavit forwarded to The College of New Jersey, Office of Finance and Business Services, Administrative Services Building, Room 201, P.O. Box 7718, Ewing, NJ 08628-0718.

To be published on **February 29, 2024 in the Trentonian**. Contact person regarding placement of ad is Lauren Manning (609) 771-2894.

**THE COLLEGE OF NEW JERSEY
ADVERTISEMENT FOR BIDS
BID #AB240013**

Under the provisions of the State College Contracts Law, Chapter 64 of Title 18-A, The College of New Jersey will receive sealed bids for the **Forcina Hall Elevator Equipment Purchase and Installation** until **2:00 P.M. on the 27th day of March, 2024** at The College's Office of Finance and Business Services, Administrative Services Building, Second Floor, Room 201, Route 31 (Pennington Road), Ewing Township, New Jersey. At 2:00 P.M. all bids will be publicly opened and read in Room 203 of the Administrative Services Building.

The project will be bid as a Single Lump Sum.

No bidder may submit more than one bid.

Bid Documents may be obtained on/after **February 29, 2024 via our website** (<https://bids.tcnj.edu/home/construction-projects/>).

A **strongly encouraged pre-bid conference/on-site inspection** is scheduled on **March 6, 2024 at 10:00 A.M.** in Room 103 of the Administrative Services Building, located on The College's Ewing Township, New Jersey campus on Route 31 (Pennington Road).

Bidders are required to comply with the requirements of P.L. 1975 c. 127 (N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 - Affirmative Action); the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.; N.J.S.A. 52:25-24.2, "Statement of Ownership Disclosure"; the Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48 et seq.); the New Jersey Business Registration of Public Contractors provisions (N.J.S.A. 52:32-44) and all amendments thereto.

Bidders must have a New Jersey Department of Treasury, Division of Property Management and Construction (DPMC) C099 classification. No other bids will be accepted without this classification.

A bid bond is required in the amount of 10% of the total bid. Bid bond shall consist of a certified check or cashiers check to the order of The College of New Jersey, or an individual or annual bid bond issued by an insurance company or surety company authorized to do business in the State of New Jersey. The successful Bidder(s) is required to provide a Performance and Payment Bond equal to 100% of the contract. A Surety Disclosure Statement and Certification form must accompany the performance bond.

The College will award the contract to the lowest responsible bidder who satisfies the qualification criteria as set forth in the contract documents.

The College of New Jersey reserves the right to reject all bids or to waive any minor informalities in the bidding in accordance with law. No bid shall be withdrawn for a period of sixty (60) days subsequent to the opening of bids without the consent of The College of New Jersey.



Forcina Hall Elevator Equipment Purchase & Installation AB240013

Milestone Schedule February 29, 2024

Advertise for bidding	February 29, 2024
Pre-bid Meeting, ASB 103 @ 10 am	March 6, 2024
Cut off for questions	March 13, 2024
Addendum Issued	March 15, 2024
Bids Received by 2 pm	March 27, 2024
Notice of Intent to Award Issued	March 29, 2024
End of Protest Period	April 11, 2024
Notice to proceed issued by:	April 12, 2024
Submittals in by:	May 3, 2024
Submittals approved by:	May 17, 2024
Equipment ready to be delivered to job site by:	October 1, 2024
Equipment Installation and complete by:	December 1, 2024 – January 17, 2025
Elevator fully operational by:	January 18, 2025
Elevator contract closed out by:	February 28, 2025

Bidding General Notes:

1. Bidder must have the following DPMC ratings: C099 (Elevators)
2. Elevator supplier / contractor is to submit for and pay for all NJDCA approvals and permits
3. Elevator supplier / contractor is to coordinate all shop drawings and field coordination with the General Contractor building the new elevator shaft.
4. Elevator equipment to be stored as needed by the Elevator Contractor
5. Bidder shall include in their bid price an allowance of \$30,000.00 dollars for "Design Enhancements", & "Un-foreseen Issues", if needed or requested by the College over and beyond what's shown on the bidding documents. Any unused allowance shall be deducted from the contract via a deduct change order.



Bid # AB240013
For: Forcina Hall Elevator
Equipment Purchase and Installation

Event	Date	Time
Pre-bid Conference and Site Visit at The College of New Jersey's Administrative Services Building, Room 203	03/06/2024	10:00 AM
Question Cut Off Date (Refer to Bid Section # 2 for more information.)	03/13/2024	4:00 PM
Addendum Date (Refer to Bid Section # 2 for more information.)	03/15/2024	11:00 AM
Bid Submission Due Date (Refer to Bid Section # 3 for more information.)	03/27/2024	2:00 PM

Dates are subject to change. All times contained in the Bid refer to Eastern Time.
All changes will be reflected in Addendum to the Bid posted on the College's website.

Bid Issued By:

The College of New Jersey
Office of Finance & Business Services
Purchasing Department
Administrative Services Building, Room 201
2000 Pennington Road
Ewing, NJ 08628
Phone: (609) 771-2894
<https://bids.tcnj.edu/home/construction-projects/>
Assigned Purchasing Contact: Lauren Manning
E-mail: manningl@tcnj.edu

Date Issued: 2/29/2024
Fiscal Year: 2024

Required Procurement Documents & Bidder's Checklist

This bid proposal MUST be received by The College of New Jersey, Purchasing Department before or at 2:00 p.m. on Wednesday, March 27, 2024 at which time responses will be publicly opened and read. Any proposal arriving at the Purchasing Department after the submission due date and time will not be accepted.

The following Bidder's Checklist is provided as an aid to the bidder. It does not in any way relieve the bidder of its responsibility to ensure that its bid proposal is complete. It is the bidder's responsibility to ensure documents are submitted and that all requirements of the bid solicitation have been met.

Procurement Documentation & Bidder's Checklist		
FORMS, REGISTRATIONS, AND CERTIFICATIONS THAT MUST BE SUBMITTED BY THE BIDDER AT THE TIME OF SUBMISSION. FAILURE TO INCLUDE THE BELOW REQUESTED DOCUMENTATION MAY RESULT IN REJECTION OF BIDDER'S SUBMISSION.		
Required		Vendor's Initials next to each item submitted with proposal
X	Bidder Information	
X	General Agreement including Acknowledgement of Receipt of Addendum (if any issued)	
X	Cost Sheet	
X	Subcontractor Information Page	
X	Small Business, Minority and/or Female-owned Business Reporting	
X	Acknowledgement of Mandatory Equal Employment Opportunity Language for Construction Contracts (NJAC 17:27-1.1 et seq. - P.L. 1975 C.127)	
X	Completed Statement of Ownership Disclosure (N.J.S.A. 52:25-24.2)	
X	Completed Non-Collusion Affidavit	
X	Completed Disclosure of Investment Activities in Iran (N.J.S.A. 52:32-58)	
X	Completed Vendor Qualification Sheet	
X	Enclosed Certified Check or Bid Bond for ten percent (10%) of the amount of the bid	
X	Copy of Public Works Contractor Registration Certificate for the bidder and disclosed subcontractors (A completed copy of your Certification is not required at time of bid; however, the certificate must be valid at the time of bid.)	
X	Copy of Electrical License and any other licenses, certifications, and qualifications.	
X	Copy of DPMC Notice of Classification and Total Amount of Uncompleted Contracts	
	Copy of latest Experience Modification Rating (EMR Safety Rating). The College requires an average rating over the last 5 years of 1.25 or less.	
FORMS, REGISTRATIONS, AND CERTIFICATIONS THAT MUST BE SUBMITTED BY THE BIDDER PRIOR TO AWARD.		
X	Proof of Affirmative Action Compliance (Initial Project Workforce Report, AA-201)	
X	New Jersey Business Registration Certificate (N.J.S.A. 52:32-44)	
X	Taxpayer Identification Request (W-9 Form)	
X	Certificate of Insurance	

THE COLLEGE OF NEW JERSEY
Construction Bid Proposal Form

Office of Finance & Business Services
Administrative Services Building, Rm. 201
2000 Pennington Road
Ewing, New Jersey 08628-0718

Bid Number: AB240013
Bid Due Date: March 27, 2024

Project Name: Forcina Hall Elevator Equipment Purchase and Installation

BIDDER INFORMATION

Firm Name:

Telephone Number:

Contact Person:

Fax Number:

Address:

Email Address:

Federal I.D. Number:

SOLICITATION OF CONSTRUCTION BIDS

1. BID PROPOSALS ARE SOLICITED AS FOLLOWS:

A. Single Bid (Lump Sum) which combines all trades.

1. The total number and types of trades are set forth in the Specifications.
2. Bidder enters the Bid Price on the line provided on the Cost Sheet.
3. Pursuant to the requirements of N.J.S.A. 18A:64-76.1., bidder lists the names of the subcontractors on the Subcontractor Information page.

2. THE SCOPE OF WORK INCLUDES:

- A.** The installation of a new (4) stop elevator at The College of New Jersey Forcina Hall.
- B.** See Specifications and Drawings for Details (included in Bid package).
- C.** The College may issue Addenda or Clarifications which may include additions to or deletions from the scope of work; changes to the Specifications, Drawings, and proposal form; and clarifications of requirements. Bidder is advised to review all Addenda and/or clarifications carefully, and shall note the receipt of same with their bid package.

GENERAL INSTRUCTIONS AND REQUIREMENTS

1. PRICES

- A. Bidder submits prices for the Base Bid and any Alternate Proposals and Unit Prices which are listed for the contract of the bid. If there is no cost associated with the Alternate or Unit Price, bidder is required to enter “0.00” or “no change”.
 - 1. Prevailing wage rates apply (Mercer County).
 - 2. Bid is to remain good for sixty (60) days after the Bid Due Date.

2. QUESTIONS

- A. Direct inquiries and correspondence relating to this proposal form and questions regarding the technical specifications and requests for clarification must be submitted in writing via **email to manningl@tcnj.edu** and must be received **prior to 4:00 PM on March 13, 2024**.
- B. Should any questions be received, a notice will be placed in the newspaper and the addendum or clarification will be available on **March 15, 2024 on the College’s website at <https://bids.tcnj.edu/>**. **If an addendum and/or clarification is posted, it SHOULD be noted in the General Agreement section of the bidder’s proposal. Failure to do so may subject Bidder to disqualification.**

3. HOW TO SUBMIT THE COMPLETED CONSTRUCTION BID PROPOSAL FORM

- A. Bidder places all pages of the completed form and the requisite additional documents in an envelope, seals the envelope, and labels it with his/her firm name, address, and “Sealed Bid Enclosed for (Bid Number and Project Name)”.
- B. Bidder mails or deliver by hand the sealed bid, no later than **2:00 p.m., March 27, 2024**, to The College of New Jersey, Attention: Lauren Manning for (specify the Bid Number), Office of Finance & Business Services, Room 201, 2000 Pennington Road, Ewing, New Jersey 08628-0718. **At 2:00 p.m., all bids will be publicly opened and read in Room 203 of the Administrative Services Building.**
- C. Contractors are advised that the U.S. Postal Service and all express mail companies deliver to The College’s Mail Room or Receiving Department, not directly to the Office of Budget & Finance. The College is not responsible for lost or misdirected bids.

4. BOND REQUIREMENTS AND SURETY STANDARDS

- A. Bidder must submit with its bid a Certified Check in the amount of ten percent (10%) of the total bid, or a Bid Bond in the amount of ten percent (10%) of the total bid.
- B. The successful bidder must submit a Performance and Payment Bond equal to 100% of the contract. A completed Surety Disclosure Statement and Certification must accompany the Performance and Payment Bond.
 - 1. The Performance and Payment Bond form and a sample Surety Disclosure Statement and Certification form are included at the end of this Construction Bid Proposal Form.
- C. All bid deposits shall be returned within three (3) days, Sunday and holidays excepted, after the awarding of the contract and the approval of the successful bidder’s performance bond, if any, the bid guaranty of the remaining bidders shall be returned to them.
- D. Should the successful bidder fail to enter into said contract after acceptance of bid by the College, then the check or security deposited by that bidder shall, at the option of the College, be retained as liquidated damages, or if Bid Bond has been supplied, principal and surety shall be liable to the amount of the Bid Bond.
- E. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified copy of their Power of Attorney to sign said bonds.
- F. Contractor shall provide a Maintenance Bond at job completion for a period of one year for 100% of the final contract price.

5. LICENSES, CERTIFICATIONS, REGISTRATIONS, QUALIFICATIONS

- A. The bidder or, as applicable, its subcontractors shall at the time of bid have those required licenses, certifications, registrations, qualifications and the like ("LCRQ") listed below and shall present satisfactory evidence thereof upon request of the College prior to the notice of intent to award.
 - 1. The electrical contractor or subcontractor as applicable shall have a valid electrical license. (An electrical license is not required when the work is below 110Volt)
- B. The selected bidder/contractor or, as applicable, its subcontractors shall have and shall present satisfactory evidence of all other required LCRQ noted in the Specifications after execution of contract during the submittal process and prior to the start of the applicable work, unless otherwise requested by the College or a date or event specified for that LCRQ in the Specifications.
- C. Bidders are required to be registered with the New Jersey Department of Property Management and Construction (DPMC) and possess a DPMC C099, Elevator, classification at the time of bid submission.

6. SUBCONTRACTORS

- A. Pursuant to New Jersey State Law (N.J.S.A. 18A-76.1), a Single Bid (Lump Sum) bidder discloses its subcontractors to whom the bidder intends to subcontract the work. The Subcontractor Information sheet is provided for this purpose.

7. CERTIFICATE OF INSURANCE

- A. The bidder is required to submit proof of liability insurance in accordance with The College's contract.

8. ACCEPTANCE/REJECTION OF BIDS

- A. THE COLLEGE OF NEW JERSEY, pursuant to State College Contract Law, Contracts shall be awarded to the lowest responsible bidder whose bid, conforming to the invitation for bids, will be the most advantageous to the State college.
- B. The bid is irrevocable by the bidder or the bidder's representatives. The bid, and any award made to the bidder by the College, shall bind the bidder and the bidder's heirs, executors, administrators, successors or assigns.
- C. Award of contract shall be made to the lowest responsible bidder, whose bid, conforming to the invitation for bids, is the most advantageous to the College.
- D. The award of the contract or the rejection of the bids shall be made within sixty (60) days of the date of receiving bids, unless written extensions are requested by the College and accepted by the bidder(s). All bid securities shall be returned immediately if all bids are rejected. The successful bidder(s) to whom the award is to be made will be notified by receipt of a written "Intent to Award" from the College.
- E. When award of contract is made in one fiscal year with effective date in the next fiscal year, award shall be contingent upon the availability and appropriation of sufficient funds for that purpose for the year in which said contract takes effect. When a contract shall be awarded for a period in excess of one year, said contract shall be contingent upon the annual availability and appropriation of sufficient funds for that purpose for each year of the contract term.

9. WITHDRAWAL OF BIDS

- A. A written request for the withdrawal of a bid, or any part thereof, will be granted if the request is received by the College prior to the specified time of the bid opening.
- B. Should the bidder refuse to perform the work for the price provided, they will forfeit their bid security and will be held liable for the difference between their low bid and the next highest/responsive bidder.

10. BID COMPLIANCE

- A. Any bid not prepared and submitted in accordance with the provisions described herein may be rejected by the College. Any bid received after the time and date specified will not be considered. No bidder shall withdraw a bid within sixty (60) days after the date of the bid opening. Contracts shall be awarded to the lowest responsible bidder whose bid, conforming to the invitation for bids, will be the most advantageous to the State college

- B. Any bidder who has defaulted on any contract with the College or any other State Agency may be considered as not responsible and their bid may be rejected. THE COLLEGE OF NEW JERSEY reserves the right to exercise this option, as the College deems proper and/or necessary in accordance with applicable law.
- C. Bids shall include all costs of any nature necessary to complete the project in the manner and within the time required by the contract.
- D. The College reserves the right to require bidders to provide a schedule of values of their lump sum bid price upon request.
- E. The College is exempt from all taxes including Federal Excise Tax, Transportation Taxes, State Excise, Sales Tax and local taxes. Rentals of equipment for 28 days or less is not exempt from any tax under the State sales tax act.
- F. Before submitting a bid, the bidder shall be familiar with the Drawings, Specifications, and other Documents that will form part of the contract and shall have visited the site of the project to confirm for themselves the character and amount of work involved.
- G. No bidder shall be allowed to offer more than one price on each item even though he/she may feel that he/she has two or more types or styles that will meet specifications. Bidders must determine for themselves which to offer. This may be cause for automatic rejection of bid.
- H. It is understood and agreed that all prices quoted are firm and not subject to any increase during the life of the contract.
- I. Should any difference arise between the contracting parties as to the meaning or intent of these instructions or specifications, the College's decision shall be final and conclusive.
- J. Should the bidder discover discrepancies in this Request for Bids, the matter shall be at once brought to the attention of the College, and the discrepancies corrected by written agreement before submission of bid. The correction will be issued by addendum.

11. OSHA COMPLIANCE:

- A. The Contractor shall guarantee that all materials, supplies and equipment to be provided under his contract shall meet all applicable requirements, Specifications and standards of the Federal Occupational Safety and Health Act (OSHA) of 1970 as amended to date of acceptance by the College, and shall also apply to Contractors Construction procedures.

12. EXAMINATION OF SITE, DRAWINGS AND SPECIFICATIONS

- A. Each Bidder shall visit the site of the proposed work and fully acquaint themselves with the conditions as they exist so that they may fully understand the facilities, difficulties, and restrictions attending the execution of the work under this Contract.
- B. Bidders shall also thoroughly examine and be familiar with the Drawings and Specifications. The failure to receive or examine any form, instrument or document, or to visit the site and acquaint himself with conditions there existing shall in no way relieve any bidder from obligation with respect to his bid. By submitting a bid, the bidder agrees and warrants that he has examined the site, the Drawings and Specifications and, that the Specifications and Drawings are adequate and the required result can be produced under the Drawings and Specifications. No claim for any extra will be allowed because of alleged impossibilities in the productions of the results specified or because of unintentional errors or conflicts in the Drawings and Specifications. No change orders will be issued for items, materials or issues that existed on or with respect to the site prior to bidding.

13. DRAWINGS AND SPECIFICATIONS

- A. The project shall be performed in accordance with the requirements of the Drawings and Specifications, subject to modification as provided in General Conditions. The Drawings and Specifications are intended to complement and supplement each other.
- B. Any work required by either of them and not by the other shall be performed as if denoted in both. Should any work be required which is not also denoted in the Specifications or on the Drawings because of an obvious omission, but which is, nevertheless, necessary for the proper performance of the project, such work shall be performed as fully as if it were described and delineated.

14. FORM OF AGREEMENT

- A. Every successful bidder shall be required to sign the standard form contract, a copy of which is attached. Any proposed language or form changes which in any way modifies the contractor's responsibilities as set forth in the Contract Documents will not be acceptable and will be deemed to constitute a bid exception.

15. MULTIPLE BIDS NOT ALLOWED:

- A. No bidder is allowed to submit more than one bid from an individual, firm, partnership, corporation or association under the same or different name. This will be cause for automatic rejection of each bid.

16. SUBSTITUTIONS:

- A. The bidder may include in their bid substitute materials or equipment or methods in lieu of those specified in the contract documents, but they do so at their own risk. Any substitution must be equivalent in type, function and quality to the item required in the contract. The successful bidder must submit all information required within 20 days of contract award to determine if the proposed substitute is equal to the contract requirements, and any substitution must be approved by the architect and the College.
- B. The College shall have complete discretion to decide whether it will accept any substitution. No substitution shall result in any increase in the contract price or times. The successful bidder in its application for the substitution must certify in writing that the substitution is equal to what is specified in the contract documents in all material respects and will not increase the time or price of the contract work.
- C. Should the substitution be rejected, the contractor will then be required to provide the specified product, material or method at no additional cost to the College and no change in the project schedule.

17. APPLICABLE LAWS: The following list of statutes and regulations, which may be applicable in whole or in part, is provided for the benefit of the Contractor and is not meant to be all-inclusive. In the event that other laws are applicable, it shall be the responsibility and obligation of the Contractor to ascertain and comply with them.

- A. **SET ASIDE PROGRAM FOR SMALL BUSINESS ENTERPRISE (SBE):** It is the policy of the State entities that small business enterprises ("SBE") as determined and defined by the State of New Jersey, Division of Revenue and Enterprise Services ("Division") in the Department of the Treasury (N.J.A.C.17:13-1.2) have the opportunity to compete for and participate in the performance of contracts and subcontract for construction and for the purchase of goods and services. The State further requires that its contractors/vendors agree to take all necessary and responsible steps, in accordance with N.J.S.A. 52:32-17 et seq. and N.J.A.C. 17:13-1 et seq. to ensure that SBE's have these opportunities, as an aid in meeting the commitment of its SBE Programs. N.J.S.A. 52:32-17 et seq. and Executive Order 71 requires that each State department make a good faith effort to award a total of 25% of the dollar value of contracts for goods and services and construction to eligible small businesses.
- B. **SET ASIDE PROGRAM FOR DISABLED VETERAN-OWNED BUSINESS (DVOB):** In accordance with the New Jersey Set-Aside Act for Disabled Veterans' Businesses, N.J.S.A. 52:32-31.1 et seq. (P.L. 2015, c. 116), it is the policy of State entities that Disabled Veteran-Owned Businesses ("DVOBs"), as determined and defined by the State of New Jersey, Department of Treasury, Division of Revenue and Enterprise Services in N.J.A.C. 17:14-1.1 et seq., have the opportunity to compete for and participate in goods and services contracts and subcontracts for construction services. The Contractor shall agree to take all necessary and responsible steps, in accordance with the aforementioned regulations, to ensure that DVOBs have these opportunities. N.J.S.A. 52:32-31.1 et seq. (P.L. 2015, c. 116) requires that each State department make a good faith effort to award a total of 3% of the dollar value of contracts for goods and services and construction to eligible DVOBs.
- C. **EXECUTIVE ORDER #34 – MINORITY AND WOMEN BUSINESS ENTERPRISES:** On September 15, 2006, Governor Corzine signed Executive Order 34 establishing a Division of Minority

and Women Business Development. The Division is charged with administering and monitoring policies, practices, and programs to ensure that minority and women business enterprises (MWBE) are afforded an equal opportunity to participate in New Jersey's purchasing and procurement processes.

D. STATEMENT OF OWNERSHIP DISCLOSURE: Pursuant to N.J.S.A. 52:25-24.2, in the event the Bidder is a corporation, partnership or limited liability company, the Bidder must disclose their ownership. Bidder completes and submits the form along with bid proposal.

E. NON-COLLUSION AFFIDAVIT: Bidder completes and submits the form along with bid proposal.

F. PREVAILING WAGE (N.J.S.A. 34:11-56.25 et seq.) AND PUBLIC WORKS CONTRACTOR REGISTRATION ACTS (N.J.S.A. 34:11-56.48 et seq.):

1. The work described in this project is subject to the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq. and the Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq.
2. The Public Works Contractor Registration Act requires the bidder and any subcontractors listed in the bid to be registered with the New Jersey Department of Labor and Workforce Development at the time the bid is submitted. The contractor must submit registration certificates for all listed subcontractors prior to award of the contract.
3. The Contractor must comply with the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 through 56.47. Workers employed by the Contractor or any subcontractor or sub-subcontractor in the performance of services directly on the project must be paid prevailing wages. Additionally, pursuant to N.J.S.A. 34:11-56.27(a), a bidder in competitive bidding for public work, whose bid is the lowest and is 10% or more lower than the next lowest bid, must certify (form to be provided by TCNJ if applicable) to TCNJ that the bidder shall pay prevailing wage rates as required by the Act. Also, as required by N.J.S.A. 34:11-56.27 and 56.28, the contract cannot become effective until the College obtains from the New Jersey Department of Labor and Workforce Development a determination of the prevailing wage rates applicable to the project as of the contract award date and attaches a copy to the contract. As required by N.J.S.A. 34:11-56.27, the Contractor or any subcontractor may be terminated if any covered worker is not paid prevailing wages on the project, and the Contractor and its surety shall be liable for any additional costs which result.
4. Please refer to <https://lwdwebpt.dol.state.nj.us/archivewages/171135212-merc-6-20-23.pdf>.

G. NEW JERSEY EQUAL PAY ACT:

1. On April 24, 2018, Governor Phil Murphy signed into law New Jersey's Diane B. Allen Equal Pay Act (P.L. 2018, c. 9) The law provides in pertinent part that as of July 1, 2018, any employer entering into a contract with the State of New Jersey or an instrumentality of the State for "qualifying services" or "public works" must provide to the Department of Labor and Workforce Development – upon commencement of the contract – wage and demographic data for all employees who are employed in connection with the contract (for public works) and for all employees (for qualifying services). This requirement DOES NOT apply to employers who are contracting with local governments (for example: municipalities and counties). The report must contain the gender, race, ethnicity, job category, compensation, and number of hours worked by each employee.
2. The extent of the Department of Labor and Workforce Development's responsibilities under the Equal Pay Act is the collection of data regarding compensation, hours worked, job/occupational category, job title, gender, race, and ethnicity for State contractors and making that data available to the Division on Civil Rights (DCR), within the Department of Law and Public Safety, and upon request to certain individuals. Complaints of unlawful discrimination under the Equal Pay Act should be directed to the DCR, as should any questions regarding the filing of such a complaint.
3. The Department of Labor and Workforce Development has issued two forms, as required by the law, to be completed by employers. The forms should be used to report the employee's wage and demographic data and can be found on the LWD website (<http://www.nj.gov/labor/equalpayact>). **A completed copy of the forms is not required at time of bid; however, it will be required of the bidder who receives the notice to proceed from the College. Completed forms should be emailed to: equalpayact@dol.nj.gov**

- H. N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27-1 et seq., AFFIRMATIVE ACTION:** The bidder is required to complete and submit a copy of Initial Project Workforce Report (AA-201) to the College and the Division of Public Contracts Equal Employment Opportunity Compliance verifying that the bidder is operating under a federally approved or sanctioned Affirmative Action program. The bidder also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to The College and the Division.
- I. New Jersey Business Registration Certificate, N.J.S.A. 52:32-44:**
1. Pursuant to - N.J.S.A. 52:32-44, The College of New Jersey ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.
 2. Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).
 3. Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other contracting document is awarded or authorized.
 4. During the course of contract performance:
 - (a) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
 - (b) the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.
 - (c) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.
 5. Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.
 6. Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.
- J. RECORD RETENTION:** Pursuant to N.J.A.C. 17:44-2.2, the vendor shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.
- K. ENERGY STAR ENERGY EFFICIENT PRODUCTS:** Under Executive Order #11 (Corzine), the College is required to select ENERGY STAR energy-efficient products when acquiring new energy-using products or replacing existing equipment. For products that do not have ENERGY STAR labels, vendors shall follow guidelines established by the New Jersey Clean Energy Program.
- L. The following list of statutes and regulations, which may be applicable in whole or in part, is provided for the benefit of the Contractor and is not meant to be all-inclusive. In the event that other laws are applicable, it shall be the responsibility and obligation of the Contractor to ascertain and comply with them.**
1. Federal Statutes:
 - Immigration Control and Reform Act (1986) – 8 U.S.C.A. Section 1324(a) *et seq.*
 - Civil Rights Act of 1964 – 42 U.S.C.A. Section 1971 *et seq.*
 - The Americans with Disabilities Act of 1990

GENERAL AGREEMENT

1. Having examined the plans and specifications with related documents and the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, the undersigned hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the price stated. This price covers all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.
2. Bidder acknowledges receipt of the following Addendums/Clarifications:

Addendum Number _____ Date _____ Addendum Number _____ Date _____
Addendum Number _____ Date _____ Addendum Number _____ Date _____
Addendum Number _____ Date _____ Addendum Number _____ Date _____
3. Bidder acknowledges and affirms that he/she has personal knowledge of or has obtained and reviewed a copy of the valid prevailing wage rates at the time of the bid and for the duration of the contract for all trades involved in the project for the geographical location of the project as issued by the Commissioner of the Department of Labor & Workforce Development, Trenton, NJ 08625 (609) 292-2259 or visiting the _____ Department _____ of _____ Labor _____ website _____ at (http://lwd.dol.state.nj.us/labor/wagehour/wagerate/wage_rates.html).
4. Bidder agrees that its price is good and the bid shall not be withdrawn for a period of 60 calendar days after the scheduled Bid Due Date and Time.
5. The attached bid security is to become the Property of the Owner in the event that the Contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense (including the difference between the price provided with said bond and the next lowest responsive bidder) to the Owner caused thereby.
6. Upon conclusion of the 5 business day protest period, Bidder will execute the formal contract for the stated work and compensation on the Standard Form of Agreement Between Owner and Contractor within 5 business days and deliver as required in the General Conditions: a Performance and Payment Bond; Surety Disclosure and Certification Statement; and certificates of insurance for general liability, automobile and worker's compensation. Contractor shall provide a Maintenance Bond at job completion for a period of one year for 100% of the final contract price.
7. Bidder acknowledges work to commence on site not later than ten (10) calendar days after receipt of a Notice to Proceed.

(Seal if bid is by Corporation)

Respectfully submitted,

(Signature of Principal)

(Printed Name of Principal)

(Title of Principal)

**COST SHEET
SINGLE BID (LUMP SUM):
BASE BID, ALTERNATE PROPOSALS, AND UNIT PRICES**

To: **The College of New Jersey**

for: Construction of Forcina Hall Elevator Equipment Purchase and Installation

Date _____

A. BID:

1. Base:

Part A (Forcina Hall Elevator Equipment Purchase and Installation): \$ _____

Part B (Allowance) **\$30,0000**

We, _____, the Undersigned, in accordance with the published advertisement inviting proposals, will furnish all labor, material, equipment and services necessary for the complete construction, as defined in the advertisement, specimen contract, specifications, addendums/clarifications/bulletins, drawings, and proposal, for the Contract amount indicated below for the **above noted project** in strict accordance with the Contract Documents and Addenda thereto for the total sum of:

TOTAL OF PART A AND B:

_____ Dollars \$ _____
(words)

General Construction (Single overall Prime Contract)

2. Add /Deduct Alternate: None

Note: Failure to provide Add/Deduct Alternate may result in rejection of bid.

3. Check List for Bidders: A check list has been provided in these specifications for the use in completing this proposal. Bidders are encouraged to reference said list to minimize the opportunity for errors by the bidder.

B. STATEMENT:

We, the Undersigned, acting through its authorized officers and intending to be legally bound, agree that this bid proposal shall constitute an offer by the Undersigned to enter into a Contract with the acts and things therein provided and accept this offer at any time during said period by notifying the Undersigned of the acceptance of said offer.

Dated _____
Firm Name _____
Phone Number _____
Address _____

**If a corporation, give the State of Incorporation, using the phrase:

"A corporation organized under the laws of _____."

If a partnership, give names of the partners, using also the phrase:

"Co-partners trading and doing business under the firm name and style of _____"

If an individual using a trade name, give individual name, also using the phrase:

"An individual doing business under the firm name and style of _____."

Dated: _____

STATE OF _____

SS.

COUNTY OF _____

_____ being duly sworn say that the several matters stated in this proposal are in all respects true, and that no member of the State or employee of the College are interested in any way in this proposal.

Sworn and subscribed before me _____

Bidder signs above line

this _____ day of _____ 20____

Print Name

and

Title

SUBCONTRACTOR INFORMATION FOR SINGLE BID (LUMP SUM)

Pursuant to the State Colleges Contract Law, N.J.S.A. 18A:64-76.1, all bids submitted shall set forth the names and license numbers of all subcontractors to whom the bidder intends to subcontract the plumbing and gas fitting work; the refrigeration, the heating and ventilating systems and equipment; the electrical work, including any electrical power plants; tele-data, fire alarm, or security systems; the structural steel and ornamental iron work (individually, the "Trade" or collectively, the "Trades").

For each Trade listed below for which the work will be completed by a subcontractor you must list for each such subcontractor at a minimum the name and, where applicable, license number (or in lieu thereof enclose a copy of the license with this form) and preferably you will also list the subcontractor's address, telephone number, and fax number. If the work will be self-performed by the bidder, you may indicate that by inserting the name of the bidder (next to "Name"). If work by that Trade is not required per the scope of work of the project, you may indicate that by inserting "Not required" (next to "Name"). If the name of a subcontractor is not provided on this form for any one or more of the Trades, the bidder, in submitting its bid, certifies that, for such Trades, either the work will be self-performed by the bidder, or the work is not required per the scope of work.

Failure to complete this form as required may result in your bid being disqualified.

Plumbing and Gas Fitting Work

List information for Subcontractor, if any:

Name: _____
License Number: _____
Address: _____

Telephone: _____
Fax: _____

Refrigeration, Heating and Ventilating Systems and Equipment

List information for Subcontractor, if any:

Name: _____
License Number: _____
Address: _____

Telephone: _____
Fax: _____

Electrical Work, including any Electrical Power Plants, Tele-data, Fire Alarm, or Security Systems

List information for Subcontractor, if any:

Name: _____
License Number: _____
Address: _____

Telephone: _____
Fax: _____

Structural Steel Work and Ornamental Iron Work

List information for Subcontractor, if any:

Name: _____
Address: _____

Telephone: _____
Fax: _____

Bidder Name

By: _____
Signature

Printed Name of Signing Individual

Date

DEMOGRAPHIC INFORMATION

Under Executive Order 34, the College is responsible for soliciting demographic information from its vendors. The College is required to seek the following information from each firm under contract with the College:

1. Is more than fifty percent (50%) of your company minority owned? (circle one) YES NO
(African-American, Hispanic, Asian, and/or Native American)
2. Is more than fifty percent (50%) of your company woman owned? (circle one) YES NO
3. What is the ethnicity of the owner of your company: (check applicable according to 51% ownership)
 - ☐ Asian American
 - ☐ Multiple Ethnicities
 - ☐ Non-Minority
 - ☐ Hispanic American
 - ☐ African American
 - ☐ Caucasian American Female
 - ☐ Native American
 - ☐ Unspecified

The College is required to solicit the foregoing information. Your response, however, is **strictly voluntary**. Please be advised that any contracting decisions made by the College will **not** be influenced in any way by your decision to provide the above information.

Bidder Name

By: _____

Signature

Printed Name of Signing Individual

Date

SMALL BUSINESS, MINORITY AND/OR WOMEN, VETERAN AND DISABLED VETERAN OWNED BUSINESS REPORTING

1. Contractor and sub-contractors are requested to check all of the following that apply to their company and, if applicable, submit a copy of their certificate(s):

A. My company is certified by the NJ Department of Treasury, Division of Revenue and Enterprise Services as a:

- ☐ Small Business Enterprise, SBE
- ☐ Minority-owned Business Enterprise, MBE
- ☐ Women-owned Business Enterprise, WBE
- ☐ Veteran-owned Business, VOB
- ☐ Disabled Veteran-owned Business, DVOB

B. My company is not certified by either NJ Department, but is:

- ☐ Small Business, SBE
- ☐ Minority-owned Business, MBE
- ☐ Women-owned Business, WBE
- ☐ Veteran-owned Business, VOB
- ☐ Disabled Veteran-owned Business, DVOB

C. ☐ My company is not certified as one of the categories listed above.

Bidder Name

By: _____
Signature

Printed Name of Signing Individual

Date



PERFORMANCE BOND & PAYMENT BOND

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____
_____ as Principal, and _____, a
corporation of the State of _____, duly authorized to do business in the State of New
Jersey, having an office at _____, are hereby held and
firmly bound unto The College of New Jersey in the Penal Sum of
_____ DOLLARS, for payment of which
well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators,
successors and assigns.

SIGNED this _____ day of _____, 20____

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named Principal
did on the _____ day of _____, 20____, enter into a written contract with The College
of New Jersey for _____ which said contract is made a part
of this bond as set forth herein;

NOW, if the said _____ shall well and faithfully
do and perform the things agreed by _____ to be done and performed according to the
terms of the said contract; shall pay all lawful claims of sub-contractors, materialmen, laborers, persons, forms of
other suppliers or teams. fuel, oils, implements or machinery furnished, used or consumed in the carrying
forward, performing, or completing of said contract, we agreeing and assenting that this undertaking shall be for
the benefit of any subcontractor, materialman, laborer, person, firm or corporation having a just claim, as well as
for the obligee herein; then this obligation shall be void, otherwise the same shall remain in full force and effect;
it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in
no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulated and agrees that no modifications, omissions, or additions in or to the terms of
the said contract, or in or to the plans and specifications therefore shall in any wise effect the obligation of said
surety on its bond.

This bond is given in compliance with the requirements of the statutes of the State of New Jersey including
N.J.S.A. 18A:64-68 and any amendments thereof.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF

Witness

BY: _____

Witness as to Surety

BY: _____
ATTORNEY-IN-FACT

Countersigned

this _____ day of _____, 20____

BY: _____

NOTE: General Power of Attorney and the current
financial statement of the bonding company
must be attached to each copy (a total of three)
of the Performance Bond.

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

_____, surety(ies) on the attached bond, hereby certifies(y) the following:

- (1) The surety meets the applicable capital and surplus requirements of R.S. 17:17-6 or R.S. 17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.
- (2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of the State of New Jersey, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ending December 31, ____, (insert most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accountants that shall have certified those amounts):

- (3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each surety that surety's underwriting limitation and the effective date thereof):

- (b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S. 17:18-9 as of date on which such limitation was so established, is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

- (4) The amount of the bond to which this statement and certification is attached is \$_____.
- (5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3) (a) or (3) (b) above, or both, then for each such contract of reinsurance:

- (a) The name and address of each such re-insurer under that contract and the amount of that re-insurer's participation in the contract is as follows:

- (b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5) (a) satisfies the credit for reinsurance requirement established under P.L. 1993, c. 243 (C. 17:51B-1 *et seq.*) and any applicable regulations in effect as of the date on which the bond to which this statement certification is attached shall have been filed with the appropriate public agency.

CERTIFICATION

(to be completed by an authorized certifying agent for each surety on the bond)

I, _____ (name of agent), as _____ (title of agent)

for _____ (name of surety),

a corporation/mutual insurance company/other (indicate type of business organization by circling one) domiciled in _____
_____ (state of domicile), DO HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by
me are true, and ACKNOWLEDGE that, if any of those statements are false, this bond is VOID and I am subject to
punishment.

(Signature of certifying agent)

(Printed name of certifying agent)

(Title of certifying agent)

(Date of Certification)

PROJECT MANUAL

FOR:

THE COLLEGE OF NEW JERSEY FORCINA HALL PHASE 01 NEW ELEVATOR

PREPARED FOR

THE COLLEGE OF NEW JERSEY
2000 PENNINGTON ROAD
EWING, NJ 08628-2815

PREPARED BY

Clarke Caton Hintz
100 Barrack Street
Trenton, NJ 08608
609-883-8383

www.ClarkeCatonHintz.com

February 09, 2024

NEW ELEVATOR BID

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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SECTION 01 1000 – SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Project Identification: The College of New Jersey Forcina Hall New Elevator.

1. Project Location: 2000 Pennington Road, Ewing, NJ 08628-0718.

B. Owner: The College of New Jersey.

1. Owner's Representative: Maggie Greco, Campus Architect.

C. Architect: Clarke Caton Hintz.

1. 100 Barrack Street, Trenton NJ 08608

1.2 WORK OF THIS PROJECT

A. The Project consists of all work described herewith along with all drawings, specifications, addendums/bulletins/clarifications and all contract bid documents.

1. This project includes providing the specified elevator equipment and installing the specified equipment.
2. The Elevator Contractor will be required to coordinate their installation work with a General Contractor that will be awarded their portion of the work at a later date.
3. The Elevator Contractor is responsible for all items required by Code for final acceptance, whether specified or not.
4. The Elevator Contractor is required to provide storage for the time needed between when the equipment is fabricated, procured, and available, and when the General Contractor has readied the site for installation by the elevator contractor.
5. The Elevator Contractor will coordinate elevator shaft requirements with the General Contractor, and will follow with surveying the shaft, machine room, and pit to obtain all measurements and conditions related to his work

B. The contract documents are those contained in these specifications, drawings and addendum/clarifications issued during the bidding process.

1.3 CONTRACTS

A. The Work will be performed under **one prime contract** that will be coordinated with a General Contractor that will be determined at a later date

1. General Construction Contract:

- a. The Elevator Construction Contract shall include all labor, materials, equipment and services necessary for the complete construction of all work shown on the Drawings and described in Divisions 0, 1, and 2 through 49 Specifications.

- b. Structural Steel Work: the Elevator Contractor will coordinate Structural Steel work that is the responsibility of the General Contractor.
- c. The Heating Ventilation and Air Conditioning Work: the Elevator Contractor will coordinate HVAC work that is the responsibility of the General Contractor.
- d. The Plumbing Work: the Elevator Contractor will coordinate Plumbing work that is the responsibility of the General Contractor.
- e. The Electrical Work: the Elevator Contractor will coordinate Electrical work that is the responsibility of the General Contractor.
- f. The Elevator Work: shall include all labor, material, equipment, and services necessary for the complete construction of all elevator work as shown on the Drawings and described in Divisions 0, 1, and 14 of the Specifications and may include other divisions where noted.
 - Elevator Contractor shall install their equipment.
 - Elevator Contractor is required to coordinate their installation and all needs with the General Contractor who has yet to be determined.
 - Elevator Contractor is responsible for field verifying all provided conditions prior to installation.
 - Elevator Contractor is responsible for carrying the cost of offsite storage for all material until the General Contractor is ready to receive on the site.
 - Elevator Contractor is responsible for coordinating all delivery and site controls when the general contractor is ready to receive on the site.
 - Elevator Contractor will assist the Owner and Architect in clarifying scope language to reduce any issues during the General Contractor bid process.
 - Elevator Contractor will coordinate with the General Contractor all required information and performance requirements of the elevator machine room.
 - General Contractor shall provide all necessary existing building demolition as required for the installation of the new elevator. The Elevator Contractor will coordinate as needed with the General Contractor
 - General Contractor shall install the shaft structure and elevator inserts that the Elevator Contractor will provide to the General Contractor.
 - General Contractor shall provide all required power and utilities needed in advance of the installation of the elevator and the control room. The Elevator Contractor will assist with all required coordination.
 - General Contractor shall review the existing fire alarm system in preparation for connecting the elevator service to the system.
 - Refer to the drawings for the basis-of-design of the elevator cab. The Elevator Contractor will provide finish options to match or be of equal quality to the Architect and Owner for final acceptance.
- g. All contractors must make themselves familiar with the total project and all the project documents. No additions to Contract sums will be approved for any contract where work may be shown for that Contract on Drawings typical for other trades.

1.4 ALTERATIONS AND COORDINATION

- A. The General Contractor shall coordinate the entire work of Project, including preparation of general coordination drawings through the HVAC Contractor (i.e. ductwork shop drawings and then overlays by each subcontractor), diagrams and schedules, and control of site utilization; from the beginning of activity, through the project closeout and warranty periods. The Elevator Contractor will be responsible for providing the General Contractor with all required information needed for coordination.

1.5 KNOWLEDGE OF CONTRACT REQUIREMENTS

- A. Each Contractor will be held to have examined the site of the Work prior to submitting his proposal and informed himself, his Subcontractors, Sub-subcontractors and material suppliers of all existing conditions affecting the execution of the work.
- B. Each Contractor will be held to have examined the Contract Documents, and Modifications thereto, as they may affect subdivisions of the Work and informed himself, his Subcontractors, Sub-subcontractors and material suppliers of all conditions thereof affecting the execution of the Work.
- C. Each Contractor will be held to be thoroughly familiar with all conditions affecting labor in the neighborhood of the Project including, but not limited to, Unions, incentive pay, procurement, living and commuting conditions and to have informed his Subcontractors and Sub-subcontractors thereof.
- D. The Specifications and Drawings shall be considered as a whole and shall not be separated during the bidding or construction period. Division of specifications into Divisions and Sections is solely for organization and is not intended to define trade responsibilities, unless specifically stated. Each Contractor shall be responsible for all work and, if he/she divides the Drawings or Specifications for use of subcontracts and material suppliers, he does so at his own risk.

1.6 CONTRACT DOCUMENTS INFORMATION

- A. The Contract Documents are prepared in accordance with available information as to existing conditions and locations. If, during construction, conditions are revealed at variance with the Contract Documents, notify the Architect immediately so that supplementary instructions may be issued.
- B. The Specifications determine the kinds and methods of installation of the various materials, the Drawings establish the quantities, dimensions and details of materials, the schedules on the Drawings, give the location, type and extent of the materials.
- C. In case of any discrepancy between the various Drawings, or between various parts of the Specifications or between Drawings and Specifications, the matter shall immediately be submitted to the Architect and for Contractual purposes, the most expensive condition shall apply.
- D. Dimensions given on the Drawings govern scale measurements and large scale drawings govern small scale drawings, except as to anything omitted unless such omission is expressly noted on the larger scale drawings.
- E. The techniques or methods of specifying to record requirements varies throughout text, and may include "prescriptive", "open generic/descriptive", "compliance with standards", "performance", "proprietary", or a combination of these. The method used for specifying one unit of work has no bearing on requirements for another unit of work.
- F. Whenever a material, article or piece of equipment is referred to in the singular number in the Contract Documents, it shall be the same as referring to it in the plural. As many such materials, articles or pieces of equipment shall be provided as are required to complete the Work.

1.7 STANDARDS

- A. Whenever a material, article, or piece of equipment is specified by reference to a governmental,

trade association or similar standard, it shall comply with the requirements of the latest publication thereof and amendments thereto in effect on the bid date.

- B. Applicable standards of construction industry have same force and effect, and are made a part of Contract Documents by reference, as if copied directly into Contract Documents, or as if published copies were bound herewith.
- C. Where compliance with 2 or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, most stringent requirement, which is generally recognized to be also most costly, is intended and will be enforced, unless specifically detailed language written into the Contract Documents clearly indicates that a less stringent requirement is to be fulfilled. Refer, apparently equal but different requirements, and uncertainties as to which level of quality is more stringent, to Architect for a decision before proceeding. Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of work, option is intended to be Contractor's regardless of whether specifically indicated as such.
- D. Reference standards referenced directly in Contract Documents or by governing regulations have precedence over nonreferenced standards that are recognized in industry for applicability to work.

1.8 DEFINITIONS (Also refer to 014200 for further references)

- A. A substantial amount of specification language constitutes definitions for terms found in other contract documents, including drawings, which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in contract documents are defined generally in this article. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the work to extent not stated more explicitly in another provision of contract documents.
- B. General requirements apply to entire work of Contract and, where so indicated, to other elements which are included in the project.
- C. The term "indicated" is a cross reference to details, notes or schedules on the Drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in the Contract Documents. Where terms such as "shown", "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping to locate cross reference, and no limitation of location is intended, except as specifically noted.
- D. Where the term "Owner" is used, this shall designate the: The College of New Jersey
- E. Where the term "Architect" is used this shall designate the firm of: See the Project Cover for the "ARCHITECT" information.
- F. Where the term "Construction Manager" is used this shall designate the TCNJ Project Manager.
- G. Where not otherwise explained, terms such as "directed", "requested", "authorized", "selected", "approved", "required", "accepted", and "permitted" mean "directed by Architect", "requested by Architect", etc. However, no such implied meaning will be interpreted to extend Architect's responsibility into Contractor's area of construction supervision.
- H. Where used in conjunction with Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of

Architect's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect be interpreted as a release of Contractor from responsibilities to fulfill requirements of the Contract Documents.

- I. Whenever the word "equivalent" is used it shall be understood to indicate that the Architect will consider substitutions for the product and/or manufacturer named in the Specifications, provided that the proposed substitution meets or exceeds the performance of the specified item. It shall be further understood that the judgment of "equivalency" rests solely with the Architect. Equipment, products, materials, etc. will be judged by the Architect according to the criteria listed below. Criteria shall be applied according to the Architect's discretion and are not listed in order of importance.
1. Ability to fit into space provided.
 2. Quality.
 3. Serviceability.
 4. Esthetics.
 5. Availability of finishes.
 6. Workmanship.
 7. Economy of operation.
 8. Suitability for purpose intended.
 9. Performance to meet design requirements
- J. The project site is the space available to Contractor for performance of the Work, either exclusively or in conjunction with others performing other work as part of the Project. The extent of project site is shown on the Drawings, and may or may not be identical with description of the land upon which project is to be built.
- K. Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
- L. Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
- M. Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- N. An installer is the entity, person or firm, engaged by the Contractor or his subcontractor or sub-subcontractor for the performance of a particular unit of work at the project site, including installation, erection, application and similar required operations. It is a general requirement that such installers be expert in operations they are engaged to perform.
- O. The testing laboratory is an independent entity engaged to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and interpret results of those inspections or tests.
- P. Where the words such as "The Contractor shall" and similar words are omitted, the sentence structure shall be considered to include such words since the Specifications are directional in nature, indicating work to be performed by the Contractor.

term "Subcontractor" shall not be construed as a firm direction to subcontract a particular Section of the Work.

- R. "Piping" includes, in addition to pipe, all fittings, valves, hangers, and other accessories related to such piping.
- S. "Concealed" means hidden from sight as in chases, furred spaces, shafts, hung ceilings, or embedded in construction.
- T. "Exposed" means "not concealed" as defined above. Work in trenches, crawl spaces, and tunnels shall be considered "exposed" unless otherwise specifically noted.
- U. Damage: Any sort of deterioration whether due to weather, normal wear and tear, accident, or abuse, resulting in soiling, marring, breakage, corrosion, rotting, or impairment of function.

1.9 PARTIAL OCCUPANCY

- A. Each Contractor agrees to use and occupancy of a portion or unit of the Project before formal acceptance by the Owner under the following conditions:
 - 1. A certificate of Substantial Completion shall be prepared and executed as provided in the General Conditions. If, in the opinion of the Architect, the Contractor is chargeable with unwarranted delay in completing the Work or other Contract requirements, the signature of the Contractor will not be required. The certificate of Substantial Completion shall be accompanied by a written endorsement of the Contractor's insurance carrier and surety permitting occupancy by the Owner during the remaining period of Project work.
 - 2. Occupancy by the Owner shall not be construed by the Contractor as being an acceptance of that part of the Project to be occupied.
 - 3. Contractor will not be held responsible for any damage to the occupied part of the Project resulting from the Owner's occupancy.
 - 4. Occupancy by the Owner shall not be deemed to constitute a waiver of existing claims in behalf of the Owner or Contractor against each other.
 - 5. Use and occupancy of any portion of the building by the Owner prior to Project acceptance does not relieve the Contractor of his responsibility to maintain all insurance and bonds required of the Contractor under the Contract until the Project is completed and accepted by the Owner.
 - 6. The Contractor agrees that the Owner may place and install as much material, equipment and furnishings as is possible during construction without interfering with orderly progress of the Work and prior to use and occupancy of the various parts of the Work, and further agrees that such placing and installation shall not evidence completion of the Work or signify the Owner's acceptance of the Work or of any part thereof.

1.10 REGULATIONS AND CODES

- A. Work shall be in accordance with the latest applicable requirements, regulation and codes as set forth below.
 - 1. See Drawings for all listed Regulations and Codes that have been applied to this project.

1.11 LIMITED USE OF PREMISES

- A. General: The Elevator Contractor will coordinate all durations, staging and installation with the

General Contractor who shall limit their use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public.

1. Confine operations to areas within contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
2. Keep driveways and entrances serving the premises clear and available to the Owner and the Public at all times. Do not use these areas for parking or storage of materials and equipment on site.
3. This project will be completed in phases and thus the contractor is to make sure that all exits and entrances are accessible at all times. Coordinate the phasing in such a way that disruption to the occupants is kept to a minimum.

1.12 OWNER OCCUPANCY

- A. The building will be occupied throughout the course of construction. Contractor will cooperate to maintain construction operations in this area to a minimum to avoid conflicts with Owner usage and operations.
 1. Refer to the project bidding schedule included in the bid documents for additional information.

1.13 FILING AND PERMITS

- A. The Elevator Contractor will be responsible for all filing requirements, process and coordination with the local authority. The Elevator Contractor shall secure any necessary building permits required for the performance of work to be done by other trades. The Elevator Contractor shall obtain and pay for all municipal and state permits necessary for execution of the elevator work, including all fees associated with expediting. The General Contractor shall be responsible for signing off all elevators.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 1000

SECTION 01 2500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. LEED Building General Requirements: The Owner requires the Contractor to implement practices and procedures to meet the project's environmental performance goals, which should take into consideration issues that provide LEED compliance.
- C. Related Requirements:
 - 1. Section 012300 "Alternates" for products selected under an alternate.
 - 2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 3. Section 018113.13 "Sustainable Design Requirements - LEED for New Construction and Major Renovations."

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and assemblies which deviate from the requirements of the Contract Documents and proposed by Contractor which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.
 - 3. The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to Contract Documents, where requested by Owner or Architect are changes, not substitutions. Contractor's determination of and compliance with governing regulations and orders issued by

governing authorities do not constitute substitutions and do not constitute a basis for change orders. Otherwise, Contractor's requests for changes in products, materials, and methods of construction required by Contract Documents are considered requests for substitutions, and are subject to requirements hereto.

4. Any and all contractor substitutions that require additional work by other trades not specifically called for in the documents shall be paid for by the contractor requesting the substitution if any other trade increase is required.
5. 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.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit requests 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 Requests: All requests for substitutions shall be submitted within 20 days of contract award, together with all supporting information,
 2. Substitution Request Form: Use the electronic version of form included as an attachment to this Section; submit in portable document format (.pdf).
 3. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures in .pdf format.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES

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

1.4 QUALITY ASSURANCE

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

1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.
- B. Should a substitution be rejected by the architect and owner, the contractor is to then provide the specified product, material or method as noted in the contract documents, at no additional cost to the Owner and no change in the project schedule..
- C. Substitutions may be permitted by the Architect, if, in his opinion, the requirements of the proposed substitution comply with the requirements specified for the material, article or piece of equipment; however, the Architect is not required to permit substitution pursuant to the case of Whitten Corporation vs. Paddock, Incorporated, United States District Court, Massachusetts, April 12, 1974, affirmed by the Federal First Circuit Court, December 14, 1974.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 30 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution does not require revisions to the Contract Documents.
 - c. Requested substitution provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and requirements.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified or superior warranty.
 - j. Requested substitution can be used without adversely affecting Owner's insurance coverage on completed Work.
 - k. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; or if requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - l. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
 - m. Maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
 - n. Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
 - o. Proposed substitution does not affect dimensions and functional clearances.
 - p. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 20 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
1. 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:
- a. 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.
 - b. Requested substitution does not require revisions to the Contract Documents or, if revisions are required, the Contractor acknowledges that the cost of the Architect's redesign fee will be deducted from the Contract Price.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Requested substitution provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and requirements.
 - e. Substitution request is fully documented and properly submitted.
 - f. Requested substitution will not adversely affect Contractor's construction schedule.
 - g. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - h. Requested substitution is compatible with other portions of the Work.
 - i. Requested substitution has been coordinated with other portions of the Work.
 - j. Requested substitution provides specified or superior warranty.
 - k. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; or if requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - l. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
 - m. Maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
 - n. Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
 - o. Proposed substitution does not affect dimensions and functional clearances.
 - p. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 2500

ATTACHMENT: SUBSTITUTION REQUEST FORM

SUBSTITUTION REQUEST

(After the Bidding Phase)

Project: Project Name
The College of New Jersey
Project #

Substitution Request Number:

From:

Date:

A/E Project Number:

Contract For:

To: Recipient

Re:

Specification Title:

Description: _____

Section:

Page:

Article/Paragraph:

Proposed Substitution:

Manufacturer: _____ Address: _____

Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☒ Point-by-point comparative data attached - REQUIRED BY A/E

Reason for not providing specified item: _____

Similar Installations: Include List of Projects with name, address and phone number of Owner; name, address and phone number of Architect; and date installed

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST

(Continued)

The Undersigned certifies:

- 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.
- Requested substitution does not require revisions to the Contract Documents or, if revisions are required, the Contractor acknowledges that the cost of the Architect's redesign fee will be deducted from the Contract Price.
- Requested substitution is consistent with the Contract Documents and will produce indicated results.
- Requested substitution provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and credits.
- Substitution request is fully documented and properly submitted.
- Requested substitution will not adversely affect Contractor's construction schedule.
- Requested substitution has received necessary approvals of authorities having jurisdiction.
- Requested substitution is compatible with other portions of the Work.
- Requested substitution has been coordinated with other portions of the Work.
- Requested substitution provides specified or superior warranty.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; or if requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____ Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____

Date: _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

SECTION 01 2900 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SCHEDULE OF VALUES

- A. The Contractor shall prepare a schedule of values in coordination with the preparation of progress schedule. The percent complete on the schedule of values shall match the percent complete on the monthly updated project schedule. Correlate line items with other administrative schedules and forms required for the work, including progress schedule, payment request form, listing of subcontractors, schedule of allowances if any, schedule of alternates if any, listing of products and principal suppliers and fabricators, and schedule of submittals. Break down principal subcontract amounts into multiple line items for each entity of work. Round off to nearest whole dollar, but with total equal to Contract Sum. Submit 4 copies of schedule of values to the Project Manager and Architect for review and approval.
 - 1. **Upon Owner/Architect approval, Owner will return the Schedule of Values to the contractor for the contractor to submit to the bonding company for their acceptance. Payments will not be made to the contractor until the bonding company has provided a written acceptance of the schedule of values to the owner.**
- B. The schedule of values shall be tabulated into subcontracts and trades with the Quantity, Labor, Material, and Total Cost indicated. The Schedule of Values shall include such items as bonds, insurance, allowances and alternates, punch list/close out documents and shall enclose copies of invoices and/or cancelled checks from bonding and insurance agents.
- C. Schedule of values shall be submitted on AIA Form G703 or similar form approved by the Architect and Owner.
- D. Contractor's monthly application for payment shall be in the same schedule form, reflecting the same items from above. Unit costs shall be realistic for their part of the Work.

1.2 CHANGES IN THE WORK

- A. When a change in the Work includes a category or categories of Work both added to and deducted from the Contract, the total quantities of added Work and of deleted Work shall be determined separately for each category and the appropriate unit price or net cost of the Work shall be applied to the difference between the two total quantities.
- B. Unit prices shall be inclusive of all costs and shall be applied to units of measure as defined in the Specifications for each category of Work.

- C. For all extra Work performed by Contractor, the gross cost to the Owner shall include the net cost of the Work to the Contractor plus an allowance for overhead and profit not to exceed 15% of the net cost.
- D. For all extra Work performed by a Subcontractor, the gross cost to the Owner shall include the net cost of the Work to the Subcontractor plus an allowance (“mark-up”) for overhead and profit not to exceed 15% of the net cost, plus the Contractor's overhead and profit (mark-up) not to exceed 5% of the Subcontractor's cost. All “mark-up” includes bond and insurance costs.
- E. Net cost of extra Work shall be the actual or pro-rated cost of:
 - 1. Labor, including foreman, at the prevailing rate of wages, contributions, and taxes.
 - 2. Materials entering permanently into the Work, including delivery to the site.
 - 3. The ownership or rental cost of construction equipment and expendable tools, pro- rated for the time necessary for the Work.
 - 4. Power and consumable supplies for the operation of power equipment, pro-rated for the time necessary for the Work.
- F. Gross costs shall be net costs plus the allowances (mark-up) described above, such mark- up allowances being inclusive of all costs associated with superintendence, supervision, engineering, overhead, profit, bond/insurance, administrative and site office expenses and all other general expenses.

1.3 APPLICATIONS FOR PAYMENT

- A. Except as otherwise indicated, sequence of progress payments for the Contractor shall be regular, and each shall be consistent with previous applications and payments. It is recognized that certain applications involve extra requirements, including initial applications, applications at times of substantial completion, and final payment applications.
- B. Payment Application Forms: Use AIA Document G702 and G703 Continuation Sheets; available from Publications Distribution Div., The American Institute of Architects, 1735 New York Ave., N.W., Washington, D.C. 20006 (also available at most local AIA chapter offices and on the internet).
- C. Except as otherwise indicated, complete every entry provided on the form, including notarization and execution by authorized persons. Incomplete applications will be returned by Architect and Owner without action. Entries shall match current data of schedule of values, progress schedules and reports. Listing shall include amounts of fully executed change orders (and issued purchase orders) issued prior to first day of the period of construction covered by application. Contractor shall furnish to the Owner certified payroll reports for each payroll period, indicating name craft, social security number and actual hourly rate of wages paid to each workman employed on the project. A certified payroll record is defined as "a payroll record which is attested to by the employer, or corporate officer of such company, or an authorized agent of the employer."

- D. Submit one "pencil" copy of each proposed payment application to the architect and owner in the field on or before the 25th of each month.
- E. Submit 4 executed final copies of each payment application to the Architects office on or before the 30th of each month. Transmit with a transmittal form listing attachments, and recording appropriate information related to application.
- F. Breakdown may include a line item for General Conditions. General Conditions shall include the cost of general supervision, trailers, temporary utilities and other general expenses directly related to the project and not considered overhead. The general conditions item shall be billed on monthly progress payments on a percentage of work completed.

1.4 INITIAL PAYMENT APPLICATION

- A. The principal administrative actions and submittals which shall precede or coincide with submittal of the Contractor's first payment application can be summarized as follows, but not necessarily by way of limitation.
 - 1. Listing of subcontractors and principal suppliers and fabricators.
 - 2. Schedule of values.
 - 3. Schedule of principal products.
 - 4. Schedule of submittals (preliminary if not final).
 - 5. Copies of acquired building permits and similar authorizations and licenses from governing authorities for current performance of the work.
 - 6. Data needed by Owner to secure related insurance coverages.
 - 7. Performance and Payment Bond.
 - 8. Insurance Certificates.
 - 9. Bonding Company Acceptance of the Schedule of Values

1.5 PROGRESS PAYMENTS

- A. Based upon application for payments submitted to the Architect and the Owner, by the Contractor, on or about the 25th day of each month for the period ending the last day of the previous second month, and Certificate of Payment issued by the Architect and the Owner, the Owner will make progress payments on account of the Contract Sum to the Contractor as follows:
 - 1. On or after the 25th day of each month, the Contractor shall submit to the Architect and Owner a "pencil copy" indicating the previous payment and the proposed amounts for each line item for the current period. After review and approval or changes, the Contractor shall prepare the final billing for presentation to the Architect and Owner.
 - 2. Withholding of Payments:
 - a. Whenever any contract, the total price of which exceeds \$100,000, entered into by a State college, for the construction, reconstruction, alteration or repair of any building, structure, facility or other improvement to real property, requires the withholding of payment of a percentage of the amount of the contract, the contractor may agree to the withholding of payments in the

manner prescribed in the contract, or may deposit with the State college registered book bonds, entry municipal bonds, State bonds or other appropriate bonds of the State of New Jersey, or negotiable bearer bonds or notes of any political subdivision of the State, the value of which is equal to the amount necessary to satisfy the amount that otherwise would be withheld pursuant to the terms of the contract. The nature and amount of the bonds or notes to be deposited shall be subject to approval by the State college. For purposes of this section, "value" shall mean par value or current market value, whichever is lower.

- b. If the contractor agrees to the withholding of payments, the amount withheld shall be deposited, with a banking institution or savings and loan association insured by an agency of the Federal government, in an account bearing interest at the rate currently paid by such institutions or associations on time or savings deposits. The amount withheld, or the bonds or notes deposited, and any interest accruing on such bonds or notes, shall be returned to the contractor upon fulfillment of the terms of the contract relating to such withholding. Any interest accruing on cash payments withheld shall be credited to the State college.
3. Any contract, the total price of which exceeds \$100,000, entered into by a State college involving the construction, reconstruction, alteration, repair or maintenance of any building, structure, facility or other improvement to real property, shall provide for partial payments to be made at least once each month as the work progresses, unless the contractor shall agree to deposit bonds with the State college pursuant to Paragraph 2 above.
4. With respect to any contract entered into by a State college for which the contractor shall agree to the withholding of payments, 2% of the amount due on each partial payment shall be withheld by the State college pending completion of the contract.
5. Upon acceptance of the work performed pursuant to the contract for which the contractor has agreed to the withholding of payments, all amounts being withheld by the State college shall be released and paid in full to the contractor within 45 days of the final acceptance date agreed upon by the contractor and the State college, without further withholding of any amounts for any purpose whatsoever, provided that the contract has been completed as indicated. If the State college requires maintenance security after acceptance of the work performed pursuant to the contract, such security shall be obtained in the form of a maintenance bond. The maintenance bond shall be no longer than two years and shall be no more than 100% of the project costs.
6. This act shall take effect immediately. This bill supplements the "State College Contracts Law," P.L.1986, c.43 (C.18A:64-52 et seq.), and applies to any State college contract for over \$100,000 which involves the construction, reconstruction, alteration or repair of any building, structure, facility or other improvement to real property. Under the provisions of this bill, whenever a contract of this type requires the withholding of payment of a percentage of the amount of the contract, the contractor would have the choice of either agreeing to a retainage deduction from each monthly progress payment, or the contractor could choose to deposit bonds in

the amount necessary to satisfy the amount that otherwise would be withheld under the contract. If a contractor chooses a retainage deduction from each monthly payment, then the retainage would be limited to 2% of the amount due on each partial payment. Upon acceptance of the work performed pursuant to the contract for which the contractor has agreed to a retainage deduction, all amounts being withheld by the State college must be paid in full to the contractor within 45 days of the final acceptance date agreed upon by the contractor and the State college. The bill provides that if the State college requires maintenance security after acceptance of the work performed under the contract, the security must be obtained in the form of a maintenance bond, which is required to be no longer than two years and no more than 100% of the project costs. The provisions of this bill are similar to provisions in the "Local Public Contracts Law," P.L.1971, c.198 (C.40A:11-1 et seq.) and the "Public School Contracts Law," P.L.1977, c.114 (C.18A:18A-1 47 etseq.).

7. Upon substantial completion, the retainage shall, upon the Architect/Owner's approval, remain at 2% of the value of work completed and the Owner will assign a value to the incomplete work which shall be added to the 2% retainage. Final release of retained monies will occur only upon the total completion of all punch list and closeout documentation to the satisfaction of the Architect and Owner.
8. For each day's delay in the Contractor's submission of an application for payment acceptable to the Architect and Owner, the Owner may delay one day in making his progress payment.
9. Owner shall make payments within 45 days of receipt of said accepted pay requisition.

1.6 APPLICATION AT TIME OF SUBSTANTIAL COMPLETION

- A. Following issuance of certificate of substantial completion on each Contractor's work, and also in part as applicable to prior certificates on portions of completed work as designated, a "special" payment application may be prepared and submitted by Contractor. The principal administrative actions and submittals which shall precede or coincide with such special applications can be summarized as follows, but not necessarily by way of limitation:
 1. Occupancy permits and similar approvals or certifications by governing authorities and franchised services, assuring Owner's full access and use of completed work.
 2. Warranties, guarantees, maintenance agreements and similar provisions of Contract Documents.
 3. Test/adjust/balance records, maintenance instructions, meter readings, start up performance reports, and similar change over information germane to Owner's occupancy, use, operation and maintenance of completed work.
 4. Final cleaning of the work.
 5. Advice to Owner on coordination of shifting insurance coverages, including proof of extended coverage as required.
 6. Listing of Contractor's incomplete work, recognized as exceptions to certificate of substantial completion.

1.7 FINAL PAYMENT APPLICATION

- A. The administrative actions and submittals which shall precede or coincide with submittal of the Contractor's final payment application can be summarized as follows, but not necessarily by way of limitation.
1. Completion of project closeout requirements.
 2. Completion of items specified for completion beyond time of substantial completion, regardless of whether special payment application was previously made.
 3. Assurance, satisfactory to Owner, that unsettled claims will be settled and that work not actually completed and accepted will be completed without undue delay.
 4. Transmittal of required project construction records to Owner via the Architect.
 5. Proof, satisfactory to Owner, that taxes, fees and similar obligations of Contractor have been paid.
 6. Removal of temporary facilities, services, surplus materials, rubbish and similar elements.
 7. Notarized consent of surety for final payment.
 8. Complete all TCNJ required forms as provided by the TCNJ Representative.

1.8 WAIVER OF LIENS

- A. Each Contractor, for himself, and for all Subcontractors and material men, agrees that no mechanic's lien or other claim shall be filed or maintained by the Contractor or by any Subcontractor, materialmen, laborer or any other person whatsoever for, or on account of any work performed or materials furnished under this Contract.
- B. In every subcontract entered into by each Contractor after execution of this Contract or in connection herewith, the Contractor shall incorporate a provision, similar to the foregoing paragraph, to the effect that neither the Subcontractor nor any party acting through or under him shall file or maintain any mechanic's lien or other claim against the Owner or Architect in connection with the Work.

END OF SECTION 01 2900

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SPECIAL REQUIREMENTS

- A. Schedule: The Elevator Contractor shall provide as part of the work, a master schedule showing sequencing of work. Work will be bid to a General Contractor at a later date. Upon award of that work, the Elevator Contractor will be required to coordinate their schedule durations with the General Contractor to meet the project's schedule requirements. The General Contractor shall supply a schedule with all subcontractor activities, relationships, and durations, utilizing the CPM method via SureTrak/Primavera or Microsoft Scheduling program to the Owner on a working version CDROM and also through the project management website, and coordinate their schedule with the Owner.
- B. Coordination Drawings: Refer to Section 01 3115 for requirements for coordination drawings.
- C. Each Contractor shall take all necessary precautions to ensure the safety of all structural elements during all phases of all work. No materials, cranes, trucks or any other construction loads shall be placed on any part of the structure until the Contractor has determined the adequacy of that structure to carry the intended load without damage or overstress.
- D. Entrance into, or other use of the building will not be permitted except as may be necessary for the execution of the Work and shall be subject to the restrictions and instructions of the Owner.
- E. Routes of ingress and egress to areas where work is being performed shall be subject to the restrictions and instructions of the Owner.
- F. Materials shall be moved through the Building using rubber tired vehicles which shall be properly controlled at all times to avoid damage to existing wall, floor or ceiling surfaces.
- G. Water damage cannot be tolerated and it is incumbent upon Contractors to take any steps necessary to keep the existing premises dry at all times.
- H. Any damage to adjacent buildings or the new construction from heavy equipment, striking the Building or any other damage to any part of the premises shall be repaired at the expense of the Contractors.
- I. All welding and cutting shall be performed by qualified and certified welders. Certificates shall be on file with the Contractor prior to commencement of any welding.
- J. All projects that require access to dormitories and apartments by contractor personnel require that each person have a state police background check completed and the contractor is to provide a list of all potential personnel to work at the site, and provide a copy of the background checks to the TCNJ project manager prior to start of the work on the project. Should a person not have a background check as required herewith (such as a delivery person), this unchecked person must be accompanied by a representative of the contractor who has been checked.

- K. No work shall start before 8:00am unless agreed to in advance with the College.

1.2 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.3 REQUESTS FOR INFORMATION (RFIs)

- A. Requests for Information (RFI's) are requests for clarifications or questions regarding the contract drawings and specifications, not contract terms, scheduling items, or general correspondence, nor, are they to be as a means to describe or request approval of alternate construction means, methods or concepts or substitution for materials, systems means and methods.
1. Carefully study and compare the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, and prior Project correspondence and documentation prior to submitting an Request for Information.
- B. Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- C. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect
 6. RFI number, numbered sequentially.

7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- D. RFI Forms: Architect will furnish electronic version of form bound in Project Manual.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow five working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. Based upon the amount of RFI's received and their level of content, the Architect will establish the level of importance of each RFI and allow sufficient time in the Architect's professional judgment to permit adequate review.
 2. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 3. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 4. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit a change proposal according to the General Conditions of the Contract
 - a. If the Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Owner in writing within 15 calendar days of receipt of the RFI response, otherwise it will be assumed there is no change in the Contract Time or Contract Sum..
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly; include the following: .
1. Project name.
 2. Name and address of Contractor.

3. Name and address of Architect .
 4. RFI number including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
- G. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

PART 2 - PRODUCTS- Not Applicable

PART 3 - EXECUTION

3.1 GENERAL

- A. Contractors shall perform the work on or about the premises in a careful manner with full consideration to fire protection as required by the National Fire Protection Association Standards, National Board of Fire Underwriters and State and Local Departments having jurisdiction. Fire resistant materials shall be used for temporary enclosures.
- B. Chemical extinguishers approved by the Owner shall be provided by the General Contractor during the progress of the work where and as required by the Owner, the Local Fire Marshal, and the National Board of Fire Underwriters.
- C. The General Contractor shall maintain an active program of fire prevention to keep workmen fire conscious during the entire life of the Contract. Designate one member of the organization to execute and coordinate fire control measures of his own organization and that of all subcontractors under his jurisdiction.
- D. All sub-contractors shall cooperate with the General Contractor in carrying out the above program.
- E. Storage of flammable materials will not be permitted in the Building unless written permission is obtained from the Owner. Storage of all such materials shall be the Contractors' responsibility.
- F. On-site open burning of rubbish, garbage, trade waste, leaves or plant life is prohibited.
- G. Safety Program: The General Contractor shall institute a safety program in accordance with OSHA and any local, state, or federal guidelines. The contractor shall name a safety officer to monitor this program and shall submit a safety report at job meetings.
- H. Stockpiling: Stockpiling of materials on site will be allowed (but limited due to the limited space on this site). Such materials shall not impair or impede the functioning of the facility. Materials stored on site shall be secured to prevent loss from theft, damage, vandalism or fire. By stockpiling materials on site, the contractor assumes full responsibility for said materials, and shall protect them to the fullest extent possible. Specific locations for stockpiling materials shall be coordinated with the Architect and Owner.

- I. Safety Barriers: The General Contractor shall erect safety barriers to deter and prohibit unauthorized access to the construction site; such barriers may take the form of fences and shall be clearly marked with signage prohibiting unauthorized access. The General Contractor shall be responsible for safety barriers within the building. The contractor shall be liable for damages to persons or property due to the construction process if adequate safety measures are not undertaken. The Owner and Architect shall review safety precautions for their adequacy but shall not be held liable for Contractors failure to maintain or provide adequate protection.
- J. Sequencing: The General Contractor will work with the Sub-Contractors to sequence the work during the submission of monthly project schedules. Contractors shall endeavor to coordinate their work efforts with the Owner's requirements. Interruptions of utility services shall be coordinated with the Architect and Owner, but in no instance shall last longer than 2 hours.

3.2 PROGRESS MEETINGS

- A. Progress Meetings shall be held bi-weekly at the job site at a regular time and day mutually agreed upon. The frequency may be changed by the Architect or Owner to reflect current conditions. The Contractors, those of his/their subcontractors concerned with current progress or with scheduling of future progress, the Architect and the Owner shall each be represented at these job meetings by persons familiar with the details of the work and authorized to conclude matters relative to work progress, establishment of progress schedules, etc., as may be necessary to expedite completion of the work.
- B. The Contractors and his/their subcontractors attending these meetings shall present complete and definite reports as to the status of their respective work, conditions of product and equipment manufacturer, labor availability, productivity and cooperation, shipping data, time of completion, sequence of the work, safety program, and any other information bearing upon the execution of the Contract or subcontract.
- C. The Owner will chair the meetings and take meeting minutes

3.3 OTHER MEETINGS

- A. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 10 days after execution of the Agreement.
 - 1. Conduct the conference to review responsibilities and personnel assignments.
 - 2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect progress; follow TCNJ's standard agenda.
 - 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- B. 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 and Owner's Commissioning Authority of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. LEED requirements.
 - i. Review of mockups.
 - j. Possible conflicts.
 - k. Compatibility requirements.
 - l. Time schedules.
 - m. Weather limitations.
 - n. Manufacturer's written instructions.
 - o. Warranty requirements.
 - p. Compatibility of materials.
 - q. Acceptability of substrates.
 - r. Temporary facilities and controls.
 - s. Space and access limitations.
 - t. Regulations of authorities having jurisdiction.
 - u. Testing and inspecting requirements.
 - v. Installation procedures.
 - w. Coordination with other work.
 - x. Required performance results.
 - y. Protection of adjacent work.
 - z. Protection of construction and personnel.
 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- C. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting.

- Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for completing LEED documentation.
 - e. Requirements for preparing operations and maintenance data.
 - f. Requirements for delivery of material samples, attic stock, and spare parts.
 - g. Requirements for demonstration and training.
 - h. Preparation of Contractor's punch list.
 - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - j. Submittal procedures.
 - k. Coordination of separate contracts.
 - l. Owner's partial occupancy requirements.
 - m. Installation of Owner's furniture, fixtures, and equipment.
 - n. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

END OF SECTION 01 3100 ATTACHMENT:

REQUEST FOR INFORMATION FORM

REQUEST FOR INFORMATION (RFI)

Contractor Address Phone: Fax		Architect: Address Phone:	
Project Name & No.: 1013016.01		Project Location	
RFI Number: 1	RFI Subject:	Date of Request:	Requested Date of Response:

☐ I have carefully studied and compared the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, and prior Project correspondence and documentation prior to submitting this Request for Information.

Sketches of Condition (Attach)	Spec Section: Page: Paragraph Ref.:	Drawing No. / Detail No.: Detail Ref.:
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Question or Information Needed

Contractor's Proposed Solution

Submitted By:

Architects Response:

Response By:

Date of Response :

1. Refer to Section 01 3100 "Project Management and Coordination" for RFI procedures.
2. Responses from the Architect do not change any requirements of the Contract Documents.
3. The information provided in this RFI is for clarification purposes only. It shall not be interpreted as a change order, nor an extension of time.
4. Failure to Notify the Architect within 15 days of receipt of the response to this RFI shall indicate that there is no cost or additional time associated with the response.

SECTION 01 3115 – COORDINATION DRAWINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes preparation of coordination drawings for architectural, structural, mechanical, plumbing, fire protection, fire alarm, lighting, information technology, security, and electrical Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for administrative provisions for coordinating construction operations.
 - 2. Division 01 Section "Project Record Documents," for project record drawing requirements.
 - 3. Division 21, 22, 23, 26, 27 and 28 for additional requirements.

1.2 DEFINITION AND INTENT

- A. The Contract Drawings (mechanical, plumbing, electrical, and fire protection plans) are diagrammatic only and are not intended to show the alignment, exact physical locations, or configurations of such Work. Performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. Where possible, the Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing coordination drawings.
- B. Coordination drawings are drawings prepared by Contractor that superimpose Work of multiple trades involved in the construction process. Coordination drawings indicate systems and components to be installed by the Contractor to maximize clear height and free area in ceiling cavities, allow for proper and adequate equipment service clearances, minimize space required by shafts and chases and provide the most efficient functioning and use of materials possible while complying with the final performance and finished appearance required by the Contract Documents.
- C. Coordination drawings are intended to show the relationship and integration of different construction elements that require coordination during fabrication or installation to fit in the space provided, to function as intended, and to present the intended final finished appearance.
- D. Coordination Drawings are not a replacement for shop drawings specified in the technical specifications or the Record Drawings required in Division 01.
- E. The Contractor shall manage the process so that each trade/ sub-contractor provides all required information in a timely manner. Coordination Drawings may be completed on a phased basis so as not to delay the overall project schedule. The CPM Schedule

specified elsewhere in Division 01 Section “Construction Progress Documentation” shall include the submission of Coordination Drawings. The same shall demonstrate how the Contractor intends to integrate the submission of Coordination Drawings to suit the overall project schedule. The Contractor shall pay all costs for reproducing copies of coordination drawings for use in the field.

1.3 CONTRACTOR'S USE OF ARCHITECT'S BIM FILES

- A. Refer to Division 01 Section “Submittal Procedures” for availability of Architect’s BIM or CAD Background Drawings, required Electronic Data Transfer Agreement Between Architect and Contractor

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare and submit as informational submittal within 120 days of Notice to Proceed.
- B. Submit coordination drawings in the same manner as shop drawings; refer to Section 01 3300 Submittal Procedures.

1.5 PROJECT CONDITIONS

- A. Maintain marked up set of coordination drawings at Project site available for reference by Owner and Architect.
- B. Maintain original BIM model used to produce coordination drawings updated with revisions to reflect actual construction. Make drawing revisions at time of change to construction; Transfer information to BIM no later than every 15 days.
- C. Failure to submit coordination drawings will result in no changes to contract sum for necessary corrections to uncoordinated work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION OF COORDINATION DRAWINGS

- A. Organize coordination drawing submittals as follows:
 - 1. Floor Plans: Provide floor plans and reflected ceiling plans for all floors. Show architectural, structural, mechanical, plumbing, fire protection, fire alarm, electrical, and telecommunications elements on floor plans and reflected ceiling plans.
 - 2. Equipment Rooms and Spaces: Provide large scale drawings for equipment rooms and spaces showing plans and elevations of mechanical, plumbing, fire protection, electrical, and telecommunications equipment.
 - 3. Structural Penetrations: Provide coordination drawings for each floor indicating

- penetrations and openings required for all trades.
 4. In public and occupied areas without scheduled finish ceilings, appearance is a major coordination factor. Reposition proposed locations of work after Coordination Drawing review by the Architect. Provide adjustments to the exact size, location and offsets of ducts, pipes, and conduit to achieve reasonable appearance objectives. Provide these adjustments as part of the Contract or notify the Architect immediately as to why the adjustment cannot be made.
- B. Prepare coordination drawings to a scale of 1/4" = 1'- 0" or larger (1/2"= 1'-0" for mechanical room plans); detailing major elements, components, and systems of mechanical equipment and materials in relationship with other systems, installations, and building components. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are of importance to the efficient flow of the Work, including (but not necessarily limited to) the following:
1. Detail complex areas at larger scale than typical floor plans.
 2. Use a common architectural layout as background.
 3. Indicate ductwork, pipes with 6-inch diameter and greater, and conduits with 3- inch diameter and greater by double lines. Use single lines for smaller mechanical piping and all electrical conduits. Draw piping, ductwork, lighting fixtures, and cable trays in scale.
 4. Circle and clearly note deviations from Contract Documents with reason for deviation stated.
 5. Provide name of representative of each subcontractor whose Work is indicated on coordination drawings, verifying their review and approval that their Work has been coordinated with each other trade and with architectural and structural Work.

END OF SECTION 01 3115

SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Daily construction reports.
 - 2. Site condition reports.
 - 3. Special reports.
- B. Related Requirements:
 - 1. General Conditions, Section 013100 and Section 013300 for requirements relating to preparation and submission of Contractor's construction schedule.
 - 2. Section 01 3300 "Submittal Procedures" for submitting schedules and reports.
 - 3. Section 01 4000 "Quality Requirements" for submitting a schedule of tests and inspections.
 - 4. Section 01 7419 "Construction Waste Management and Disposal" for submitting LEED documentation.
- C. The elevator contractor shall follow all requirements of this section and report directly to the General Contractor who will distribute the information accordingly.

1.2 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. PDF electronic file.
- B. Daily Construction Reports: Submit at monthly intervals.
- C. Site Condition Reports: Submit at time of discovery of differing conditions.
- D. Special Reports: Submit at time of unusual event.

PART 2 - PRODUCTS

2.1 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.

4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Accidents.
8. Meetings and significant decisions.
9. Unusual events (see special reports).
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Field Orders received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

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

2.2 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION – Not used.

END OF SECTION 01 3200

SECTION 01 3300 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.2 PROGRESS SCHEDULE / COORDINATION DRAWINGS

- A. The Elevator Contractor will be responsible for coordinating tall schedule durations with the General Contractor and for providing updates as needed to support the General Contractor's contract obligations.

1.3 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Allow sufficient processing time; as a minimum, as indicated in this Section.
 - 3. Initial Submittal: Submit concurrently with initial submission of construction schedule (refer to Paragraph 1.2.A of this section for timeframe). Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 4. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - b. Contractor is to provide a submittal schedule identifying the critical path submittals to assist the design team in prioritizing their review and subsequent return to the contractor prior to the first requisition for payment being processed. Every submittal is to have a required return date associated with it so the design team can schedule their reviews accordingly.
 - 5. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.

- c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.
- B. Architect will review Submittal Schedule for concentrations, overloading and similar conflicts which will impact the Architect's ability to meet the schedule and propose revisions to the duration of processing time to the Contractor.
- C. No payment will be made to Contractor (except for insurance, bonds and mobilization costs) until complete Schedule of Submittal with critical path submittals has been received and accepted by Owner and Architect.
- D. 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 if the Contractor fails to submit a Submittal Schedule showing the critical path submittals and adhere to said schedule.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files:

- 1. Any request for digital data files shall be solely and exclusively for use related to this Project.
- 2. Building Information Modeling (BIM): At the Contractor's written request, electronic data files of the BIM Model will be available from the Architect as a convenience to the Contractor for use in preparing shop drawings and coordination drawings for this Project in accordance with the attached Electronic Data Order Form and following:
 - a. To the extent the Architect chooses to utilize BIM software, it shall be for the Architects use in developing the Instruments of Service.
 - b. BIM files were created by the Architect for the primary purpose of creating 2D contract documents. No implication is intended for any purpose beyond the production of 2D documents.
 - c. BIM Digital Data Files will be available to the contractor, subcontractor or supplier on written request to the Architect in accordance with this Section.
- 3. AutoCAD: At the Contractor's written request, Digital Data Files of the Floor Plan Background Drawings in editable file format will be available from the Architect as a convenience to the Contractor for use in preparing shop drawings for this Project in accordance with the attached Electronic Data Order Form and following:
 - a. AutoCAD 2012 file (editable file format) of documents indicated above will be available to the contractor, subcontractor or supplier on written request to the Architect in accordance with this Section.
 - b. Floor Plan Background Drawings as defined in the attached Electronic Data Order Form are available as a convenience to the Contractor.
 - c. Floor Plan Background Drawings files requested will be delivered in editable file format indicated, and will not be further altered by the Architect prior to delivering them to any said party.
- 4. Electronic Data Order Procedure:

- Architect's representative in .pdf format.
 - b. The Architect's representative will complete the CAD or BIM Digital Data Transfer Agreement between Architect and Contractor or Subcontractor and send it to the requesting entity for signature.
 - c. The requesting entity shall sign the Agreement and return it to the Architect in .pdf format.
- 5. Each contractor, subcontractor, trade, supplier or entity requesting electronic data file shall submit a request for Electronic Data Files, prior to delivery of said files. No contractor, subcontractor, trade, supplier or entity shall transfer these Electronic Files received from the Architect, or any portion thereof to any third party ("Transferee") without written permission of the Architect.
 - 6. The Architect will transfer files to the requesting entity via the Project Information Management (PIM) software.
 - 7. All files are a schematic representation of elements within the project. All Contractors are responsible for field verification and coordination with other trades.
 - 8. Use of these files does not relieve the Contractor from producing Coordination Drawings and Shop Drawings required by the Contract.

1.5 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Shop drawings, product data and samples will not be processed by the Owner and/or Architect until the list of subcontractors, material suppliers and fabricators is submitted.
- B. The Architect shall be compensated on an hourly basis for review of all shop drawings or samples that do not meet the requirements of the contract documents after two submissions. The compensation shall be deducted from the contractors contract via a deduct change order, or other means that both parties agree to.
- C. 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. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 - 4. 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.
- D. Processing Time: Allow sufficient time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 10 days for initial review of each submittal by the design team and an additional week for TCNJ review. Allow additional time if coordination with subsequent submittals is required, and for coordination of multiple components of a submittal in a substantial submittal package. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

2. Resubmittal Review: Allow 10 days for review of each resubmittal and one week for TCNJ review.
 3. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 10 days for initial review of each submittal
- E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS- 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of firm or entity that prepared submittal.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. Category and type of submittal.
 - h. Submittal purpose and description.
 - i. Specification Section number and title.
 - j. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Indication of full or partial submittal.
 - o. Submittal and transmittal distribution record.
 - p. Other necessary identification.
 - q. Remarks.
- F. Options: Identify options requiring selection by Architect.
- G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal
- H. Each submission shall be complete, with all options clearly marked and with all components required for the assembly fully described and detailed. Submissions missing important information will be returned unchecked.
- I. Except as otherwise indicated in individual work sections, comply with requirements specified

herein for each indicated category of submittal. Provide and process intermediate submittals, where required between initial and final, similar to initial submittals.

- J. Maintain returned final set of samples at project site, in suitable condition and available for quality control comparisons by the Architect, and by Owner.
- K. Do not proceed with installation of materials, products or systems until final copy of applicable shop drawings, product data and samples are in possession of Installer.
- L. Contractor's submittal of, and Architect's acceptance of, shop drawings, product data or samples which indicate work not complying with requirements of Contract Documents, does not constitute an acceptable and valid request for, nor approval of, a substitution.
- M. Resubmittals: Make resubmittals in same form and manner as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- N. 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.
- O. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.
- P. Submittals will be accepted from the Contractor only. Submittals received from other entities will be returned without review or action.
 - 1. Submittals received without a transmittal form will be returned without review or action.

1.6 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Post electronic submittals as PDF electronic files directly to Architect's project information transmission web-based software specifically established for Project.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Action Submittals: Submit electronic file except where paper copies of submittals are specifically required.
 - 3. Informational Submittals: Submit electronic file except where paper copies of submittals are specifically required.
 - 4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

- a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. 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, unless submittal based on Architect's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
 - b. In addition to submission of electronic files, submit 3 paper copies of fire alarm shop drawings and sprinkler shop drawings with Contractor approval stamps applied, signed and sealed by a NJ licensed engineer, for submittal to College Code Review for review and comment.
 - c. Additional copies of submittals may have to be provided for the Owner's insurance review (i.e. Factory Mutual).
- C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in the following format:
 - a. PDF electronic file.
 7. Use a form matching the sample form attached to this section.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality- control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 - 2. Manufacturer and product name, and model number if applicable.
 - 3. Number and name of room or space.
 - 4. Location within room or space.
 - 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 013115 "Coordination Drawings."
- G. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 4000 "Quality Requirements."
- H. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 7700 "Closeout Procedures."
- I. Maintenance Data: Comply with requirements specified in Section 01 7823 "Operation and Maintenance Data."
- J. LEED Submittals: Comply with requirements specified in Section 018113 "Sustainable Design Requirements - LEED" and individual specification sections.
- K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's

standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

- R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- T. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- W. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

1.7 DELEGATED-DESIGN SERVICES

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

- C. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services

1.8 COLOR SELECTIONS

- A. All colors for all finished surfaces and materials will be selected or approved by the Architect. The color selections will be made at one time to provide a complete and coordinated color schedule which, upon acceptance of the Owner, will be provided to the Contractor. Any and all specific color selections for materials not noted on drawings or in specification shall be chosen by Architect after submittal of samples.
- B. It is imperative that all color information be submitted to the Architect by the Contractor before color selections can be made. If any color selection information is not available when colors are needed to meet the project schedule, the Architect will select colors from one of the named manufacturers in the Specifications, and the Contractor will be required to exactly match that color. A claim for delay will not be accepted if the color schedule is late due to the failure of the Contractor to provide the Architect with all required color.
information, nor will an extra be entertained if the selected color is not available from the manufacturer the Contractor intended to use but neglected to submit.

1.9 MISCELLANEOUS SUBMITTALS

- A. Miscellaneous submittals related directly to the work include warranties, maintenance agreements, workmanship bonds, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the work and not processed as shop drawings, product data or samples.
- B. Refer to sections for specific general requirements on warranties, product/workmanship bonds, and maintenance agreements. In addition to copies desired for Contractor's use, furnish 3 executed copies, except furnish one additional copy where required for operation and maintenance manuals.
- C. For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect .
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 7700

- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Architect's Actions:
 - 1. Contractor may proceed with fabrication on submittals marked "No Exception Taken" or "Make Corrections Noted" provided that the Contractor adheres to the corrections noted.
 - 2. Contractor may proceed with fabrication on submittals marked "Resubmit for Record Only" provided that the Contractor makes the corrections noted and resubmits submittals for record purposes.
 - 3. Contractor may not proceed with fabrication on shop drawings noted "Revise and Resubmit" or "Rejected" until "No Exception Taken" or "Make Corrections Noted" stamp is received on resubmitted drawing.
 - 4. Contractor may not proceed with fabrication on the specific shop drawings noted "Partial Resubmit" until "No Exception Taken" or "Make Corrections Noted" stamp is received on resubmitted drawing.
 - 5. Do not permit submittals marked "Revise and Resubmit," or "Rejected," to be used at Project site, or elsewhere where Work is in progress.
 - 6. Other Action: Where submittal is primarily for information or record purposes, special processing or other activity, submittal will be returned, marked "No Action Taken."
- C. Informational Submittals: Architect will review each submittal and will not return it or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- F. Submittals not required by the Contract Documents may be returned by the Architect without action.

3.3 CONTRACTOR'S ACTION

- A. One copy of all submissions will be returned to the Contractor for his files. The Contractor shall markup other copies so as to conform with the copy returned to him and forward them to all interested Contractors, Subcontractors, and Suppliers.

3.4 DISTRIBUTION

- A. Provide additional distribution of submittals, not included in foregoing copy submittal requirements, to subcontractors, suppliers, fabricators, installers, governing authorities and others as necessary for proper performance of the work. Include such additional copies in transmittal to Architect where required to receive Action marking before final distribution. Show such

Forcina Hall Renovation – Phase 00 New Elevator
The College of New Jersey
Project #2387
distributions on transmittal forms.

END OF SECTION 01 3300 ATTACHMENTS:

- Submittal Cover Sheet
- Electronic Data Transfer Agreement For Building Information Modeling (BIM) Files
Between Architect and Contractor
- Electronic Data Transfer Agreement For CAD Files Between Architect and Contractor
- Electronic Data Order Form

SUBMITTAL COVER SHEET

CONTRACTOR: _____
STREET ADDRESS: _____
CITY/STATE: _____
CONTRACTOR'S PROJECT NO: _____ SUBMITTAL NO: _____

DATE OF SUBMITTAL: _____ SUBCONTRACTOR: _____

SUBMITTAL DESCRIPTION: _____ RESUBMITTAL: ☐ Y ☐ N
SUBSTITUTION: ☐ Y ☐ N

SHOP DRAWING TITLE: _____

NO. _____ REVISION NO. _____ DATE: _____

PRODUCT DATA, TESTS, SCHEDULES: _____

SAMPLES: _____

MANUFACTURER: _____

ADDRESS: _____

REFERENCES:

SPECIFICATION SECTION - PAGE: _____ PARAGRAPH(S): _____

CONTRACT DRAWINGS(S): _____ ROOM NO.(S): _____

CONTRACTOR'S STAMP:

ARCHITECT'S STAMP:

REMARKS: _____

Project Name
The College of New Jersey
Project #

Type Date Here

[Address]

Re: Electronic Data Transfer Agreement for BIM Model, Between Architect and Contractor
The College of New Jersey, **Project Name**

Dear [Addressee's Name]:

Pursuant to the request of _____ (“Owner”), _____ (“Architect”) will deliver to _____ (“Contractor”) certain electronic files (such files and any and all drawings, models, data, and other information contained in the files are collectively referred to as the “Files”) for Contractor’s use in connection with the above project (“Project”), subject to the following terms and conditions.

These Files are components of the Architect’s Instrument of Service and not products. They are transmitted for the Owner’s benefit on this Project. Delivery of the Files to Contractor shall not be deemed to be a sale by Architect. Architect makes no representations or warranties whatsoever regarding the Files, including, without limitation, any representations or warranties of merchantability or fitness for any purpose. All rights to the Files, including all rights under the copyright and other laws, and the material objects in which the rights are embodied, are and shall be owned by Owner. Transfer of the information does not transfer any license to use the underlying software or obligate the Architect to provide the software to the recipient. The Architect retains the right to reuse the information in the general course of a professional practice.

This Agreement provides the Contractor with a nonexclusive, limited license to use the information in the Files for the specific purpose of responding to the requirements of the Contract Documents for this Project. Except as necessary to respond to the requirements of the Contract Documents for this Project, Contractor shall not reproduce the Files or any portion thereof, create any derivations of the Files, or otherwise modify them. Receipt and use of the electronic data does not relieve the recipient of any responsibility or obligation. Contractor shall treat the information contained in the Files as proprietary and confidential. Contractor understands that protection of the information is of vital importance and shall maintain in confidence all such information and not use the information outside of the scope of the Project prior or subsequent to the duration of the Project. The Contractor shall not transfer the Files or any portion thereof to any third party (“Transferee”). Trade contractors and subcontractors must execute their own Electronic Data File Agreement.



[Addressee's Name]

[Date]

Page 2

The Files are not Contract Documents for the Project. Only hard copy documents are Contract Documents. If any discrepancies exist at any time between the Files and the Contract Documents the Contract Documents shall control. **These BIM files were created by the designers for the primary purpose of creating 2D contract documents. No implication is intended for any purpose beyond the production of 2D documents.** Contractor shall be responsible for updating the Files throughout the course of the Project or requesting updated electronic files (if they exist) by executing a new Electronic File Data Agreement and paying an additional service fee for each requested file.

A complete list of the Files to be delivered to Contractor, including their dates and sizes, is attached. The Files are electronic source material for Contract Documents current as of **[Date files were recorded for transfer]**. Architect shall transmit the Files to Contractor in electronic form as Revit 2013 format files. Use of the electronic data is at the sole risk of the recipient, who acknowledges that the electronic data is subject to undetectable alteration or electronic corruption or degradation. Upon acceptance, Contractor shall waive any right to claims for detrimental reliance upon the information contained in the File.

Contractor acknowledges it has no contractual relationship with Architect or any relationship that is the functional equivalent of privity of contract, other than this letter agreement. Contractor shall hold Architect harmless from and against any and all losses, damages, costs, claims and any other liability relating directly or indirectly to the subject matter of this agreement. In no event shall Architect's liability exceed the amount of service fee payment made under this agreement. This agreement shall be binding upon and inure to the benefit of the successors and assigns of the parties. Contractor shall not assign or otherwise transfer this agreement to any third party without the prior written consent of Architect.

Please sign below, indicating acceptance of these terms, and return one copy of the signed letter to me. Upon receipt of the signed letter and the above fee, we will transmit the Files to you.

Very truly yours,

Architect/Engineer Name

Signature

Date

[Name of Contractor's Representative]

Contractor's Representative



[Addressee's Name]
[Date]
Page 3

Signature

Date

cc: [CA Person for Project]



Project Name
The College of New Jersey
Project #

Type Date Here

[Address]

Re: Electronic Data Transfer Agreement for AutoCAD files, Between Architect and Contractor
[Project Number], [Project Name]

Dear [Addressee's Name]:

Pursuant to the request of _____ (“Owner”), _____ (“Architect”) will deliver to _____ (“Contractor”) certain electronic files (such files and any and all drawings, data, and other information contained in the files are collectively referred to as the “Files”) for Contractor’s use in connection with the above project (“Project”), subject to the following terms and conditions.

These Files are components of the Architect’s Instrument of Service and not products. They are transmitted for the Owner’s benefit on this Project. Delivery of the Files to Contractor shall not be deemed to be a sale by Architect. Architect makes no representations or warranties whatsoever regarding the Files, including, without limitation, any representations or warranties of merchantability or fitness for any purpose. All rights to the Files, including all rights under the copyright and other laws, and the material objects in which the rights are embodied, are and shall be owned by Owner. Transfer of the information does not transfer any license to use the underlying software or obligate the Architect to provide the software to the recipient. The Architect retains the right to reuse the information in the general course of professional practice.

This Agreement provides the Contractor with a nonexclusive, limited license to use the information in the Files for the specific purpose of responding to the requirements of the Contract Documents for this Project. Except as necessary to respond to the requirements of the Contract Documents for this Project, Contractor shall not reproduce the Files or any portion thereof, create any derivations of the Files, or otherwise modify them. Receipt and use of the electronic data does not relieve the recipient of any responsibility or obligation. Contractor shall treat the information contained in the Files as proprietary and confidential. Contractor understands that protection of the information is of vital importance and shall maintain in confidence all such information and not use the information outside of the scope of the Project prior or subsequent to the duration of the Project. The Contractor shall not transfer the Files or any portion thereof to any third party (“Transferee”). Trade contractors and subcontractors must execute their own Electronic Data File Agreement.



[Addressee's Name]

[Date]

Page 2

The Files are not Contract Documents for the Project. Only hard copy documents are Contract Documents. If any discrepancies exist at any time between the Files and the Contract Documents the Contract Documents shall control. Contractor shall be responsible for updating the Files throughout the course of the Project or requesting updated electronic files (if they exist) by executing a new Electronic File Data Agreement for each requested file.

A complete list of the Files to be delivered to Contractor, including their dates and sizes, is attached. The Files are **[electronic source material for] [electronic versions of]** Contract Documents current as of **[Date files were recorded for transfer]**. Architect shall transmit the Files to Contractor in electronic form as AutoCAD version 2012, format files. These Files will be accompanied, upon request, by hard copy Contract Documents current as of the same date as the Files. The Contractor shall notify the Architect of any discrepancies between the hard copy Contract Documents and the Files within 30 days of receipt of the Files or the Files will be deemed to be accepted. Upon notification that there is a discrepancy between the hard copy Contract Documents and the Files, the Architect will replace the Files. Use of the electronic data is at the sole risk of the recipient, who acknowledges that the electronic data is subject to undetectable alteration or electronic corruption or degradation. Upon acceptance, the Contractor shall waive any right to claims for detrimental reliance upon the information contained in the File.

Contractor acknowledges it has no contractual relationship with Architect or any relationship that is the functional equivalent of privity of contract, other than this letter agreement. Contractor shall hold Architect harmless from and against any and all losses, damages, costs, claims and any other liability relating directly or indirectly to the subject matter of this agreement. In no event shall Architect's liability exceed the amount of service fee payment (if any) made under this agreement. This agreement shall be binding upon and inure to the benefit of the successors and assigns of the parties. Contractor shall not assign or otherwise transfer this agreement to any third party without the prior written consent of Architect.

Please sign below, indicating acceptance of these terms, and return one copy of the signed letter to me. Upon receipt of the signed letter, we will transmit the Files to you.

Very truly yours,

Architect

Signature

Date

[Name of Contractor's Representative]

Contractor's Representati



[Addressee's Name]

[Date]

Page 3

Signature

Date

cc: [CA Person for Project]



Project Name
The College of New Jersey
Project #

Electronic Data Order Form

Date: _____

Project Name: _____

Project Number: _____

Recipient Name: _____

Recipient Address: _____

Recipient Telephone: _____ Recipient Fax: _____

Person Requesting
Electronic Data: _____

Signature: _____

I hereby request the following electronic data:

☐ **AutoCAD 2012 - Background Drawings**

☐ **Revit 2013 - BIM Model**

Electronic Data Order Form - Definitions

Editable File Format:

Editable file format electronic data can be altered by the Recipient. These electronic data will arrive in the format utilized by the Architect and indicated above.

Sheet Drawing:

An electronic document representing a hard copy drawing, which may be used to produce a drawing sheet

Bound:

All external references to an electronic document will be included into that electronic document, delivering it as a single electronic file.

Unbound:

All external references to an electronic document will be included as separate electronic files.

Background Drawing:

A. Floor plans including the following elements:

1. Exterior walls and openings in exterior walls at or below typical window or door height.
2. Interior walls and partitions and openings in interior walls and partitions at or below typical door height.
3. Glazed openings
4. Horizontal reference grid.
5. Toilet partitions and screens.
6. Cabinets, casework and countertops that are permanently installed.
7. Wall cabinets shown dotted.
8. Locations of elevators, dumbwaiters, escalators and chutes.
9. Stairs, landings, ramps, handrails and guards.
10. Plumbing fixtures visible within finished spaces.
11. Permanently mounted equipment in contact with the floor except Food Service Equipment.
12. Fixed seating.

B. Separate Reflected Ceiling Plans including the following elements:

1. Grid patterns for exposed grid ceilings
2. Tile patterns for acoustical tile ceilings
3. Ceiling bulkheads and soffits
4. Ceiling mounted Light fixtures
5. Fire suppression sprinkler heads
6. HVAC diffusers

SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 TRADESMEN AND WORKMANSHIP

- A. Each Contractor shall ensure that tradesmen performing work at site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality levels for workmanship in completed work. Remove and replace work which does not comply with workmanship standards as specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty workmanship or its replacement.
- B. In certain instances, specification text requires that specific work be assigned to specialists or expert entities, who shall be engaged for performance of those units of work. These shall be recognized as special requirements over which Contractor has no choice or option. These assignments shall not be confused with, and are not intended to interfere with, normal application of regulations, union jurisdictions and similar conventions. One purpose of such assignments is to establish which party or entity involved in a specific unit of work is recognized as "expert" for indicated construction processes or operations. Nevertheless, final responsibility for fulfillment of entire set of requirements remains with Contractor.
- C. The elevator contractor will specifically coordinate with the General Contractor over all items under Part 3 of this section. The General Contractor will provide confirmation that all conditions have been verified and all utilities are provided per the drawings and elevator contractor's needs prior to the installation of the elevator.

1.2 INSPECTION, TESTS AND REPORTS

- A. Required inspection and testing services are intended to assist in determination of probable compliances of the work with requirements, but do not relieve any Contractor of responsibility for those compliances, or for general fulfillment of requirements of Contract Documents. Specified inspections and tests are not intended to limit any Contractor's quality control program. Afford reasonable access to agencies performing tests and inspections.

- 1.3 The Owner is responsible for all testing and inspections (foundations, soils compaction, concrete, steel, etc.) unless specifically indicated otherwise in the Specifications. Each Prime Contractor is responsible to coordinate the activities of the testing agency to assure that work is tested prior to being covered up or other activities associated to the work begin. Provide proper notice to the TCNJ on site superintendent and/or project manager to assure the inspections are completed prior to any work requiring same is done.

1.4 SPECIAL INSPECTIONS

- A. Special Inspections: Owner will engage qualified testing agency(ies) and special inspectors to conduct special inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in New Jersey Uniform Construction Code and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Commissioning Authority, Owner's Representative, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority, through Owner's Representative, with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents
6. Retesting and reinspecting corrected work.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor.
- B. Final As-Built Survey of Underground Utilities: Submit two paper copies and one electronic (.pdf) file, signed by land surveyor.

PART 2 - PRODUCTS (not applicable) PART 3

PART 3 - EXECUTION

3.1 REPLACEMENT OF WORK

- A. The Contractor shall, within 24 hours after rejection of Work, remove all materials and equipment so rejected and immediately replace said Work, at his/her cost, to the satisfaction of the Architect. Should the Work of the Owner or other Contractors be damaged by such removal or replacement, the Contractor shall reimburse the Owner or other Contractors for all cost incurred for correcting said damage.

3.2 SITE LAYOUT

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Each contractor is required to complete their own surveying and layout work as required to complete their work.

3.3 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. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions prior to work starting: 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. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.4 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. 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 72 hours in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without 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.

3.5 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 and Owner promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Architect and Owner when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Owner.

3.6 FIELD ENGINEERING

- A. Identification: Identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect or Owner. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Owner before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.7 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.
4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces without ceilings.

B. Mechanical Installations: Comply with the following requirements:

1. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
2. Coordinate connection of mechanical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.
3. Install all equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Extend grease fittings to an accessible location.

C. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

D. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

E. 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.

F. Tools and Equipment: Only use the best quality tools and equipment with proper attenuations for

the latest acceptable sound levels.

- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements
- H. 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.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

END OF SECTION 01 4000

SECTION 01 4200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved" or "Furnished as Submitted": When used to convey Architect's action on Contractor's submittals, applications, and requests, "Approved" or "Furnish as Submitted" 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. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-5434
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CFR	Code of Federal Regulations Available from Government Printing Office www.access.gpo.gov/nara/cfr	(888) 293-6498 (202) 512-1530
FS	Federal Specification Available from Defense Automated Printing Service www.astimage.daps.dla.mil/online	(215) 697-6257
	Available from General Services Administration www.fss.gsa.gov/pub/fed-specs.cfm	(202) 619-8925

1.3 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. 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. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ICC	International Code Council, Inc. www.iccsafe.org IBC International Building Code NJUCC New Jersey Uniform Construction Code	(888) 422- 7233
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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 4200

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Specific administrative and procedural minimum actions are specified in this section, as extensions of provisions in General Conditions and other Contract Documents. Nothing in this section is intended to limit types and amounts of temporary work required, and no omission from this section will be recognized as an indication that such temporary activity is not required for successful completion of the work and compliance with requirements of Contract Documents.
- B. Each Contractor is specifically assigned certain responsibilities for temporary facilities to be used by all Contractors, other entities at the site, the Owner's work forces and other personnel including occupants of the project, Owner's Project Manager, the Architect, test agencies, personnel of governing authorities, and similar entities and personnel authorized to be at the project site during construction. In general, each Contractor is assigned the responsibilities for installation, operation and removal of each temporary facility which is related by recognized trades to its scope of contract work; and, except as otherwise indicated, each is responsible for costs and use charges associated therewith, including fuel, power usage, water usage and similar usage costs. The General Contractor is responsible for temporary facilities not related to any other Contractor's scope of contract work and not otherwise specifically assigned, as designated by the Architect.
- C. No costs or usage charges for temporary facilities are chargeable to the Owner, nor can any Contractor's cost or usage charges for temporary facilities be accepted as the basis for a change order extra. The total costs and usage charges for temporary facilities are included, collectively, in the Contract Amounts.

1.2 GENERAL REQUIREMENTS

- A. Each Contractor shall provide and operate all hoists, cranes, helicopters and furnish and erect all ladders and scaffolding as required for their work and by their subcontractors, constructed to afford proper protection to craftsmen, their Work and other Work in progress and previously executed.
- B. Informational Submittals:
 - 1. Site Plan: Submit site plan showing temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
 - 2. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - a. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.

- b. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged work.
 - c. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- 3. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - a. Locations of dust-control partitions at each phase of work.
 - b. HVAC system isolation schematic drawing.
 - c. Location of proposed air-filtration system discharge.
 - d. Waste handling procedures.
 - e. Other dust-control measures.

1.3 JOB CONDITIONS

- A. Each Contractor shall establish and initiate use of each temporary facility at the time reasonably required for proper performance of the total work of project. Terminate use and remove facilities at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.
- B. Each Contractor shall install, operate, maintain, and protect temporary facilities in a manner and at locations that will be safe, nonhazardous, sanitary, protective of persons and property, and free of deleterious effects.
 - 1. The elevator contractor will coordinate their needs for temporary facilities and controls with the General Contractor. The General Contractor will provide required utilities and access. The elevator contractor will be responsible for all other items as written in this section.
- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air- filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
 - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

- D. Contractor is to provide road safety and traffic controls when working on or near any roadway or sidewalk on campus. Including flag personnel, signage, cones and all necessary safety measures to assure the safety of the pedestrians and vehicles at all times. This includes escorting deliveries using equipment other than a truck or car on roadways and walkways with a flag person. Backhoes can be run without an escort.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Scaffolding: Erect and maintain scaffolding located at existing building surfaces in such a manner as to prevent damage to existing building materials.

1.4 ENVIRONMENTAL PROTECTION

- A. Each Contractor shall provide facilities, establish procedures, and conduct construction activities in a manner that will ensure compliance with environmental and other regulations controlling construction activities at project site. The General Contractor shall designate one person, the Construction Superintendent or other, to enforce strict discipline on activities related to generation of wastes, pollution of air/water/soil, generation of noise, and similar harmful or deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of project site. Anti-pollution measures required by D.E.P., as applicable are to be followed.

1.5 SHEDS

- A. Each Contractor shall provide his own temporary sheds or trailers for storage, fabrication, and similar purposes, which shall be located in accordance with the General Contractor's coordinated plan for site utilization, as directed by the Architect and Owner.

1.6 WATER CONTROL

- A. Surface water drainage provisions shall be provided by the General Contractor. The General Contractor is to comply with Erosion and Sedimentation Control Plan on the Drawings and adjust as directed by the Owner to eliminate any interference with other trades work and access to areas of the site.
- B. The general contractor will be responsible to control all water during excavations and to maintain the bottom of footings, trenches and mass excavations in a stable condition. Replace all "soft spots" with suitable clean compactable fill as part of the base contract.

1.7 SECURITY

- AT The General Contractor shall maintain complete security on the site at all times outside of normal working hours to protect the Work and all field offices, and to secure the area of construction by restricting all trespassers.
 - 1. This means locking the gates. A guard is not required.

1.8 SITE ENCLOSURE FENCE

- A. The General Contractor shall enclose the entire project site to be sufficient to contain the

entire construction activity. Provide 8' high chain link steel fence with screening with custom TCNJ logo/lettering. Provide 8' high gates for both personnel and trucks, with locks held under strict security control. A minimum of four gates will be required (locations will be coordinated in the field with the Owner). Fence to include top rail and be maintained throughout the project in a straight and plumb condition.

1.9 TEMPORARY CONSTRUCTION FACILITIES

- A. General Contractor to provide temporary stairs (centrally located, meeting the latest OSHA requirements) at each story of construction as soon as construction of floor system at head of stairs is started, and retain in use until permanent stairs are placed in use. Also, provide temporary plywood walkways, scaffold and railings as needed for public areas to protect against overhead work. Also refer to Paragraph 1.10 of this section.
- B. General contractor to provide, maintain, operate and remove when no longer needed, a temporary elevator for vertical movement of personnel and materials if required. Provide full-time operator if required. Also refer to Paragraph 1.10 of this section
- C. Where mud, snow, ice or other hazardous conditions exist in the purview (Scope of Work) of any Prime/subcontractor, the General Contractor shall remove the hazards immediately and replace with suitable material for the other contractors use. If the Owner is compelled to remove the hazards with their own forces due to inaction by the Prime Contractor, then that Prime Contractor will be back-charged for the work performed by the Owner.
- D. No welding, cutting by torch, or Work utilizing or causing flammable waste shall be done unless adequate fire protection is provided and maintained for the duration of the Work in the area of operations.
- E. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction

1.10 DEBRIS CONTROL (Refer to Section 01 7419 for further delineation)

- AE Each Contractor shall be responsible for daily cleaning up of spillages and debris resulting from his operations and from those of his Subcontractors; and shall be responsible for complete removal and disposition of hazardous and toxic waste materials. The General Contractor shall provide containers at grade, sufficient for the depositing of nonhazardous/nontoxic waste materials and shall remove such waste materials from project site at least weekly during cold weather (daily high temperatures below 50°F) and at least twice weekly during mild and warm weather.
 - 1. General Contractor is responsible to provide all dumpsters.
 - 2. Once per week, The General Contractor is to provide three laborers to clean the site/building. The GC will provide tools (i.e., brooms, etc.) to accomplish this task. This is in addition to the proper daily cleanup by all trades of the debris they deposit throughout the course of their normal workday.
 - 3. The Architect and Owner shall coordinate the dumpster location with the Contractors. The General Contractor shall be responsible for obtaining, maintaining, and disposing of dumpsters, and shall maintain clean work areas throughout the course of the project.
- B. The General Contractor shall clean daily all mud, dirt and debris resulting from all trades operations from the adjacent streets, sidewalks, drives and parking areas and shall repair all

damage caused by the cleaning to the satisfaction of the Owner.

- C. The General Contractor is to provide and maintain appropriate means of trash disposal (i.e., chutes) to grade/dumpster. Multiple units may be required and shall be figured for in the GC bid.
- D. Should cleanup not be completed to the satisfaction of the Owner, the Owner will hire additional labor to clean the site and back charge the general contractor via a deduct change order.

1.11 TEMPORARY PARKING

- AL Limited staging and on-site parking will be allowed on site. The General Contractor will coordinate with the owner all parking areas with all the subcontractors. Parking for contractor employees is available across Route 31, on Carlton Avenue in the TCNJ Contractor parking lot. Contractor to shuttle employees accordingly.
 - 1. Contractors shall figure the site will only have enough parking for 6 vehicles (or less). All others shall park at the TCNJ Carlton Avenue parking lot and be shuttled as necessary to the site by the General Contractor or other contractor means.

PART 2 - PRODUCTS

2.1 TEMPORARY CONSTRUCTION

- A. General Contractor shall provide wind bracing per FM Research approved criteria.
- C.T Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise. Provide types of partitions approved by Owner in Owner occupied areas
 - 1. Temporary partitions within the new building as required for construction shall be constructed of 2x4 studs 16" o.c. with 5/8" drywall floor to bottom side of floor above. Drywall shall be attached to occupied face of studs and nailed/screwed 8" o.c. maximum spacing. Joints shall occur over studs and shall be taped and finish spackled along with screws. Partitions are to be painted with two coats of paint for interior or exterior type partitions.
 - 2. In areas where containment of airborne particles is critical to Owner operations, construct dustproof partitions with two layers of 6-mil (0.14-mm) polyethylene sheet on each side. Cover floor with two layers of 6-mil (0.14-mm) polyethylene sheet, extending sheets 18 inches (460 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1219 mm) between doors. Maintain water- dampened foot mats in vestibule.
 - 3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 4. Insulate partitions to control noise transmission to occupied areas.
 - 5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 6. Protect air-handling equipment.
 - 7. Provide dust control adhesive-surface walk-off mats at each entrance through temporary

partition.

- D. Contractor to use ¾" plywood for exterior faced temporary partitions.
- E. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 ENCLOSURES

- A. At all times, the General Contractor shall secure the building against unauthorized entrance at times when personnel are not working. Provide secure temporary enclosure at ground floor and other locations of possible entry, with locked entrances.
- B. At each story of construction, as soon as the structural floor work is principally completed and the enclosure wall work is principally completed, the General Contractor shall provide temporary enclosure of remaining openings. Arrange enclosure work to accommodate access, temporary heating, and natural ventilation as required for construction work by all entities on the project.
- C. Where any form of demolition will expose the interior of the building to weather, demolition shall follow the erection of weatherproof walls by the General Contractor installed inside the demolition line, sealed and flashed, as required, to keep all water from the building interior. Keep temporary weatherproofing in place until new construction has been completed to the stage where water will not enter the building.
- D. The General Contractor shall provide constant protection against rain, wind, storms, frost or heat to maintain the work, materials, apparatus and fixtures free from damage. At the end of each day's work, cover work likely to be damaged. During cold weather, protect work from damage by freezing and provide such enclosures and heating apparatus as may be necessary diligently to prosecute the Work without stoppage for reason of unfavorable weather.
- E. Wherever a Contractor provides openings through walls or slabs, each location shall be adequately protected at the end of each working day with temporary enclosures to make these areas tight. Openings through exterior walls shall be watertight.

3.2 TEMPORARY ELECTRICITY

- AA As soon as practical after start of work at project site, the General Contractor or Electrical Subcontractor shall provide temporary electrical power distribution system, sufficient to accommodate temporary lighting and construction operations including the use of power tools, including heavy duty electrical welding units, electrical heating units, and start-up of specified building equipment which must be tested, started or placed into use prior to completion of its permanent power connections. Provide weatherproof, grounded wiring with overload protection; with direct wired connections, where feasible, and for voltages over 220/208 volts. Locate multiple outlets, not less than 4 gang, at each story of construction, spaced so that entire area of construction can be reached by power tools on a single extension cord of 100' maximum length.
 - 1. **The owner** shall pay for cost of all electric energy used on distribution lines installed for the duration of the project, either by means of temporary power or permanent power since this is a renovation project.

2. Contractor shall provide and pay for all maintenance, servicing, operation and supervision of lines installed for the project. He shall also maintain and service electrical equipment installed by the Heating Contractor and necessary for maintenance of temporary heat after same is required in the building.
 3. Provide service with ground fault circuit interrupter feature, activated from each circuit of 20 amp or less rating.
 4. Supply power for electric welding, if any, from either temporary power distribution system or by engine driven power generator sets, at Contractor's option.
 5. Where a service of a type other than herein mentioned is required, the Contractor requiring same shall install and pay all costs for such special service.
 6. As permanent power distribution system is accepted as substantially complete, either entire system or usable portions thereof, make suitable provisions for temporary use thereof, and remove unused portions of temporary system. Maintain and operate permanent electrical supply and distribution system until time of final acceptance and transfer of operation to Owner's personnel.
 7. Provide meters, if required, for electrical power.
 8. When temporary electrical lines are no longer required, they shall be removed by the Contractor and any part, or parts, of the grounds or buildings disturbed or damaged shall be brought back to their original condition.
 9. Contractor shall pay for all power up to Notice of Substantial Completion. At that time, the Owner will commence payment for all electric power usage. This is not a requirement for this project. The owner will pay for elec. usage during construction.
 10. Contractor shall make power and lighting available to all contractors on a 24-hour basis at his own expense. Temporary power and lighting is to be maintained at all times unless directed otherwise by the Owner.
 11. Electrical Contractor shall satisfy requirements of Electricians Union for maintaining temporary power such as stand-bys etc., and pay for all associated costs.
- BE Electrical Contractor shall provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, and portable plug in task lighting.
1. Provide as a minimum uniformly spaced general lighting equivalent to not less than one 200 watt incandescent lamp per 1,000 sq. ft. of floor area, and one 100 watt lamp per 50' of corridor or per flight of stairs.
 2. Limit lighting installations to intensities which will accommodate normal access and workmanship requirements, recognizing that each entity performing work requiring higher intensity lighting will provide supplementary plug in temporary lighting at localized areas where such work is in progress.
 3. As permanent lighting system is substantially complete, for each story or usable portion thereof, make suitable provisions for temporary use thereof, and remove unused portions of temporary lighting system. Maintain and operate permanent lighting system until time of final acceptance and transfer of operation to Owner's personnel.
 4. Replace all bulbs in permanent light fixtures that have been utilized for temporary lighting.
 5. Maintain temporary lighting on a daily basis and change or adjust as new wall configurations go up.

3.3 TEMPORARY HEATING AND COOLING

- AP Prior to enclosure of building, buildings, or portions thereof, and when weather conditions indicate the necessity for temporary heat, the General Contractor shall provide, maintain, operate and pay all costs, including fuel, for a sufficient number of approved portable heaters

that will maintain a minimum temperature of 45 degrees Fahrenheit in all working areas of the building, unless higher temperatures are specified in individual specification sections, so that the progress of the work is not impeded. General Contractor shall provide plastic tent protection, temporary window and door opening closures, and any other protection required so that any work can continue in cold and inclement weather. The General Contractor shall include the cost of temporary heat in their contract price and shall calculate the need for heat based on historical precedent and the stage of completion of the work. Normal heating months span from November 15 to April 15. The General Contractor shall have temporary heat available throughout the building for daily 24 hour use.

1. Temporary enclosures shall begin one month prior to the start of temporary heat. Should the General Contractor not begin the enclosure process at that time, the Owner will hire labor to have this work completed, and back charge the General Contractor for all costs associated with this work.
- B. As soon as temporary, or permanent, enclosure is completed for any area or story of construction, and temporary heat is required for scheduled work, or required to facilitate proper workmanship, and permanent heating system is not yet operable or authorized for use, the General Contractor shall provide temporary heat service for every entity authorized to do work at project site. Maintain temperatures as indicated by other Specification Sections for each type of work to be performed.
- C. The General Contractor shall enclose the building from November 15 through the following April 15 with temporary or permanent enclosures (doors, windows, etc.) to maintain a working temperature and to secure the building from trespassers. This will coincide with the scheduled time for temporary heat.
- D. The building shall be considered enclosed when the roof is on and substantially weathertight; the exterior walls have been completed to the point that they are weathertight (but not necessarily with final exterior finish such as brick); and when openings, doors and windows are closed with either temporary or permanent closures. Final decision of when the building is considered enclosed shall be solely the decision of the Owner.
- E. As permanent heating/cooling system is substantially complete, for each story or usable portion thereof, the HVAC Contractor shall make suitable provisions for use thereof in temporary heating and cooling, and notify the General Contractor to remove unused portions of temporary heating service. The HVAC Contractor shall maintain and operate permanent system for temporary heating/cooling purposes, including service to occupied areas if any, until time of final acceptance and transfer of operation to Owner's personnel, for major parts of system if not for entire heating system.
- F. After the permanent heating system is generally ready for use and the conditions of construction requires continuous 24 hour heat in the building, the HVAC Contractor shall provide, operate and maintain temporary radiation or unit heaters to provide required temperatures for the conduct of the work. This service shall be continued until the permanent heating system has been completely installed and in operation and the buildings of the project completed. The HVAC Contractor is to provide a one year warrantee from date of substantial completion, not the date of temporary heat. The General Contractor shall furnish and pay for all fuel as required for providing temporary heat via the permanent heating system.
- G. All permanent heating equipment used to supply temporary heat shall be completely cleaned and reconditioned by the HVAC Contractor prior to final acceptance. Radiator traps and valves used in the heating system during the period of its operation to supply temporary heat shall not be reinstalled in the permanent system. Install new disposable filters and clean non-disposable

filters prior to final acceptance.

- H. The General Contractor shall remove all soot, smudges, and other deposits from walls, ceilings, and all exposed surfaces which are the result of the use of any temporary heating equipment including the use of the permanent heating system for temporary heat purposes. There shall not be any finish work until all such surfaces are properly cleaned.
- I. **The project will have two full seasons that will require full building temporary heat (either via temporary units or permanent equipment) and General Contractor shall bear all costs associated with providing this temporary heat.**

3.4 TEMPORARY VENTILATION

- A. A trade requiring ventilation for Work shall provide fans to induce circulation of air provided prior approval has been obtained from the Owner and Architect.
- B. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes

3.5 TEMPORARY TELEPHONES

- A. The General Contractor shall provide and pay for telephone instruments and all their monthly bills plus the Architect/Owner field office.
- B. Each Contractor is responsible for their own telephone service and for payment of all charges relating to that service.

3.6 TEMPORARY WATER

- A. As soon as practical after start of work at project site, the Plumbing Contractor shall provide temporary water distribution piping system, with meter and back flow preventer, from one of the potable water hydrants (in location as approved by the Owner), complete with 3/4" hose bib terminations and fire hose sized termination, at each story of construction work, located so that any area of building construction can be reached with a 100' length of hose. Provide hose units and protect system from freezing. Maintain system in operation at all locations until either the need for water has ended or the permanent system is placed in use for temporary water service. Maintain minimum water pressure of 30 psig at each hose bib, with 5 gpm flow rate.
- B. Where potable water is available, either for total temporary requirements or as a separate service for drinking water and sanitation, extend piping system through construction areas and to temporary offices and hand wash facilities, and provide one refrigerated drinking fountain at each temporary office and at least one fountain at every third story of construction.
- C. As permanent water distribution system is accepted as substantially completed, either entire system or usable portions thereof, make suitable provisions for temporary use thereof and remove unused portions of temporary system. Maintain and operate permanent water distribution system until time of final acceptance and transfer of operation to Owner's personnel.
- D. If the source of water supply is a well, provisions covering the supply of water shall include the installation of necessary power driven pumping facilities, as well as protection of well from contamination. ~~The water supply shall be tested periodically by the Plumbing Contractor and, if~~

necessary, shall be chlorinated and filtered.

- EG General Contractor shall pay all monthly use charges for water.
1. Provide meters for water services, if required. Read meters and record readings weekly, and include in progress report to Architect at monthly intervals.

3.7 TEMPORARY SANITARY FACILITIES

- A. Starting at time of start of work at project site, the General Contractor shall provide and maintain self-contained toilet units of type acceptable to governing authorities, adequate, at all stages of construction, for use of personnel at project site. Provide separate facilities for male and female personnel when both sexes are working, in any capacity, at project site. Provide self-contained hand wash facilities. Facilities shall remain in use until completion of project. Use of permanent facilities will not be permitted.

3.8 REMOVAL AND RESTORATION

- A. Prior to acceptance of the Project, each contractor shall remove temporary work for which he has been responsible.

3.9 OWNER'S RIGHTS

- A. If any Contractor fails to carry out his responsibilities in providing temporary facilities, as set forth above, the Owner shall have the right to take such action as they deem proper for the protection and conduct of the Work, and to deduct the cost thereof from the amount due the Contractor at fault.
- BE Extended work days, hours, shifts, weekend work, etc. may be allowed upon coordination and approval by Owner, and Architect at no additional cost to the Owner.
 1. Should the schedule begin to slip, for any reason, each contractor will be required to work additional shifts or weekends to recover the lost time.

3.10 TEMPORARY STAIRS and ELEVATOR

- A. The General Contractor will supply wooden stairs per floor suitable for other trades to access the work on upper levels including the mechanical mezzanines. The stairs shall meet the code in effect at the time of construction with handrails and guardrails of the appropriate structural capacity and dimensions. The General Contractor shall submit to the local code official (if required) two sets design drawings of the stairs that have been prepared, signed and sealed by an Architect licensed in the State of the place of work. The General Contractor shall maintain these stairs until such time that the permanent stairs are available for use. At that time, the General Contractor shall remove the temporary stairs.
- B. The General Contractor is to provide, maintain, operate, and remove when no longer needed, a temporary elevator for the vertical movement of personnel and equipment/materials and pay for all costs associated with said elevator and its operation should OSHA regulations require the use of one.

3.11 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

- BE Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- CP Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace, or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- DC Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours

END OF SECTION 01 5000

SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; and equivalent products.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for requests for substitutions.
 - 2. Section 014200 "References" for applicable industry standards for products specified.

1.2 DEFINITIONS

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

1.3 ACTION SUBMITTALS

- A. Equivalent Product Requests: Submit request for consideration of each equivalent product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Equivalent Products" Article.

2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of an equivalent product request. Architect will notify Contractor of approval or rejection of proposed equivalent product request within 10 working days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a equivalent product request within time allocated.

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

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
- B. Mechanical Materials and Equipment: When two or more items of same material or equipment are required (pumps, valves, air conditioning units, etc.), they shall be of the same manufacturer. Product manufacturer uniformity does not apply to raw materials, bulk materials, pipe, tube, fittings (except flanged and grooved types), sheet metal, wire, steel bar stock, welding rods, solder, fasteners, motors for dissimilar equipment units, and similar items used in the work, except as otherwise indicated. Provide products which are compatible within systems and other connected items.
- C. Asbestos in Materials: All products submitted for use and incorporated into this project shall be asbestos free.
- D. Mercury-Free Products: All products submitted for use and incorporated into this Project shall be mercury-free. In the absence of mercury-free products, provide products with the lowest amount of mercury possible.
- E. Lead-Free Products: All products submitted for use and incorporated into this Project shall be lead-free.
- F. To the greatest extent possible, provide products, materials and equipment of a singular generic kind and from a single source.
- G. Performance Criteria: Provide products which comply with specific performances indicated, and which are recommended by manufacturer, in published product

literature or by individual certification, for application indicated. Overall performance of a product is implied where product is specified for specific performance.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

1. The Elevator Contractor will store all materials required of this work at their own facilities until the time that the General Contractor has prepared the site for delivery. Provide all required insurance and photo documentation of material stored on site as required as called for in the project specifications.
2. The elevator contractor will provide their own delivery and handling to the site once the General Contractor has provided notice that they are ready to receive the material.
3. The elevator contractor will provide their own storage area on the site separate from that of the General Contractor.

B. Delivery and Handling:

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

C. Storage:

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

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are

undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved equivalent," comply with requirements in "Equivalent Products" Article to obtain approval for use of an unnamed product.
7. A named product and model number establishes the characteristics and salient features of the specifications even when they are not fully described and will serve as the basis of comparison.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed product.
4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a

product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed manufacturer's product.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a equivalent product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 EQUIVALENT PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for equivalent product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Evidence that the proposed product provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and credits.
 3. Evidence that the proposed product will not adversely affect Contractor's construction schedule.
 4. Evidence that the proposed product has received necessary approvals of authorities having jurisdiction.
 5. Evidence that the proposed product will have no adverse effect on other trades and will not affect or delay progress schedule; or if proposed product involves more than one contractor, proposed product has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

6. Evidence that the proposed product maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
7. 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.
8. Evidence that proposed product provides specified warranty.
9. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
10. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 6000

SECTION 01 7329 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes procedural requirements for cutting and patching.
 - 1. The elevator contractor will coordinate their needs for the new elevator opening with the General Contractor. If additional cutting or patching is required, the General Contractor shall follow the procedures identified in this section.
- B. Related Requirements:
 - 1. Divisions 2 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit proposal describing procedures at least 10 days prior to 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.

1.4 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. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-protection systems.
 - 4. Control systems.
 - 5. Conveying systems.
 - 6. Electrical wiring systems.
- 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.
 - 1. Water, moisture, or vapor barriers.
 - 2. Membranes and flashings.
 - 3. Equipment supports.
 - 4. Piping, ductwork, vessels, and equipment.
 - 5. Noise- and vibration-control elements and systems.
- 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.
 - a. Processed concrete finishes.
 - b. Ornamental metal.
 - c. Roofing.
 - d. Firestopping.
 - e. Window wall system.
- E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

- 1.5 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. Alternate materials are to be reviewed by the Owner and the Architect prior to installation.

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 minimize 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. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Sections of these Specifications where required by cutting and patching operations.
 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- 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.
 - a. Where patching occurs on a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.

END OF SECTION 01 7329

SECTION 01 7419 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
- B. Elevator contractor shall provide their own waste management plan, documentation and materials as identified in this section separate from the General Contractor
- C. Related Sections include the following:
 - 1. Division 02 Section "Selective Structure Demolition" for disposition of waste resulting from selective demolition of existing buildings,
 - 2. Division 04 Section "Unit Masonry Assemblies" for disposal requirements for masonry waste.

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of at least 75 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials.

1.4 INFORMATIONAL SUBMITTALS

- A. Waste Management Plan: Submit 4 copies of plan within 15 days of date established for the Notice to Proceed.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use Form CWM-8 for demolition waste. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons
 - 4. Quantity of waste salvaged, both estimated and actual in tons
 - 5. Quantity of waste recycled, both estimated and actual in tons
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Qualification Data: For refrigerant recovery technician.
- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.5 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01. Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan.
 - 2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 5. Review waste management requirements for each trade.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, and waste reduction work plan. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use Form CWM-4 for demolition waste. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by the Owner. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - 1. Comply with Division 01 Section "Temporary Facilities" for operation, termination, and removal requirements.

- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - 2. Comply with Division 01 Section "Temporary Facilities" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Sale and Donation: Not permitted on Project site.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste off Owner's property and transport to recycling receiving or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: break up and sort rebar as best as possible. Recycle all concrete
- C. Recycle all unused metal products during construction of a new building and from the building before demolition remove all aluminum, copper and steel etc.

- D. Recycle as much unused and demolished products as possible and provide a complete report to Owner to confirm the percentage of waste being recycled on the project. Submit said report monthly.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.

3.6 DISPOSAL OF WASTE

- #### A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

- #### B. Burning: Do not burn waste materials on site.

- #### C. Burying: Do not bury waste materials on site.

- #### D. Disposal: Transport waste materials off Owner's property and legally dispose of them.

- #### E. Washing waste materials into sewers or drains is not permitted.

END OF SECTION 01 7419

SECTION 01 7700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 DEFINITION

- A. Closeout is hereby defined to include general requirements near end of Contract Time, in preparation for final acceptance, final payment, normal termination of Contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Divisions 2 through 49. Time of closeout is directly related to Substantial Completion, and therefore may be either a single time-period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation, if any, shall be applicable to other provisions of this section.
- B. Substantial completion shall be defined that every material item has been installed. Nothing is missing and therefore, the punch list can begin.
- C. Upon completion of their scope of work, the elevator contractor shall provide all necessary documentation, as identified in the sections below, to the General Contractor to ensure a seamless project closeout.

1.2 PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. At least ten (10) days prior to requesting the Architect's inspection for certification of substantial completion, for either entire work or portions thereof, complete the following and list known exceptions in request:
 - 1. In progress payment request coincident with or first following date claimed, show either 100% completion for portion of work claimed as substantially complete, or list incomplete items, value of incomplete items, and reasons for being incomplete.
 - 2. Include supporting documentation for completion as indicated in these Contract Documents.
 - a. 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.
 - 3. Submit statement showing accounting of changes to the Contract Sum.
 - 4. Advise Owner of pending insurance change over requirements.
 - 5. For all fire sprinklers, devices, alarm system, roofing system, doors, insulation, etc. requiring FM Research approval, submit certification from Factory Mutual indicating compliance with requirements.
 - 6. Submit test/adjust/balance records.
 - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 8. Certificates of Release: Obtain and submit releases from authorities having jurisdiction enabling Owner's full and unrestricted use of the work and access to services and utilities, including occupancy permits, operating certificates, and similar releases.
 - 9. ~~Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's~~

9. Certificates of Release: Obtain and submit releases from authorities having jurisdiction enabling Owner's full and unrestricted use of the work and access to services and utilities, including occupancy permits, operating certificates, and similar releases.
 10. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 11. Perform preventive maintenance on equipment used prior to Substantial Completion.
 12. Complete start up and testing of systems and equipment. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
 13. Advise Owner of changeover in heat and other utilities.
 14. Participate with Owner in conducting inspection and walkthrough with local emergency responders
 15. Discontinue, or change over, and remove from project site temporary facilities and services, along with construction tools and facilities, mockups, and similar elements.
 16. Complete final clean up requirements.
 17. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests . On receipt of request, Architect and Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection, or the Owner 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.
- a. Architect will perform inspection in areas no smaller than a floor plate. Inspection of individual rooms or spaces will not be performed.
 - b. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - c. Results of completed inspection will form the basis of requirements for Final Completion.
- C. Substantial Completion shall be defined for this project that every element of the project/construction and the contract, based on the contract and amended drawings and specification sections, is completed and the project is deemed complete, less repairs and/or touch up type work that would be generally referred to as punchlist work. If any components of the project, or site work associated with this contract are not installed, the project cannot be deemed substantially completed.

1.3 PREREQUISITES TO FINAL ACCEPTANCE

- A. Prior to requesting Owner and Architect's final inspection for certification of final acceptance and final payment, complete the following and list known exceptions, in request:
1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. .
 2. Submit release of liens for all subcontractors.

3. Submit Contractor's statement that his final application, as presented, is the final bill and no other claims will be presented.
 4. Submit updated final statement, accounting for additional changes to Contract Sum including change orders and allowances.
 5. Submit certified copy of Architect's final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by Architect.
 6. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 7. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents
 8. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner, in location directed by Architect, obtaining a signed receipt of materials delivered. Refer to individual work sections for required quantities of spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be submitted. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section.
 9. Submit one set of record documents, bound copies of maintenance/operating manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
 10. Complete final clean up requirements.
 11. Touch up and otherwise repair and restore marred exposed finishes.
 12. Submit notarized consent of surety to final payment.
 13. Submit final liquidated damages settlement statement, if required, acceptable to Owner.
 14. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.
 15. A letter from the Owner's representative certifying that he has been properly instructed in the operation and maintenance of equipment by the Contractor.
 16. Maintenance Bond.
 17. Underwriter's Certificate or Electrical Sub Code Official's Approval.
 18. Fire Alarm Certification.
 19. HVAC Contractor to submit certified balancing report.
 20. Final acceptance by Architect of record documents
- B. Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests Upon receipt of Contractor's notice that work has been completed, including all punch list items, but excepting incomplete items delayed because of circumstances acceptable to the Owner and Architect, the Owner and Architect will reinspect the work. Upon completion of reinspection, the Architect will either prepare the certificate of final

acceptance or advise the Contractor of work not completed or obligations not fulfilled as required for final acceptance.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected

- C. In the event that the work is not completed, or obligations are not fulfilled as required for final acceptance and the Architect/Owner is required to reinspect the work more often than the two inspections the Contractor shall compensate the Architect and/or the Owner at the rate of \$1500.00 for each additional site visit required for reinspections. The compensation shall be processed by change order as a deduction to the Contractor's Contract Sum, which amount will be paid to the Architect by the Owner, through a Supplemental order as an addition to the Architect's Fee.
- D. Each Contractor has a scheduled amount of time to complete their respective punch list per the punch list activity or final completion milestone date on the project schedule with the Notice to Proceed. **Liquidated damages of \$500/day for every day thereafter will be applied and deducted from the final contract if the project is not FINAL completed by the established date.**

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.

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. Use cleaning products that comply with the maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 CLEANING

- A. Where extra materials of value remaining after completion of associated work have become Owner's property, dispose of these to Owner's best advantage as directed.
- B. After Substantial Completion of the Work, each Contractor shall do the final cleaning of the surfaces of his installations as may be required by the various Specification sections.
- C. After each Contractor has cleaned their work, The General Contractor shall engage a professional cleaning service to perform final cleaning of the work consisting of cleaning each surface or unit to normal clean condition. Comply with manufacturer's instructions for cleaning operations and chemicals. The following are examples, but not by way of limitation, of cleaning levels required:
 - 1. Remove labels that are not required as permanent labels.
 - 2. Clean transparent materials, including mirrors and window/door glass, to a polished condition, removing substances that are noticeable as vision obscuring materials. Replace broken glass and damaged transparent materials.
 - 3. Wipe surfaces of mechanical and electrical equipment clean, including elevator equipment and similar equipment; remove excess lubrication and other substances.
 - 4. Remove debris and surface dust from limited access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
 - 5. Vacuum and clean carpeted surfaces and similar soft surfaces.
 - 6. Clean light fixtures and lamps to function with full efficiency.
 - 7. Clean and wax or polish all hard floors following manufacturer's instructions.
 - 8. Clean all window surfaces inside and outside.
 - 9. Perform final cleaning in, on and around all casework, sinks, toilets fixtures, etc.
 - 10. 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.
 - 11. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - 12. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - 13. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - 14. Remove snow and ice to provide safe access to building.
 - 15. 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.
 - 16. Sweep concrete floors broom clean and wet mop.
 - 17. Replace parts subject to unusual operating conditions.

18. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
19. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
20. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - a. Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
21. 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.
22. Leave Project clean and ready for occupancy.

- 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.

3.2 REMOVE TEMPORARY FACILITIES

- A. At the completion of the work prior to final payment, remove all temporary facilities entirely from site, including, but not limited to, the following: Field offices, trailers, shanties, sheds, job telephone, temporary toilets, temporary enclosures, dust barriers and other temporary protection devices.

3.3 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 7700

SECTION 01 7823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
 - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.2 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.3 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file complete with Table of Contents and book marked by equipment. Submit on digital media acceptable to Architect.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
2. Four paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 60 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 30 days before commencing demonstration and training. Architect will return copy with comments.
 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
 2. Upon completion and approval, 3 copies will be forwarded to the Owner and one copy retained by the Architect.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of documents.
 2. List of systems.
 3. List of equipment.
 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same

designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- 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 the following materials, in the order listed:
1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Architect.
 7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 8. 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 the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include a comprehensive table of contents for all volumes in each volume of the set.
- 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. Include the following, as a minimum:
1. Catalog cuts and shop drawings:
 - a. Catalog cuts shall clearly indicate the exact model and type of each piece of equipment installed in the Project, including all options provided.
 - b. Catalog cuts shall fully describe equipment including physical, electrical, mechanical and other characteristics, performance characteristics and installation or erection diagrams.

- c. Catalog cuts shall indicate spare part numbers and name, address and telephone number of local representative or service department.
 - 2. Typewritten list of all subcontractors on the Project including name, address, telephone number and responsibility on the Project.
 - 3. Warranties, permits, inspection stickers/approvals and Certificate of Occupancy are to be included.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
- 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
- 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by- 280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross- referenced to Specification Section number and title of Project Manual.
 - 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
 - 4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.

5. 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.

2.3 EMERGENCY MANUALS

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

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- 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.
1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. 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.

- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. 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.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."
- G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 7823

SECTION 01 7836 - WARRANTIES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- B. **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

1.2 GUARANTEES AND 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 the 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. Refer to Divisions 2 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. **Submittal Time:** Comply with requirements in Division 01 Section "Closeout Procedures."
- D. The period for all guarantees and warranties shall commence at date of substantial completion for the entire project, as determined by the Architect and Owner.
- E. Each contractor's guarantee on all work, covered by Maintenance Bond shall be One (1) year
- F. **Submittal Time:** Submit written warranties on request of Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- G. **Partial Occupancy:** Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- H. 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 title, "Warranties," Project Name, and name of Contractor.
- I. Submit three copies of warranty manual to the Architect. Provide additional copies of each warranty to include in operation and maintenance manuals.
 - J. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document
- 1.3 STANDARD MANUFACTURER WARRANTIES/GUARANTEES
- A. Unless otherwise noted in specifications, contractor shall provide standard of the industry and acceptable warranties/guarantees provided by all manufacturers of products used on this project. Warranties/guarantees shall commence at date of substantial completion for entire project as determined by the Architect. Review each Technical Section for other warranty requirements.

END OF SECTION 01 7836

SECTION 01 7839 – PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Project record documents consisting of:
 - a. Record drawings.
 - b. Record project manual (specifications).
 - c. Record product data.
 - d. Miscellaneous record submissions.
- B. Refer to other sections of these specifications for further requirements.

1.2 SUBMITTALS

- A. Project Record Documents: Submit after substantial completion, but prior to final completion.
 - 1. Record drawings: Submit in form of opaque prints and pdf electronic forms.
 - a. Sets shall include all drawings, whether changed or not.
 - 2. Other record documents: Submit originals or good quality photocopies.
 - 3. Each prime/sub contractor is responsible for their respective trade, record documents and record drawings. Combine with General Contractor record drawing documents for a complete set.
 - B. Closeout Submittals:
 - 1. Record Drawings: Submit PDF electronic files of scanned record prints and one set of prints
 - 2. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
 - 3. Record Product Data: Submit annotated PDF electronic files and directories of each submittal
 - a. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual
 - 4. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.
-

PART 2 - PRODUCTS

(NOT USED)

PART 3 - EXECUTION

3.1 MAINTENANCE OF PROJECT RECORD DOCUMENTS

- A. Do not use record documents of any type for construction purposes.
- B. Maintain record documents in a secure location at the site while providing for access by the contractor and the architect during normal working hours; store in a fire-resistive room or container outside of normal working hours.
- C. Record information as soon as possible after it is obtained.
- D. Assign a person or persons responsible for maintaining record documents.
- E. Record the following types of information on all applicable record documents:
 - 1. Dimensional changes.
 - 2. New and revised details.
 - 3. Revisions to electrical circuits.
 - 4. Locations of utilities concealed in construction.
 - 5. Particulars on concealed products which will not be easy to identify later.
 - 6. Changes made by modifications to the contract; note identification numbers if applicable.
 - 7. New information which may be useful to the owner, but which was not shown in either the contract documents or submittals.

3.2 RECORD DRAWINGS

- A. Maintain a complete set of opaque prints of the contract drawings, marked to show changes.
- B. Where the actual work differs from that shown on the drawings, mark this set to show the actual work.
 - 1. Mark location of concealed items before they are covered by other work.
 - 2. Mark either record contract drawings or shop drawings, whichever are best suited to show the change.
- C. When the contractor is required by a provision of a modification to prepare a new drawing, rather than to revise existing drawings, obtain instructions from the architect as to the drawing scale and information required.
- D. Keep drawings in labeled, bound sets.
 - 1. Mark with red pencil.
 - 2. Mark work of separate contracts with different colors of pencils.
 - 3. Incorporate new drawings into existing sets, as they are issued.

- E. Where record drawings are also required as part of operation and maintenance data submittals, copy marks to another opaque print obtained from the architect.
- F. Format: Submit PDF electronic files of scanned record prints and one set of prints.
 - 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
- G. Record Coordination Drawing Digital Data Files: Immediately after receiving Certificate of Substantial Completion and prior to final completion, submit the comprehensive model integrating all trade models for the project.
 - 1. Format: Same digital data software program, version, and operating system as the original Contract Drawings

3.3 RECORD PROJECT MANUAL

- A. Maintain a complete copy of the project manual, marked to show changes.
- B. Where the actual work differs from that shown in the project manual, mark the record copy to show the actual work.
 - 1. Include a copy of each addendum and modification to the contract.
 - 2. In addition to the types of information required on all record documents, record the following types of information:
 - a. Product options taken, when the specification allows more than one.
 - b. Proprietary name and model number of actual products furnished, for each product, material, and item of equipment specified.
 - c. Name of the supplier and installer, for each product for which neither a product data submittal nor a maintenance data submittal was specified.
- C. Format: Submit record Specifications as scanned PDF electronic file(s) of marked-up paper copy of Specifications

3.4 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

- 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.
- 3.5 Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data
- 3.6 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.
 - B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.
 - 1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.
- 3.7 TRANSMITTAL TO OWNER (through the Architect)
 - A. Collect, organize, label, and package ready for reference.
 - 1. Bind print sets with durable paper covers.
 - 2. Label each document (and each sheet of drawings) with "PROJECT RECORD DOCUMENTS - This document has been prepared using information furnished by _____" [insert the contractor's name], and the date of preparation.
 - B. Submit to the Architect, unless otherwise indicated.

END OF SECTION 01 7389

SECTION 01 7900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Attendance Record: For each training module, submit a list of participants and length of instruction time.
- C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.3 CLOSEOUT SUBMITTALS

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
 - 1. At completion of training, submit complete training manual(s) for Owner's use with identification as directed below.
 - 2. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of videographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date of video recording.

1.4 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.
- B. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- C. Pre-instruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.

5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."
- B. Set up instructional equipment at the instruction location.

3.2 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
 2. Owner will furnish Contractor with names and positions of participants.

- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner, through Architect, with at least seven days' advance notice.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- D. Provide operating and maintenance instruction to Owner's personnel for systems and components as indicated in individual Specification Sections. Provide instruction periods, comprised of approximately 50 percent classroom instruction and 50 percent "hands-on" instruction.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids.
- B. Video: Provide minimum 640 x 480 video resolution converted to .mp4 format file type, on electronic media.
 - 1. Electronic Media: Read-only format compact disc acceptable to Owner, with computer made label.
 - 2. File Hierarchy: Organize folder structure and file locations according to project manual table of contents. Provide complete screen-based menu.
 - 3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
 - 4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
 - a. Name of Contractor/Installer.
 - b. Business address.
 - c. Business phone number.
 - d. Point of contact.
 - e. E-mail address.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
 - 1. Film training session(s) in segments not to exceed 15 minutes.
 - a. Produce segments to present a single significant piece of equipment per segment.

- b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
 - c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause the training session. Begin training session again upon commencement of new filming segment.
- D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.
 - 1. Furnish additional portable lighting as required.
- E. Narration: Describe scenes on video recording by audio narration by microphone while or dubbing audio narration off-site after video recording is recorded. Include description of items being viewed.
- F. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION 01 7900

SECTION 14 20 00 – OVERHEAD TRACTION MRL ELEVATOR

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. These specifications are intended to cover the installation of one new machine-room-less passenger elevators.
- B. Items specified are new for the elevator unless specifically identified otherwise. Refer to all contract documents and drawings issued herein for additional details and requirements.
- C. The Elevator Contractor is responsible for all items required by Code for final acceptance, whether specified or not.
- D. The Elevator Contractor will be required to coordinate their installation work with a General Contractor that will be awarded their portion of the work at a later date.
- E. Related Sections:
 - 1. Division 04 Section "Unit Masonry Assemblies" for setting sleeves, inserts, and anchoring devices in masonry and for grouting elevator entrance frames installed in masonry walls.
 - 2. Division 09 Section for finish flooring in elevator cars.
 - 3. Division 05 Section "Metal Fabrications" for the following:
 - a. Attachment plates and angle brackets for supporting guide-rail brackets.
 - b. Hoist beams.
 - c. Divider beams
 - d. Structural-steel shapes for subsills.
 - e. Pit ladders.
 - 4. Division 27 Section "Communications Copper Horizontal Cabling" for twisted pair cabling for telephone service for elevators.
 - 5. Division 28 Section "Addressable Fire-Alarm Systems" for smoke detectors in elevator lobbies to initiate emergency recall operation, for heat detectors in shafts and machine rooms to disconnect power from elevator equipment on or before sprinkler activation, and for connection to elevator controllers.

1.03 ACTION SUBMITTALS

- A. Within fourteen (14) days of the Letter of Award, the Contractor shall provide three (3) sets of submissions. Partial submissions are not acceptable. All submissions shall be made at one time, complete, in a single package. Transmittal letter shall be marked with Contractor's name, project name and contract number.
- B. The Elevator Contractor will coordinate elevator shaft requirements with the General Contractor, and will follow with surveying the shaft, machine room, and pit to obtain all measurements and conditions

related to his work. The Contract Documents are for reference only and shall not be considered sufficiently accurate for the proper engineering of the system(s).

- C. The Shop Drawings shall show material type and gauge, general dimensions, methods of attachment, location and size of reinforcements and openings, and a general arrangement of components. Approval thereof shall not relieve the Elevator Contractor of compliance with the specification, unless the attention of the Elevator Consultant is called to the non-complying features in writing.
- D. The Drawings submitted shall be as follows:
 - 1. Elevator section showing overhead, pit and floor to floor dimensions. The drawing shall be scaled and shall show all concrete structure, hoist and divider beam size and locations and all other required details complete. Details shall include the height of the cab, door operator and crosshead, including details of rope shackle.
 - 2. Hoistway plan shall clearly show all typical dimensions to scale. In addition, plan shall identify all structural beams, hoist beam or hook location, divider beam locations and sizes; widths and depth of beams as they relate to the clear hoistway and hoistway walls; column pads in the pit and all column intrusions into the shaft. Provide large scale drawings and details of sill support condition and any column encroachments.
 - 3. Provide machine room plan showing all typical dimensions and equipment layout. Show clearly all electrical disconnects or switchgear in the code compliant location and to scale. Provide location and size of the machine support including the attachment of the machine beams to the building structure.
 - 4. Provide large scale drawings for the car enclosure showing cab plan, reflective ceiling, wall elevations, front returns and car station integration. Detail section through wall panel from canopy to platform. Detail section through suspended ceiling including attachment to canopy. Detail typical joints, reveals and panel edging, panel attachments, handrail fastening and pad button attachment to shell. Include all gauges of steel components. Provide thickness and type of materials used for wall panels and ceiling along with lamination details.
 - 5. Entrance details with the same specifics and quality of information provided for the cab details.
 - 6. Provide fixture drawings job specific in large scale. Identify all engraving including font, depth of engravings and infill color material. (No applied or recessed plates shall be acceptable except for Braille plates.) Provide gauges of all material used for car stations. Provide faceplate fastener and hinging method and type.
 - 7. Provide cut section through emergency light, position indicator, intercom/telephone, buttons, Braille plates and service cabinet, if request.
 - 8. Fixture, cab and entrances shall each be provided from a single source manufacturer/supplier for all elevators. Drawings shall be submitted for all elevators at the same time.
 - 9. Car frame and car platform construction details and layout complete.
 - 10. Machine isolation foundation fastening details and hydraulic oil line isolation fastening details (as applicable). Include manufacturer's data of all isolation equipment used.
 - 11. Provide any and all sketches, clarifications and drawing modifications requested by the Elevator Consultant. All ancillary sketches requested shall be scaled and adequately detailed for review.

- E. Sample submissions (as requested by the Elevator Consultant) may include:
 - a. Cab or fixture material and finishes.
 - b. Braille plates and jamb designation.
 - c. Push-buttons and position indicators.
 - F. Sixty (60) days prior to the completion of the work of the contract, the Elevator Contractor shall submit to the General Contractor six (6) copies of an Operation Maintenance and Parts Manual and six (6) complete sets of as-built. These shall be reviewed, and if approved, shall become the property of the Owner.
 - G. Sustainable Design Submittals:
 - a. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
 - b. Chain-of-Custody Certificates: For certified wood products. Include statement of costs.
 - c. Laboratory Test Reports: For adhesives, indicating compliance with requirements for lowemitting materials.
 - H. Samples: For exposed finishes.
- 1.04 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For Installer.
 - B. Manufacturer Certificates: Signed by elevator manufacturer certifying that hoistway, pit, and machine room layout and dimensions, as shown on Drawings, and electrical service, as shown and specified, are adequate for elevator system being provided.
 - C. Sample Warranty: For special warranty.
- 1.05 CLOSEOUT SUBMITTALS
- A. Operation and Maintenance Data: For elevators to include in emergency, operation, and maintenance manuals.
 - 1. Submit manufacturer's or Installer's standard operation and maintenance manual, according to ASME A17.1/CSA B44
 - B. Inspection and Acceptance Certificates and Operating Permits: As required by authorities having jurisdiction for normal, unrestricted elevator use.
- 1.05 QUALITY ASSURANCE
- A. Approved equipment and component manufacturers:
 - 1. Controller – MCE, Elevator Controls, Smartrise, Alpha Controls
 - 2. Tracks, hangers, interlocks and door operators – GAL (no alternates)
 - 3. Fixtures – Innovation, MAD, CE Fixtures or Approved Equal
 - 4. Door Protective Device - Tri-Tronics or Janus
 - 5. Entrances and Cabs – Premier Elevator Designs, Park Avenue Cabs, A&D Cabs

6. Machine - As manufactured by Imperial Electric or Hollister-Whitney
 7. Car Sling and Platform – As manufactured by Holister-Whitney
 8. Counterweight frame – As manufactured by Holister-Whitney
 9. Buffers and Pit Steel – As manufactured by Hollister Whitney, or equal
 10. Guide Rails – Savera, or equal
- B. ALL COMPONENTS USED IN THE ELEVATOR INSTALLATION SHALL BE OPEN SOURCE AND NON-PROPRIETARY IN NATURE. NO OTIS, KONE, THYSSENKRUPP, SCHINDLER, OR FUJITEC BRANDED OR MANUFACTURED PACKAGES OR COMPONENTS MAY BE USED.

1.07 COORDINATION

- A. Coordinate installation of inserts, sleeves, block outs, elevator equipment with integral anchors, and other items that are embedded in concrete or masonry for elevator equipment. Furnish templates, inserts, sleeves, elevator equipment with integral anchors, and installation instructions and deliver to Project site in time for installation.
- B. Coordinate locations and dimensions of work specified in other Sections that relates to electric traction elevators including pit ladders; sumps and floor drains in pits; entrance subsills; electrical service; and electrical outlets, lights, and switches in hoistways, pits, and machine rooms.

1.08 STANDARDS

- A. Except as modified by governing Codes and by this Division, the work shall comply with provisions of the latest editions of the following, and in the event of conflict between these standards, the Elevator Consultant's determination shall be final:
 1. Safety Code for Elevators and Escalators, ASME A17.1, and all supplements
 2. NFPA Life Safety Code
 3. Title III of the Americans with Disabilities Act (ADAAG)
 4. International Building Code
 5. NJAC 5:23-12 Elevator Safety Subcode
 6. UCC-F150 Elevator Subcode Technical Section
 7. Ewing Township, NJ Rules, Regulations and Ordinances
 8. Guide for Inspections of Elevators, Escalators, and Moving Walks, ASME A17.2, latest adopted edition
 9. Safety Code for Existing Elevators and Escalators, ASME A17.3
 10. Guide for emergency evacuation of passengers from elevators, ASME A17.4
 11. National Electrical Code (ANSI/NFPA 70)
 12. ASME A17.5/CSA-B44.1 - Elevator and escalator electrical equipment.
 13. NEMA: National Electrical Manufacturers Association.
 14. NFPA: National Fire Protection Association 15. OSHA: Occupational Safety & Health Administration.
 16. UL: Underwriter Laboratories.
 17. IEEE: Institute of Electronic & Electrical Engineers.
 18. AIA: American Institute of Architects.
 19. ADA: Americans with Disabilities Act.

- B. The Contractor shall advise the Consultant and Construction Manager of pending code changes that could be applicable to this project or property.

1.09 TERMS / DEFINITIONS

- A. The terms used herein are defined as follows:

1. "Owner" shall mean The College of New Jersey (TCNJ) and/or affiliated entities.
2. "Architect" shall mean the firm of Clarke Caton Hintz, or their authorized representative.
3. "Structural Engineer" shall mean the firm of Harrison-Hamnett, P.C. or their authorized representative.
4. "Elevator Consultant" shall mean the firm of B Squared Engineering, LLC. or their authorized representative.
5. "Elevator Contractor" shall mean the person, firm or corporation named in the Contract Documents who will execute the elevator scope of work defined in Specification Sections 14 20 00 and 14 40 00. It shall include all his employees, subcontractors and suppliers.
6. "General Contractor" shall mean person, firm or corporation named in the Contract Documents who is responsible for the day-to-day oversight of the construction site, management of vendors and trades, and the communication of information to all involved parties throughout the course of the project. It shall include all his employees, subcontractors and suppliers.
7. All terms in the specifications shall be as defined in ASME A17.1.
8. The term "Provide" or "New" shall mean furnish and install.
9. The words "or equal", "or approved equal", "equal to", refer to substitution of a manufacturer not specified; and shall require approval in writing from the Elevator Consultant prior to bid or prior to installation, if substitution is requested after award.
10. The terms "Adequate" or "Sufficient" means adequate or sufficient in the opinion of the Elevator Consultant.

1.10 MAINTENANCE AND INTERIM MAINTENANCE

- A. At Owner's option, furnish full protective maintenance and service on the equipment as described in Section 14 40 00 of this Project Manual for a period of five (5) years from the date of final acceptance of the entire installation.
- B. Furnish full protective interim maintenance and service on the equipment as described in Section 14 40 00 of this Project Manual for from the date of execution of the Contract until final acceptance of the entire installation, including for the elevators which shall be used for construction operations in the building.

1.11 GUARANTEE

- A. After award, furnish a written guarantee from the equipment manufacturer which states that replacement parts and/or major components for the equipment installed will be available for a period of fifteen (15) years after final acceptance.
- B. Guarantee in writing that any defects not due to ordinary wear and tear or improper use which may develop within one (1) year from the date of final acceptance of each elevator installation will be made good at no additional cost. In the event that contractor performing post-modernization full-service maintenance is other than contractor who performed modernization work, contractor performing modernization work shall transfer all equipment warranties for parts to the company performing maintenance.

- C. Repairs or replacements made under the guarantee shall bear an additional one (1) year guarantee dated from final acceptance of repair or replacement, or through the end of the original one (1) year guarantee period, whichever is longer.
- D. During the guarantee period, replace or repair any piece of equipment that is found to be defective. The replacement or repair shall be done as soon as notified. Repair all damage to surrounding work caused by defective equipment.

1.12 CONDITIONS

- A. The Elevator Contractor shall examine all drawings relating to this work and become fully informed as to the extent and character of the work required. All measurements, layouts and the exact conditions of the work shall be verified by the bidder. If any of the conditions conflict with or affect the proposed work, the Contractor shall notify the Elevator Consultant, in writing before the bid date. No allowances will be made for failure to avail himself of such information.
- B. All equipment and shop work area shall be provided by the Elevator Contractor and shall be in an area approved by the Owner and coordinated with the General Contractor.
- C. Any work that is disturbed by this work, shall be restored to a "like New" condition by the Elevator Contractor.
- D. The Elevator Contractor shall take measurements at the project site so that all of his work will properly fit together and conform to and join the work installed under other sections of this Contract. The Elevator Contractor in coordination with the General Contractor, before commencing work, shall make certain that all adjoining work on which this work is in any way dependent for perfect workmanship, shall be properly in place and in proper order to receive all elevator work.

1.13 ACCEPTANCE AND CAT 1 AND CAT 5 TESTING OF ELEVATORS

- A. A Category One and Category Five test shall be performed at the time of the final acceptance test. It is the sole responsibility of the contractor to ensure that all necessary paperwork has been submitted, in a timely manner to the local authority having jurisdiction and all weights, staffing and any other items needed for the test be available. The contractor is to perform and file such test the same day as the acceptance test providing the inspector has passed the newly modernized elevator. All test witnessing shall be performed by the Elevator Consultant.
- B. Should the Elevator Contractor fail to notify the Elevator Consultant of the acceptance test at least five days in advance and the Elevator Consultant is not able to attend the test, it will be the elevator contractor's responsibility to perform the test again in the presence of the consultant at no additional charge to the client.

1.14 PERMITS AND EXPEDITING SERVICES

- A. The Elevator Contractor will be responsible for all filing requirements, process, and coordination with the local authority. All permits are the Contractor's responsibility. The Elevator Contractor shall secure any necessary building permits required for the performance of work to be done by other trades. The Elevator Contractor shall obtain and pay for all municipal and state permits necessary for execution of the elevator work, including all fees associated with expediting. The Elevator Consultant will be providing all expediting services on the project. The contractor is responsible for signing off all elevators.

1.15 RUNNING OF THE CARS FOR OTHER TRADES

- A. Contractor shall include twenty-four (24) hours per car for running of the car for any tradesmen hired by Construction Manager or Owner, as needed, to facilitate any needed repairs to the hoistway walls or any other work required within the hoistway or in support of the elevator project. Owner shall receive a credit for any hours not used at the contractor's standard team billing rate.

PART 2 – PRODUCTS

2.01 DESCRIPTION OF ELEVATOR UNITS

A. Overhead Traction Passenger Elevators: PE-2

1. Quantity: One Service Elevator
2. Type: Overhead Gearless Traction MRL Type
3. Capacity: 5,000 Pounds
4. Speed: 150 FPM
5. Travel: PE-1: 42'-0"
6. Number of Landings: 4 @ *1, 2, 3, 4
7. Number of Openings: Same as Landings
8. Door Openings: All Front
9. Operation: Simplex Automatic
10. Control: Microprocessor with VVVF-AC Regen Drive
11. Number of Push Button Risers: One
12. Compensation: New
13. Guide Rails: New 15# Car Rails and 8# CWT Rails
14. Buffers: New Spring
15. Cab Included: New Shell and Cab
17. Door Operation: PE-1: SSSO
18. Fixture and Signals: New, as Specified Herein
19. Machine Type: Overhead AC Gearless Traction 2:1 Roping
20. Control Space: Remote at 3rd Floor
22. Deflector Sheaves: New
23. Machine Manufacturer: Imperial Electric or Hollister-Whitney
24. Motor: Permanent Magnet Gearless AC
25. Door Equipment Manufacturer: GAL Manufacturing
26. Fixture Manufacturer: Innovation, MAD, Monitor, CE Fixtures
27. Ropes: Minimum ½" or 10mm
28. Car Frame Construction: New, Steel
29. Platform Construction: New, Steel
30. Counterweight Frames: New – 50% Counterbalance
31. Entrances: New, as specified herein
32. Hoistway Doors: New, as specified herein
33. Special Features: New Rope Gripper, Per Code
Security camera wiring
Emergency Battery Lowering

2.02 MACHINE LOCATION

- A. The elevator machine shall be placed in the hoistway and supported by building steel. All structural steel work required to mount and install new hoist machine, shall be included as part of the Elevator Contractor's base scope of work. The Elevator Contractor will coordinate the structural steel work that is the responsibility of the General Contractor.
- B. The Elevator Contractor shall furnish and install any additional structural members required for the installation of the equipment, such as supports for governors. Provide rope guards for machines as required.
- C. All required forms, templates and sleeves shall be furnished and set by the Elevator Contractor.
- E. Vibration isolating machine foundation shall effectively prevent transmission of machine vibration to the building structure. Location and deflection characteristics of the vibration isolation units used shall be such as to produce an approximately uniform and non-excessive loading on the units under all operating conditions from minimum to maximum rated elevator load lifting capacity. The foundation shall incorporate positive means to prevent lateral displacement of the machine.
- F. Deflector Sheaves shall be of hard alloy cast iron, semi-steel or cast steel of approved composition, with proper grooves for deflection. Surface of sheave shall have hardness between 220 and 240 Brinell and shall be plainly stamped. The diameter of each deflector sheave shall not be less than 40 times the diameter of the hoisting rope. Provide standard ball bearing sheaves on steel shaft. Provide four bolt type support blocks for deflector sheave. Provide guard around deflector sheave.

2.03 GEARLESS ELEVATOR HOISTING MACHINE MOTOR

- A. The elevator machine shall be of the gearless traction type designed for elevator service with a slow speed, direct current motor directly connected to a driving sheave and brake pulley. The elevator machine and related accessories shall be rigidly mounted on a fabricated steel bedplate. Machines may be single- or double-wrap, as needed.
- B. The bedplate of the machine shall be isolated from the building structure by means of elastomer pads properly loaded for the static and dynamic forces developed by the machine. The type and number of pads shall be as required to limit objectionable structure borne noise transmission into occupied spaces. Adjustable mechanical stops shall be incorporated in the bedplate design to prevent excessive rocking that would cause the elevator to attempt to re-level.
- C. A new electromechanical disc brake shall be provided on the machines. The new brake shall be spring applied and electrically activated. Brake shoes shall be applied to the braking areas simultaneously and with even pressure by means of helical compression springs. An electromagnet shall be used for fast release and for gradual smooth operation of shoes. The brake shall be able to hold 125% of the elevator capacity. The contractor shall provide all necessary machine supports and anchoring. Brake switches are required to monitor brake activation.
- D. The secondary sheave shall have grease lubricated antifriction bearings and shall be mounted on the underside of the machine bedplate so that the sheave assembly does not contact the building steel or the machine beams under all loading or running conditions.

2.04 SOLID STATE CONTROLLER

- A. Provide the elevator installation with controllers to fit within the space conditions in the control space being provided.
- B. The Controller shall be non-proprietary and equipped with solid state components and printed circuit boards to control the hoisting machine and signal functions in accordance with this specification.
 - 1. Approved manufacturers: Subject to compliance with the requirements of this Section, provide MCE, Elevator Controls or Smartrise controller equipment.

2. The controller shall include, but not be limited to the following features.
 - 1) Password accessible.
 - 2) Inspection control.
 - 3) Fireman's service.
 - 4) Independent service.
 - 5) Diagnostics.
 - 6) Built-in remote monitoring, control and programming via on-board TCP/IP interface.
 - 7) On-board color touch screen display which can be used for monitoring and viewing all controller parameters, including acceleration and deceleration speed curves.
- C. The controller assembly shall provide efficient, smooth, step-less acceleration and deceleration of the elevator hoisting machine, automatically and irrespective of the load in the car. All control equipment shall be enclosed in a metal cabinet with lockable, hinged door(s), and shall be provided with a means of forced ventilation. All non-conducting metal parts in the machine room shall be grounded in accordance with controller manufacturers' specifications and the latest International Electrical Code. Cabinet shall be securely attached to the building structure. All Controllers shall be identified with 4-inch letters.
- D. Modules or Solid-State boards for the control of the elevator system, including dispatching, signals, door operation, etc. shall be installed in a NEMA Type I, General Purpose Enclosure. All similar modules or solid-state boards shall be interchangeable between controllers of a particular development and interchangeable with other controllers built to the same specifications.
- E. Modules or solid-state boards shall be fuse protected. Each module or solid-state board and fuse (with ampere rating) shall be identified by name, letter or standard symbol in an approved, indelible and legible manner on the device or panel. Coordinate identification markings with identical markings on wiring diagrams.
- F. The electrical connections between the printed circuit boards (modules) and the circuit connectors incorporated in the mounting racks shall be made through individual tabs which shall be an integral part of each module. The tabs shall be nickel-gold plated (or of other approved metal of equal electrical characteristics). Modules shall be keyed or notched so as to prevent insertion of the modules in the inverted position.
- G. Light emitting diodes (LEDS) shall be used for visual monitoring of individual modules and marked with familiar terminology.
- H. Components shall have interlocking circuits to assure fail-safe operation, and to prevent unwarranted elevator movement, should any component fail to function properly.
- I. Wiring shall be arranged so that similar voltages are grouped together.
- J. If modules are used, they shall be of the type that plug into pre-wired mounting racks. Field wiring or alteration shall not be necessary in order to replace defective modules.
- K. Field wiring changes shall be made only to the mounting rack connection points and not to the individual module circuitry or components. Individual modules, requiring design changes shall be returned to the factory where changes shall be made, and module design records updated so that correct replacement units shall be available.
 1. All shaft and traveling cable wires shall be able to withstand accidental connection to any other shaft or traveling cable connection without causing permanent damage to the equipment.

Replacement of fuses or other “low cost” protection devices is acceptable. All outputs shall withstand the application of a short circuit across the output terminals without causing permanent damage to the equipment.

- L. Module boards shall be moisture resistant, fabricated from non-conductive, non-corrosive material, and shall be of sufficient strength so as to support all components mounted thereon without warping. Mounting racks shall be spaced sufficiently apart to prevent accidental contact between individual modules.
 - 1. All logic symbols and circuitry designations shall be in accordance with ASME Standards.
- M. Solid state components shall be designed to operate normally within a temperature range of 20° F, and 120° F.
- N. Wiring connections for operating circuits and for external control circuits shall be brought to terminal blocks mounted in an accessible location within the controller cabinet. Terminal blocks using pierce-through serrated washers are not permitted. Clearly mark & color code the voltages on the terminal strips.
- O. A diagnostic testing device shall be permanently installed on each controller, for all trouble-shooting procedures related to the specific type controls installed on this Contract.
 - 1. Diagnostics shall include but not be limited to the following control circuits:
 - a) Interlocks.
 - b) Car door gate switch.
 - c) Up and down slowdown limits.
 - d) Up and down normal limits.
 - e) Up and down final limits.
 - f) Emergency stop switch in car.
 - g) Emergency stop switch on top of car.
 - h) Safety plank switch.
 - i) Governor overspeed switch(es).
 - j) Top and or side emergency exit switch.
 - k) Comp sheave switch.
 - l) Hoist motor overloads.
 - m) Pit stop switch.
 - n) Tape switch.
 - o) Oil Buffer switch.
 - p) Door Operator overload switch.
 - q) Generator overload switch.
 - 2. The Fault Monitoring System shall record and report faults in a sequential fashion. When more than one (1) contact is open, the contact with the highest priority will be displayed first. After this one is satisfied any additional open contacts will be displayed in the same sequential fashion.
 - 3. Error messages are to be stored in a non-volatile memory for future recall.
 - 4. If repairs or replacement of the testing devices become necessary prior to the end of the one (1) year Warranty period, the repairs or replacement shall be provided at no additional cost to the Owner.

- P. Controller shall be provided with the capability of having qualified elevator personnel move elevator at inspection speed with safety circuit open. This operation is to be available by operating selective relays on the controller.
- Q. In addition to printed hard copies, all documentation for wiring diagrams shall be provided on CD ROM disk, in an Acrobat™ Portable Document Format (PDF).
 - 1. All documentation for wiring diagrams shall be provided on CD ROM disk, in an Acrobat™ Portable Document Format (PDF).
 - 2. All job parameters, both for the controller and motion control equipment, shall be provided.
- R. The use of standard issue communication devices, such as walkie-talkies, from in front of the controllers, with the doors open, should not cause intermittent or permanent problems with the proper operation of the controller equipment
- S. The Elevator Contractor shall provide electrical (over-current) protection for each elevator hoist motor. When activated, it shall disconnect power from the elevator hoist motor and hoist machine brake. Activation of the motor protection device shall require a "Manual Reset". The motor protection device shall be clearly labeled and identified at the terminals and a cover plate shall be provided with a light illumination indicating that this device has been tripped with a reset button provided to restore normal operation. The motor protection equipment and its method of connection to the elevator system must be shown on the wiring diagram.
- T. In the event of a power outage, the equipment shall be arranged, so that once the normal power supply has been re-established, each elevator will automatically return to service.
- U. The Safety circuits shall be designed to individually fuse the following:
 - 1. Gate switch & secondary gate switch.
 - 2. Interlocks
 - 3. Normal limits (up & down)
 - 4. Final limits (up & down)
 - 5. Slowdown limits (up & down)
 - 6. Pit switch, governor switch, buffer switch, comp switch & pit door switch.
 - 7. Top emergency exit switch, Car safety switch, top of car inspection stop switch, side exit switch, stop switch in car, safety edge & electric eyes.
- V. The control system for the elevators shall be arranged to maintain consistent acceleration and deceleration rate changes and floor leveling accuracy regardless of load.
- W. Controller shall incorporate direction switches, reverse phase protection, over current protection, singlephase protection in each phase, and switching to provide smooth acceleration and deceleration.
- X. Controller shall be provisioned with all required hardware and software to accommodate all required functionality, including sequential lowering operations and selective car operation, should emergency power generator be added to the building in the future.
- Y. Controller shall be provisioned with door lock monitoring, per Code.
- Z. Provide a three-phase voltage monitor (RPR), model PLR240A, as manufactured by SSAC inc., or approved equal.

- AA. Provide rubber mats in front of all controllers and group supervisory panels.

2.05 VARIABLE VOLTAGE VARIABLE FREQUENCY - AC REGENERATIVE CONTROL SYSTEM

- A. The elevator hoist machine shall be gearless traction having an AC motor. The control of the hoisting motor shall be by means of a solid-state drive system. The speed, acceleration and deceleration shall be automatically and continuously controlled by varying the frequency and voltage of the motor. A closed loop system shall be provided.
- B. The drive shall utilize a 3 phase, full wave rectifier and capacitor bank to provide direct current for the solid-state inverter. The control principle shall be based on constant flux control utilizing pulse width modulation. The drive shall be capable of providing not less than 200% of the motor name plate rated current for not less than 60 seconds.
- C. A means shall be provided for removing regenerated power and return it to the 3 phase AC power line.
- D. The final stopping shall be performed independent of the machine brake which shall be applied to hold the car at a floor only after the car has stopped.
- E. The drive shall not create excessive audible noise in the elevator motor and control system.
- F. The drive system shall include but not necessarily be limited to the following features:
 - 1. Maintain a car speed within +/- 5% of the rated speed.
 - 2. Protection against excessive motor current in addition to normal overload relays.
 - 3. Maintain operation within 90 to 110% of nominal line voltage.
 - 4. Line fault protection to prevent operation under:
 - 1) Loss of phase.
 - 2) Low line voltage.
 - 3) High line voltage.
 - 5. The transistor protection shall ensure 100% protection of the transistors and prevent fuse blowout.
 - 6. Continuous supervision of the braking resistors shall be provided.
 - 7. Motor contacts shall disconnect the motor stator winding during each stop. In normal operation, the contactors shall operate only under zero current conditions, but must be capable of interrupting the line current should an emergency stop be required.
 - 8. The drive system shall continuously monitor the hoisting motor operation and motor torque in order to ensure 100% safe elevator operation at all times.
 - 9. Provide an AC Drive variable frequency drive with regenerative power features, as manufactured by Magnetek or KEB. No substitutions or alternates.

2.06 SELECTORS

- A. Provide an absolute position selector electronically and optically operated and located on Car Top with compatible tape in the hoistway. The operation of the selector shall be to govern functions such as direction of travel, automatic stopping and leveling at landings.

2.07 SPEED REGULATION

- A. Speed regulation shall be such that the maximum velocity attained with any load up to full load in the car on either "Up or "Down" motion shall not vary more than 5% plus or minus from normal operation velocity.
- B. The acceleration and deceleration of the cars under any condition of load shall be as nearly constant as is possible with the method of control specified and employed and shall be independent of the operating devices in the car.
- C. Entire elevator equipment including hoisting machines and controllers shall operate without noticeable irregularities and as quietly as can be obtained by use of high-grade materials, first class workmanship, and adjustment.

2.08 SPEED GOVERNOR AND TENSION SHEAVE

- A. Provide centrifugal type speed governor in the hoistway with an overspeed switch for each direction of travel. Safety rope grip shall lock in position when governor trips and shall be held in contact with the rope both by springs, and by sliding action and pull of the rope in the grip. The rope grip jaws shall be of the parallel jaw or equivalent type, of such shape and length that the pull-through action of the governor rope as required by the ASME Code will result in a minimum amount of abrasion. Governor jaws shall be machined and so arranged that if worn, they can be replaced. Speed governors shall be located in the overhead.
- B. Provide tension frame and sheave. Proper tension in governor rope shall be maintained by a weighted tension sheave located in the pit. This sheave shall be protected with a 16 USSG sheet metal guard to prevent foreign objects from being caught between the governor rope and sheave. Tension sheave shall be provided with a grease gun fitting to receive grease lubrication.

2.09 ASCENDING CAR OVERSPEED PROTECTION DEVICE

- A. Provide a device designed to prevent an ascending elevator from striking the hoistway overhead structure. The device shall decelerate the car with any load up to the rated capacity by applying an emergency brake.
 - 1. The device shall detect an ascending car overspeed condition of not greater than 10% higher than the speed that the car governor is set to trip.
 - 2. The device, when activated, shall prevent operation of the car until the device is manually set.
 - 3. The device shall meet the requirements of Section 2.19 of the ASME A17.1 – 2016 Safety Code.
 - 4. A dual brake integral to the machine shall not be acceptable.

2.10 UNINTENDED CAR MOVEMENT PROTECTION DEVICE

- A. Provide a device to prevent unintended car movement away from the landing when the hoistway doors are not in the closed and locked position and the car doors are not in the closed position.
 - 1. The device shall prevent such movement in the event of failure of the electric driving machine motor, brake, coupling, shaft or gearing, control system, and any other component upon which the speed of the car depends, except the suspension ropes and the drive sheave of the traction machine.

2. The device, when activated, shall prevent operation of the car until the device is manually reset.
3. The device shall meet the requirements of Section 2.19 of the ASME A17.1 – 2016 Safety Code.
4. A dual brake integral to the machine shall not be acceptable.

2.11 AUTOMATIC OPERATION

A. General operation of individual elevators:

1. Provide a non-proprietary diagnostic microprocessor-controlled dispatching and car control system, based on real time calculations, designed to monitor all types of traffic and sufficiently flexible so that it can be modified to accommodate changes in traffic patterns.
2. Serial link communications: Provide a distributed processing network consisting of localized processors located in machine rooms, car stations, hall stations and top of car to allow system to make fast decisions based on data shared by the processor involved in the different operations of the elevators. For group dispatch operations, all elevators in the group shall be capable of acting as a group common dispatcher as the need arises.
3. Fault diagnostic system: Provide Owner's Representative with all hardware such as on-board LED diagnostics, handheld device or laptop computer, as standard with manufacturer, and supporting software documentation. Diagnostic system shall be capable of determining faults most difficult to find, as well as be capable of performing all code required testing.
4. The system shall be flexible, irrespective of the number of elevators in normal service.

B. Group automatic operation:

1. Provide an "on-demand" hall call response system that will continuously scan the hall calls and assign the closest elevator in time to respond to that call. The system shall be capable of reassigning the elevator if demand changes the real time calculation.
2. A car with no car calls registered arriving at a floor where both "up" and "down" hall calls are registered shall respond to the hall call in the direction of travel and illuminate the appropriate lantern. If no car call is registered for that direction, the lantern shall be extinguished, the lantern for the other direction shall light and the car shall respond to the call in that direction. The doors shall not close and reopen.
3. The system shall be capable of monitoring hall and car calls to monitor coincidental calls. The cars will continuously scan the whole system to determine the closest elevator in time taking into account the coincidental car and hall call.
4. Other required features:
 - a. Should a car be delayed from leaving a floor for any reason, other cars shall respond to the hall calls at that floor and shall be dispatched in a normal manner.
 - b. Provide each car with an adjustable load-weighing device, which will immediately dispatch cars and bypass hall calls when car is loaded to predetermined load.
5. General program adjustments:

- a. After each group of elevators have been placed in regular service and the building substantially occupied, the elevators shall be regularly observed under normal operating conditions and minor adjustments shall be made as found necessary to ensure that the elevators operate at maximum efficiency.
- b. If zones are employed, arrangements shall be made in the control circuits of the elevators for the division between each zone to be raised or lowered if found necessary due to uneven distribution of traffic between the zones and/or staffing requirements.

D. Simplex selective collective operation:

1. Arrange for simplex selective collective automatic operation. Operate elevators from a single riser of landing buttons and from operating device in car.
2. Momentary pressure of one or more car or landing buttons, other than those for landing at which car is standing, starts car, and causes car to stop at first landing for which a car or landing call is registered corresponding to direction in which car is traveling. Stops made in order in which landings are reached, irrespective of sequence in which calls are registered.
3. Double door operation not permitted. If an up-traveling car has a passenger for an intermediate floor and a down call is registered at that floor, with no calls above car, it travels to floor, opens door to let passenger out, then lights down direction arrow in hall lantern and accepts waiting passenger without closing and reopening doors.

E. Swing car operation:

1. Arrange for swing car operation of Car PE-2 wherein the car can be removed from the group and operate as an independent elevator. Provide inconspicuous riser in the entrance frames at all levels, in a material to match entrance finish or as otherwise selected by Architect, to facilitate hall calls when the car is being used in swing mode of operation.

F. Inspection operation:

1. Provide key-operated hoistway access device and car top operating device. Key switches shall be mounted in existing locations at terminal landings.

G. Independent service:

1. Independent service operation shall be provided so that, by means of a switch located in the car service cabinet, the car can be removed from automatic operation and be operated by an attendant. The attendant shall have full control of the starting, stopping and direction of car travel.
2. The car shall respond to car buttons only. The hall signals for the car on independent service shall not operate.

H. Anti-nuisance:

1. Provide "anti-nuisance service" whereby all car calls will be cancelled if the load-weighing device detects that an abnormal number of calls are registered given the number of passengers in the car.
2. System using false call answering to accomplish this is not acceptable.

I. Operation under fire or other emergency conditions:

1. Provide special emergency service to comply with ASME A17.1, CCR Title 8, IBC and local codes having jurisdiction.
2. Provide Phase 1 recall switch at main floor elevator lobby and fire control life safety room. Interlock recall switches to prevent simultaneous activation.
3. Key switches at main floor shall be integrated in hall button station with engraved instructions.

2.12 HOISTWAY EQUIPMENT

A. Hoistway Entrances:

1. Provide and install new 42" wide x 84" high fully automatic SSCO (PE-1) and SSSO (PE-2) type entrances at all landings, in accordance with architectural drawings.
2. New complete stainless-steel entrances and doors shall be provided with all new equipment including but not limited to; fascias, dust covers, locks, tracks, hangers, gibs, eight-inch (8") "Z" brackets, kick block rollers, lock assemblies, stainless steel sills, sill supports, steel lintels, struts, bumpers, sight guards, etc. The doors shall be installed complete.
3. Entrance frame design shall be full profile welded, and shall be preassembled at the fabricator, and come to the site protected with peelable laser protective film coating. Frames shall be No. 4 Stainless Steel with a Satin Finish. All hoistway entrances shall have the requisite fire rating and bear an official marking indicating that it has been produced by a facility certified by Underwriter's Laboratory (UL) along with the official registration number for the product and test report number. No other fire rating agency or fire label will be accepted.
4. The Contractor shall provide all labor, material, equipment and service necessary to complete all metal work required by the drawings, and/or herein specified. Provide shop coat of metal protective paint on all steel components that are not stainless steel.
5. Provide floor number designations, at least 4" high, on each hoistway entrance door (hoistway side).
6. Hangers and Tracks: All doors shall be hung on new heavy-duty ball bearing, sheave type hangers, sheaves not less than 3-1/8" riding surface diameter with adjustable upthrust rollers of metal design, running on a polished steel track. Sheave rollers shall be of nylon or equal, with no flat spots. Hangers that are not mounted flush with the top of the door shall be provided with new metal stiffeners and shall be installed to eliminate excessive movement. An upthrust safety retainer shall be installed on the door hanger to prevent the door from coming off the track due to vandalism.
7. Removable Guides: Each door panel shall be guided at the bottom by two (2) removable guides, of solid nylon or solid Teflon, mounted in galvanized steel brackets, and fastened with stainless steel machine screws, sliding in the hoistway slide door sill groove.
8. Rubber Bumpers: Provide rubber bumpers on the hoistway slide door hanger tracks, (both front and rear) instead of the hoistway door frame. After their final adjustment, permanently pin so that they cannot be removed.
9. Hoistway Slide Door Sill Mounted Spring Closers: Provide sill mounted Hoistway side slide door spring closers for all hoistway entrances.

10. Hoistway Door Safety "Z" Bar Guide: Provide one stainless steel safety "Z" bar guide on the underside of all doors and securely fasten to the underside of the door with stainless steel countersunk machine screws. Mount the safety "Z" guide adjacent to and in between the removable guides.
11. Install any missing fascias: Fascia shall be #14 USSG galvanized steel reinforced to insure a flat even surface. Securely fasten to the header and sill above.
12. Install any missing toe guards at the lowest landing. The toe guards shall be No. 14 USSG galvanized sheet steel, secured to the lowest sill and gradually beveled to the wall.
13. Fascias, cover plates, enclosures, dust covers, and toe guards shall be of galvanized steel.

B. Hoistway Door Interlock:

1. Provide each hoistway entrance with new electro-mechanical interlocks as manufactured by GAL Manufacturing Corporation. Interlock shall prevent the operation of elevator unless all doors are closed and positively locked. Interlock shall be of a type that shall satisfy the requirements of the ASME Code.
2. Provide all wiring from shaft riser to the new interlock. The wiring shall be type SF-2 Silicon insulated fixture wire with Silicon rubber insulation. Conductors shall have insulation with an operating temperature of 392°F (200° centigrade). Flexible steel conduit running to shaft conduit boxes shall be properly supported with approved straps.
3. Car and Hoistway Door Clutch Device: Provide each car with a car and hoistway door clutch device. The clutch shall be of a type and design that shall function with the hoistway slide door interlocks to be installed as hereinbefore specified above. The car doors shall be reinforced for mounting of the car door clutches. All hoistway door interlock release rollers shall be properly adjusted so that at no time will the car door clutch device strike the release roller and thus cause the elevator to stop between floors. Provide equipment manufactured by GAL.

C. Terminal Stopping Devices:

1. Provide upper and lower normal terminal stopping devices arranged to automatically stop the car from any speed attained in normal operation within the top and bottom over-travel, independent of the operating devices, final terminal stopping device and buffer devices.
2. Final terminal stopping devices shall be arranged to automatically stop the car and counterweight from speed specified within the top clearance and bottom over travel independent of the operation of the normal terminal stopping device with the buffers operative.
3. Provide top and bottom slowdown devices as required to accommodate the available top and bottom runbys.
4. Final terminal stopping devices shall be through bolted to the rails.
5. Opening on limit switches shall face down.

D. Car and Counterweight Guide Rails:

1. Provide new steel car and counterweight guide rails as manufactured by Severa Industries, aligned to a +/- 1/8" plumb for the full travel distance. Car rails shall be minimally 15 pounds per foot and counterweight rails shall be minimally 8 pounds per foot.

2. All fishplates and bracket fastenings shall be solidly tightened.
 3. Clean rails and paint all surfaces except the running surfaces with machine enamel, or as specified by rail manufacturer.
 4. New rails shall be fastened to hoistway walls using existing rail brackets and supplemented, where needed, with new brackets attached to the walls using anchor bolts and epoxy fastening system. All anchoring details shall be in accordance with details issued by the Structural Engineer. Elevator contractor is responsible for providing and installing all needed anchors as part of the base scope of work.
- E. Counterweights:
1. Provide and install new counterweight frame, sling and weights in accordance with the engineering drawings provided. The elevator shall be completely balanced, as per elevator machine manufacturer's requirements, upon the completion of all work. Counterweight guards shall be furnished. Any changes in the elevator cab weight, as a result of the cab modifications will be included. A counterweight Runby data plate shall permanently and securely provided in the pit, in the vicinity of the counterweight buffer, indicating the maximum designed counterweight runby. The data plate shall conform to A17.1 rule 2.16.3.3, except that the letters shall be not less than 25 mm (1 in.) in height. Provide counterweight to equal 50% counterbalance per machine manufacturer's instructions.
- F. Compensation:
1. Provide new encapsulated chain compensation (Whisper-Flex, or equal) including all manufacturer's recommended suspension and guidance assemblies.
- F. Spring Buffers:
1. Provide new spring buffers and all new pit mounting steel for the car and counterweights in their new locations suitably sized for the speed and capacity of the elevators.
 2. Provide #12 gauge stainless steel elevator identification plates. Identify each elevator with 1-inch high black paint-filled numbers. Permanently secure to all oil buffers and pit access doors.
 3. Load test and properly tag the equipment after testing.
 4. Properly align all buffers.
- G. Alarm Bells:
1. An electric signal bell shall be provided in or adjacent to the elevator hoistway and on the car top, as directed. This bell shall be connected to the alarm button in the car operating panel.
 - a. Provide 110 volt alarm bells. One weatherproof bell located in hoistway on the back wall and 8' - 0" from the pit floor; and one bell located underneath the platform. Hoistway bells shall be located so that they are accessible and not obscured by the counterweight frame.
 - b. Bells shall have a minimum of 90 db at 10 feet.
 - c. Bells shall be operated from buttons inside the car marked "ALARM".
 - d. Bells shall be operated by the opening of the car emergency switch.

- e. All required bells shall ring whenever either the alarm button inside the car is operated or when the car emergency stop switch is opened.

H. Pit Stop Switch, Pit Lighting Fixture & Switch:

- 1. Provide a watertight emergency stop switch for each elevator at the point of access to the pit. The switch shall have a metal guard to prevent accidental operation. Plastic or fiberglass material of box and faceplate shall not be permitted. When opened, the switch shall cause the electric power to be removed from the driving machine and brake. Final location shall be coordinated in the field.
- 2. The light fixtures shall be designed for exterior use with weather tight gaskets between the lenses and the back box.

I. Hoisting Wire Ropes:

- 1. The hoisting ropes shall be 8 x 19 pre-formed wire rope of traction steel, uncoated, fiber core. The hoisting ropes shall be especially designed for elevator service, compatible with the hoist machine. Drive belts or any suspension media other than wire ropes are not acceptable.
- 2. Attach a metal tag to one of the car wire rope fastenings, in compliance with the ASME Code.
- 3. Provide all deflector sheaves as needed for 2:1 roping, as detailed in the engineering drawings provided.
- 4. Hoist ropes shall be shackled by the following method:
 - a. Provide wedge clamp type shackles. The shackle rods shall be provided with threads and compression springs at the crosshead hitch and counterweight header, so that the shackle rod assemblies will permit the tension in all ropes to readily equalize. The installation shall be in accordance with manufacturer's directions.

J. Governor Wire Ropes:

- 1. During normal operation of each elevator, the governor rope shall run free and clear of the governor gripping jaws, rope guards and all other stationary parts.

K. Traveling Cables:

- 1. Traveling cables shall conform to the following:
 - a. All traveling cables shall be hung in self-locking loops (in an approved manner) on porcelain hanger and bracket or Kellems cable grips. The hanger and bracket shall be provided under the car platform and hoistway junction box and shall be so located as to make traveling cables inaccessible from any door opening. The hanger and bracket shall be through bolted to the cab floor.
 - b. Provide a junction box with terminal blocks at each end of the cable; properly terminate all conductor wires, including spare wires to provide complete circuit continuity. Provide all traveling cables to junction boxes with proper size connectors and properly secure to junction boxes.

- c. Locate car junction box on the underside of each platform as close to the safety plank as possible. Locate hoistway junction boxes at mid-shaft in "High Rise" buildings and at top of shaft in buildings 8 stories or less. All terminal blocks shall have indelible identification numbers for each terminal connection and shall match the car junction box, hoistway junction box and controllers. Provide junction box covers with a watertight neoprene gasket. Cover plate screws shall be of the "captive type", stainless steel spanner head.
- d. Separate alternating current and direct current conductors into individual travelers.
- e. The cable shall be flexible, Type "ETT", with a steel hanger wire or type "ETP" flat elevator traveling cable. The minimum size of the D.C. copper conductors shall be No. 18 AWG. The minimum size of the AC copper conductors shall be No. 14 AWG. Each cable shall have 20 percent spare conductor wires (minimum of six (6) wires) and shall be UL listed. Provide metal eyelet's, or other approved fasteners for each end of conductor wires.
- f. Provide beam padding that is waterproof, oil proof, fireproof, and similar to the material insulating the traveling cable. Beam pads shall be properly secured.
- g. Provide a traveling cable with integrated shielded and insulated wiring capable of providing signal to and from a camera device mounted in the elevator cab. Such cable shall be capable of operating with either a digital or analog camera system. Minimum required cabling standard for camera shall be two (2) CAT-6. If integrated CAT-6 type data cables cannot be provided inside of travelling cable, separate traveling cables may be provided by affixing the cables to the main elevator traveling cable. Elevator Contractor is responsible for terminating the CAT-6 cables on the first floor, directly adjacent to the elevator hoistway and shall coordinate with G.C. on specific location(s).

L. Landing Control System Device:

- 1. The landing control system for each elevator shall be as previously specified. The system shall also include the following:
 - a. A separately fused A.C. Electric Feed & Circuitry for Deactivating the System and shall be independent of the A.C. feed to cab enclosure (i.e. Blower, lights, alarm, etc.).
 - b. The fuse and fuse clip shall be mounted at the front of the controller in convenient location. The fuse shall be properly identified in a permanent legible manner and labeled, "Landing Control System Fuse".
 - c. All terminal blocks on controller, hoistway junction box and car junction box shall be labeled in a permanent manner to match.
 - d. Wiring from landing control system device to car junction box shall have a minimum of four (4) spare conductor wires and connected with liquid-tight connectors having nylon insulated throat.
 - e. Two additional tape guides (one for the top and one for the bottom).
 - f. Stainless Steel Tape / Steel Tape Coated with Polyester.
 - g. Magnets installed on non-perforated tape shall have their locations marked with a permanent ink type marker. The entire perimeter around each magnet shall be done in a color that contrasts with the tape.
 - h. Mount LCS device and tape on rear half portion of elevator away from hoistway doors.
 - i. LCS must utilize an absolute position-based system.

- j. Any system manufactured by, or using components made by, CEDES shall not be permitted.

M. Electric Wiring

1. It shall be the responsibility of the Elevator Contractor to furnish and install complete, necessary, insulated wiring to connect all parts of the equipment. Wiring, conduit, fittings and installation shall be in accordance with Division 16 and comply with the requirements of the National Electric Code. The Elevator Contractor will coordinate the electrical work that is the responsibility of the General Contractor.
2. Insulated wiring shall have a flame retarding and moisture resisting outer cover and shall run in concealed galvanized metal conduit, metallic tubing or wire ducts.
 - a. Flexible metal conduit shall be permitted for short runs only (less than 36").
3. Traveling cables between car and hoistway shall have a flame retarding and moisture resisting outer cover. They shall be flexible and suitably suspended to relieve strains in the individual conductors. The traveling cable shall also include:
 - a. A minimum of 10% spare conductors (ends to be left accessible to facilitate connections at a later date).
 - b. Wiring as required for the intercom/telephone and firemen's communication (as required per local code).
 - c. Six (6) pairs of 18 gauge shielded cables, (terminating on terminal strips in the controller and in the car operating station).

N. Pit Ladders:

1. The elevator contractor shall furnish and install new pit ladder(s), as needed. The ladder is to be located in such a way to not obstruct elevator operation. It shall allow convenient access from the lowest floor landings. The pit ladder shall extend 48-inches above the lowest landing and the nearest point of the ladder must be within 39-inches (measured horizontally) from the means to unlock the egress door of the pit. The pit ladder shall be secured so work persons can ascend and descend safely.
2. If necessary due to hoistway dimensional constraints, a retractable ladder shall be installed. The safety switch on the retractable ladder shall be wired in series with the pit stop switch circuit to prevent elevator operation when the ladder is in the extended position. All wiring and conduit shall be provided for a complete installation.

O. Car-Top Railing:

1. Provide a standard railing conforming to ASME A17.1 (2.10.2) on the outside perimeter of the car top on all sides where the distance from the edge of the car top to the hoistway wall exceeds 12 inches. The standard railing shall consist of a 42-inch-high top rail, intermediate rail, 4-inch toe board and posts.

2.13 CAR EQUIPMENT

A. Car Sling:

1. Provide new steel crosshead, stiles and safety plank, as designed and manufactured by HollisterWhitney.

B. Platform:

1. Provide new steel car platform with isolation frame, as manufactured by Hollister-Whitney:
 - i. Provide platform with two (2) layers of $\frac{3}{4}$ -in. thick marine grade plywood. Cover the underside of the car platform with sheet steel.
 - ii. Provide work lights and 110-volt GFIC receptacles at bottom of platform. Provide lights with wire guards and local switch.
2. Provide new stainless-steel thresholds having non-slip surface.
3. All passenger elevator platforms shall be provided with vibration isolation pads. The support frame shall carry rubber pads on which the platform shall rest without any connection to the steel frame.
4. Recess the passenger elevator platforms to receive finished flooring thickness as selected by the Architect.

C Car Safety:

1. Provide new car safety, as follows:
 - a. Flexible guide clamp safety shall be mounted on bottom members of car frame and operated by a speed governor located over the hoistway. The safety shall be arranged to stop the car whenever excessive descending speed is attained and means shall be provided to cut off power from the motor and apply the brake within Code requirements after the governor jaws grip the governor rope.
 - b. The car safety mechanism shall gradually and smoothly bring the car to a stop from governor tripping speed.
 - c. The operation of the governor on overspeed shall open a switch disconnecting the power from the elevator and shall trip the safety mechanism. The safety mechanism when tripped shall engage the rails with sufficient force to stop the car from governor tripping speed with full load in the car. Equalize the pressure of the two pairs of jaws on the rails.

D. Inspector's Operating Station:

1. An inspector's operating station shall be provided on top of the elevator car consisting of "Up" and "Down" constant pressure buttons, incandescent light with guard, 110 Volt G.F.I. work outlet and an emergency stop switch.
2. Provide an additional light with guard and G.F.I. work outlet mounted to the bottom of the car and located towards the front for easy access.
3. Provide audible and visual indicators to identify activation of Phase 1 Firemen's Service.

E. Car Door Operator:

1. Provide a D.C. motor driven linear door operator, install and connect in place, all complete as hereinafter specified. Provide MOVFE 2500-HL operators with 1/2 HP motors as manufactured by GAL.

- a. Each door operator control circuit must be complete with accelerating circuits and door motor overload protection (circuit breaker type) in the event of a stall condition. Control circuits shall be protected with properly sized fuses.
- b. Provide fuse clips, fuses, and overload protection for door operator units and all necessary additional terminals on control panel.
- c. Provide a steel support for the door operator. The support shall be designed so that no part of door operator rests directly on the cab or is supported by car door header.
- d. Provide one gate switch of the shielded type, connected in series to a gate contact to prevent operation of the elevator, unless the car door is in the closed position and both devices are activated. The gate contact shall be located in the door operator limit switch mechanism and be an integral part of this mechanism. Cover plate shall have "CAPTIVE" type tamperproof stainless-steel machine screws.
- e. Provide door operator motors, which shall be D.C., 1140 rpm developing 1/2 HP, and shall be rated for not more than 50°C. temperature rise when operating for a minimum of five minutes.
- f. Provide a recycling device for each car door which will cause car door to open and reclose at approximately 10 second intervals whenever car door is prevented from closing fully by any obstruction. A second timer shall reopen cab door, if for any reason car does not operate after cab door has fully closed.
- g. Car door operator shall be mechanically connected to car door. Friction drives will not be permitted.
- h. All control relays furnished under this Contract shall be designed to operate quietly and conform to NEMA Standards with respect to size, spacing, voltage, carrying capacity for the contact leads and coils. Control relays shall have fine silver overlay contacts.
- i. All gate switches shall be shielded type manufactured by G.A.L. Manufacturing Corp.
- j. Door operator shall be wired in such a manner that when the stop switch is applied and elevator is out of the landing zone, car doors shall not open and door operator shall remain energized. When the stop switch is activated in the landing zone, the cab door shall open and power will be removed by door open limit; and if the door is closed by hand, it shall reopen.
- k. The car entrance door shall be arranged so that it can be opened manually in case of emergency only when the car is within the landing zone.
- l. Provide wiring and conduit complete.
- m. Mount car door header angle in such a way so that if a car door of a down traveling elevator engages a fixed obstruction in the hoistway, the car canopy will not be damaged.
- n. Provide car door clutches and all related equipment.

F. Door Edge Protective Device:

- 1. Provided with a reopening device that will stop and reopen the car door and hoistway door automatically if the door becomes obstructed by an object or person. The device shall be capable of completing these operations without required contact for an obstruction passing through the opening. The device shall be a non-reflective through beam system with a minimum of forty sensors per edge. It shall have a maximum sensor spacing of 1.8" or less. It shall incorporate a microprocessor controlled fail-safe system.
 - a. It shall be capable of self-adjustment to compensate for varying environmental conditions.

G. LED Light Fixture with Convenience Outlet (Top and Bottom of Car):

1. Provide LED light fixtures with convenience outlet. Fixture to be mounted above each car roof and under each car platform and shall be wired to the lighting circuit. The light fixtures shall be designed for exterior use with weather tight gaskets between the lenses and the backboxes.

H. Car and Counterweight Guide Shoes:

1. Roller guide shoes. All guide shoes shall be securely fastened to the car and counterweight at the top and bottom of the stiles and/or frame. Provide new 6" rollers for the car and 3" rollers for the counterweight, as manufactured by ELSCO, as specified in the engineering drawings provided.

I. Emergency Exit Contacts:

1. All top emergency exits shall be provided with electric contacts to prevent the operation of the car and sound an alarm when the exit door is opened.

J. Emergency Lighting System:

1. Provide an emergency car lighting system as manufactured by EPCO, Flexi-lite or approved equal which shall provide LED emergency lighting using the normal elevator cab lighting and emergency power to the two (2) alarm bells as specified hereinafter.
2. The battery pack shall consist of a minimum of two (2) rechargeable batteries which shall be housed in an 18 USSG galvanized steel box with removable cover. The charger unit shall consist of a charger and inverter, which shall be housed in a separate 18 USSG galvanized steel box with removable cover. Provide a testing circuit and pilot light on the exterior of the charger unit box for testing the batteries, alarm bells and cab lights.
3. Upon interruption of normal power, the LED lights located in the main cab ceiling lighting fixture shall automatically illuminate within one (1) second and permit operation of the alarm bells, subject to the activation of the emergency alarm button. The battery pack shall be capable of providing a minimum of one-hour alarm operation (for three alarm bells working simultaneously) and four hours of continuous illumination. Charger shall be capable of restoring the batteries to full charge automatically within 16 hours after resumption of normal power.
4. The power pack and charger unit shall be located in the elevator machine room. Provide steel shelf/shelves of proper adequacy to support the power pack and charger unit and properly secure shelf/shelves to the machine room wall. Properly secure boxes to the steel shelf/shelves.
5. Amount and size of wires and method of connections to be in accordance with manufacturer's instructions.

2.14 FIXTURES

A. Car Operating Panel

1. Provide new applied type main and auxiliary car operating panels in each car compliance with applicable Code.

- a) Car Operating Panel: Provide new illuminating stainless steel vandal resistant pushbuttons or approved equal product, as selected by the Elevator Consultant. Faceplate shall have Satin stainless steel finish. Faceplate shall have continuous hinge with three-point latching.
- b) Provide a keyed stop switch and alarm bell button, door open and door close buttons. All floor pushbuttons shall be located no higher than 48- inches above the car floor, the keyed in car stop switch and alarm button shall be located no lower than 35-inches above finished floor height. Provide fire service cabinet, phase 2 switch, fire jewel, call cancel button, emergency light fixture, and voice annunciation grill and flush mounted speaker grill for the Hands-Free telephone.
- c) Braille/Arabic designations shall be identified by a minimum of 5/8-inch Arabic numeral, standard alphabet character, or standard symbol immediately to the left of the control button. Braille shall be located immediately below the numeral, character or symbol. Controls and emergency equipment shall be identified by raised symbols, including but not limited to, door open, door close, alarm bell, emergency stop and telephone. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation. Braille and Arabic designations shall be flush with inconspicuous mechanical mounting. The plaques shall have raised white characters on a black background. Provide cast Oval Surround style Braille plates as provided by Entrada, Vison Mark, SCS, or Equal.
- d) Provide a lockable service cabinet with concealed hinges. Cabinet door shall be flush with the faceplate with hairline joints.
 - 1. Cabinet shall contain the following toggle type controls:
 - (i) Light toggle switch
 - (ii) Three speed fan switch
 - (iii) Inspection keyed switch
 - (iv) Independent service toggle switch
 - (v) Emergency Light test button
 - (vi) Duplex 120 volt, A.C. GFCI convenience outlet.
 - (vii) Light switch for under car platform light.
- e) Engrave the following; the font shall be as directed by consultant and Code:
 - 1. Elevator Number. Minimum ½-inch high lettering.
 - 2. Elevator Capacity below Elevator Number.
 - 3. Building Name and Address.
 - 4. Fire Instruction signage.
 - 5. All Code Required Signage/Verbiage Shall be engraved on the new car operating panel.
- f) Floor Annunciator: Provide new digitized voice annunciator providing both male and female voices in a system capable of up to 5-minutes of speech. Provide concealed speaker. Messages shall include the following announcements:
 - 1. Floor number and direction of travel.
 - 2. Notice of doors closing prior to nudging operation.
 - 3. Notice of car on independent service.
 - 4. Emergency operation announcements:

5. Firefighter's Service, "Elevator returning to lobby."

- C. Car Position Indicator: Provide new segmented digital readout type with 2-inch high (minimum) indications at upper section of car operating panel. Indicator shall provide car position and direction of travel.
- D. Fixture Requirements: Provide new faceplates constructed of satin finish stainless steel, minimum thickness 1/8-inch. All edges shall be relieved. All hall fixtures to have concealed fasteners.
- E. Hall Pushbutton Station: Provide a single riser the duplex pair of elevators. Station shall include flush mounted faceplate fashioned of a material to match the finish of the existing hall fixtures. Extend faceplates as required to cover holes left by removal of existing fixture. Centerline of riser to be at 3feet-6-inches above the finished floor. Buttons shall have a minimum dimension of 3/4-inch, be raised 1/8-inch plus or minus 1/32-inch above the surrounding surface and have a detectable mechanical motion. A minimum clear space of 3/8-inch separation shall be provided. Button design shall be as selected by Elevator Consultant. Provide spanner type security fasteners. Each hall station shall have two-character segmented digital readout type with 1-inch high (minimum) indications incorporated into the hall fixture for each car and shall provide car position and direction of travel.
- F. Fire Key Switch, Fire Sign and In Case of Fire Sign:
 - 1. Locate the fire key switch with the hall pushbutton at the main return landing.
 - 2. Provide Code required pictograph Fire signs incorporated with the hall buttons, at all floors. Provide 3-position Code required Phase I key switch and operational instructions engraved minimum 1/8-inch high on the faceplate at the main return floor. In Case of Fire signs minimum 1/2-inch high shall be integral within the faceplate, at all floors. Faceplate edges shall be relieved. Finish shall match currently existing fixtures. No. 4 brushed finish. Backfill for engraving shall be epoxy filled. Integral signs shall be as follows:
 - a) Fire Signs. Minimum 1/2-inch high lettering
 - b) Fire Operational Instructions. Minimum 1/8-inch high lettering
 - 3. Provide spanner type security fasteners. Finish matching faceplate.
- G. Provide main and auxiliary car operating panels in each car.
- H. For Car PE-2, provide a roof level floor lockout key in the service cabinet of the car stations. Additionally, provide any other key lockouts as requested by the Owner adjacent to the pushbuttons or in the service cabinet and/or provide any and all provisions for a proximity access security control system.
- I. Provide emergency power jewel and keyswitch integrated into main lobby fixture.

2.15 CAR ENCLOSURE

- A. Provide new car shell consisting of 14-gauge steel for walls and 12-gauge steel for canopy. Individual panels shall not exceed 18" in width and shall be reinforced to provide for a flat, rigid surface. Apply spray on sound deadening on rear of shell. Sound deadening material shall be non-combustible and applied in accordance with manufacturer's recommendation. Provide a minimum 1/8" consistent thickness on all surfaces. Provide welded re-enforcement grounds (minimum 1/4" thick with weld nut) on the rear of the shell for handrail mounting. Provide all cutouts in the shell as required for

ventilation and fixture installation. New car shell shall maximize the available space under the crosshead to maximize car interior height.

2.16 CAB ALLOWANCE

Elevator Contractor shall include in their base bid the price for the Contractor's portion of the work as described in Part A of this subsection. The Elevator Contractor shall include in their price an allowance of \$30,000 for "Design Enhancements", and "Unforeseen Issues", if needed or requested by the Owner over and beyond what's been shown on the bidding documents. Any unused allowance shall be deducted from the contract via a deduct change order. In either event, the Elevator Contractor would still be responsible for the entire scope of work as indicated in Part A, including all required coordination to complete the installation of the cabs.

A. Elevator Contractor Scope of Work

1. Cab design shall be as per the basis of design drawings, specifications, and other details provided by the Architect or Engineer. The Elevator Contractor must liaise with the Owner, Architect, Engineer, or Consultant regarding selection of cab subcontractor. Elevator Contractor shall provide photographic quality renderings of cab interior selections for review by design team, and, if requested, a full-scale mock-up of a typical panel.
2. The Elevator Contractor must provide all information necessary to the Cab Company and Cab Designer to ensure that the equipment to be installed by the Contractor is accommodated in the design and manufacture of the cab.
3. Provide all labor and material needed to install the new cab supplied by the cab company.
4. Provide all necessary coordination to ensure efficient and timely installation of the cab.
5. Elevator Contractor is to include in the base bid price any work and cab-related equipment specified elsewhere in this specification, as well as the following:
 - a. Suitably designed Ventilation Fan including Emergency Power for the Fan
 - b. Car Door Hangers
 - c. Gate Switches
 - d. Emergency Exit Switches
 - e. All other Code related items
 - f. GFI outlet in the cab
 - g. One set of hanging cab wall pads per elevator. The pads shall be appropriate for protection of the cab interior if the elevator is used as a service car. Each set must contain all accessories required for building personnel to hang pads.
6. Elevator Contractor is responsible to include in their base bid all permits, tests, fees, and all other costs required by the authorities having jurisdiction to complete the installation according to Code. It is the responsibility of the Contractor to ensure that all alterations not increase the original building design reactions by more than 5%.
7. A balanced load test will be conducted when all work including door equipment, wiring, cab, etc. has been completed.
8. Elevator Contractor shall statically balance the cab after the installation is completed.

B. Cab Company Scope of Work:

1. The elevator car per the basis-of-design shall include, but is not limited to, ventilation, lighting, doors, base wainscoting, wall coverings, handrails, entrance columns, transoms as required, all necessary cutouts and other cab associated appurtenances that may be designed.
2. The cost of the new car shell shall be provided as a separate line item price.

2.17 INTERCOM

- A. A new multi-path two-way communications system shall be provided. This system shall be comprised of a microprocessor based central control unit, a self-contained standby power supply, master communication station at each elevator machine room, the building's management office and a handsfree communication station inside each elevator car.
- B. The central control unit shall be fully enclosed by a metal cabinet and wall mounted inside a centrally located machine room so as to be easily accessible for maintenance.
- C. Accompanying the central control unit shall be a self-contained emergency standby power supply consisting of a nickel-cadmium or gel-cell battery pack with self-regulating battery charger. Whenever a disruption in normal power supply occurs, the standby power supply shall be automatically activated and shall be capable of sustaining communications for a continuous period of time not less than four (4) hours.
- D. Each master communications station shall be equipped with a loudspeaker, microphone, volume control, annunciator, function/car/master station selector buttons and indicator lights. Those master stations which are located inside the elevator machine rooms shall be surface-mounted and may use handsets in lieu of hands-free operation, otherwise, the remaining master stations provided shall be flush mounted with hands free operation only. In addition to being arranged so that by pressing the appropriate selector button, communications can be initiated with other master stations, individual elevator cars, or entire elevator groups, each master station shall be configured so that responding to a registered call for assistance from any given elevator shall cause an indicator light designated "EMERGENCY CALL ACKNOWLEDGED" in the affected car operating station to become illuminated and to remain so until canceled.
- E. Each elevator car shall be provided with a 4" loudspeaker and a microphone with pre-amplifier mounted behind perforations in the car operating station faceplate. Microphone sensitivity and loudspeaker volume shall be individually adjustable. Activation of the communications system shall be accomplished from inside the elevator by pressing a button in the car operating station designated "EMERGENCY CALL". This action shall cause a corresponding indicator light on each master station to become illuminated and for an annunciator therein to sound. A master station may respond to any such call for assistance by pressing the illuminated button.
- F. ADA Autodial Telephone Features:
 1. The system shall provide the facilities to connect elevator car stations to the telephone network should the car alarm fail to be answered by a master after a preset time clock (after hours).
 2. The car alarm button, when pressed, shall automatically initiate a voice announcement in the car, "emergency call has been activated" and the car station LED shall flash every 3 seconds. If a master station fails to answer a call after a preset time, the system shall automatically dial out. The car passenger shall hear a voice announcement "your call will be redirected". When activated, the system shall automatically dial the first programmed telephone number. If that number is busy, the system shall continue to call each programmed number until answered. The system shall allow for up to five (5) outgoing numbers.

3. When the remote telephone is answered, the operator shall hear a voice message, “press the “star” (*) button to answer the call”. When answered, a voice message will be heard indicating building name, location and car number, plus instructions.
4. When the “star” (*) button is pressed, the car station (LED) shall turn on steady and the passenger shall communicate hands free.
5. If additional car alarms occur while a call is in progress, a voice announcement indicating another car alarm shall be heard at the remote telephone.
6. Calls from a remote telephone to any elevator car station shall be completed by dialing the system telephone number, entering a pre-programmed PIN number followed by a station number.

2.18 FIRE COMMAND CENTER

Provide any and all required elevator annunciation and control features and two-way communication as required by relevant Code requirements within the existing or new fire command room or fire command station in the building. Elevator contractor shall be responsible for all wiring necessary between elevator control equipment and remote panels.

A new enunciator panel, along with any Code required control features, shall be located in the building fire control room, or adjacent to lobby fire command panel. Additionally, a two-way communication system between the fire command station and elevators shall be installed which shall enable emergency personnel within the fire command room to establish two-way voice communication to each car individually. Two-way voice communications shall be established without any intentional delay and shall not require intervention by a person within the car. Two-way voice communications, once established, shall be disconnected only when emergency personnel outside the car terminate the call.

2.19 REMOTE ELEVATOR MONITORING AND CONTROL

- A. Elevator Contractor shall provide and install LiftNet as manufactured by Integrated Display Systems or equal to provide remote monitoring and control of all elevators being modernized under this contract. Main operating console shall be at the lobby desk, with additional remote monitoring and control ability by remote device. Supplying of any additional remote devices is not included in the project scope.
- B. All hardware, software, wiring, programming, provisioning, integration, commissioning and user training, including for any Owner supplied remote devices, shall be provided by the Elevator Contractor.
- C. System shall allow car calls to be placed at lobby desk or other remote location to support transient use of the elevators such as visitors, delivery personnel, etc.
- D. Internet access shall be provided by Owner. Elevator contractor shall run cabling, as needed, from internet source to the various hardware required for the LiftNet system.

2.20 EMERGENCY GENERATOR / STANDBY POWER OPERATION

- A. Provide emergency generator / standby power operation features in conformance with A17.1 §2.27.2. Sequential lowering and selective operation of one or multiple cars within each bank shall be field programmable, and selectable by keyswitch or keypad by the building.

2.21 AUTOMATIC RESCUE OPERATION

- A. The automatic rescue operation function consists of the automatic rescue of the elevator passengers following a power outage in the event the generator does not immediately active and/or for the second floor of standby power sequential lowering. This shall require that a battery powered inverter sense the loss of power and provide three phase back-up power to the elevator control system.
- B. When back-up power has been provided, the elevator car should move at rescue speed to the next available floor. The car will be rescued in the direction of imbalance or if balanced, in the downward direction. When the car reaches the next available landing, it shall stop. When it is at the desired floor, it will perform a normal door opening, then closing cycle. The door open button inside the cab shall remain active as long as backup power is provided. In rescue mode, the elevator shall not respond to any hall or car calls. If building power recovers prior to the rescue cycle being completed, the rescue cycle shall complete before the system is restored to normal operation. An auxiliary contact in the main elevator disconnect must be provided so as to prevent activation of the rescue feature when elevator system power has been disconnected for maintenance purposes. The battery powered inverter must provide a standard lock-out / tag-out of its internal battery energy source, pursuant to OSHA and local Code requirements.
- C. Traction Elevator Battery Rescue System
 - 1. The Elevator Contractor shall furnish and install a Traction Elevator automatic evacuation device (Reynolds & Reynolds Traction Powervator or equal). The purpose of the device is to prevent entrapment in the event of a power failure. The battery rescue system shall work with the elevator controller to move the elevator car to the next available landing in the overhauling direction and then open the car doors when power is lost. The battery rescue unit shall produce three phase power while in battery back-up mode so that standard equipment can be used. The battery rescue unit shall provide a standard lock-out / tag-out switch for the internal battery energy source.
 - 2. The Elevator Contractor shall furnish an auxiliary contact in the main disconnect for wiring to the battery rescue unit. The state of the contact should match the state of the disconnect (contact is open when disconnect is open).

2.22 POWER ISOLATION TRANSFORMERS

The elevator contractor is responsible for providing and installing power isolation transformers dedicated to the elevator equipment. The power isolation transformers shall be designed in accordance with applicable portions of the following standards:

- 1. American National Standards Institute (ANSI)
 - 2. Institute of Electrical and Electronic Engineers (IEEE)
 - 3. National Electric Code (NEC)
 - 4. National Fire Protection Association (NFPA Article 70)
 - 5. FCC Article 15, Section J, Class A
 - 6. ANSI C62.41 Category B-3
 - 7. UL Listed to Standard 1012
 - 8. C-UL listed to CSA Standard C22.2, No. 107.1-01
- A. Manufacturer Requirements: The manufacturer shall be ISO 9001:2008 “Quality Assurance Certified” and shall upon request furnish certification documents. The manufacturer shall be a United States based manufacturer with 10 years experience or greater in design and fabrication of three phase power conditioning and line voltage regulation equipment. The equipment shall be the Power Processor, Series

700F Front Access Power Conditioning Voltage Regulator, manufactured by Controlled Power Company, or approved equal.

- B. Product Data: The manufacturer shall supply documentation for the installation of the system, including wiring diagrams and cabinet outlines showing dimensions, weights, BTUs, input/output connection locations and required clearances. Factory test results shall be provided to show compliance with the requirements. The manufacturer shall include test documentation which demonstrates compliance with the specified requirements at the continuous rated kVA load. The supplier shall furnish equipment submittal copies. Submittals shall be specific for the equipment furnished and shall include as-built information.

PART 3 - EXECUTION

3.01 DESIGN REQUIREMENTS

A. Electrical Design and Wiring:

1. All wiring shall be Underwriters approved stranded type in accordance with the latest International Electrical Code. Minimum size permitted shall be No. 18 AWG. These wires shall be installed in conduit with steel outlet boxes. All electrical boxes (Hall pushbutton boxes, Car Stations, Terminal boxes, pull boxes, etc.) and other similar items shall be of approved construction, hot-dip galvanized or electroplated with Zinc Dichromate. All electrical boxes exceeding 150 cubic inches shall be supported independently of the conduits.
2. All raceway shall be galvanized EMT and/or trough.
3. Furnish all materials and completely wire all parts of the electrical equipment of the elevator, including electrical devices on hatch doors.
4. Switches, relays, etc. on controller, starter, and signal panels and similar items on other parts of the equipment, shall be the latest model. Any parts showing wear or damage during the guarantee period to the extent that abnormal maintenance is required or indicated shall be replaced by the Contractor as part of his Contract obligations.
5. Contacts in elevator motor circuits, which are intended to be opened by the governors or other safety devices, shall be copper to carbon, or other approved non-fusing type. Relays shall be designed for visual inspection and easy replacement of contacts with minimal disassembly, and keyed parts for ease in reassembly. They shall be equipped with suitable blowout coils, vanes, barriers, etc., to prevent undue arcing and heating. Current ratings for silver-to-silver contacts on relays used in motor circuit applications shall be at least three times the current draw of the running ratings of the motor. Contacts on control and signal relays and switches shall generally be of silver alloy.
6. Conduits shall be run and connected to suitable approved connection boxes at all outlets, apparatus and panels.
7. The conduits shall be of such size that the wires or cables can be readily installed and replaced, if necessary. No conduit or raceway shall be less than 3/4 inch trade size, except that for small devices such as door switches, interlocks, etc. for which, 1/2 inch conduit may be used. The total overall cross-sectional area of the wires contained in any conduit shall not exceed 40 percent of the internal area of the conduit. Approved strain boxes shall be installed for all vertical runs in accordance with Code.
8. Conduits shall be neatly and systematically run. All exposed conduit and boxes shall be supported by straps (wire or plastic ties are not acceptable), hangers, or clamps to the structural

steel, reinforced concrete, or other approved supports. Riser conduits and/or trough in hoistway shall be supported at each floor level.

9. Connections of all wires larger than No. 8 AWG shall be made with copper connectors except for Mainline Disconnect switches where UL approved aluminum lugs/connectors may be used. Metal eyelets pressed around the strands shall be used for all connections of smaller stranded conductors.
10. All terminals shall be tagged or identified in a permanent legible manner to match car and hoistway junction boxes and controllers.
11. In all machine rooms, hoistways, etc., install the equipment to allow easy access for maintenance.
12. All screws used for terminal connections of all wiring (machine room, hoistway and pit) shall be of proper size and type as approved.
13. All connections of wires to controller and motor lead terminals from external circuits shall be made with "copper" soldered lugs or "copper" eyelet compression type lugs.
14. All elevator lights (top and bottom of car and pit) and A.C. alarm bells shall be fused and located in the elevator machine room in a separate approved box, or on the controller. The fuses shall be identified (permanent label) "lights and alarm bells".
15. All receptacles in elevator machine room, pits, and car shall be Ground-Fault Circuit-Interrupter type (GFCI).
16. All grounding shall be done in accordance with the latest International Electrical Code as adopted by local jurisdiction. Grounding of machine to bedplate is not permitted.

B. Mechanical Design Requirements:

1. All bearings, pivots, guides, guide shoes, gearing, door hanger sheaves, door hanger tracks, and elements subject to friction or rolling wear shall be accurately finished and arranged for convenient lubrication. Provide means for flushing and draining the larger bearings and gear cases. All oiling holes shall have dustproof, self-closing caps.
2. All bearings shall be sized for heavy-duty commercial elevator usage.
3. Ball and roller bearings shall be fully enclosed. Loading, lubrication, support and all other conditions of use shall be in accordance with the recommendations of the bearing manufacturer. Bearings for motors shall be of the open (non-sealed) type with approved fittings for grease lubrication or approved sealed bearings. The bearings shall not be part of the end bell housing but shall be separate for easy removal and replacement.
4. All bolts used to connect moving parts, bolts carrying hoisting stresses, and all other bolts except guide rail bolts, subject to vibration or shock, shall be designed to prevent loosening of the nuts and bolts. Bolts transmitting shearing stresses between machine parts shall have tight body fit in drilled and reamed holes. All bolts subject to vibration shall be provided with split ring lock washers. All guide rail vane brackets shall be through bolted and provided with proper bolts, nuts and lock washers.

5. All parts shall be manufactured to high precision standards so that wearing parts will be readily interchangeable with stock repair parts with a minimum of field fittings.
6. All bearing and sliding surfaces of shafts, pins, bearings, bushings, guides, etc., shall be smoothly and accurately finished. During the maintenance period, all bearings shall be regularly checked for any tendency to run hot and any defects corrected.
7. Protection for moving parts: Belts, pulleys, chains, gears, couplings, projecting set screws, keys, and other rotating parts located so that any person can come in close proximity thereto, shall be fully enclosed or properly guarded.
8. All exposed hardware on public hall side shall be of tamperproof design constructed of stainless steel with No. 4 satin finish.
9. Tamperproof stainless steel spanner head screws shall be used for all exposed locations, for all landing button panels, certificate frames, interlocks and car lighting fixtures. Supply one Spanner head wrench for each size screw. Tamperproof screws shall be of the "captive type". Self-tapping screws or self-tapping machine screws shall not be permitted.
10. All locks and key operated switches shall be five (5) pin tumbler type. All keys where permitted shall be of the captive type. Furnish two (2) keys for each lock and/or switch for each elevator. All locks shall be mastered to one master key. Furnish four (4) master keys. Firemen's Service keys shall meet Local Code requirements.

3.02 WORKMANSHIP AND INSTALLATION

A. Inspection and Tests:

2. Failure to keep the shutdown time within the specified limit may result in cancellation of the contract by the Owner. Any delays in the approved schedule shall be brought immediately to the attention of the Owner, in writing, along with the proposed revised schedule.
2. Arrange and schedule final inspection of all work and notify the Elevator Consultant in writing that the work has been thoroughly checked and is ready for final inspection. Testing shall be performed under the direction of authorized Inspectors.
3. When the elevator work is completed, conduct operating tests to the satisfaction of the Owner and the appropriate City Agencies having jurisdiction. The inspection procedure outlined in the ASME A17.2 for the Inspection of Elevators, Escalators and Moving Walks, Inspector's Manual will form a part of the final inspection.
4. Furnish all test instruments, labor and materials, required at the time of final inspection. They shall include, but not necessarily be limited to, standard 500 pound test weights.
5. Certificates: Before final acceptance, furnish all certificates required by all Public Agencies having jurisdiction. All certificates shall be turned over to the Owner with copies to the Elevator Consultant.
6. If requested by the Elevator Consultant, the following tests shall be made by the Field Engineer or Adjuster of the Elevator Company in the company of the Elevator Consultant or the Elevator Consultant's Representative, at the time of final inspection:

- a. FULL LOAD-RUN TEST: Shall be for one-hour continuous run, with full specified rated load in the car. During the test run, the car shall be stopped at all floors in both directions of travel for a standing period of ten (10) seconds per floor.
 - b. SPEED TEST: The actual speed of the elevator car shall be determined in both directions of travel and with full contract load and no load in the elevator car. Speed tests shall be made before and also after the full load run test. Speed shall be determined by applying a tachometer to the car hoisting cables. The actual measured speed of elevator car with full load in "UP" direction shall be within 5 percent of specified rated speed.
 - c. TEMPERATURE RISE TEST: The temperature rise of the hoisting motor shall be determined during the full load test run. Temperatures shall be measured by the use of thermometer on top of windings and shielded by cotton waste or putty. Temperature rise of the equipment shall not exceed the temperature rise for the class of insulation used in the motor tests, shall be started only when all parts of the equipment are within 5° centigrade of the ambient temperature at time of starting test.
 - d. CAR STOPPING ACCURACY: Elevator stopping shall be tested for accuracy of landing within 1/2 inch plus or minus (from finished floor) at all floors with no load in car, balanced load in car and full load, in both directions of travel. Accuracy of floor landing shall be determined both before and after the full load run test.
 - e. INSULATION RESISTANCE TEST: The complete wiring systems of elevator shall be free from short circuits and grounds, and the insulation resistance of systems determined by use of a "Megger", shall be not less than one megohm. (Solid State Controllers are excluded from this test).
 - f. CAR SAFETY AND GOVERNOR TESTS: The car safety and governor shall be tested as outlined in Section 1003 ASME A17.1 Code.
 - g. STATIC CAR BALANCING: The car shall be statically balanced in its sling so that the total lateral force on top car guide assemblies shall be a maximum of forty pounds (40 lbs.) for all positions of the car in the shaftway.
 - h. DYNAMIC SYSTEM BALANCING: Car and counterweight suspension system shall be dynamically balanced so that total weight of counterweight and its frame shall be equal to total weight of unloaded car and its sling, plus forty percent (40%) of contract load with an accuracy of plus or minus fifty pounds (50 lbs).
 - i. ELECTRICAL PROTECTIVE DEVICES: All electrical protective devices in the wiring system (Fuses, Overloads, etc.) shall be tested for proper operation.
 - j. The FIREMAN'S SERVICE SYSTEM shall be tested for proper operation.
 - k. PASSENGER OVERLOAD TEST: The car shall be tested with 125% of rated load and shall conform to all passenger overload regulations in ASME A17.1. In addition, the car shall be subjected to the Acceptance and 5 Year Tests for Drive Machine Brakes in ASME A17.2.1, Inspectors' Manual for Electric Elevators.
 - l. BUFFER TEST: Car and Counterweight Oil Buffers shall be tested in accordance with the requirements for Acceptance and 5 Year Tests for Oil Buffers, as described in ASME A17.2.1, Inspectors' Manual for Electric Elevators.
- B. Cleaning, Adjustment, and Final Acceptance:
1. At the end of each day, remove and legally dispose of all refuse and dirt resulting from work of this contract. All work areas shall be left "broom clean". After completion of work, thoroughly clean and adjust elevators so that they are in proper operating condition. Remove from site, all materials which are not required as part of finished work.
- C. Safety of Persons and Property:

1. Plan the work and execute in an organized and orderly manner. Danger and warning signs shall be prominently displayed and exercise every precaution to protect pedestrians.
2. Erect construction barriers around the work area. Keep dust and noise at a minimum. Barricades shall not have protruding nails or sharp jagged edges.
3. If there are two (2) or more cars in a common shaft, furnish and install temporary wire screening between elevator hoistways. The screening shall be full depth and height of the elevator hoistways and shall be fastened to wood blocking which, in turn, is securely fastened to the Building structure. Wire screening shall be 1/2" x 1/2" #19 galvanized wire mesh. All wire screening, wood blocking, protruding nails, etc. shall be removed after completion of work. Damaged concrete shall be repaired.

D. Protection:

1. Protect all items against dirt and damage. The Elevator Contractor shall be held fully responsible for all damage until final acceptance. Any equipment or property of the Owner damaged by this Contractor or his employees shall be restored to its original condition or replaced without cost to the Owner.

E. Elevator Contractor's Shop:

1. The successful bidder, shall, before being awarded this Contract, prove to the Consultant to his satisfaction that he maintains or has access to an adequate shop within a reasonable distance of the project, carry in stock, all spare parts furnished under this Contract which are subject to periodic failure.

F. Storage:

1. The Owner will designate a suitable area where the Contractor may store equipment until the work is completed. All equipment shall be stored at the sole risk of the Contractor. The Elevator Contractor is responsible for carrying the cost of offsite storage for all material until the General Contractor is ready to receive on the site.
3. The Elevator Contractor will coordinate on-site storage with the General Contractor and then provide his own lock and key. The assigned storage area shall be left clear and unencumbered of material or debris and shall be left in a broom-clean condition at the completion of the work. An approved Type "C" fire extinguisher shall be provided and installed on a wall, for each storage area assigned to the Contractor.

G. Access to Elevator Equipment:

1. The Elevator Contractor shall provide keys for access to all the elevator equipment.

H. Punch List Items:

1. All punch list items shall be completed within thirty (30) consecutive calendar days of receipt of Punch List items.

3.03 SHAFT CLEANING

- A. The entire shaft, from the pit floor to the underside of the machine room slab, shall be thoroughly cleaned of all debris, lint, grease, dust, etc.

3.04 HOISTWAY PROJECTIONS

- A. Elevator contractor shall provide seventy-five degree (75°) metal cant strips on all ledge projections in excess of two inches of all elevator hoistways on all floors.

3.05 HOISTWAY PATCHING

- A. Upon mobilizing onto the site, the Elevator Contractor shall perform a detailed survey of the elevator hoistways and identify and document any needed repairs to hoistway walls and/or around elevator entrances. A full report shall be provided to the Owner within one week of mobilization. Any needed hoistway wall repairs shall be by Owner.
- B. Elevator Contractor shall provide fire caulking around any holes or penetrations as may be needed.

3.06 PAINTING

- A. Summary of Work Included:
 - 1. Clean all ironwork and paint with one shop coat of primer coating. Do not paint galvanized steel with enamel coating. After erection, touch up bare spots on iron work. Apply final field coat of paint similar to shop coat.
 - 2. Touch up any wall and ceiling surfaces damaged by work of this project with at least two coats of paint to match finish.
 - 3. Paint metal with one coat of an oil-based rust inhibitive primer and one coat of an enamel alkyd paint.
- B. Samples:
 - 1. Before placing orders for materials, submit the name or names of manufacturers for approval.
 - 2. Upon approval of the manufacturer, submit samples of all materials. Approval of the samples will be based upon manufacturers certifying that the products proposed are the standard best or top brands produced by them and are readily obtainable as such in "over the counter" sales. Do not proceed until all samples are approved.
 - 3. All materials shall be further subject to field tests from time to time as the work progresses.
- C. General Painting Requirements
 - 1. Delivery: Deliver all material in their original containers with seals unbroken. Order in advance, in large enough quantities and in ample time to facilitate the work.
 - 2. Storage of Materials: Store materials where directed. Keep storage space clean and accessible at all times. Remove paint or oil-soaked rags, waste, etc. from the premises at the close of each day's work. Absolutely no flammable or combustible materials are to be stored on the Owner's property.
 - 3. Protection: Provide suitable coverings to protect all work and all adjacent surfaces and objects.
 - 4. Cleaning Up: Upon completion of the work, remove all surplus materials, empty containers, rags, and other debris from the premises. Touch up finished work where directed. Remove daubs or spatters of paint from all surfaces.

D. Workmanship:

1. Carefully prepare all surfaces to be painted. Do not apply paint until the surfaces are absolutely dry and clean.
2. Shop or priming coats shall be put in good condition; touch up any bare or abraded spots.
3. Wire brush all metal surfaces. Remove all abrasions in the prime coat, rust, scale, etc. Clean and touch up damaged areas to match prime coat. Clean metal work with solvent to remove all dirt and grease.
4. Clean concrete and masonry surfaces to be painted of all grit, dirt and loose material. Patch scratches, cracks, holes and similar defects in wall and ceiling surfaces to provide a smooth flush surface. Patched portions shall be given a coat of primer sealer in addition to all other specified coats.
5. Allow each coat of paint to dry before subsequent coat is applied. The finished work shall be free from runs or sags, defective brushing or brush marks, and clogging of lines and angles. Exposed surfaces shall be left clean.

END OF SECTION

SECTION 144000 - COMPREHENSIVE ELEVATOR MAINTENANCE AND REPAIR

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
- B. Examine all other Sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by, work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 RELATED DOCUMENTS

- A. Except as modified by governing Codes and by this Division, the work shall comply with provisions of the latest editions of the following, and in the event of conflict between these standards, the Elevator Consultant's determination shall be final:
 - 1. Safety Code for Elevators and Escalators, ASME A17.1, and all supplements
 - 2. NFPA Life Safety Code
 - 3. Title III of the Americans with Disabilities Act (ADAAG)
 - 4. International Building Code
 - 5. NJAC 5:23-12 Elevator Safety Subcode
 - 6. UCC-F150 Elevator Subcode Technical Section
 - 7. Ewing Township, NJ, Regulations and Ordinances
 - 8. Guide for Inspections of Elevators, Escalators, and Moving Walks, ASME A17.2, latest adopted edition
 - 9. Safety Code for Existing Elevators and Escalators, ASME A17.3
 - 10. Guide for emergency evacuation of passengers from elevators, ASME A17.4
 - 11. NFPA Life Safety Code, Latest Edition
 - 12. National Electrical Code (ANSI/NFPA 70)
 - 13. Title III of the Americans with Disabilities Act (ADAAG)\
 - 14. ASME A17.5/CSA-B44.1 - Elevator and escalator electrical equipment.
 - 15. NEMA: National Electrical Manufacturers Association.
 - 16. NFPA: National Fire Protection Association
 - 17. OSHA: Occupational Safety & Health Administration.
 - 18. UL: Underwriter Laboratories.
 - 19. IEEE: Institute of Electronic & Electrical Engineers.
 - 20. AIA: American Institute of Architects.
 - 21. ADA: Americans with Disabilities Act.

The Elevator Contractor shall advise the Owner of pending code changes that could be applicable to this property.

1.3 SUMMARY

- A. This Section details the requirements of the full comprehensive maintenance and repair contract to service, repair, and maintain all elevator equipment identified in this specification and other elevator related equipment if not listed, accompanying accessories, and related equipment, and thereof, in a manner that ensures all requirements, procedures, tests, inspections, filing procedures and recording documentation as referenced, mandated or implied herein are all inclusive.
- B. Elevator Contractor shall Furnish full protective maintenance on the equipment described herein for a period of five (5) years from the date of substantial completion of the entire installation. Maintenance coverage shall include, but is not limited to, preventive services and emergency callback services. The costs of any and all maintenance and service specified herein shall be separately billable to the Owner on a monthly basis. All service requests and callbacks, other than for vandalism, misuse or acts of god, shall be covered without additional billing.
- C. Elevator Contractor shall service and maintain, in full accordance with the terms of these specifications, the building elevators at the locations specified herein. The scope of work shall include, but not be limited to:
 - 1. Keeping the elevators in safe operating condition 24 hours per day, 7 days per week, including Holidays.
 - 2. Providing maintenance and replacement of parts and equipment as hereinafter specified.
 - 3. Maintaining and submitting to the Owner a monthly elevator service report. This report shall be included with monthly or quarterly invoice.
Note: invoice will not be processed for payment without monthly service report.
 - 4. Providing inspection and testing service for any insurance company, city, state or government agencies, which have jurisdiction over the elevators.
- D. The Owner's entire vertical transportation systems located at:

TCNJ Forcina Hall
2000 Pennington Road
Ewing Township, NJ 08618

shall be maintained as described in this Specification. Trained employees of the Elevator Contractor shall use all reasonable care to keep the systems in proper adjustment and in safe operating condition, in accordance with the applicable codes, ordinances, and regulations. The requirements are specified in their singular with the understanding that all provisions shall be provide for all vertical transportation systems indicated unless otherwise specified.

E. Equipment:

The Elevator Contractor shall provide full comprehensive elevator maintenance as described herein on the following equipment:

Elevator PE-2: 5,000 LB. Capacity, OHT MRL, 150 fpm, 4-Stop

F. Exceptions

- 1. The work to be performed by the said Contractor under these specifications shall be done to and for each elevator and everything which was furnished with each of them.
- 2. The Elevator Contractor shall be required to restore to satisfactory operating condition any item of the elevator or parts thereof damaged by negligence, abuse, or misuse thereby caused by persons other than the Elevator Contractor, his agents, or employees as further defined herein.

1.4 DEFINITIONS

- A. Words in the singular shall mean the plural whenever applicable or as to the context so indicates.
- B. The specifications are written in the singular with the understanding identical work, materials and equipment shall be provided for all elevators identified unless otherwise specified.
- C. All terms in these specifications have the definition given in the latest edition of the American Society of Mechanical Engineers, ASME A. 17.1, Safety Code for Elevators and Escalators.
- D. Abbreviations for associations, institutions, societies, reference documents and/or governing agencies, which may appear in the Contract Document, shall mean the following:

AIA	American Institute of Architects
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
BOCA	Building Officials and Code Administrators International, Inc.
A.H.J.	Authority Having Jurisdiction
G.A.	Governing Agency
NEC	National Electrical Code
OSHA	Occupational Safety and Health Administration

- E. Owner shall mean either the owner of the building and/or their managing agent.

1.5 FIRM AND PERSONNEL QUALIFICATIONS

- A. If required by law, Elevator Contractor certifies that it is licensed in the state, municipality and/or local jurisdiction where the property is located to perform the elevator services pursuant to this specification, and that license will be maintained current and valid for the term of the Elevator Maintenance Contract.
- B. Work shall be performed only by Licensed Qualified Technicians and Mechanics directly employed and supervised by the Contractor, who are experienced and skilled in maintaining vertical transportation units similar to be maintained under this Work and shall not be assigned or transferred to any agent or subcontractor without the express written consent of the Owner.

1.6 NOTICE BY OWNER TO REPAIR OR REPLACE

- A. The Elevator Contractor shall comply with all written recommendations of the governing authority or independent inspectors, consultants and insurance carriers employed by the Owner. However, Elevator Contractor is not required under this Contract to install new attachments different from those now constituting the equipment, as recommended or directed by insurance companies, Government Authorities, or otherwise.

1.7 SUBSEQUENT EQUIPMENT MODERNIZATION, ALTERATIONS, AND UPGRADES

- A. Full comprehensive service and repair coverage shall be included under the terms of this agreement when equipment and/or component systems represented herein are modified or upgraded.
- B. Such changes in equipment necessitating continuing full maintenance coverage may be initiated by the Owner under a separate voluntary extra cost upgrading agreement with or without this Elevator Contractor's permission or direct authorization and involvement before the work is performed.
- C. Modernized or otherwise upgraded systems and parts thereof shall automatically be included under the terms of this full comprehensive agreement whether such components are specifically identified or not without extra cost to the Owner.
- D. Owner shall have the option of severing the elevator comprehensive maintenance and repair service contract with no penalty at any time if any of the units covered under the agreement undergo modernization, whether with the service provider or a different company.

1.8 PAYMENT FOR MAINTENANCE SERVICE

- A. This Section supplements the requirements of the General Conditions and is specific to this the Maintenance and Service Repair of the Work.
- B. As relevant to the scope of work defined for each elevator, all interim and contract maintenance, as specified herein, shall be provided at no additional cost to the Owner from the start of the building construction project through date of final completion of all work under the Contract.
- C. The Owner will only pay the Elevator Contractor for extraordinary work and/or other work not covered under the full maintenance contract as approved by Owner, such as elective upgrading of components and accessories, modernization of equipment and invoiced separately upon completion and acceptance of the work or other service performed. Such invoicing shall include mechanic's time ticket with description of work, hours spent, materials, date, and other pertinent information.
- D. The owner, in no instance, will process and/or pay an invoice unless it includes a clear, typed comprehensive monthly report of all activities at each site and car. It is incumbent on the service contractor to clearly itemize all charges by building name and address, and specific elevator. Elevators shall be identified by numbers defined above.
- E. Elevator Contractor shall submit with invoices all state non-compliance reports and subsequent work slips for corrective actions to comply with state elevator inspections.

1.9 RECORD KEEPING AND REPORTS

- A. Record Drawings: The Elevator Contractor shall provide and maintain two (2) complete sets of updated electrical wiring Diagrams and control schematic drawing on file within the building and they are to become the Property of the Owner for each group and/or individual system.
- B. Permanent Records: A complete permanent record of inspections, maintenance, lubrication and call-back service shall be kept in the machine room or other designated location at the site of work. These records are to available to Owner designee at all times. The records shall indicate the reason the mechanic was in the building, arrival and departure time, the work performed, etc., and these records will be the property of the Owner. Record keeping requirements shall include Elevator Contractor assigned maintenance personnel and scheduled preventive maintenance procedures, inspections, tests and third party assisted examinations. The Elevator Contractor shall be required to maintain and submit to the Owner's elevator service records, permits, certificates, inspection reports, etc. It shall be the Elevator Contractor's responsibility to provide sufficient documentation to allow the Owner to adequately monitor the performance of this contract.
- C. Annually the records specified in paragraph B. above shall be submitted to the Owner and become the property of the Owner. If electronic tracking is utilized to comply with paragraph B of this section, a complete printout will be submitted to the Owner for their records.
- D. Reports: The Elevator Contractor shall, at any time during the term of this Contract, upon written request of the Owner, render a report of inspections, repairs or replacements made by the Contractor at the premises herein, itemized as to parts installed or services performed and supply samples of lubricants, compounds, or other materials employed.
 - 1. Elevator Contractor shall prepare and issue all required forms and/or reports relative to examinations, tests and inspections as specified herein.
 - 2. Elevator Contractor shall provide a typed monthly report of all activities at each site, as part of the invoice process.

1.10 PERFORMANCE

- A. The Owner may have the Elevator Contractor's work and systems' performance operations checked monthly to ensure the Elevator Contractor is performing in accordance with this Contract. If the work requirements are not maintained, the Owner will retain the monthly payment to the Contractor until the Consultant verifies that the work and/or operating performance is back to standard. If three (3) consecutive months of substandard maintenance is noted, the Owner has the right to immediately cancel the Contract without notice to the Elevator Contractor.
- B. The Consultant and/or Owner's Designee may withhold approval for payment on any request to such extent as may be necessary to protect the Owner from loss on account of:
 - 1. Negligence on the part of the Elevator Contractor to execute the work properly or failure to perform any provisions of the contract. The Owner, after three (3) days written notice to the Contractor, may, without prejudice to any other remedy, make good such deficiencies and may deduct the cost of the contract.
 - 2. Claims filed or reasonable evidence indicating probable filing of claims due to the Elevator Contractor's failure to perform.
 - 3. Failure of Elevator Contractor to make payments properly to subcontractors for material and labor used to fulfill contractual requirements.
 - 4. Damage to the building as a result of work performed or another subcontractor's failure to perform.

1.11 OWNERSHIP OF EQUIPMENT

The Elevator Contractor does not assume possession or control of any part of the equipment but such remains ours exclusively as the owner thereof.

1.12 NOTICES

All notices to be given under the contract shall be in writing and addressed to the party to be notified, postage prepaid, by registered or certified mail, return receipt requested, or by delivering the same in person to such party. All notices shall be deemed to have been given as of the date of delivery indicated on the return receipt or date of failure to deliver by reason of changed address of which no notice was given or refusal to accept delivery, or when personally delivered. Any party or person to whom notices are to be sent or given pursuant to the Contract may, by notice to all such other parties or persons mentioned herein, change its address for the giving of notices, provided, however, that a notice addressee.

1.13 AGREEMENT INTENT

- A. Provide proactive preventive maintenance for the equipment covered by this Agreement to facilitate the following:
 - i. Consistent safe operation of equipment
 - ii. Maximum operational performance of equipment
 - iii. Maximum beneficial usage of equipment
 - iv. Maximum life cycle of equipment
- B. Elevator Contractor expressly acknowledges that Owner is relying on Contractor's professional expertise in performance of Services to achieve and maintain Agreement intent.
- C. For clarification elevators, escalators, moving walks, etc. may be referred to as "units" or "equipment" in this Agreement.

1.14 ELEVATOR CONTRACTOR SERVICES

- A. Services shall include all labor, transportation, supplies, materials, parts, tools, scaffolding, machinery, hoists, employee safety equipment, equipment, lubricants, supervision, applicable taxes, and all other work and materials expressly required under this Agreement or reasonably inferred whether or not expressly stated herein.
- B. Elevator Contractor shall submit a written Maintenance Control Program (MCP) specifically designed for the properties included in this agreement defining the planned preventive maintenance procedures to facilitate Agreement intent and “Services” for all equipment included under this Agreement. Routine maintenance procedures shall include any unique or product specific procedures or methods required for inspecting or testing the equipment. MCP shall identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.
- C. Coordinate and follow the directives of Owner with respect to scheduling Services and any deliveries hereunder or at time or times further specified in other provisions of this Agreement.
- D. Services shall be performed as follows:
 - a. In conformance with all provisions of this Agreement.
 - b. In conformance with all applicable original equipment manufacturer’s specifications.
 - c. In conformance with the written Maintenance Control Program (MCP).
 - d. In conformance with Owner’s requirements for cleanup using containers supplied by Contractor.
 - e. To Owner’s satisfaction.
 - f. By qualified, careful, and efficient employees in conformity with best industry practices.
 - g. Diligently and in a first class, complete, and workmanlike manner, free of defect or deficiency.
 - h. In such manner as to minimize any annoyance, interference, or disruption to occupants of Property and their invitees.
- E. Materials: The term “materials” shall include all tangible property, whether designated as materials, goods, parts, or otherwise. All such materials shall be:
 - a. New.
 - b. Best quality and suitable for their intended uses.
 - c. Obtained from or recommended by original manufacturer(s) of equipment for replacement or repair, including parts redesigned by and recommended as replacement parts by the original equipment manufacturer(s). Equivalent parts may be used if approved by Owner in writing.
 - d. Parts requiring repair shall be rebuilt to “like new” condition.
 - e. All lubricants shall be suitable for purpose intended and shall meet or exceed minimum requirements specified by original manufacturer of equipment to which the lubricant is applied.
 - f. All materials delivered and stored at the Property which are intended to become part of the completed Services shall pass to Owner upon installation.
 - g. Lubricants, cleaning fluids, and all combustible liquids shall be stored in a metal cabinet in machine room and shall be disposed of in accordance with Federal or local jurisdiction guidelines. A metal can with lid shall be provided in each machine room for temporary storage of oily rags.

- h. Proration of equipment or materials shall not be allowed. Consideration shall be given in regard to obsolescence of systems, materials, or parts only when both the original equipment manufacturer(s) and after-market elevator industry suppliers no longer manufacture or rebuild required parts or assemblies. Rebuilt parts and/or assemblies are acceptable when documentation is provided indicating parts and/or assembly meets all design requirements of the original part and/or assembly.
- F. No parts or equipment required by Services may be removed from the Property without written approval of Owner. This does not include renewal parts stocked on site by Contractor, which shall remain Contractor's sole property until installed on the equipment. Expeditiously replenish parts/materials as utilized.
- G. Initiate, maintain, and supervise all safety precautions and programs in connection with Services and comply with all applicable safety laws. Take all reasonable precautions for safety of building occupants and visitors, Contractor's employees, and other persons on or about Property.
- H. Repair, to satisfaction of Owner, any damage to the Property and adjacent areas caused by performance of Services.

1.15 ELEVATOR CONTRACTOR'S EMPLOYEES

- A. Elevator Contractor shall be responsible for the supervision and execution of Services by its employees. An onsite condition review shall be conducted by a designated Supervisor of Contractor on an annual basis to ensure all Services hereunder are properly performed. Contractor shall inform Owner of the name of its Supervisor responsible for execution of Services and Supervisor shall have the authority to act as Contractor's agent. Supervisor shall notify Owner of site inspection and provide Owner's property management team, Engineer and Elevator Consultant with written summary of findings within ten (10) working days after completion of site review.

1.16 ELEVATOR CONTRACTOR'S HOURS AND MANNER OF WORK

- A. Services, except as otherwise noted under this Agreement, including unlimited emergency callback service, shall be performed during regular hours of regular working days of the Elevator Trade Monday through Friday 8:00am to 4:30pm.
 - a. Provide 24-hour callback service for all units.
- B. Response time for callback service:
 - a. During the hours identified above, Contractor shall arrive at Property within 75 minutes from time of notification of equipment problem or failure by Owner.
 - b. During the hours identified above, Contractor shall arrive at Property in response to passenger entrapment calls within thirty (30) minutes from time of notification by Owner.
 - c. After hours, Contractor shall respond to callback service within 120 minutes from the time of notification by Owner.
- C. Callback is defined as any request for service or assistance by Owner, Owner or Owner's representative when any unit is not available for beneficial usage due to equipment shutdown or malfunction.
- D. Removal of units from beneficial usage to facilitate Services shall be coordinated with and approved by Owner and identified in the MCP, unless removal is necessitated for emergency repair or adjustment. Owner agrees to permit Elevator Contractor to remove units from service for a reasonable time during hours identified above, to perform Services.

- E. If Owner requests service on overtime, Owner will be charged only for the difference between Elevator Contractor's regular hourly billing rate and overtime rate for each overtime hour.
- F. If both elevators are out-of-service, Elevator Contractor shall provide emergency call back service at all times of the day and night, including weekends and holidays, within one hour and restore it back to service. Such emergency call back service shall be performed as part of this contract without additional charges.

1.17 SPECIAL CONDITIONS

- A. Elevator Contractor will update its online system within twenty-four (24) hours of servicing or repairing an elevator. Detail shall include a description of the work performed and the name of Contractor's employees who performed such work.
- B. Conspicuously post written Maintenance Control Program (MCP) and work log in each machine room or instructions for locating the MCP in or on the car controller(s). Maintain preventive maintenance history and testing logs in accordance with the MCP either in the machine room, building management office, or electronically within unit computer control system. Data shall be accessible by Owner via manual log or web access and hard copy printout at all times. Log or electronic printout shall include all entries for routine preventive maintenance, repairs, tests, callbacks, and Supervisor's inspection. Entries shall include date work is completed, Mechanic's or Supervisor's name, brief description of work completed, including unit number and number of units serviced, repaired or inspected, and the approximate time required for work excluding travel time to and from property. Owner shall be allowed to inspect and copy log or electronic printout and maintenance history and schedule at any time.
- C. Maintain property's complete set of straight line wiring diagrams in good condition. Drawings shall be consistently updated and properly noted with "as built" conditions with any changes or modifications to circuits resulting from control modifications, parts replacement, or equipment upgrades made by Contractor during Agreement term. Owner shall be allowed to reproduce these "as built" drawings and retain sole possession of these drawings in event Agreement is cancelled. If Agreement is cancelled, Owner will withhold final payment due Contractor until all as built/as modified set(s) of wiring diagrams are delivered to Owner.
- D. Equipment manufacturer's electronic diagnostic devices required to facilitate services, including fixed and hand-held devices, shall be maintained and upgraded by Contractor during the term of this Agreement. If requested by Owner or Owner's Elevator Consultant, any such handheld or other electronic devices shall be left on-site at all times.
- E. Local or National inspection fees in regard to operation of equipment covered by this Agreement shall be paid by Owner. Fees for re-inspection due to Elevator Contractor's failure to expeditiously eliminate deficiencies covered by Services shall be paid by Elevator Contractor.

1.18 ELEVATOR CONTRACTOR'S REPORTING REQUIREMENTS

The Elevator Contractor shall provide a monthly report showing all elevators maintained by them no later than the 5th of each month. The report shall be in excel format and include a column for the number of callbacks that occurred in that quarter, a cumulative total of callbacks since contract inception, the length of the callback (time for response, correcting problem and returning unit to service), time for all monthly maintenance performed, time for all monthly repairs performed, time for testing and all other occurrences where unit was out of service.

1.19 OWNER'S RIGHT TO AUDIT SERVICES

- A. Owner reserves the right to make, or cause to be made, such audits and tests whenever necessary to ascertain that Services are being fulfilled. Deficiencies noted shall be submitted, in writing, to the Elevator Contractor. Elevator Contractor shall expeditiously correct deficiencies within thirty (30) working days at its expense.

- B. A qualified vertical transportation Consultant acceptable to both parties may be retained by Owner to perform audit of Services and mediate disputes. Reinspection deficiencies and associated fees will be at Elevator Contractor's expense.

1.20 NOTICES

- A. Each party will notify the other when they become aware of the death or injury to any person or damage to property arising from the use of the Equipment.

1.21 OWNER'S RESPONSIBILITIES

- A. Provide clear, safe, and convenient access to Property and equipment rooms.
- B. Maintain car lighting, telephone lines to controller terminal(s), equipment room electrical switch gear, and electrical feeders to unit controllers.
- C. Maintain equipment room heating and air conditioning systems.
- D. Maintain fire alarm initiating devices in elevator lobbies, machine rooms, hoistways, etc.
- E. Prevent storage of Property or other Contractors' equipment or supplies in unit equipment rooms and obstruction of equipment room access corridors and doors.
- F. Maintain standby power generator systems and related switch gear and feeders.
- G. Maintain equipment rooms, hoistways, wellways, and pits in code compliant dry condition.
- H. Coordinate with General and/or Elevator Contractor in regard to equipment retrofits such as security systems, new car interior finishes, car interior TV systems, etc.
- I. During Property construction and/or modernization, make provisions to limit infiltration of dust and debris into equipment and equipment spaces.

PART 2 - PRODUCTS AND SERVICES

2.1 MATERIALS AND WORKMANSHIP

All materials are to be new and of the best quality of the kind specified. Installation of such materials shall be accomplished in a neat and workmanlike manner. In case the Contractor should receive written notification from the Owner stating the presence of inferior, improper, or unsound materials or workmanship, the Contractor shall, within twenty-four (24) hours proceed to remove such work or materials and make good all other work or materials damaged thereby. If the Owner permits said work or materials to remain, the Owner shall be allowed the difference in value or shall, at its election, have the right to have said work or materials repaired or replaced as well as the damage caused thereby, at the expense of the Contractor, at any time within one (1) year after completion of the work; and neither payments made to the Contractor, nor any other acts of the Owner shall be construed as evidence of acceptance and waiver.

2.2 SCHEDULED PREVENTATIVE MAINTENANCE LABOR

- A. Elevator Contractor shall provide scheduled monthly examinations, adjustments, cleaning and lubrication of all machinery, machinery spaces, hoistways and pits. The Contractor shall include a minimum of 90 minutes per month per unit that is to be dedicated to routine preventive maintenance.
- B. Where there is no specific requirement for a preventive maintenance procedure, the original equipment manufacturer (O.E.M) standard shall be employed unless there is no relative documentation available. The absence of both contract requirement herein and the O.E.M. design standard shall cause the contractor to engage the services of a qualified engineer to formulate the relative standards and incorporate same as an addendum to this agreement with the Professionals' Seal and Stamp.

2.3 FULL PROTECTIVE MAINTENANCE REQUIREMENTS

Regularly and systematically examine, adjust, lubricate, clean and when conditions warrant repair or replace the following items, as applicable, and all other mechanical or electrical equipment.

- A. Machine, drive and deflector sheave, sheave shaft bearings, brake pulley, brake coil, brake contact, shoes and linings, and component parts.
- B. Motor, motor drives, motor windings, rotating element, commutator, field coil, brushes, brush holders and bearings, rotors, stators, slip rings.
- C. Governor, governors sheave and shaft assembly, bearings, contacts and governor jaws.
- D. Deflector or secondary sheave, bearings, car and counterweight buffers, car and counterweight guide rails, top and bottom limit switches, governor tension sheave assembly, compensating assembly, counterweight and counterweight guide shoes, including rollers or gibs.
- E. Controller, Selector and Dispatching Equipment: all components including all relays, solid state components, resistors, condensers, transformers, contacts, leads, dashpots, computer devices, selector switches, mechanical or electrical driving equipment, coils, magnet frames, contact switch assemblies, springs, solenoids, resistance grids, hoistway vanes, magnets and inductors.
- F. Hoistway door interlocks or locks and contacts, hoistway door hangers and tracks, bottom door gibs, cams, rollers, and auxiliary door closing devices for power operated doors. Chains, tracks, cams, interlocks, sheaves for vertical bi-folding doors.
- G. Hoistway limit switches, slowdown switches, leveling switches and associated cams, vanes, and electronic components.
- H. Guide shoes including rollers or replaceable gibs.

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- I. Automatic power operated door operators, door protective devices, car door hangers, tracks and car door contacts for both side slide and vertical bi-folding doors.
- J. Traveling cables.
- K. Elevator control wiring in hoistway and machine room.
- L. Car safety mechanism and Load weighing equipment.
- M. Buffers.
- N. All car and hoistway operating fixtures including hall lanterns, main Lobby fixtures, car operating panels, car position indicator, car fans, electric door operators, proximity devices, safety edge, photo eyes, door reflectors and starters' panels.
- O. The guide rails shall be kept free of rust. Where roller guides are used, rails shall be kept dry and properly lubricated when sliding guides are used. Renew guide shoe rollers and gibs as required to insure smooth and satisfactory operation.
- P. Furnish lubricants compounded specifically for elevator usage.
- Q. After substantial completeness or acceptance, the Contractor shall be required to make renewals or repairs necessitated by reason of negligence or misuse of the equipment or by reason of any other cause beyond the Contractor's control except ordinary wear and tear unless the Contractor receives just compensation. Negligence, misuse and vandalism shall not be excluded from the Contractor's maintenance responsibilities prior to substantial completeness or acceptance. Misuse by any of the subcontractors during construction shall be the Contractor's responsibility to repair or replace damaged equipment.
- R. The Contractor shall check the group dispatching systems (if applicable) and make necessary tests to insure that all circuits and time settings are properly adjusted, and that the system performs as designed and installed.
- S. Contractor shall perform the required mandated State and/or Local inspections and tests during the full term of the maintenance contract. All such testing services shall be included as part of the base scope of services without additional billing to the Owner, including, as needed, full load tests or any other special tests required or requested by the Authority Having Jurisdiction.
- T. The Contractor shall keep each elevator maintained to operate at the original contract speed, keeping the original performance time, including acceleration and retardation as designed and installed by the manufacturer. The door operation shall be adjusted as required to maintain the original door opening and door closing times, within legal limits.
- U. The Owner reserves the right to make inspections and tests as and when deemed advisable. If it is found that the elevators and associated equipment are deficient either electrically or mechanically, the Contractor shall be notified of these deficiencies in writing, and it shall be his responsibility to make the necessary corrections within 30 days after his receipt of such notice. In the event that the deficiencies have not been corrected within 30 days, the Owner may terminate the Contract and employ a Contractor to make the corrections at the original bidder's expense.
- V. Approximately six months prior to the end of the contract term, the Owner may make a thorough maintenance inspection of all elevators covered under the contract. At the conclusion of this inspection, the Owner may give the Contractor written notice of any deficiencies found. The Contractor shall be responsible for correction of these deficiencies within 30 days after receipt of such notice.

W. Working Hours

1. The maintenance work outlined in this specification shall be performed during normal working hours of 8:00 a.m. to 4:30 p.m., Monday through Friday. Bidder shall submit with his bid a statement of the hourly rates for regular time, time and one-half and double time, both for mechanics and helpers. Bidder shall indicate what constitutes time and one-half as opposed to double time.
2. This Agreement covers requests for service during the regular working hours of the regular working days of the elevator trade. Service requests are defined as services that require immediate attention and that are within the scope of services and not excluded from the scope of services as provided herein. Service requests outside the scope of services will be billed separately at Contractor's then current labor rates and material prices plus mileage and incidentals. Service requests that require more than one technician or more than two hours to complete will be treated as a repair and scheduled in accordance with the hours of service. Purchaser agrees that Contractor may perform service requests made by any person that Contractor believes is authorized by Purchaser to make such requests.
3. If Owner requests service on overtime, Owner will be charged only for the difference between Contractor's regular hourly billing rate and overtime rate for each overtime hour.
4. If both elevators are out-of-service, Contractor shall provide emergency call back service at all times of the day and night, including weekends and holidays, within one hour and restore it back to service. Such emergency call back service shall be performed as part of this contract without additional charges.

X. Spare Parts

1. Provide a list of minor spare parts for the Elevator Consultant's review and approval.
2. In addition to the minor spare parts, the Contractor shall have available at all times, for immediate delivery and installation, sufficient supply of emergency spare parts for the repair of each elevator concerned.
3. Contractor shall provide at the building a spare parts metal; lockable storage cabinet and metal safety containers for storage of waste and other flammable materials.

AB. Items of Preventive Maintenance Work

1. The preventive maintenance specified herein is considered the minimum for all equipment. If specific equipment covered by this contract required additional preventive maintenance for safe, reliable operation as specified by the manufacturer, the Contractor shall perform the required additional preventive maintenance without added cost to the Owner. If specific equipment covered by this contract required additional preventative maintenance for safe, reliable operation as specified by the manufacturer, the Contractor shall perform the required additional preventative maintenance without added cost to the Owner.
2. Monthly
 - a. Perform general inspection of machinery, sheaves, worm and gear motor, brake, selector or floor controllers. Lubricate as required.
 - b. Empty drain pans, discard oil, in an approved manner. Check and maintain oil level.
 - c. Replace all burned out lamps in elevator machine room, pit, hall lanterns, etc.
 - d. Remove litter, dust, oil, etc. from all machine room equipment.
 - e. Clean trash from pit and empty drip pans.

- f. Check governor and tape tension sheave lubrication.
- g. Burned out lamps in hall lanterns, pushbuttons, and corridor position indicators, remote arrival signals, remote dispatch panels, and other signal fixtures shall be supplied and installed by the Contractor. Burned out lamps in elevator, machine rooms and pit shall be supplied by the Owner and installed by the Contractor.
- h. Observe operation of elevator throughout its full range and at all floors it serves to test controls, safety devices, leveling and re-leveling and other devices.
- i. Check door operation, clean, lubricate and adjust brakes, checks, linkages, gears, wiring motors, check keys, set screws, contacts, chains, cams and door closer.
- j. Check selector. Clean, adjust and lubricate bushings, dashpots, travel cables, chain, pawl magnets, wiring, contacts, relays, tape drive and broken type switch.
- k. Check car. Clean, adjust and lubricate car door and gate tracks, pivots, hangers, ventilation grilles, side and top exits.
- l. Inspect interior of elevator cab. Test intercom/telephone or intercommunication system, normal and emergency lights, fan, emergency call system or alarm. Make needed repairs.
- m. Visually inspect controller, contacts and relays. Check adjustment and replace contacts as required.
- n. Observe operation of signal and dispatching system. Inspect compensating hitches, buffers, rope clamps, slack cable switch, couplings, keyways, and pulleys. Check load weighing device and dispatching time settings. Clean, adjust and lubricate as necessary.
- o. Check oil level in car and counterweight oil buffers and add oil as required.
- p. Check brushes and commutators. Inspect commutators for finish, grooving, eccentricity and mica level. If required, clean, turn or refinish commutator to provide proper commutation. Inspect brushes for tension seal and wear, replace or adjust as required.
- q. Perform fire service test, per Code.
- r. Check and adjust:
 - 1) Car ventilation system.
 - 2) Car position indicators.
 - 3) Hall and car call buttons.
 - 4) Hall lanterns.
 - 5) Main dispatch panels/remote monitoring panel

3. Quarterly

- a. Check leveling operation. Clean and adjust leveling switches, hoistway vanes, magnets, and inductors. Repair and/or adjust for proper leveling.
- b. Check hoistway doors. Clean, lubricate and adjust tracks, hangers and upthrust eccentrics, linkage gibs and interlocks.
- c. Clean, adjust, and lubricate car door or gate tracks, pivots and hangers.
- d. On hoistway doors, clean, lubricate and adjust tracks, hangers and eccentrics, linkage gibs and interlocks.
- e. Inspect all fastenings and ropes for wear and lubrication. Clean both governor and hoist ropes and lubricate hoist ropes if needed.
- f. Inspect all rope hitches and shackles and equalize rope tension.
- g. Inspect hoist reduction gear brake and brake drum, drive sheave and motor, and any bearing wear.
- h. In the car, test alarm bell system. Clean light fixtures. Inspect, clean and adjust retiring can device, chain, dashpots, commutators, brushes, cam pivots, and fastenings. Test emergency switch (ground case if necessary). Inspect safety parts, pivots, set screws, switches, etc. Check adjustment of car and counterweight gibs, shoes or roller guides. Lubricate and adjust, if necessary.
- i. In the pit, lubricate compensating sheave and inspect hitches. Inspect governor and tape tension sheave fastenings. Empty and clean oil drip pans.

- j. Clean all parts of safeties and lubricate moving parts to assure their proper operation. Check and adjust clearance between safety jamb and guide rails. Visually inspect all safety parts.
- k. Clean and examine governor ropes, replacing if needed. (Do not lubricate governor rope.)

4. Semi-Annually

- a. Check controllers. Clean with blower, check alignment of switches, relays, timers, contacts, hinge pins, etc., adjust and lubricate. Check oil in overload relays, settings and operation of overloads. Clean and inspect fuses and holders and all controller connections.
- b. In hoistway examine guide rails, cams and fastenings. Inspect and test limit and terminal switches. Check and adjust car shoes, gibs or roller guides. Adjust or replace as required.
- c. Clean all overhead cams, sheaves, sills, bottom of platform, car tops, counterweights and hoistway walls.
- d. Inspect sheaves to ensure they are tight on shafts. Sound spokes and rim with hammer for cracks.
- e. Examine all hoist ropes for wear, lubrication, length and tension. Replace, lubricate and adjust as required to meet code requirements.
- f. On tape drive, check hitches and broken tape switch.
- g. Check car stile channels for bends or cracks, also car frame, cams, supports and car steadying plates.
- h. Lubricate moving parts of vertical rising or collapsible car gates.
- i. Check pivot points, sheaves, guides and track for wear.
- j. Lubricate guide shoe stems.
- k. Check governor and tape tension sheave fastenings.
- l. For bi-parting doors, clean chains, tracks and sheaves, lubricate as required. Check door contacts.
- m. Check fastenings and operation of door checks, interlocks, clean and lubricate pivot points as required.

5. Annually

- a. Thoroughly clean car and counterweight guide rails using a nonflammable or high flash point solvent to remove lint, dust and excess lubricant.
- b. Remove, clean and lubricate brake cores on brakes, clean linings, if necessary and inspect for wear. Correct excess wear and adjust.
- c. Inspect motor generator and hoist motor armatures and rotor clearance. Check motor and MG set connection and lubricate in accordance with manufacturer's instructions.
- d. Drain, flush and refill oil reservoirs of each hoisting motor and motor generator.
- e. Check and reset, if necessary, all brushes for neutral settings, proper quartering and spacing on commutators.
- f. Group supervisory control systems where installed shall be checked out. The system's dispatching, scheduling and emergency service features shall be tested and adjusted in accordance with manufacturer's literature.

AC. The Elevator Contractor shall during the course of all examinations remove and discard immediately all accumulated dirt and debris from the car top(s) and pit area(s). Prior to each annual anniversary

2.4 INSPECTION / TESTS

- A. The Elevator Contractor shall conduct Safety, Efficiency and Maintained Conditions surveys, inspections and tests as follows:
1. Semi-Annual quality control evaluations by a qualified supervisor to ensure and confirm the services and procedures as specified herein are properly executed relative to maintenance and performance standards for the systems serviced.
 2. Mandated inspections and testing in accordance with ASME A17.1 Standards applicable per local law; filing of all procedures per the Authority Having Jurisdiction (A.H.J.) and preparation of reports within the required time periods for the examination(s) rendered.
 - a. The Owner retains the right to have these tests performed on a not-to-interfere basis at any hour of the day and any day of the week; and the cost for overtime work shall be quoted at Elevator Contractor's then current billing rates and require approval from Purchaser before work commences. Owner shall only be billed for the difference between Elevator Contractor's normal and overtime hourly billing rate for each overtime hour.
 - b. The Owner retains the right to engage the services of a third-party qualified and certified agency for the sole purpose of witnessing mandated inspections and tests performed by the Elevator Contractor. Should the Owner elect to utilize this provision, the Elevator Contractor shall provide Owner with a quote at Elevator Contractor's then current billing rates for approval before work commences.
 3. If applicable, independent testing of Fire Emergency Operating Systems and/or Emergency Power System tests in accordance with local law requirements and ASME standards.
 - a. The Owner retains the right to have these tests performed on a not-to-interfere basis at any hour of the day and any day of the week; and the cost for overtime work shall be quoted at Elevator Contractor's then current billing rates and require approval from Purchaser before work commences. Owner shall only be billed for the difference between Elevator Contractor's normal and overtime hourly billing rate for each overtime hour.
 4. Once a year the Elevator Contractor shall test all safety devices, governor and associated equipment on each elevator, in accordance with the latest edition of the American Standard Safety Code for Elevators and Dumbwaiters. Such test shall be made by running each car in the down direction at the design speed without load and by setting the safety device by tripping the governor by hand. The Elevator Contractor shall promptly correct any defect that may become apparent during the test of the safety devices and equipment.
 5. Whenever necessary for the safe and/or satisfactory operation of the elevator equipment, the Elevator Contractor shall examine and equalize the tension of all hoistway ropes and shall re-socket the hoist at the car crosshead. Whenever necessary to ensure the maintenance of an adequate safety factor or when required by the elevator inspection or companies ensuring the elevators in question against accident, the Elevator Contractor shall replace any and all ropes, including but not limited to hoist ropes and governor ropes.
 6. Whenever necessary for the safe and satisfactory operation of the elevator equipment, the Elevator Contractor shall repair and/or replace any or all the electrical equipment from the load side of each elevator disconnect switch.
 7. Whenever necessary for the safe and/or satisfactory operation of the elevator equipment, the Elevator Contractor shall repair and/or replace any and all mechanical parts of each elevator.

8. Owner's Inspections: Two inspections per year shall be scheduled at the convenience of both the Elevator Contractor and the Owner to jointly inspect all work included in this contract. Elevator Contractor shall provide a senior service elevator technician and a management representative to demonstrate that all work has been or in the process of being completed. One working day per inspection should be allowed to complete tour. Owner will be provided with a quote at Elevator Contractor's then current billing rates for approval before work commences.
9. The Owner shall reserve the right, from time to time to employ others to test the condition, speed and safety of the elevators as it may be deemed advisable. If it is found that the elevators do not conform to the required standards as set forth under the terms of this contract, the Owner will immediately demand that the elevators be placed in satisfactory condition, and if the work has not commenced within twenty-four (24) hours, the Owner can enter into agreement with others to perform such work and deduct the total cost of said work from the Elevator Contractor's monthly charge for the services specified. If the above happens repeatedly, the Owner may void this contract and not allow this Elevator Contractor to bid on future work.

2.5 PAINTING

- A. The Elevator Contractor shall keep the exterior of the machinery and any other parts of the equipment subject to rust properly painted, identified and presentable at all times. Motor windings and controller coils shall be periodically treated with proper insulating compound. The machine room floor and all storage areas shall be painted annually with a good quality deck enamel as typically used and accepted in the elevator industry.

2.6 VIOLATIONS

- A. Elevator Contractor agrees that he/she and his/her agents shall comply with any violation issued by the any agency or authority having jurisdiction, assuming all repairs are covered under the scope of work outlined in this agreement. The Elevator Contractor shall provide a separate proposal for any repairs not covered by this agreement. Any affirmations of correction and/or other paperwork, expediting, hearings and or any other means necessary to clear all violations shall be the sole responsibility of the Elevator Contractor. The Owner and/or Owner's representative shall forward any violation issued to the Elevator Contractor within five (5) business days. All fines related to violations on covered items shall be the responsibility of the Elevator Contractor. Any fines which have accrued prior to the date the Elevator Contractor was given the violation shall be the responsibility of the Owner, however, after twenty (20) calendar days, if left uncured, the Elevator Contractor will be responsible for fines incurred afterward.
- B. If there is work that needs to be performed by someone other than the Elevator Contractor, or work that is not included in this contract, the Elevator Contractor MUST inform the Owner/Management and the Owner's elevator consultant in writing. In either case, clearing of the violation shall be the responsibility of the Elevator Contractor, once the Owner or Owners Representative has stated completion.

2.7 OBSOLESCENCE OF PARTS

- A. Definition of Obsolescence:
 1. A system, component, or part that is no longer repairable, re-buildable, supported, manufactured, available in-stock or supplied by the OEM, Non-OEM Elevator/Escalator systems parts supplier or other 3rd party parts supplier or fabricator in the same form, fit and function.
- B. During the term of this agreement, any system, component or part not meeting the Definition of Obsolescence in 1.4.A.1 above shall be covered as prescribed in this document. Systems, Components or Parts which are repairable or re-buildable as noted above shall be covered under the following conditions:
 - a. Part is repairable, either through the manufacturer or through any 3rd party provider, up to the cost that the original part would have been at its latest available date.

- b. Part is custom makeable up to the cost that the original part would have been at its latest available date.
 - c. Additionally, should the cost of the part repair or fabrication is greater than the original part, Elevator Contractor shall submit documentation to substantiate the original part cost and the current repair/fabrication cost. Purchaser shall not be responsible for additional labor cost associated with this repair or fabrication.
- C. Should a part become obsolete meeting the definition in 1.4.A.1, the Elevator Contractor shall submit the following:
 - 1. A separate quotation to the Purchaser stating:
 - a. The cost of the obsolete part and the cost of the replacement part. Purchaser shall only be responsible for the cost difference in parts.
 - b. The cost of labor to replace the obsolete part and the cost of labor to install the replacement part. Purchaser shall only be responsible for the cost difference in labor.
 - 2. Documentation to substantiate the part is obsolete and attempts to locate 3rd party providers has occurred for any material cost associated with the part.
 - 3. Documentation as to equipment changes required to replace the obsolete part with that of the new part for any labor costs associated with the part replacement.
- D. If Elevator Contractor, third party consultant or Purchaser receive a notice of component or part obsolescence from a third party non-OEM elevator system parts supplier, not owned by or in any way affiliated with the Elevator Contractor, during the course of this agreement then Purchaser will consider a claim of obsolescence. Claim may include only the necessary retro-fit material and only the additional portion of labor above and beyond what would have been required to replace the obsolete component or part with an OEM original component or part.
- F. No other claim for obsolescence of any kind will be considered by the Purchaser during the course of this agreement.

2.8 OCCUPANCY

- A. A credit will be allowed from the contract price based on the occupancy of the building during each three months (quarter annual) installment) of the contract. The credit shall be toward the entire fixed monthly cost, inclusive of labor and materials. This credit shall be adjusted in accordance with the following schedule:

<u>Occupancy</u>	<u>Credit</u>
Below 50%	40%
50% - 70%	25%
70% - 90%	15%
Above 90%	0%

- B. If any elevator is removed from service, full credit will be granted to the owner. Current occupancy data to be furnished to Elevator Contractor on a quarterly basis.

2.9 DATE OCCUPANCY RATE

- A. Occupancy will be reviewed quarterly for the prior quarter to determine reduction in price that will be applied over the following three months. At Owner's option, occupancy discounts may be applied based on total building occupancy or zone occupancy or may be based on total building population or zone population, at the Owner's discretion.
- B. Occupancy rate shall be determined based on the actual rented square feet divided by the total available rented area. The elevator company will be permitted at his/her own expense to verify.

2.10 ESCALATION

- A. For all lump-sum costs not included on the bid form, year price escalation is permitted. The escalation shall be calculated based upon two components on the following basis:
 - Material (20%)
Pre-variance (increase or decrease) shall be defined based upon the metals index published by the appropriate authorities.
 - Labor (80%)
Pre-variance (increase or decrease) shall be based upon negotiated increases by applicable IUEC union labor authorities and personnel. These shall be quantified and qualified by the Elevator Contractor as required by Owner and Consultant and supported by official documents as requested.
- B. In either event, the Elevator Contractor agrees not to increase the maintenance for a Five-Year period by more than three (3%) percent each year with a cap of 9% (calculated from year one) for the life of this contract.
- C. This price escalation shall apply to Elevator Contractor's hourly billing rates as well.

PART 3 - EXECUTION AND SUPPLEMENTAL REQUIREMENTS

3.1 PERFORMANCE TIMES, LEVELING AND CONTRACT SPEED

- A. The control system shall be maintained to provide smooth acceleration and retardation. Elevator Contractor must maintain elevators in accordance with the original equipment manufacturer design performance specifications (including floor-to-floor times door timing, rated speed, group supervisory system, etc.). The door close pressure must never exceed 30 pounds. The following performance schedule shall be adhered to:
1. Contract Speed: The contract speed shall be provided for up direction travel with full-capacity load in the elevator car. The speed in either direction under any loading condition shall not vary more than 5% of the contract speed.
 2. In accordance with the ASME A17.1 Code, the elevators shall be maintained and adjusted to safely lower, stop and hold the car with a load of 125% of the rated capacity.
 3. Leveling Accuracy: The elevator shall be adjusted to provide accurate leveling within $\pm 1/4$ " of the floor level without releveing regardless of load. This is MANDATORY.
 4. Door Operating Times:
 - a. Door Open 2.5 to 3.0 Seconds
 - b. Door Close 4.8 to 5.75 Seconds
 5. Non-interference Door Dwell Times:
 - a. Car Calls 3.0 Minimum
 - b. Hall Calls 5.0 Minimum
 6. Floor to Floor Time (Flight Time):
 - a. Optimized based on Contract Speed of Elevator
 7. Measured noise levels in a moving car outside the leveling zone shall not exceed 55 dBA under any condition including car ventilation blower or fan on highest speed. Measured noise levels in car within the leveling zone or when car is stopped shall not exceed 60 dBA. There shall be no discernible sound in the elevator car from hoist machine, suspension means, sheaves, counterweight, pump unit, electrical power conversion unit(s), platform(s), car enclosure walls, or car and counterweight guide assemblies unless it is mutually determined by Elevator Contractor and Owner that such sounds are attributable to the design of the equipment, provided such design exception shall not apply to the extent that Elevator Contractor has provided design or redesign Services under this Agreement or related Agreement.
 8. Elevator Contractor shall maintain a quiet and comfortable car ride with smooth acceleration, deceleration, and accurate stop. Door operation shall be smooth and quiet.

3.2 PARTS INVENTORY AND WIRING DIAGRAMS

- A. The Elevator Contractor shall maintain an inventory of spare parts at the site of the work for scheduled preventive maintenance procedures and common emergency call-back service repairs. Such parts shall include but are not limited to contacts, coils, solid-state boards, relays, resistors, timing devices, computer devices, interlock safety switch and linkage parts, bottom guides, door closers, fuses, bulbs, car guides and an assortment of hardware.
- B. The Elevator Contractor shall maintain and continually update wiring diagrams and control schematics to ensure "as built" documents remain on site and the property of the Purchaser per the maintenance agreement.

3.3 PROTECTION OF WORK AND PROPERTY

The Elevator Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Owner's property from injury or loss arising out of this contract. The Elevator Contractor shall make good any such damages, injury or loss, except such as may be directly caused by agents or employees of the Owner. The Elevator Contractor shall provide all barricades required to protect open hoistways or shafts per OSHA regulations. Such protection shall include any necessary guards or other barricades for employee protections during and after the maintenance procedure.

3.4 REPRESENTATION

Elevator Contractor represents that it will (i) perform elevator maintenance services under this Agreement in accordance with acceptable industry professional and ethical standards, (ii) not proceed with performance of various aspects of the Services, unless pre-authorized ("Pre-approved Services") by the Owner, (iii) conduct any handling of Owner's Confidential Information in accordance with acceptable industry professional and ethical standards, (iv) not represent to any third party that it has authority to sign, endorse or represent a contractual relationship with or in Owner's name, or enter into any agreement on behalf of Owner in connection herewith (unless expressly pre-authorized in writing by Owner), (v) safeguard the physical security of Owner's Confidential Information if it has access to or possession of such information, (vi) ensure that only "Authorized Representatives" of this Agreement, will have access to any of Owner's Confidential Information while rendering the Services, and that it will not be copied, or disseminated to anyone other than the Authorized Representative, and (vii) ensure that all of its employees, representatives, agents or assigns will not solicit any of Owner's employees for any purpose. The Parties agree that any alteration to any of the Addenda or Exhibits hereto shall be null and void, unless made in writing by mutual consent of the Parties. The obligations of Elevator Contractor set forth herein shall remain in full force and effect for the later of a period of one (1) year from the date of termination or expiration of this Agreement, or the date the Confidential Information is returned to whomever disclosed such information, after the date of termination or expiration of this Agreement.

3.5 TERMINATION

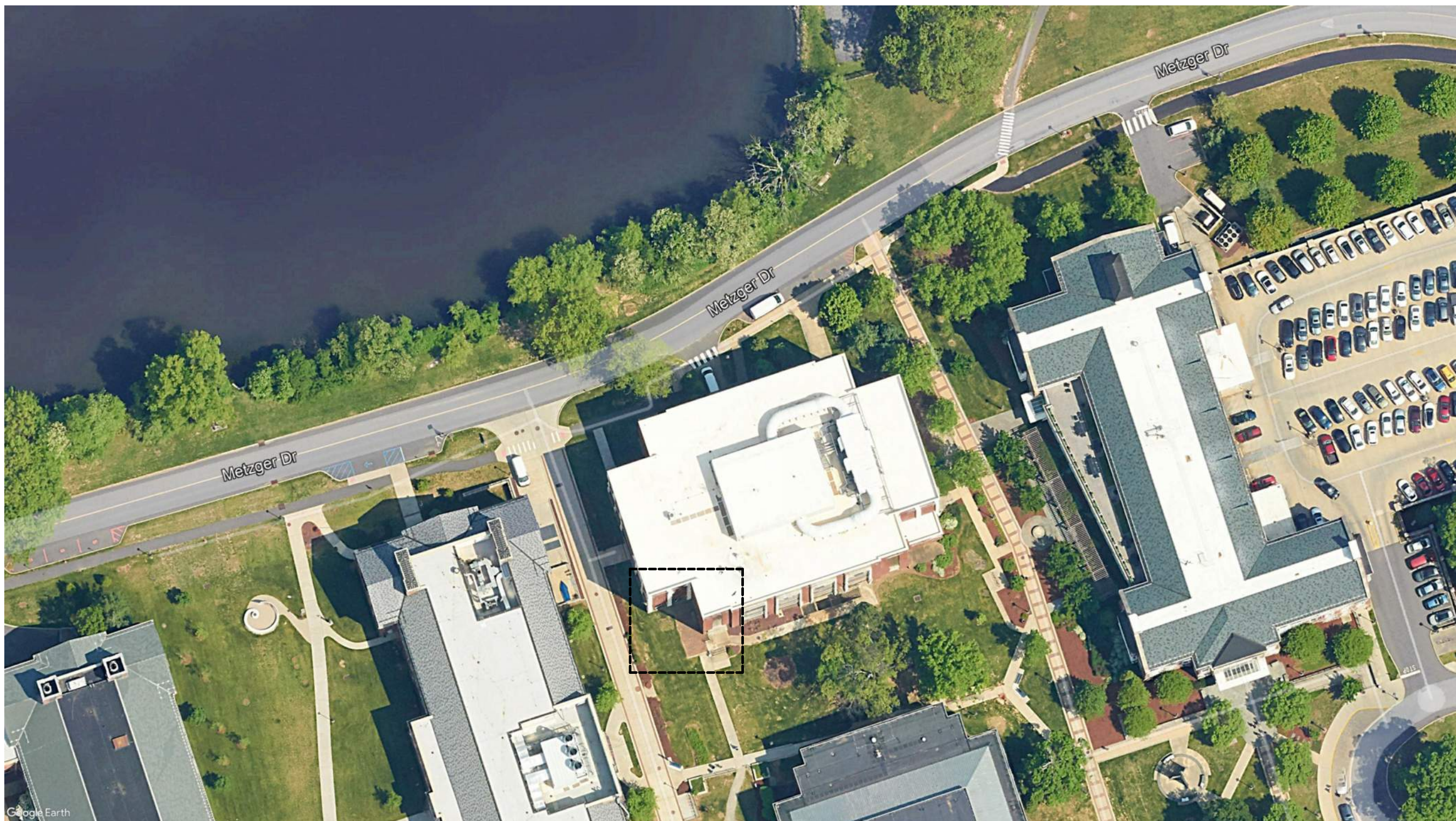
- A. Either party may terminate this Agreement at the end of the initial five (5) year term or subsequent term by giving the other party not less than sixty (60) days written notice.
- B. The Owner may also terminate this Agreement at any time upon thirty (30) days written notice to the Elevator Contractor due to the following reasons:
 - a) Unacceptable performance by the Elevator Contractor
 - b) Elevator Contractor's failure to comply with all of its duties and obligations under this Contract
 - c) If the Owner chooses to modernize vertical transportation equipment, during any term of this Agreement, provided the modernization work is a major modernization as defined by ASME/ANSI A17.1, Safety Code for Elevators and Escalators, latest adopted edition.
 - d) Permanent removal of equipment from service
 - e) Owner's Convenience

END OF SECTION

THE COLLEGE OF NEW JERSEY FORCINA HALL RENOVATION

2000 Pennington Road Ewing, NJ 08628
2387

02/09/2024
ELEVATOR PROCUREMENT BID SET



DRAWING LIST	
CS	COVER SHEET
A-100	FLOOR PLANS
A-200	EXTERIOR ELEVATIONS
A-300	PROPOSED ELEVATOR PLANS AND SECTIONS
A-501	ELEVATOR DETAILS
EL-100	NEW SERVICE ELEVATOR PLANS AND SECTION

PROJECT PHASING	
RENOVATIONS ARE TO OCCUR IN AN OCCUPIED BUILDING THROUGHOUT THE COURSE OF CONSTRUCTION.	
PHASE 1: NEW ELEVATOR:	
• NEW EXTERIOR ADDITION FOR ELEVATOR SHAFT, PIT, OVER-RUN.	
• UNDERPINNING OF EXISTING FOUNDATIONS WILL BE REQUIRED	
• RENOVATIONS TO THE MAIN LOBBY AND THE CREATION OF ELEVATOR LOBBY/LOUNGES ON THE SECOND, THIRD AND FOURTH FLOORS.	
PHASE 2: FIRST AND SECOND FLOOR RENOVATIONS	
• RENOVATIONS OF PROGRAM SPACE TO ACCOMMODATE NURSING LABS AND CLASSROOMS ON THE FIRST AND SECOND FLOORS.	
• CORRIDORS AND RESTROOM ON THE FIRST FLOOR ARE TO BE FULLY RENOVATED	
• CORRIDORS ON THE SECOND FLOOR ARE TO BE RENOVATED.	
• SECOND-FLOOR RESTROOM TO BE RELOCATED AWAY FROM THE BUILDING'S PERIMETER TO THE BUILDING'S CORE.	
• FIRST-FLOOR CEILING IN EXISTING HIGH-FIDELITY NURSING LAB TO BE PARTIALLY DEMO'D AS NEEDED FOR NEW SECOND-FLOOR RESTROOM PLUMBING.	
• REFER TO MEP REPORT FOR PLANNED REPLACEMENT AND PHASED APPROACH TO MECHANICAL SHAFT TO EXISTING ROOFTOP EQUIPMENT.	
PHASE 3: THIRD AND FOURTH FLOOR RENOVATIONS	
• THIRD FLOOR CORRIDOR AND BATHROOM RENOVATIONS.	
• FOURTH-FLOOR RENOVATIONS OF PROGRAM SPACE, CORRIDORS, AND RELOCATION OF RESTROOM	
CONSTRUCTION SCHEDULE	
PHASE 1: NEW ELEVATOR:	
8/19/24 TO 5/1/25	
PHASE 2: FIRST AND SECOND FLOOR RENOVATIONS:	
12/9/24 TO 9/22/25	
PHASE 3: THIRD AND FOURTH FLOOR RENOVATIONS:	
9/22/25 TO 9/18/26	



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MEP/FP

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Planning
Landscape Architecture

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1. ELEVATOR SHAFT PIT, FOUNDATIONS, AND WATERPROOFING SHOWN FOR REFERENCE ONLY. NIC WORK RELATED TO THE ELEVATOR SHAFT CONSTRUCTION WILL BE COMPLETED BY A SEPARATE CONTRACTOR, IN COORDINATION WITH THE FINAL ELEVATOR DESIGN, PRIOR TO INSTALLATION OF THE ELEVATOR.

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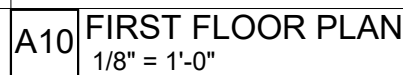
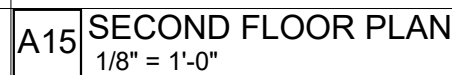
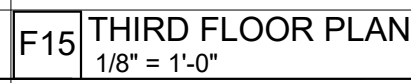
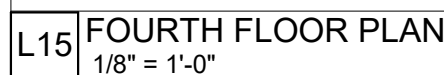
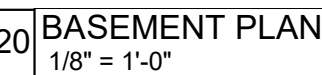
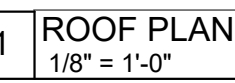
3. ROOF CURB SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR, IN COORDINATION WITH THE FINAL ELEVATOR DESIGN, PRIOR TO INSTALLATION OF THE ELEVATOR.

4. ELEVATOR CAB DRAWINGS DRAWN AS A BASIS FOR DESIGN. FINAL FINISH SELECTION FOR ELEVATOR CAB TO BE DETERMINED. SHAPES & BRILLIANT MODEL USED AS A BASIS FOR DESIGN OF ELEVATOR CAB.

5. ELEVATOR CAB FINISH FLOOR BY OTHERS.

6. REFER TO EL-100 FOR ADDITIONAL ELEVATOR INFORMATION

7. FINISHES TO THE INTERIOR OF THE BUILDING ARE SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR.



FLOOR PLAN LEGEND-CCH
12" = 1'-0"

CCH PROJECT NO: 2387

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4. CAB DRAWING CABINET SHALL BE USED AS A BASIS FOR THE CAB DESIGN. FINISH SELECTION FOR ELEVATOR CAB TO BE DETERMINED. SPM300 BRILLIANT MODEL USED AS A BASIS FOR THE DESIGN OF ELEVATOR CAB.
5. ELEVATOR CAB FINISH PANEL BY OTHERS, NIC.
6. REFER TO E-100 FOR ADDITIONAL ELEVATOR INFORMATION.
7. FINISHES TO THE INTERIOR OF THE BUILDING ARE SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR.

NOTE:
ELEVATOR SHAFT SHOWN FOR REFERENCE ONLY, NIC. WORK RELATED TO THE
ELEVATOR SHAFT CONSTRUCTION WILL BE COMPLETED BY A SEPARATE
CONTRACTOR IN COORDINATION WITH THE FINAL ELEVATOR DESIGN

A20 WEST ELEVATION - ELEVATOR SHAFT

NOTE:
ELEVATOR SHAFT SHOWN FOR REFERENCE ONLY, N/C. WORK RELATED TO THE
ELEVATOR SHAFT CONSTRUCTION WILL BE COMPLETED BY A SEPARATE
CONTRACTOR IN COORDINATION WITH THE FINAL ELEVATOR DESIGN

A16 SOUTH ELEVATION - ELEVATOR SHAFT

NOTE:
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ELEVATOR SHAFT CONSTRUCTION WILL BE COMPLETED BY A SEPARATE
CONTRACTOR IN COORDINATION WITH THE FINAL ELEVATOR DESIGN

A4	EAST ELEVATION - ELEVATOR SHAFT
----	---------------------------------

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[illegible]

FORCINA HALL RENOVATION

THE COLLEGE OF NEW JERSEY

DATE:	01/17/24
SCALE:	AS SHOWN
DRAWN BY:	BL, EG, JS
CHECKED BY:	MN, GH

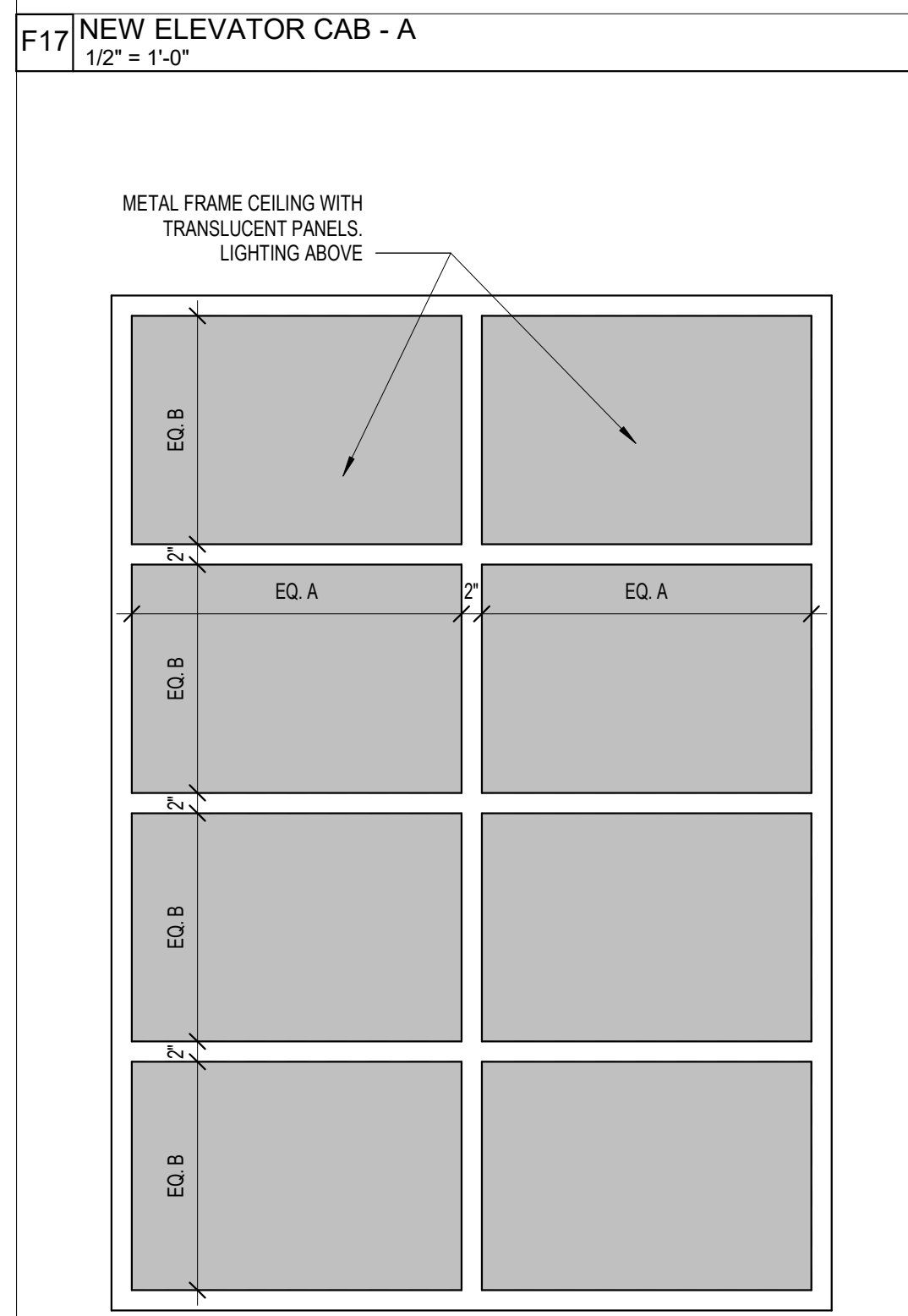
SHEET TITLE:
EXTERIOR ELEVATIONS
- PHASE 00

DRAWING NO.:

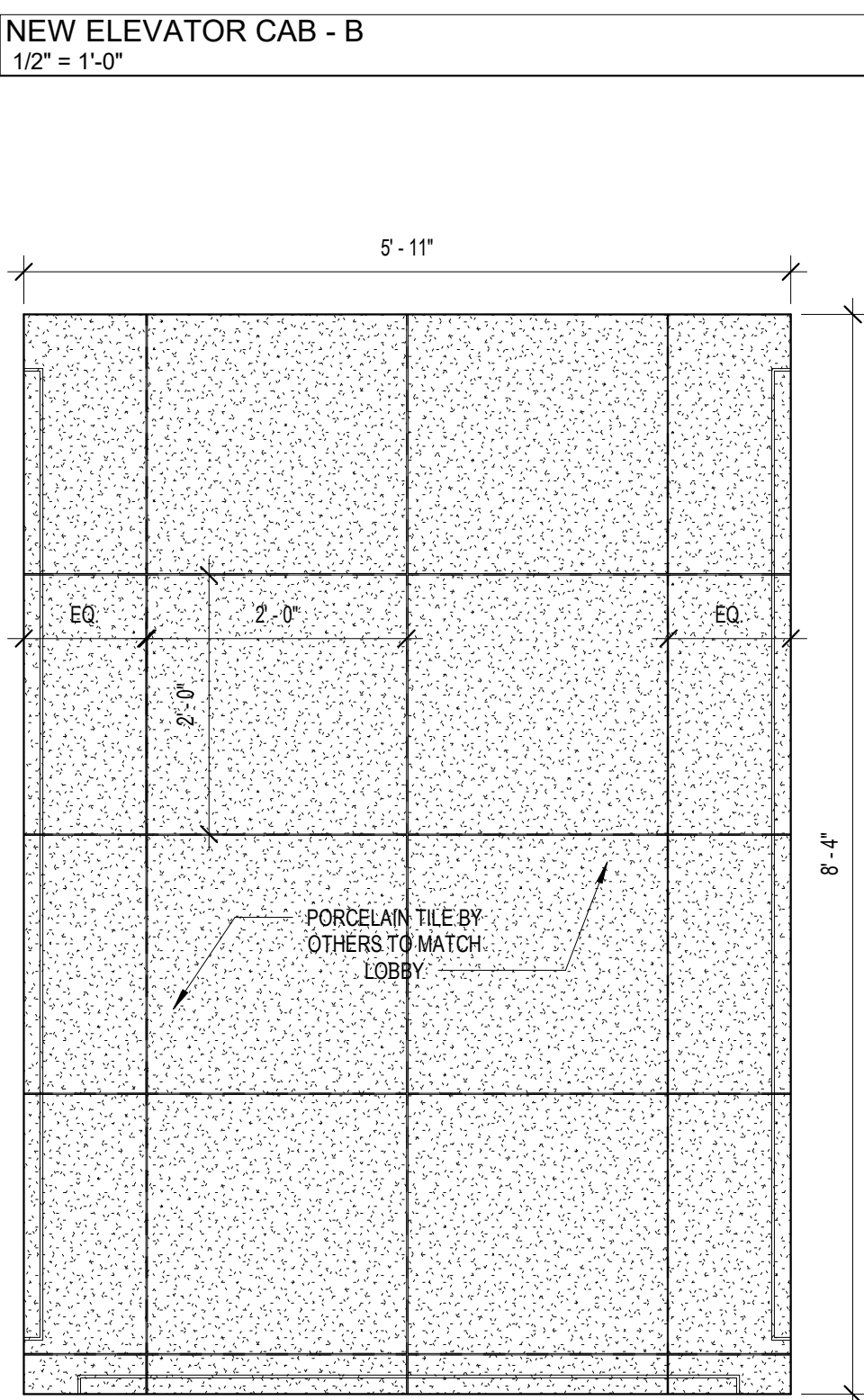
A-200

CCH PROJECT NO: 2387

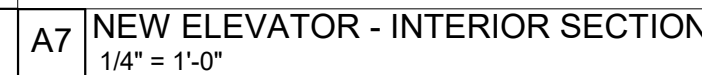
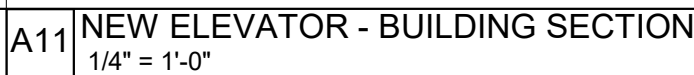
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7. INSTALLATION.
8. ROOF SCOPES SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR. IN COORDINATION
9. WITH THE FINAL ELEVATOR DESIGN, PRIOR TO INSTALLATION OF THE ELEVATOR.
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12. 6000 FSU FINISH FLOOR BY OTHERS.
13. REFER TO E-100 FOR ADDITIONAL ELEVATOR INFORMATION
14. FINISH THE INTERIOR OF THE BUILDING ABOVE SHOWN FOR REFERENCE ONLY. WILL BE COMPLETED BY A SEPARATE
15. CONTRACTOR



A17 NEW ELEVATOR CAB CEILING PLAN
3/4" = 1'-0"



A14 NEW ELEVATOR CAB FINISH PLAN
3/4" = 1'-0"



DESIGN DEVELOPMENT SUBMISSION - NOT FOR CONSTRUCTION

FORCINA HALL RENOVATION

DATE:	01/03/24
SCALE:	AS SHOWN
DRAWN BY:	BL, EG, JS
CHECKED BY:	MN, GH

SHEET TITLE:
PROPOSED ELEVATOR
- PLANS AND SECTIONS
- PHASE 00

DRAWING NO.:

A-500

CCH PROJECT NO: 2387

OWNER:
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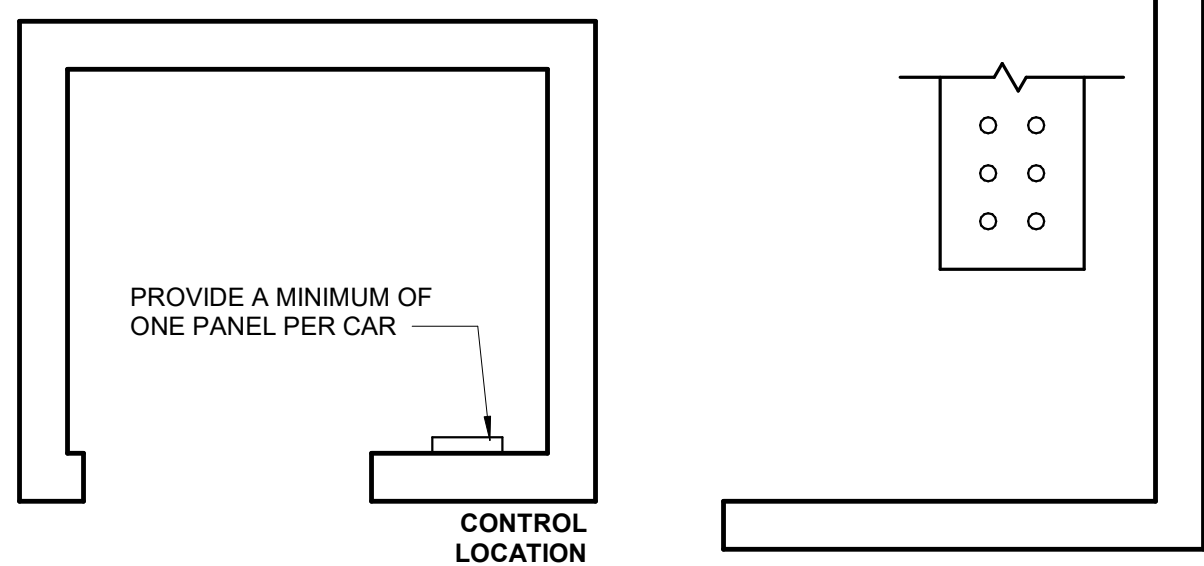
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3. ROOF SCOPE SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR, IN COORDINATION WITH THE FINAL ELEVATOR DESIGN, PRIOR TO INSTALLATION OF THE ELEVATOR.
4. CAB DRAWING CABINET SHALL BE USED AS A BASIS FOR THE CAB FINISH. FINISH SELECTION FOR ELEVATOR CAB TO BE DETERMINED. SPM300 BRILLIANT MODEL USED AS A BASIS FOR THE DESIGN OF ELEVATOR CAB.
5. ELEVATOR CAB FINISH PANEL BY OTHERS, NIC.
6. REFER TO EL-100 FOR ADDITIONAL ELEVATOR INFORMATION.
7. FINISHES TO THE INTERIOR OF THE BUILDING ARE SHOWN FOR REFERENCE ONLY. NIC WILL BE COMPLETED BY A SEPARATE CONTRACTOR.

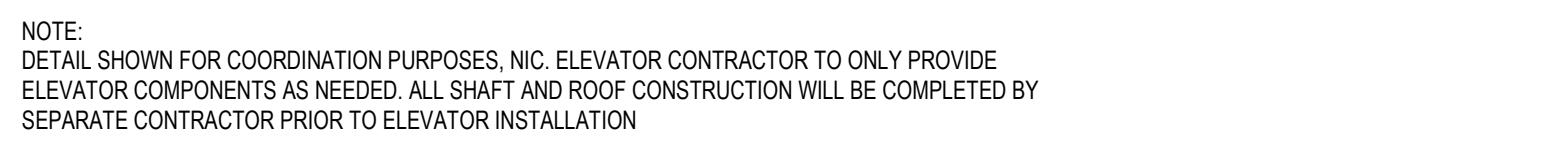


NOTE:
FINAL CONFIGURATION TO BE COORDINATED WITH MANUFACTURER

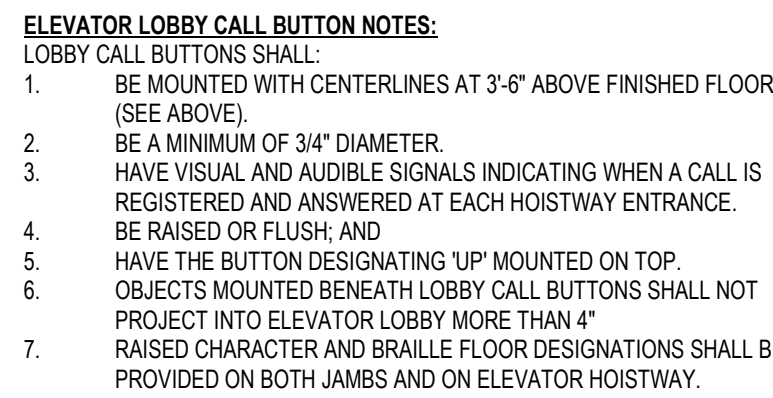
A20 ELEVATOR CONTROL BUTTON DETAILS
1/2" = 1'-0"



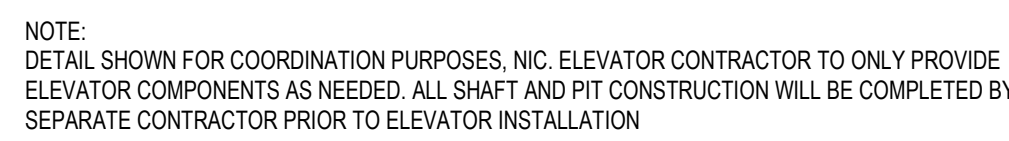
G16 ELEVATOR CALL BUTTON DETAIL
3" = 1'-0"



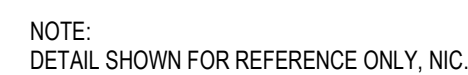
A16	PARAPET DETAIL 1 1/2" = 1'-0"
-----	----------------------------------



L11	ELEVATOR ENTRANCE DETAIL 1/2" = 1'-0"
-----	--



A11 ELEVATOR PIT LADDER DETAIL
1/2" = 1'-0"



A6 ELEVATOR PIT WATERPROOFING DETAIL
1" = 1'-0"

Drawings Copyright © 2017 Clarke Caton Hintz, PC

MEP ENGINEERS
MOORE Consulting Engineers, L.L.C.
457 Oakshade Road
Suite 100
Shamong, NJ 08088
(609) 268-0500

[illegible]

FORCINA HALL RENOVATION

DATE:	01/03/24
SCALE:	AS SHOWN
DRAWN BY:	BL, EG, JS
CHECKED BY:	MN, GH

SHEET TITLE:
ELEVATOR DETAILS -
PHASE 00

DRAWING NO.:

A-501

CCH PROJECT NO:	2387
-----------------	------

SYMBOL	PIT LOAD CONDITION - CAR #1	LOAD (LBS.)
B1	IMPACT ON CAR BUFFER SUPPORT	19,000
B2	IMPACT ON CWT BUFFER SUPPORT	22,000

Diagram illustrating the dimensions and loads for a new hoistway wall to wall section. The diagram shows a cross-section of the wall and the hoistway opening.

- Dimensions:**
 - Overall height: 10'-4" NEW HOISTWAY WALL TO WALL
 - Overall width: 8'-4" NEW HOISTWAY WALL TO WALL
 - Width of the hoistway opening: 14"
 - Width of the wall section on the right: 8"
- Loads:**
 - Top left corner: 35 KIPS
 - Top right corner: 25 KIPS
 - Bottom left corner: 40 KIPS
 - Bottom right corner: 28 KIPS
- Other Labels:**
 - ELEVATOR MACHINE BEAMS (indicated by a line pointing to the vertical beams within the hoistway opening)

Diagram illustrating the dimensions for a new passenger car (Car No. 1) at Hall Station @ ADA Compliant Ht. The car is shown with a 4'0" clear opening and a 3'6" centerline of call button. The height of the new entrance is 6'0".

17'-0" UNDERSIDE OF ROOF

16'-4" CLEAR OVERHEAD

9'-0" CAB HEIGHT (8'-8" CLEAR INSIDE)

8'-0" DOOR HEIGHT

FOURTH FLOOR

8" HOISTBEAM
INSTALLED BY OTHERS

Technical drawing showing a side elevation of a hoist installation. The drawing includes a vertical dimension line on the left indicating a total height of 17'-0" from the underside of the roof to the fourth floor. A specific dimension of 16'-4" is shown for the clear overhead space. The hoist cab is shown with a height of 9'-0" and a clear interior height of 8'-8". The door height is indicated as 8'-0". A horizontal dimension line at the top right indicates an 8" hoistbeam installed by others. The drawing also shows the hoist mechanism and the fourth floor structure.

Diagram illustrating the required electrical components and wiring for a machine room door:

- Dimensions:**
 - Top panel: 4'-0" (MINIMUM)
 - Left side panel: 7'-3" (MINIMUM)
 - Bottom panel: 3'-0"
- Internal Components:**
 - CONTROLLER
 - XFMR
 - MINI-SPLIT AC (H/H)
- Wiring and Connections:**
 - PROVIDE MIN. 30 FOOT-CANDLES OF LIGHT AT CONTROLLER (BY G.C.)
 - 110 VOLT LIGHTING AND APPLIANCE CIRCUIT BREAKER PANEL. THE FOLLOWING CIRCUIT BREAKERS SHALL BE CAPABLE OF BEING LOCKED IN THE OFF POSITION. A SEPARATE CIRCUIT FOR CAR LIGHTS, FANS AND OUTLET. A SEPARATE CIRCUIT FOR MACHINE ROOM LIGHTS AND RECEPTACLES. A SEPARATE CIRCUIT FOR PIT LIGHTS AND RECEPTACLES.
 - 3 PHASE POWER SUPPLY THROUGH A CIRCUIT BREAKER OF FUSED DISCONNECT LOCATED ADJACENT TO THE MACHINE ROOM DOOR.
 - 3 PHASE POWER SUPPLY THROUGH A CIRCUIT BREAKER OF FUSED DISCONNECT LOCATED ADJACENT TO THE MACHINE ROOM DOOR.
 - LIGHT SWITCH (BY OTHERS)

Diagram illustrating the components and dimensions for a new hoistway wall and governor tension sheave assembly:

- 8" NEW HOISTWAY WALL TO WALL**: Dimension indicating the width of the new hoistway wall.
- 10" NEW HOISTWAY WALL TO WALL**: Dimension indicating the height of the new hoistway wall.
- NEW GOVERNOR TENSION SHEAVE**: Component for the governor system.
- B1**: Callout for the new car spring buffers (typical).
- NEW CAR SPRING BUFFERS (TYP.)**: Component for the car.
- NEW CAR RAILS AND BRACKETS**: Component for the car.
- B2**: Callout for the new CWT spring buffers.
- NEW CWT. SPRING BUFFERS**: Component for the counterweight.
- NEW CWT. RAILS AND BRACKETS**: Component for the counterweight.
- PUMP AND DISCHARGE LINE TO PREVENT CONTAMINATE WATER FROM GOING INTO SEWER OR STORM LINE**: Component for water management.
- PERFORATED REMOVABLE GALVANIZED STEEL PLATE COVER**: Component for the pump and discharge line.

HOISTWAY SECTION - CAR PE-2

3. PROVIDE A CLEAR, PLUMB HOISTWAY OF THE SIZE SHOWN ON THE FINAL CONTRACT LAYOUT DRAWINGS. VARIATIONS SHALL NOT EXCEED "1" (TOLERANCE = -0" + 1")
2. PROVIDE ADEQUATE SUPPORT FOR GUIDE RAIL BRACKETS FROM PIT FLOOR TO THE TOP OF HOISTWAY AND NOT SPANNING FURTHER THAN ALLOWED BY NYC DOB. ANY REQUIRED FIREPROOFING SHALL BE INSTALLED AFTER INSTALLATION OF BRACKETS.
3. HOISTWAY VENTILATION SHALL BE PROVIDED PER CODE REQUIREMENTS.
4. PROJECTIONS REQUIRING BEVELING IN ACCORDANCE WITH CODE REQUIREMENTS SHALL BE BEVELED AT AN ANGLE NOT LESS THAN 75 DEGREES FROM THE HORIZONTAL.
5. ELEVATOR CONTRACTOR PROVIDE REMOVABLE, OSHA COMPLIANT BARRICADES AROUND THE HOISTWAY.
6. PROVIDE TWO LIFELINE ATTACHMENTS AT THE TOP, FRONT OF THE HOISTWAY.
7. ARRANGE FOR ALL BLOCK OUT / CUTOUT OF OPENINGS TO INSTALL HALL PUSHBUTTONS, SIGNAL FIXTURES, AND HATCH DUCT.
8. PROVIDE A DRY PIT REINFORCED TO SUSTAIN VERTICAL FORCE FROM RAILS AND BUFFERS. REFERENCE THE REACTION LOAD TABLES FOR VERTICAL FORCES. PUMPS AND / OR PUMPS PUMPS (WHERE PERMITTED) LOCATED WITHIN THE PIT MAY NOT INTERFERE WITH THE ELEVATOR EQUIPMENT.
9. PROVIDE SUITABLE LIGHTING FOR THE MACHINE SPACE WITH A LIGHT SWITCH LOCATED IN THE HOISTWAY. PROVIDE A LIGHT FIXTURE WITH AND A SEPARATE GFCI PROTECTED DUPLEX CONVENIENCE OUTLET IN THE ELEVATOR PIT.
10. ENTRANCE WALLS ARE TO BE LEFT OPEN UNTIL THE ELEVATOR EQUIPMENT IS INSTALLED. ADEQUATE SUPPORT FOR ENTRANCE ATTACHMENT POINTS IS REQUIRED ALL LANDINGS. ALL FINISHED FLOORING AND GROUTING IS TO BE INSTALLED AFTER THE ENTRANCE FRAMES ARE INSTALLED.
11. A PIT LADDER SHALL BE SUPPLIED BY THE ELEVATOR CONTRACTOR.
12. A HOIST BEAM SHALL BE INSTALLED IN THE ELEVATOR HOISTWAY OVERHEAD AS SHOWN.
13. THE MACHINE SPACE AT THE TOP OF THE HOISTWAY MUST BE PROPERLY VENTED PER CODE REQUIREMENTS.
MAX ALLOWED HUMIDITY IS 95% NON-CONDENSING. HOISTWAY MUST MAINTAIN A TEMPERATURE BETWEEN 41 F AND 104 F.
14. THE ACCESS DOOR TO THE CONTROL SPACE OR THE CONTROL ROOM MUST BE SECURED AGAINST UNAUTHORIZED ACCESS.
IT SHALL BE SELF LOCKING AND SELF CLOSING.
15. PROVIDE A 15-AMP 120V AC FUSED SERVICE WITH GROUND (VIA EMERGENCY LIGHT SUPPLY IF AVAILABLE) CONNECTED TO THE CONTROL CABINET FOR LIGHTING AND FAN. PROVIDE DEDICATED PHONE LINE TERMINATING AT THE ELEVATOR CONTROL CABINET.
16. FOR CONTROL SPACES LOCATED REMOTELY FROM THE ELEVATOR HOISTWAY, PROVIDE A GOVERNOR ACCESS DOOR OF SIZE AND LOCATION PER CONTRACTOR FINAL LAYOUT DRAWINGS. THE ACCESS DOOR SHALL BE SECURED AGAINST UNAUTHORIZED ACCESS.
17. PROVIDE A SUITABLE WORKING ENVIRONMENT INCLUDING ADEQUATE ACCESS TO THE BUILDING, PROPER LIGHTING IN ALL AREAS, CLEAN AND SAFE STORAGE ADJACENT TO THE HOISTWAY, AND SUFFICIENT ON-SITE REFUSE CONTAINERS FOR THE DISPOSAL OF ELEVATOR PACKING MATERIALS.
18. THESE DRAWINGS ARE FOR INFORMATION PURPOSES ONLY AND MUST NOT BE USED FOR CONSTRUCTION PURPOSES. FULLY DETAILED PROJECT SPECIFIC CONSTRUCTION DRAWINGS SHALL BE PROVIDED BY THE ELEVATOR CONTRACTOR FROM THE MANUFACTURER.

Clarke Caton Hintz

Architecture
Planning
Landscape Architecture

Drawings Copyright © 2017 Clarke Caten Hintz PC

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2000 Pennington Rd, Ewing
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(609) 771-2131

MEP ENGINEERS
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457 Oakshade Road
Suite 100
Shamong, NJ 08088
(609) 268-0500

ELEVATOR CONSULTANT
B Squared Engineering, LLC
169 Mill Brook Road
Stamford, CT 06902
(609) 203-0388

SUBMISSIONS		
NO.	DATE	DESCRIPTION
1	02/02/24	SD ISSUANCE

REVISIONS

FORCINA HALL RENOVATION

THE COLLEGE OF NEW JERSEY

DATE:	12/20/23
SCALE:	AS SHOWN
DRAWN BY:	L
CHECKED BY:	P

SHEET TITLE:
NEW SERVICE
ELEVATOR PL
AND SECTION

DRAWING NO.:

EL-100

CCH PROJECT NO: 2387



Mandatory Documents

FORM #	TITLE OF FORM
1	MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
2	OWNERSHIP DISCLOSURE FORM
3	NON-COLLUSION STATEMENT
4	DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM
5	VENDOR QUALIFICATION SHEET



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
FORM # 1

The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

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

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

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

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

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

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

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

the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

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

- (1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
- (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
- (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;
- (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
- (5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
- (6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:
 - (i) The contractor or subcontractor shall interview the referred minority or women worker.
 - (ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.
 - (iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.
 - (iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.
- (3) 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 Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor

shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

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

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

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program 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 Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27-1.1 et seq.)**.

Additional Mandatory Construction Contract Language For State Agencies, Independent Authorities, Colleges and Universities Only

The Executive Order No. 151 (Corzine, August 28, 2009) and P.L. 2009, Chapter 335 include a provision which require all state agencies, independent authorities and colleges and universities to include additional mandatory equal employment and affirmative action language in its construction contracts. It is important to note that this language is in addition to and does not re- place the mandatory contract language and good faith efforts requirements for construction con- tracts required by N.J.A.C. 17:27-3.6, 3.7 and 3.8. The additional mandatory equal employment and affirmative action language is as follows:

It is the policy of The College of New Jersey that its contracts should create a work- force that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by The College of New Jersey to perform under a construction contract shall put forth a good faith effort to engage in recruitment and employment practices that further the goal of fostering equal opportunities to minorities and women.

The contractor must demonstrate to The College of New Jersey's satisfaction that a good faith effort was made to ensure that minorities and women have been afforded equal opportunity to gain employment under The College of New Jersey's contract with the contractor. Payment may be withheld from a contractor's con- tract for failure to comply with these provisions.

Evidence of a "good faith effort" includes, but is not limited to:

1. The Contractor shall recruit prospective employees through the State Job bank website, managed by the Department of Labor and Workforce Development, available online at <http://NJ.gov/JobCentralNJ>;
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women;
3. The Contractor shall actively solicit and shall provide The College of New Jersey with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media; and
4. The Contractor shall provide evidence of efforts described at 2 above to The College of New Jersey no less frequently than once every 12 months.
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27-1.1 et seq.

To ensure successful implementation of the Executive Order and Law, state agencies, independent authorities and colleges and universities must forward an Initial Project Workforce Report (AA 201) for any projects funded with ARRA money to the Dept. of LWD, Construction EEO Monitoring Program immediately upon notification of award but prior to execution of the contract.

IF AWARDED A CONTRACT YOUR COMPANY/FIRM WILL BE REQUIRED TO COMPLY WITH THE AFFIRMATIVE ACTION REQUIREMENTS LISTED ABOVE.

Firm Name: _____

Signature: _____

Title: _____

Date: _____



OWNERSHIP DISCLOSURE
FORM # 2

The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

BID SOLICITATION # AND TITLE: _____

VENDOR NAME: _____

PURSUANT TO N.J.S.A. 52:25-24.2, ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO PROVIDE A STATEMENT OF OWNERSHIP.

1. The vendor is a **Non-Profit Entity**; and therefore, no disclosure is necessary.
2. The vendor is a **Sole Proprietor**; and therefore, no other disclosure is necessary.
A Sole Proprietor is a person who owns an unincorporated business by himself or her-self.
A limited liability company with a single member is not a Sole Proprietor.
3. The vendor is a **corporation, partnership, or limited liability company**; and therefore, disclosure is necessary.

If you answered **YES** to Question 3, you must disclose the following information below: **(a)** the names and addresses of all stockholders in the corporation who own 10% or more of its stock, of any class; **(b)** all individual partners in the partnership who own a 10% or greater interest therein; or, **(c)** all members in the limited liability company who own a 10% or greater interest therein.*

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

4. For each of the corporations, partnerships, or limited liability companies identified in response to Question #3 above, are there any individuals, partners, members, stockholders, corporations, partnerships, or limited liability companies owning a 10% or greater interest of those listed business entities?

If you answered **YES** to Question 4, you must disclose the following information below: **(a)** the names and addresses of all stockholders in the corporation who own 10% or more of its stock, of any class; **(b)** all individual partners in the partnership who own a 10% or greater interest therein; or, **(c)** all members in the limited liability company who own a 10% or greater interest therein. The disclosure(s) shall be continued until the names and addresses of every non-corporate stockholder, individual partner, and/or member a 10% or greater interest has been identified.*

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

NAME	_____		
ADDRESS	_____		
ADDRESS	_____		
CITY	STATE	ZIP	

5. As an alternative to completing this form, a Vendor with any direct or indirect parent entity which is publicly traded, may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10% or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10% or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10% or greater beneficial interest.*

* Attach additional sheets if necessary



**NON-COLLUSION STATEMENT
FORM # 3**

The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

Date:

The College of New Jersey
The Office of Finance & Business Services, Purchasing Department
Administrative Services Building, Room 201
P.O. Box 7718
Ewing, New Jersey 08628-0718
To Whom It May Concern:

This is to certify that the undersigned bidder _____ as
not, either directly or indirectly, entered into any agreement, participated in
any collusion, or otherwise taken any action in restraint of free competitive
bidding in connection with the proposal submitted to The College of New
Jersey on the _____ day of _____, 20 ____.

Signature:

Corporate Seal:

Attest by:

Sworn to and subscribed before me this _____ day of _____, 20 ____.

My commission Expires: _____

Notary Public

THIS STATEMENT MUST BE COMPLETED AND SIGNED



DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

FORM # 4

The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

BID SOLICITATION # AND TITLE: _____

VENDOR NAME: _____

Pursuant to N.J.S.A. 52:32-57, et seq. (P.L. 2012, c.25 and P.L. 2021, c.4) any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must certify that neither the person nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the New Jersey Department of the Treasury's Chapter 25 List as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found on the Division's website at <https://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Vendors/Bidders must review this list prior to completing the below certification. If the Director of the Division of Purchase and Property finds a person or entity to be in violation of the 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.

CHECK THE APPROPRIATE BOX

☐ I certify, pursuant to N.J.S.A. 52:32-57, et seq. (P.L. 2012, c.25 and P.L. 2021, c.4), that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the New Jersey Department of the Treasury's Chapter 25 List of entities determined to be engaged in prohibited activities in Iran.

OR

☐ I am unable to certify as above because the Vendor/Bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the New Jersey Department of the Treasury's Chapter 25 List. I will provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, has engaged in regarding investment activities in Iran by completing the information requested below.

Entity Engaged in Investment Activities
Relationship to Vendor/ Bidder
Description of Activities

Duration of Engagement
Anticipated Cessation Date

**Attach Additional Sheets If Necessary.*

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Vendor is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State 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. If I do so, I may be subject to criminal prosecution under the law, and it will constitute a material breach of my contract(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

Signature

Date

Print Name and Title

**TCNJ**

THE COLLEGE OF NEW JERSEY

VENDOR QUALIFICATION SHEET**FORM # 5**

The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

Vendors are required to submit evidence of qualifications to meet all requirements as required by the Office of Finance & Business Services at The College of New Jersey by providing the information listed below. Vendors must comply with the College's terms and conditions available on the [Purchasing website](#).

If this information is being requested as part of an RFP or RFQ, vendors may be requested to furnish additional information for clarification purposes. This will in no way change the vendor's original proposal.

All vendors are encouraged to register with the State of New Jersey, Division of Purchase and Property via [NJSTART](#).

TO BE COMPLETED BY VENDOR

1. Please list the types of commodities that your company can provide.

A. _____

B. _____

C. _____

2. The number of years your firm has been providing these services. _____ Year(s)

3. Location of vendor's office and personnel that will be responsible for managing contract/service:

Name: _____

Title: _____

Telephone Number: _____

Email Address: _____

Street Address: _____

City/State/Zip: _____

Federal Identification Number: _____

4. Does your firm have a New Jersey Business Registration Certificate? Yes ☐ No ☐
If yes, please **attach** a copy of the certificate. If you would like to register, visit the State website [here](#).

5. Is your firm registered under any of the following categories in the State of New Jersey? If yes, please **attach** a copy of the certificate or certification statement from the New Jersey Division of Revenue and Enterprise Services. If no and you would like to register, please contact the New Jersey Division of Revenue and Enterprise Services at 609-292-2146.

Small Business Enterprise (SBE):

Yes ☐

No ☐

Women-Owned Business Enterprise (WBE):

Yes ☐

No ☐

Minority-Owned Business Enterprise (MBE):

Yes ☐

No ☐

Veteran-Owned Business (VOB):

Yes ☐

No ☐

Disabled Veteran-Owned Business (DVOB):

Yes ☐

No ☐

VENDOR QUALIFICATIONS- continued

Under NJ Executive Order 34, TCNJ is responsible for soliciting demographic, ethnic, and gender information from its vendors. Your response, however, is **strictly voluntary**. Please be advised that any contracting decisions made by TCNJ will **not** be influenced in any way by your decision to provide the above information. TCNJ is required to seek the following information from each firm under contract with us:

1. Is more than fifty percent (50%) of your company minority owned (African-American, Hispanic, Asian, and/or Native American) Yes ☐ No ☐
2. Is more than fifty percent (50%) of your company woman owned? Yes ☐ No ☐
3. What is the ethnicity of the owner of your company: (check applicable according to 51% ownership)

- ☐ Asian American
- ☐ Multiple Ethnicities
- ☐ Non-Minority
- ☐ Hispanic American
- ☐ African American
- ☐ Caucasian American Female
- ☐ Native American
- ☐ Unspecified

11. Please provide a list of former or present clients. Also, indicate the name of a contact person and telephone number for reference purposes. **Any personnel from The College of New Jersey listed as a reference will not be considered a valid reference.**

A. Client Name: _____

Contact Name: _____

Telephone Number: _____

Email Address: _____

B. Client Name: _____

Contact Name: _____

Telephone Number: _____

Email Address: _____

C. Client Name: _____

Contact Name: _____

Telephone Number: _____

Email Address: _____

VENDOR QUALIFICATIONS- continued

12. Please answer the questions below related to your prior experience. If any of the responses are yes, attach a summary of details on a separate sheet.

Has the bidder:

- a. been found, through either court adjudication, arbitration, mediation, or other contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or perform goods or services; or failed to complete the contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with the contracting unit? Yes ☐ No ☐

- b. defaulted on a contract, thereby requiring the local unit to utilize the services of another contractor to provide the goods or perform the services or to correct or complete the contract or requiring the local unit to look to the bidder's surety for completion of the contract or tender of the costs of completion? Yes ☐ No ☐

- c. been debarred or suspended from contracting with any of the agencies or departments of the executive branch of the State of New Jersey at the time of contract award, whether or not the action was based on experience with the contracting unit. Yes ☐ No ☐

Firm Name: _____

Signature: _____

Title: _____

Date: _____



CONTRACT FOR CONSTRUCTION

This AGREEMENT is entered into as of the ____ day of _____, _____, between

The College: The College of New Jersey (“TCNJ” or the “College”)
 PO Box 7718
 2000 Pennington Road
 Ewing, New Jersey 08628-0718

and

the Contractor: _____ (the “Contractor”)

in connection with

the Project: Forcina Hall Elevator Equipment Purchase and Installation (the “Project”)

The Architect: Clarke Caton Hinz
 100 Barrack Street
 Trenton, NJ 08608

ARTICLE 1

EMPLOYMENT OF THE CONTRACTOR/THE PROJECT DESCRIPTION

1.1 The College employs the Contractor and the Contractor agrees to perform the construction for the Project identified above. The Project is described in more detail in the College’s Plans and Specifications prepared by the Architect.

ARTICLE 2

THE CONTRACT DOCUMENTS

2.1 The Contract Documents consist of this Contract for Construction and the Exhibits attached hereto (“Contract for Construction”), the General Conditions of the Contract for Construction (the “General Conditions”) (and any other General, Supplementary and other Conditions), the Plans and Specifications, and also the following documents:

- (a) The Contractor's Bid excluding limitations and qualifications unless such limitation or qualification is specifically accepted in writing by the College;
- (c) Addenda and Clarifications issued before the bid due date;
- (d) The Project Bidding Schedule; and
- (e) Modifications issued after execution of this Contract for Construction.

These documents all form the "Contract," and are as fully a part of this Contract as if attached hereto or repeated herein. This Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral.

ARTICLE 3

SCOPE OF WORK

3.1 The Contractor shall fully perform the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others. The Contractor shall assume full responsibility for constructing and completing the Project and all the Work, including providing all labor, Subcontractors, materials, equipment, and services reasonably inferable from the Contract Documents and all applicable laws, codes and professional standards, and providing all supervision, management, and scheduling required in the General Conditions and as noted throughout the Contract Documents.

ARTICLE 4

CONTRACT TIMES

4.1 TIME OF THE ESSENCE. All dates and durations specified in this Contract, including the Construction Start Date(s), any Milestones Dates, any Substantial Completion Date(s) and any Final Completion Date(s) (collectively, "Contract Times") are agreed to be of the essence.

4.2 CONSTRUCTION START. The Work shall start no later than ten (10) calendar days after the College issues a Notice to Proceed to the Contractor ("Construction Start Date"). If the Work is to be performed in phases, the College may issue a separate Notice to Proceed with respect to each phase (e.g., Phase 1 Notice to Proceed, Phase 2 Notice to Proceed, etc.) thereby establishing different Construction Start Dates for each phase (e.g., Phase 1 Construction Start Date, Phase 2 Construction Start Date, etc.). The College may, in its sole discretion and at no cost to the College, choose to delay the issuance of a Notice to Proceed and the Construction Start Date for any phase until after the Contractor has achieved Substantial or Final Completion of any other phase.

4.3 MILESTONES. The construction tasks or activities shall be completed within the number of calendar days after the Construction Start Date as set forth in the Notice to Proceed ("Milestone Dates"). If the Work is to be performed in phases, each phase may have

separate Milestone Dates (e.g., Phase 1 Milestone Dates, Phase 2 Milestone Dates, etc.), which dates shall be set forth in the Notice to Proceed for that phase.

4.4 SUBSTANTIAL COMPLETION. The Contractor shall diligently prosecute the Work and shall achieve Substantial Completion of the entire Work as set forth in the Notice to Proceed (“Substantial Completion Date”). If the Work is to be performed in phases, each phase may have a separate Substantial Completion Date (e.g., Phase 1 Substantial Completion Date, Phase 2 Substantial Completion Date, etc.), which date shall be set forth in the Notice to Proceed for that phase. The definition and requirements of Substantial Completion are set forth in the General Conditions. The Substantial Completion Date(s) shall only be changed by a written change order.

4.5 FINAL COMPLETION. The Contractor shall achieve Final Completion of the entire Work as set forth in the Notice to Proceed (“Final Completion Date”). If the Work is to be performed in phases, each phase may have a separate Final Completion Date (e.g., Phase 1 Final Completion Date, Phase 2 Final Completion Date, etc.), which date shall be set forth in the Notice to Proceed for that phase. The requirements for Final Completion are defined in the General Conditions as well as the Specifications of the Project. The Final Completion Date(s) shall only be changed by written change order.

4.6 LIQUIDATED DAMAGES FOR DELAY. If the Contractor fails to achieve Substantial Completion of a phase of the Work or of the entire Work by the Substantial Completion Date(s) set forth in the applicable Notice to Proceed (as extended by Change Order, if applicable), and the delay is not excused by the College, then the Contractor shall pay the College the following amounts as liquidated damages for delay (“Liquidated Damages”) for each calendar day that the phase of the Work or the entire Work is not substantially completed beyond the applicable Substantial Completion Date:

\$_____ per calendar day.

The College and the Contractor agree that the actual loss to the College from construction delays and the inability to use the Project or any phase of the Project in a substantially completed state are for the most part difficult to quantify, and that the foregoing Liquidated Damages formula results in damages amounts that are a reasonable estimate of the damage to the College for not being able to use the Project in a substantially completed state and are not penalties and are not intended to be penalties. The College may deduct Liquidated Damages from payments due under this Contract, but its failure to withhold Liquidated Damages or to assert a claim for Liquidated Damages shall not be deemed a waiver of the College’s right to withhold or to assert a claim for damages for any delay that occurs at any time on the Project.

ARTICLE 5
CONTRACT PRICE

5.1 CONTRACT PRICE. The Contractor shall be paid \$_____ for the complete performance of this Contract, which was proposed by the Contractor in its bid and accepted by the College (the "Contract Price"). The Contractor shall be entitled to additional compensation for authorized changes which include the cost of the changes and mark-ups included in change orders approved in writing by the College in accordance with the change order provision set forth in the General Conditions.

5.2 ALTERNATES. The Contract Price is based upon and includes the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the College:

[_____]

5.3 UNIT PRICES. The Contract Price is based upon and includes the following unit prices, if any, which are described in the Contract Documents:

[_____]

5.4 ALLOWANCES. The Contract Price is based upon and includes the following allowances, if any, which are described in the Contract Documents:

[_____]

ARTICLE 6
PAYMENTS TO THE CONTRACTOR

6.1 PAYMENT. The Contractor will be paid by the College in accordance with this Article and the payment provision in the General Conditions.

6.2 MONTHLY PROGRESS PAYMENTS. The College will make progress payments as the Work proceeds based on written invoices submitted monthly by the Contractor and approved by the Architect and the College. No payments will be made until the Contractor submits a unit schedule break down showing the portions of the total Contract Price for each principal category of Work and value loaded CPM schedule allocating the Contract Price among the schedule activities. Monthly progress payment amounts shall be based on the percentages of the Work completed as of the end of the pay period (less earlier payments). All payment requests or invoices and all payments shall be governed by the payment provision of the General Conditions as well as any special requirements of this Contract, including the requirement that progress payments shall be based on a unit schedule breakdown and a value loaded CPM schedule.

6.3 RETAINAGE. The College will retain 2% of the amount due on each progress payment pending Final Completion of the Work. The holding and release of retainage shall be governed by the payment provision of the General Conditions.

6.4 CHANGE ORDERS. The Contractor shall invoice for change order work in the monthly progress payment invoices as the change order work is performed, but only after a written change order and TCNJ issued Purchase Order has been signed by the College. Changes in the Work shall be governed by the change order provision of the General Conditions.

6.5 FINAL PAYMENT. Upon final completion of all Work included in the Contract Documents including all change orders, acceptance of the Work by the Architect and the College, the satisfactory completion of all of the requirements in the General Conditions for final completion, and the issuance of the Certificate of Final Completion, the Contractor will be paid the fully adjusted Contract Price including any retainage withheld (less earlier payments). The invoice for final payment and final payment shall also be subject to the payment provision of the General Conditions and any special requirements of this Contract.

6.6 PAYMENT TERMS. All invoices and payments shall also be subject to the General Conditions, including the provisions regarding payments, to the right of the College to withhold payments or to make deductions from payments, and to the Prevailing Wage Act requirements set forth in the General Conditions. The College will pay proper final invoices within thirty (30) days of their submission to the College with the approval of the Architect.

6.7 SUBMISSION OF INVOICES. Prior to the submission of the invoice, the Contractor will submit to the College and the Architect, in draft form, a “pencil copy” of the monthly invoice for review and approval setting forth each line item for which the Contractor intends to request payment in that invoice based on the claimed percent completed for that line item. Upon receipt of said “pencil copy”, the College and the Architect shall observe the Work in place and, on the basis of such observations, will either approve the amounts requested or modify the Contractor’s request, based on the College’s independent assessment of the Work in place. The College will then return the pencil copy invoice to the Contractor for the Contractor to then adjust and submit the final invoice with the agreed to percentages completed per line item to the College for payment. No invoice shall be submitted for payment until all amounts and completion percentages have been determined in this manner.

6.8 PROMPT PAYMENT ACT. For the purposes of the State’s Prompt Payment Act, N.J.S.A. 2A:30A-1, et seq.:

(a) An invoice will be deemed to have been received when it is received by the College at the address designated in the pre-construction conference for receipt of the invoices.

(b) The “billing date” as that term is used in N.J.S.A. 2A:30A-2 shall be the earlier of the date upon which an invoice for payment is approved for payment or 20 days after the invoice is received, unless within such 20 day period the invoice is found to be incomplete or

otherwise unacceptable and returned to the Contractor, with a written explanation of deficiencies, the amount withheld and the reasons for withholding payment.

(c) In the event that an invoice is found to be deficient and returned to the Contractor, the “billing date” shall be calculated from the date that a corrected invoice is received.

(d) Payment shall be considered to have been made on the date on which a check for such payment is dated.

(e) Payment terms (e.g., “net 20”) offered by the Contractor shall not govern the College’s obligation to make payment.

(f) The following periods of time will not be included in the calculation of the due date of the Contractor’s invoice:

(i) Any time elapsed between receipt of an improper invoice and its return to the Contractor, not to exceed 20 calendar days; or

(ii) Any time elapsed between the College’s return of an improper invoice to the Contractor and the College’s receipt of a corrected invoice.

If the State’s Prompt Payment Act is amended, or the language stated herein is inconsistent with the language contained in the State’s Prompt Payment Act, the language of the State’s Prompt Payment Act shall control.

6.9 LIMITATIONS ON APPLICABILITY. The provisions of this Article shall not govern the College’s payment obligations nor shall they supersede or modify any other contractual provision allowing the withholding of monies from the Contractor to the extent that the Contractor has not performed in accordance with the provisions of the Contract Documents. This Article also shall not govern the College’s payment obligations nor supersede or modify any other contractual provision governing the Contractor claims for additional compensation beyond the base Contract Price and approved change orders.

6.10 INTEREST. Interest shall be payable on amounts due the Contractor if not paid within thirty (30) calendar days after the billing date specified above, as provided under the State’s Prompt Payment Act, N.J.S.A. 2A:30A-1, et seq. Interest on amounts due shall be payable to the Contractor for the period beginning on the day after the required payment date and ending on the date on which the check for payment is drawn. Interest may be paid by separate payment to the Contractor, but shall be paid within 30 days of payment of the principal amount of the approved invoice. Nothing in this Article shall be construed as entitling the Contractor to payment of interest on any sum withheld by the College for any reason permitted under the Contract Documents or applicable law, or on any claim for additional compensation, over and above sums due under the base Contract Price or approved change orders.

ARTICLE 7
DISPUTE RESOLUTION

7.1 If a dispute or claim arises out of or relates to this Contract, or the breach thereof, and if the dispute cannot be settled through negotiation, the method for resolution of such dispute or claim shall be as provided in the dispute resolution provision of the General Conditions.

ARTICLE 8
TERMINATION OR SUSPENSION

8.1 This Contract may be terminated by the College as provided in the termination and suspension provision in the General Conditions.

8.2 The Work may be suspended by the College or the Contractor as provided in termination and suspension provision in the General Conditions.

ARTICLE 9
INSURANCE AND BONDS

9.1 CONTRACTOR'S INSURANCE. The Contractor shall purchase and maintain insurance as set forth in the insurance and bonds provision of the General Conditions. To the extent the Contractor shall be required to purchase and maintain additional insurance or insurance that differs from that set forth in the General Conditions, such requirements are set forth below:

[_____]

9.2 SUBCONTRACTOR'S INSURANCE. The Contractor shall ensure that its Subcontractors purchase and maintain insurance as set forth in the insurance and bond provision of the General Conditions.

9.3 PAYMENT AND PERFORMANCE BOND. The Contractor shall furnish the College with a payment bond and a performance bond as set forth in the insurance and bond provision of the General Conditions.

ARTICLE 10
OTHER PROVISIONS

10.1 CONTRACTOR REPRESENTATIONS. The Contractor represents to the College that it has:

(a) **Examination of the Contract Documents.** Examined and carefully studied the Contract Documents and the other documents in the bid documents, and that they are sufficient for performing the Work at the Contract Price.

(b) **Examination of Site.** Visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect the cost, progress, and performance of the Work.

(c) **Familiarity with Law.** Familiarized itself with all federal, state, and local laws and regulations that may affect the cost, progress, and performance of the Work.

(d) **Familiarity with Other Information and Other Documents.** Carefully studied all reports of investigations and tests of the site and subsurface conditions at or contiguous to the site and all drawings of physical conditions at the site including surface or subsurface composition, water, structures and utilities at or near to the site.

(e) **Additional Information Not Required for Bidding or Contract Performance.** Does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price.

10.2 ASSIGNMENT OF CONTRACT. The Contractor may not assign this Contract or any rights under or interests in this Contract including its right to payments under this Contract.

10.3 CONTRACTOR PERSONNEL ASSIGNED. The Contractor's team for this Project shall consist of the following personnel, who shall not be reassigned without the College's prior written consent:

<u>Name</u>	<u>Position</u>
_____	<u>Project Executive</u>
_____	<u>Project Manager</u>
_____	<u>Project Superintendent</u>
_____	<u>Project Scheduler</u>

The College reserves the right to request and have any member of the Contractor's or Subcontractor's staff replaced on the Project for any non-discriminatory reason.

10.4 NOTIFICATIONS/AUTHORIZED REPRESENTATIVE. All Notices required under this Contract shall be in writing, signed by the party giving same, and shall be deemed properly given only if hand delivered, sent by reputable overnight courier, or by registered or certified U.S. mail, return receipt requested, postage pre-paid and addressed as provided below.

Notice to the Contractor/Contractor's Representative. Written notices from the College and/or the Architect to the Contractor should be addressed to the Contractor's Representative:

Attn: _____

Notice to the College/College's Representative: Written notices from the Contractor to the College should be addressed to the College's Representative:

The College of New Jersey
PO Box 7718,
Ewing, New Jersey 08628
Attn: _____

with a copy to the College's General Counsel as follows:

Michael J. Canavan
Vice President and General Counsel
The College of New Jersey
PO Box 7718
Ewing, NJ 08628-0718

The College's Contracting Officer hereby authorizes the College's Representative to receive all Contract related correspondence.

Notice to the Architect: Written notices from the Contractor to the Architect should be addressed to:

Attn: _____

Neither the College's nor the Contractor's Authorized Representatives shall be changed without 7 days' written notice to the other party.

10.5 CONTRACT TERMS, CHANGES, AND LAW. This Contract constitutes the entire agreement between the College and the Contractor, and it shall be governed by the law of the State of New Jersey. The terms and conditions of this Contract may not be changed except by a writing signed by the Contractor and the College.

10.6 COUNTERPARTS AND SIGNATURES. This Contract may be executed in counterparts. All executed counterparts shall constitute one contract, and each counterpart shall be deemed an original. The parties hereby acknowledge and agree that facsimile signatures or signatures transmitted by electronic mail in so-called "pdf" format shall be legal and binding and shall have the same full force and effect as if an original of this Contract had been delivered. The College and the Contractor (1) intend to be bound by the signatures on any document sent by facsimile or electronic mail, (2) are aware that the other party will rely on such signatures, and (3) hereby waive any defenses to the enforcement of the terms of this Contract based on the foregoing forms of signature.

10.7 NO IMPLIED COVENANTS OR WARRANTIES. The Contractor acknowledges that there are no implied covenants or warranties from the College under this Contract.

10.8 SEVERABILITY. If any term or provision of the Contract Documents are to any extent held invalid or unenforceable, and if the provisions of the Contract Documents that are essential to each party's interests otherwise remain valid and enforceable, then (i) the remaining terms and provisions in the Contract Documents will not be affected thereby, (ii) each term and provision of the Contract Documents will be valid and enforceable to the fullest extent permitted by law, and (iii) the court/arbitrator(s) will give the offending provision the fullest meaning and effect permitted by law.

10.9 HEADINGS. The headings used in this Contract are for convenience and reference only, and are not part of this Contract, and do not in any way control, define, limit or add to the terms and conditions hereof.

10.10 INTERPRETATION/RULES OF CONSTRUCTION. The parties acknowledge that each party, and if it so chooses, its counsel, have reviewed and revised this Contract and that the normal rule of construction to the effect that any ambiguities be resolved in favor of the non-drafting party shall not be employed in the interpretation of this Contract or any amendments or exhibits thereto.

THE COLLEGE OF NEW JERSEY

By _____
William Rudeau,
Director of Design and Construction

By _____
Mark Mehler, Associate VP
for Finance & Budget Planning

Date _____

Date _____

By _____
Sharon Blanton,
Vice President for Operations

Date _____

By _____
Anup Kapur,
Executive Director of Procurement

Date _____

By _____
Joseph O'Brien,
Associate Vice President,
Financial Affairs

Date _____

CONTRACTOR:

By _____

Title _____

Date _____



GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

Last Revised May 2021

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ARTICLE 1
**CONTRACT DOCUMENTS, INTERPRETATION, INFORMATION FOR BIDDERS,
CLAIMS BASED ON BID AND CONTRACT DOCUMENTS**

1.1 Definitions.

Terms defined in the Contract for Construction shall have the meaning provided therein. Definitions for the purpose of these General Conditions include the following:

Addendum: A document issued to bidders by the College prior to the bid due date which supplements, revises or modifies the bid solicitation documents furnished for bidding purposes, and which must be identified and included in bids for the Contract.

Architect: The Architect (A/E) engaged by the College to design the Project, to prepare the design documents and assist with bid documents, and may administer the Contract and act as the agent of the College as described in the Contract.

Bulletin: A document prepared by the Architect describing proposed changes or additions to the Work in the Contract Documents that is issued after Contract award. If the College decides to implement the change, it will provide the bulletin to the Contractor and ask it to submit a change order proposal or request (in accordance with the change order provisions in the Contract for Construction, these General Conditions and other sections of the bidding documents).

Change Order Proposal or Change Order Request: A written proposal or request submitted by the Contractor in accordance with the change order provision of the Contract for Construction, these General Conditions and other sections of the bidding documents, including proposals submitted in response to Contract Change Directives, which proposes cost, time and other terms under which the Contractor will perform changed work under the Contract. If accepted by the College, a written change order signed by the Vice President for Administration and a TCNJ Purchase Order signed by the Contracting Officer of the College, and if accepted by the Contractor in writing, it will become part of the Contract as a change order.

The College's Representative: The College's Representative is a person or persons designated by the College to act on its behalf in administering the Contract for the College. The College's Representative may include the Director of Campus Construction, the Project Manager or an independent construction manager working for the Office of Campus Construction.

College Site Superintendent: The College Site Superintendent is a person or persons designated by the College to witness, observe, record and report on activities in and around the construction site. The Site Superintendent does not have the authority to stop or change the scope of the Work of the Contract Documents.

Contract: The Contract Documents all form the Contract. 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 College and a Subcontractor or a Sub-subcontractor, (3) between the College and the Architect or the Architect's consultants or (4) between any persons or entities other than the College 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 Contractor's duties.

Contract Amendment: The Contract can only be amended by (1) a written amendment identified as such that is signed by the College and the Contractor, (2) a change order signed in accordance with the Contract Documents, (3) a written Contract Change Directive (CCD) issued by the College that should result in a change order unless issued to address some fault of the Contractor, (4) a written approval or acceptance by the College or the Architect of a change requested by the Contractor in writing, provided the request for a change is specifically identified in a submittal.

Contract Change Directive (CCD): A Contract Change Directive (CCD) is a written directive issued by the College which orders an addition, deletion, clarification of a disputed item or revision in the Work, or a response to an emergency. A CCD does not by itself change the Contract, but it should result in a change order which does change the Contract Price or Contract Times if warranted. A CCD should specify the terms of the change order (if deemed warranted by the College) which will result, and/or specify a deadline for the submission by the Contractor of a proper change order request, and/or contain other similar terms.

Contract Documents: The Contract Documents are enumerated in Article 2 of the Contract for Construction.

Contract Limit Lines: The lines shown on the Plans that limit the boundaries of the Project site, and beyond which no construction work or activities shall be performed by the Contractor unless otherwise specified in the Contract Documents, including the Plans and Specifications and supplemental General Conditions.

Contracting Officer: The Associate Treasurer of the College shall be the Contracting Officer in connection with the Contract and the Project. The Contracting Officer and other designee shall have authority to act on behalf of the College under the Contract.

Field Order (FO): A written order issued by the Architect or the College which requires minor changes in the Work that do not result in a change in the Contract Price or the Contract Times. If the Contractor believes that a field order warrants the issuance of a change order that changes the Contract Times or Contract Price, it must notify the College and the Architect in writing within 48 hours, and its notice must specify the terms of the change order that it believes are warranted, including specific time and price change requests.

Plans: The Plans 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, and diagrams.

Project: The Project is the total construction of the Work performed under the Contract Documents and may include construction by the College and by separate contractors that the College has specifically identified.

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 prepared by the Architect or the College.

Supplemental General Conditions: The part of the Contract Documents which amends or supplements these General Conditions for the Project.

Work: 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.

1.2 Intent Of Contract Documents.

The intent of the Contract Documents is to describe a functionally complete and aesthetically acceptable Project to be constructed and completed by the Contractor in every detail in accordance with the Contract Documents. Any Work, services, materials, equipment or documentation that may be reasonably inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce a complete Project shall be supplied by the Contractor whether or not specifically identified at no additional cost to the College. Where the Contract Documents describe portions of the Work in general terms but not in complete detail, only the best construction practices and only materials and workmanship of the first quality are to be used. Only where the Contract Documents specifically describe a portion of the Project as being performed by others is the Work to be considered to include less than the entire Project.

1.3 Interpretation Of Contract Documents.

When two or more interpretations of a Specification for the Work are possible, the most stringent or the highest cost interpretation shall apply as determined by the Architect. The Architect (or in the absence of the Architect, the College) shall be the sole interpreter of the Plans and Specifications and the Contractor's performance therewith. It is the intent of these Plans and Specifications to provide materials of a quality consistent with the highest standards provided under similar circumstances in the same general geographical area and that will result in long-term use and efficient operation.

1.4 Law And Referenced Standards.

The Contractor is required to comply with all federal, state and local laws and regulations that apply to the Project, the Work and the Contract. Where the Contract Documents refer to any publication, including but not limited to any standard, which affects any portion of the Work or the Project, it shall be considered to mean the edition or revision in effect on the bid due date unless otherwise specified in the Contract Documents. No provision in any publication including

any standard shall create an obligation on the part of the College or the Architect to supervise or direct the Contractor's Work.

1.5 Plans And Specifications.

The Plans will include general plans and such details as deemed necessary to give a comprehensive representation of the construction required. The Contractor shall keep one set of Plans available at the Project site, which shall be available for inspection by the College and the Architect at all times. All alterations affecting the requirements in the Plans must be authorized by the College and the Architect in writing, and shall be promptly noted on the Contractor's record set of Plans, which are maintained at the site for inspection by the Contractor, the College and the Architect.

1.6 Order Of Precedence Of Contract Documents.

Each of the Contract Documents is an essential part of the Contract, and a requirement specified in one part of the documents is binding as if specified in all. The Contract Documents are intended to be complementary and to describe and provide for a complete Project. The obligations of the Contractor under the various Contract Documents shall be cumulative and to the extent that one of the Contract Documents imposes a stricter or more costly requirement or higher standard upon the Contractor than does another Contract Document, the more stringent or more costly requirement or higher standard, as determined by the Architect, shall apply. Otherwise, if there is any conflict among the Contract Documents, the signed Contract for Construction and all approved change orders shall control. As to the other Contract Documents, the order of precedence shall be as follows:

- (a) Contract for Construction
- (b) Addenda
- (c) Supplemental General Conditions
- (d) General Conditions
- (e) Specifications
- (f) Plans
 - i. Notes
 - ii. Large Scale Details
 - iii. Sections
 - iv. Elevations
- (g) Scope of Work Description

1.7 Organization Of Plans And Specifications.

The arrangement of the Plans and the organization of the Specifications into divisions, sections or articles shall not be construed by the Contractor as being intended to divide or allocate the Work among Subcontractors or trades or to establish the scope of the Work to be performed by particular Subcontractors or trades. The College is not liable for the Contractor dividing and separating the Contract Documents into individual packages to Subcontractors. Items that the Contractor fails to include or provide for shall be at the Contractor's sole risk and

cost. The Contract Documents work together as a whole and, therefore, the Contractor is required to coordinate the entire package with all its Subcontractors.

1.8 Required Approvals.

In all cases where approvals or decisions under the Contract Documents are required from the College, the Work shall not proceed without the required approvals and decisions in writing.

1.9 Conformity Of Work To Contract Documents.

All Work performed shall conform to the lines, grades, cross-sections, dimensions, material requirements, tolerances, details and other information in the Contract Documents. The purpose of tolerances is to accommodate occasional minor variations from the middle portion of the tolerance range that are unavoidable despite reasonable construction practices. When a maximum or minimum tolerance value is specified, the material and the Work shall be controlled so that they shall not be preponderantly of borderline quality or dimension.

1.10 Work Involving Existing Structures.

On projects involving alterations, remodeling, repairs, installations or other work in pre-existing structures or systems, the Contractor shall by personal inspection of the existing structures and systems satisfy itself as to the accuracy of any information provided that may affect the quantity, size and/or quality of materials required for a satisfactorily completed Project, including information that is not identified or included in the Plans and Specifications. The Contractor shall provide all material and labor required to complete the Work based on conditions that can be reasonably observed by a competent and diligent contractor before bidding.

1.11 Verification Of Dimensions.

The Contractor shall verify all dimensions at the job site and shall take any and all measurements necessary to verify the information in the Plans. The Contractor shall properly and accurately layout and survey the Work. Any errors or discrepancies affecting the layout of the Work shall be reported to the Architect and the College immediately in writing. No Work affected by any error or discrepancy shall proceed until such discrepancy is resolved by a written decision of the Architect with the consent of the College.

1.12 Manufacturer Literature.

Manufactured articles, materials and equipment shall be installed, applied, connected, erected, used, cleaned and conditioned in accordance with the manufacturer's written instructions unless otherwise specified in the Contract Documents. If there is any conflict between manufacturer literature and the Contract Documents, it shall be reported by the Contractor to the Architect and the College in writing, and the Contractor shall not proceed without a written decision by the Architect with the consent of the College.

1.13 Quality -- General Requirement.

Where no explicit quality or standard are specified for Work, materials or equipment, they shall be new, of good quality, free of defects, suitable for their intended use, in conformity with the Contract Documents, and consistent with the highest quality of the surrounding Work and of the construction of the Project generally.

1.14 Examination Of Contract Documents Before Bidding/Errors.

The Contractor represents and warrants that before bidding it examined and carefully studied the Contract Documents and other documents included or referred to in the bid documents. The Contractor also represents and warrants that the documents are sufficient for bidding and performing the Work at the Contract Price. Should it appear that any of the Work or materials are not sufficiently or properly detailed or explained in the Contract Documents, the Contractor shall notify the College in writing before the bid deadline for submitting questions.

Errors, omissions, conflicts, discrepancies, inconsistencies or other defects in the Contract Documents or between the Contract Documents and any codes, standards or other applicable documents which are capable of being discovered by a diligent and competent contractor before bidding shall be reported to the College in writing before the bid deadline for submitting questions. If errors, omissions, inconsistencies or other defects in the Contract Documents are not discovered until after the bid due date, the Contractor shall promptly notify the College and the Architect of them in writing, provide written recommendations regarding changes or corrections to resolve any such errors, omissions, inconsistencies or defects, and obtain the Architect's written interpretation and approval with the consent of the College before proceeding with the Work affected.

1.15 Site Information.

Soil borings, test pits or other subsurface or site information regarding the physical site and subsurface conditions on or near the site may have been obtained from independent contractors for the purpose of preparing the design documents for the Project rather than for the purpose of contractor estimating or bidding. Such information may be identified or included in the Contract Documents so that it can be reviewed by bidders during the bidding phase, but because of the limited nature and purpose of the information, it shall not be considered to be part of the Contract Documents, and the Contractor must assume responsibility for interpreting and relying upon the information.

1.16 Sufficiency Of Documents Provided For Bidding.

The Contractor represents and warrants that before bidding it carefully studied all reports, surveys and documents included or identified in the bid documents regarding observations, inspections, investigations and tests of the site and subsurface conditions at or near the site, and all information provided to bidders regarding physical conditions at or near the site, including surface and subsurface composition, water, structures and utilities, and that it determined that no further examinations, investigations, tests, studies or data were necessary for bidding or the performance of the Work at the Contract Price. If the Contractor concluded that additional

information is required, it must notify the College in writing before the bid deadline for submitting questions.

1.17 Examination Of Site Before Bidding.

The Contractor represents and warrants that before bidding it visited the site and familiarized itself with and was satisfied as to the general, local and site conditions which may affect the cost, progress and performance of the Work and the Contract, and that its bid and bid price take into account all such conditions. No additional costs will be borne by the College for conditions that existed and were reasonably observable or described at the time of bidding.

1.18 Hazardous Materials On Site.

The Contractor will not be responsible for hazardous environmental conditions uncovered or discovered on the site that were not disclosed in the Contract Documents and that were not caused by the Contractor or anyone working through or under the Contractor. If such conditions are discovered, the Contractor shall stop work and notify the College in writing immediately. The College may issue a written directive to the Contractor requiring it to stop work until the hazardous environmental condition is remedied, and the Contractor will be entitled to an extension of the Contract Times if an extension is warranted under the provisions of the Contract for Construction and these General Conditions regarding extensions. The College may also make changes in the Contract in response to the conditions, and the Contract will be changed in accordance with the change order provisions in the Contract for Construction and these General Conditions.

1.19 Limitation On Claims Based On Contract Documents And Information Provided For Bidding.

The Contractor may not assert claims for extra compensation beyond the bid and Contract Price for constructing the completed Project by reason of any errors, omissions, inconsistencies, or defects in the Contract Documents that are discoverable by a diligent and competent contractor, because of (i) its obligation to review and study the bid documents before submitting its bid, (ii) its representation in the Contract Documents that it did so, and (iii) its obligation to notify the College in writing of any such errors, omissions, inconsistencies, or defects before submitting its bid,. In addition, the Contractor may not assert claims for extra compensation beyond the bid and Contract Price for constructing the completed Project by reason of any lack of information affecting the construction of the Project at the time of bidding, or errors in the information included or referenced in the bid documents except to the extent explicitly permitted by the Contract for Construction or these General Conditions. The Contractor shall notify the College in writing before submitting its bid of any errors or omissions in the information provided or be precluded from seeking extra compensation or asserting a claim. This limitation on claims may be modified and further restricted in the signed Contract for Construction when the Contract Documents explicitly require the Contractor to participate in any aspect of the design phase.

The Contractor may assert claims for extensions and additional compensation in accordance with the provisions of the Contract for Construction and these General Conditions if

information regarding the site that is identified in the bid or Contract Documents is factually inaccurate, and the inaccuracy is one that a reasonably competent and diligent contractor would not discover in preparing a bid. The Contractor may not assert a claim for an extension or extra compensation when it claims, not that the information is factually inaccurate, but rather that conclusions, inferences or judgments made in reliance on accurate information prove to be incorrect.

ARTICLE 2

THE COLLEGE

2.1 General Rights And Responsibilities Of The College.

The College as the owner of the Project is entitled to have the Contractor perform and complete the Work in accordance with the Contract Documents, including the time of completion, quality and documentation requirements of the Contract. The College for its part undertakes to furnish the site, to notify the Contractor of any restrictions on the site that could affect the Contractor's performance of the Contract, to obtain approvals relating to the site that are needed for the construction to proceed, to pay the Contractor in accordance with the Contract, and to act reasonably in reviewing all documentation, claims and questions properly submitted to it under the Contract. The College also undertakes to provide the information and items that it expressly agrees in the Contract Documents to provide.

The College shall also have such other rights and responsibilities as are specified in the Contract Documents. The College will not supervise the Contractor's Work or be responsible for the Contractor's construction means and methods, or the Contractor's safety practices, or any failure of the Contractor to comply with the Contract Documents or any laws or regulations.

2.2 The College's Representative, Authority To Decide Contract Questions.

The Contracting Officer delegates its authority to the College's Representative who is authorized to act and make decisions on behalf of the College regarding matters specified in the Contract Documents. However, the College's Representative is not authorized to make or agree to material changes to the Contract Documents or changes involving the Contract Times or Contract Price.

All changes to the Contract Documents including change orders that modify Contract Price, Contract Times or other material change to the Contract Documents must be reviewed and approved by the Contracting Officer or his/her designee. The Contracting Officer designates that the Vice President for Administration is authorized to approve change orders.

The College's Representative, in consultation with the Architect, is authorized to decide on behalf of the College, all questions regarding the quality, acceptability and rate of progress of the Work, all questions regarding the interpretation of the Contract Documents, the acceptability of the performance of the Contract by the Contractor, and the compensation due to the Contractor. Where the College's Representative is authorized to render decisions under the

Contract for Construction or these General Conditions regarding disputes or claims, he/she shall consult with the Architect and shall not act arbitrarily so as to unfairly benefit either the College or the Contractor.

2.3 Required Approvals.

In all cases where approvals or decisions are required from the College under the Contract Documents, such approvals or decisions shall be made reasonably, except in cases where a specific standard applies such as, for example, situations where the College is entitled to exercise unqualified discretion in selecting the types of materials, products or construction which it decides to procure.

2.4 Information Required From The College.

Information which the Contract Documents specify the College will provide shall be provided with reasonable promptness.

2.5 Permits.

The College will arrange and pay for permits and permit inspections, including building code permits except to the extent that the Specifications specify otherwise. The Contractor will arrange for and coordinate all inspections and the dates and times for all inspections with local, state and independent agencies and include the College's Representative or the Site Superintendent.

2.6 The College's Inspection Of The Project.

The College shall have the right to be represented at the site by the College's Representative(s), the Site Superintendent and other College employees designated by the College, the Architect, and other consultants designated by the College or the Architect. The College and its representatives shall have the right to visit the site, inspect Work and materials, inspect Project documentation, conduct tests, attend meetings, meet with the Contractor's and the Subcontractors' representatives, investigate problems, conduct studies, and make reports. The College and its representatives shall be allowed access to all parts of the Work, and the Contractor shall furnish them with information and assistance when they request it.

The Contractor shall give the College and the Architect timely notice of readiness of Work for observation, inspection and testing, and shall cooperate with these efforts. The Contractor shall also comply with any inspection and testing procedures specified in the Contract Documents.

The Contracting Officer, the Architect and the College's Representative shall have the right to direct the Contractor to remove or uncover unfinished Work if deemed necessary to inspect Work or materials in place.

If Work is covered before it is inspected because the College, the Architect or any consultant were not afforded reasonable notice and an opportunity to inspect, or where the

Contract Documents or any law require an inspection, the Contractor shall uncover and replace Work at its own expense if required to do so by the College.

If any other portion of the Work not specifically required to be inspected is covered, and the College or the Architect did not ask to observe or inspect the Work before it was covered, the College may nonetheless ask to inspect the Work. If the College makes such a request, the Contractor shall uncover the Work for inspection. If the Work uncovered is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall be paid by the College by a change order. If the Work uncovered is found not to be in compliance with the Contract Documents, the Contractor shall pay all costs of uncovering and replacement, and also remedy the defect or deficiency at its own cost.

The College at all times retains the right to stop all or part of the Work by a written direction because of defective Work until the defect is eliminated. This right shall not give rise to any duty on the part of the College to exercise the right for the benefit of the Contractor or those performing its Contract.

The College at all times retains the right to stop all or part of the Work due to concerns with the effectiveness of the Contractor's safety program required under Article 5.2. The College may require the Contractor to provide a written plan to correct safety deficiencies, an on-site safety supervisor, or other administrative or engineering controls to ensure the safety of personnel impacted or potentially impacted by Contractor operations. The Contractor shall indemnify, defend and hold the College harmless from fines issued by Federal, State or Local OSHA enforcement.

2.7 The College's Inspectors, Duties And Limitations

If the College designates inspectors to inspect Work and materials and Project documentation, they will not be authorized to alter or waive any requirements or provisions in the Contract Documents. The College's inspectors will not be authorized to issue instructions contrary to the Contract Documents or to act as foremen or employees of the Contractor. The College's inspectors have the authority to reject unsuitable Work or materials, subject to written confirmation by the College's Representative. If the Contractor believes that any action of a College inspector is contrary to the Contract Documents, it shall notify the College's Representative and the Architect in writing within 48 hours. The College does not undertake to have inspectors sufficient in number to inspect every item of Work or material as it is provided, or to have inspectors with the expertise needed to judge every aspect of the Work.

The Contractor shall remain responsible for defective Work or materials irrespective of any inspections or lack of inspections during the Work. If the Contractor seeks a binding determination of the acceptability of Work or materials during the performance of the Contract, it shall do so by making a written request for such a determination to the College's Representative with a copy to the Architect.

2.8 The College's Rejection Of Defective Work.

The College shall have the right to reject defective Work, materials, or equipment at any time, and to require the Contractor to remove and replace it at the Contractor's expense. The Contractor shall also be responsible for repairing damage to other work caused by defects or deficiencies in its Work. The College's Representative, upon consultation with the Architect, may elect to accept Work or materials that do not conform to the Contract Documents and to credit or reduce the Contract Price, but the College shall have no contractual obligation to elect this remedy. Changes to the Contract Documents in these circumstances shall be recorded as a change order under the change order provision of the Contract for Construction and these General Conditions.

ARTICLE 3 **THE ARCHITECT**

3.1 The Architect's General Role.

The Architect is, by contract with the College, responsible for the design of the Project. During construction, the Architect is responsible for reviewing the Contractor's submittals to determine if they conform to the Contract Documents and good industry practice, to provide some level of inspection to determine if Work and materials provided by the Contractor conform to the Contract Documents and good industry practice, and to review the Contractor's payment applications. During the performance of the Work, the Architect may investigate any defects and deficiencies in the Work or materials provided and make recommendations to the College regarding the defects or deficiencies. The Architect will conduct inspections to determine if the Contractor has achieved proper Substantial and Final Completion and submitted all documents required at Substantial and Final Completion. The Contractor shall cooperate with and render assistance to the Architect in the performance of these duties.

3.2 The Architect's Access And Facilities.

The Contractor shall allow the Architect and its consultants access to the Project at all times and shall facilitate their access to inspect Work and materials and Project documentation. The Architect and its consultants shall be permitted to attend job meetings, scheduling meetings and other meetings at the site and the Contractor shall facilitate their ability to do so. The Contractor shall provide an office at the site for the Architect if the Specifications require it to do so.

3.3 Limitation Of The Architect's Responsibilities.

The Architect will not be responsible for or have control of construction means and methods or safety precautions and programs in connection with the Work. The Architect will not be responsible for or have control of acts or omissions of the Contractor, its Subcontractors, or any of their agents or employees, or any other person performing any of the Contract Work.

3.4 The Architect's Rejection Of Work.

The Architect may recommend rejection of Work or materials that it believes does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, it may recommend to the College special inspections or testing of Work or materials, including completed Work and materials.

3.5 The Architect's Review Of The Contractor's Submittals.

The Architect will review, approve or take other appropriate action regarding the Contractor's submittals, such as shop drawings, product data and samples, to assure that they conform with the design requirements and Contract Documents. The approval of a specific item shall not be deemed to constitute approval of an assembly of which the item is a component.

3.6 The Architect's Review Of The Contractor's As-Built Plans.

The Architect will periodically review the Contractor's as-built plans maintained at the site to ensure that they are up-to-date, and shall review the completed as-built plans at Project completion to ensure that they are complete and are provided to the College.

3.7 The Architect's Determination Of Substantial and Final Completion.

The Architect will conduct inspections to determine the dates of Substantial and Final Completion and to determine if the Contractor has properly Substantially and Finally completed the Project. The Architect will obtain from the Contractor all written warranties and all other documents that the Contractor is required to provide at Substantial and Final Completion of the Project.

ARTICLE 4 **THE CONTRACTOR**

4.1 The Contractor's Responsibility For Performance Of The Contract And Work.

The Contractor is the person or entity identified as such in the Contract. The Contractor shall be lawfully licensed in the jurisdiction where the Project is located.

The Contractor shall perform all of the duties in the Contract Documents, shall furnish the labor, materials and equipment to complete the construction of the Project in accordance with the Contract Documents, and furnish all services, labor, materials and equipment necessary or appropriate to construct the Project. The Contractor shall manage, supervise, schedule, direct, and inspect the Work as competently, skillfully, and efficiently as possible, and shall be solely responsible for all construction means, methods, techniques, safety, security, sequences, procedures, and coordination.

The Contractor shall comply with all applicable laws, and shall establish and maintain reasonable quality assurance and safety programs in connection with its Work. The Contractor shall complete the Work in compliance with the Contract Documents and by Milestone, Substantial Completion and Final Completion Dates in the Contract for Construction or any authorized extensions thereof. The Contractor shall maintain good order and discipline at the site at all times.

4.2 The Contractor's Key Personnel.

The Contractor shall assign to the Project a Project executive, Project manager, superintendent, and scheduler, and such other key personnel as are specified in the Contract for Construction or as required to carry out the requirements of the Project. The Contractor shall not remove or replace such key personnel without the College's written approval. The College has the authority to reject and have replaced any staff member of the Contractor or any of the Subcontractors for any non-discriminatory reason.

4.3 The Contractor's Supervision Of Contract Work/The Superintendent.

The Contractor shall supervise and be responsible for the acts and omissions of the Contractor's employees, agents, Subcontractors, sub-subcontractors, suppliers and other persons performing portions of the Work and the Contract. The Contractor's designated Project superintendent shall be at the Project site at all times when Work is in progress. The Contractor may designate in writing an alternate superintendent who must be approved in writing by the College. The superintendent (or alternate) shall have full authority to represent and act for the Contractor at the site and shall have full authority to execute orders and directives of the College without delay.

Communications from the College or the Architect to the superintendent shall be deemed to have been given to the Contractor. The superintendent shall be capable of and authorized to respond to all hazardous and unsafe conditions at the Project site and to implement prompt corrective measures to eliminate all unsanitary, hazardous or dangerous conditions at the site. The College may suspend all or part of the Work at the Project site if the superintendent (or alternate) is not present at the Project site. Such a suspension shall not be the basis of a claim against the College, including without limitation any claim for additional time or extra cost.

The superintendent shall attend all meetings at the Project site including job meetings, scheduling meetings, and meetings with the College and/or the Architect. The superintendent shall have a written plan that must be approved in writing by the College for responding to emergencies when the Work is not in progress. The Contractor shall also utilize qualified competent craftsmen on the Project.

4.4 Cooperation With The College And Other Contractors.

The College reserves the right to contract for and perform other or additional work on or adjacent to the Project site. When separate contracts are let within the limits of the Project site, or in areas adjacent to the site, the Contractor shall perform its Work so as not to interfere with or

hinder the progress or completion of the work being performed by other contractors. The Contractor shall also affirmatively cooperate with such other contractors and coordinate its activities with theirs, and include coordination measures in the Project Schedule. The Contractor shall arrange its Work and shall place and dispose of materials being used so as not to interfere with the operation of other contractors within the limits of the Project site. The Contractor shall join its Work with that of the other contractors in an acceptable manner and shall perform its Work in proper sequence with that of other contractors.

If there is a disagreement as to the respective rights of the Contractor and others doing work within the limits of or adjacent to the Project site, the College shall determine the respective rights of the contractors involved to secure the satisfactory completion of all affected work. The Contractor shall not be entitled to additional compensation beyond its Contract Price that may arise because of inconvenience, delay, or loss experienced by it as a result of the presence and operations of other contractors working within the limits of or adjacent to the Project site.

The College reserves the right to occupy any portion of the Project that is ready for occupancy prior to Final Completion and acceptance of the Project, after Local and State Construction Enforcing Agency approval.

The occupancy of any portion of the Project does not constitute an acceptance of any Work nor does it waive the College's right to liquidated damages or constitute an acceptance of any Work, as the Project will be accepted as a whole and not in units. Prior to such occupancy, however, the Architect, a representative of the College, and the Contractor shall fully inspect the portions of the Project to be occupied, preparing a complete list of omissions of materials, faulty workmanship, or any items to be repaired, torn out or replaced. The College will assume responsibility for damage to premises so occupied of any items not on this list when such damage is due to greater than normal wear and tear, but does not assume responsibility for improper or defective workmanship or materials.

4.5 Performance Of The College Directives.

When the College issues a written directive to the Contractor under the authority of any provision in the Contract for Construction or these General Conditions, the Contractor shall perform as directed in a diligent manner and without delay. Compliance with written directives shall not adversely affect the rights of the Contractor under the Contract for Construction, these General Conditions or law, but if the Contractor objects to a directive of the College, or claims that a directive infringes upon its rights or entitles it to a change order, it shall notify the College in writing within 2 business days of any directive and describe any objection it has to the directive and the reasons for its objection. Objection to a written directive does not relieve the Contractor of the obligation to comply with the directive and proceed in a diligent manner to implement the directive without delay.

ARTICLE 5

PERFORMANCE OF WORK

5.1 Protection Of Work/Materials.

The Contractor, shall at its own expense, protect all finished Work and materials from damage and keep them protected until the Project is accepted as Substantially Completed, and shall repair or replace any Work or material damaged before acceptance. After the Project is accepted as Substantially Complete, the Contractor will remain responsible up through Final Completion for damage to Work and materials caused by it or its Subcontractors or others participating in the performance of its obligations under the Contract Documents. The Contractor shall also secure and protect its own tools, equipment, materials and supplies, and the College shall have no liability for damage, theft or injury to the Contractor's property.

5.2 Safety And Safety Programs.

The Contractor shall have full responsibility for safety at the Project site at all times up to Final Completion and acceptance of the Project and the Contract. The Contractor shall provide for the safety of all individuals on the Project site, and take measures to ensure that individuals on or near the Project site are not injured by the performance of the Contract. The Contractor shall establish and maintain a Project safety program in accordance with all applicable laws including OSHA, good industry practice, and any additional requirements in the Contract Documents. If the College or the Architect become aware of an unsafe situation, the Contractor will immediately respond to remedy the safety concern and shall take all other actions necessary to comply with Article 2.6.

5.3 Emergencies Affecting Safety.

If there is an emergency affecting the safety of persons or property, the Contractor shall take immediate action to prevent damage, injury or loss. The Contractor shall notify the College in writing of the situation and all actions being taken immediately or as soon as possible. If, in the opinion of the Contractor, immediate action is not required, the Contractor shall notify the College in writing of the emergency situation and proceed in accordance with the College's instructions. However, if loss, damage, injury or death occurs that could have been prevented by the Contractor's prompt and immediate action, the Contractor shall be liable for all costs, damages, claims, actions, suits, attorney's fees and other expenses that result.

Any additional compensation or extension of time claims by the Contractor on account of emergency Work shall be determined in accordance with the change provisions of the Contract for Construction and these General Conditions. The Contractor shall be responsible for emergencies and costs and delays resulting therefrom that could have been foreseen or prevented with normal diligence, planning, and supervision of the Work, or that are caused by the Contractor's failure to properly perform the Contract.

The Contractor shall provide the College with a list of the names and telephone numbers of its employees and employees of each Subcontractor designated to be contacted in case of an emergency during non-working hours. A copy of this list shall be displayed prominently at the

Project site so that it is visible when the Project site is secured and shall be provided to the College's campus police department.

5.4 Working Hours.

Except as required for the safety or protection of persons or property, or as specified in the Contract Documents, all Work at the site shall be performed during regular working hours, and not on Saturdays, Sundays, legal holidays, the College's commencement days, resident move-in and move-out days or other days specifically noted in the Contract Documents without the prior written consent of the College, which will not be unreasonably withheld.

5.5 Site Security.

The Contractor shall provide, maintain and oversee security at the site if required in the Specifications. The Project site shall be fenced as specified in the Specifications, and the Contractor shall control access when gates are unlocked or open. The fence shall provide a physical barrier to the site and protection from visible nuisance. At a minimum, the fence shall be firmly secured with buried posts or weighted feet, top rails, metal fabric, and locking gates. Contractor shall immediately notify the College in the event of unauthorized entry to the site.

5.6 Site Use.

The Contractor shall confine construction equipment, storage and Work to the Project site absent written approval from the College. Any request by the Contractor to use areas outside the Project site must be described in written form and included with the Contractor's bid.

5.7 Building Access.

The Contractor shall be responsible for the sign out, distribution, safe use and return of all building keys and/or access cards, and shall be responsible for all costs associated with failure to return these items (e.g., the cost to re-key/re-implement the system).

5.8 Minimize Interruption.

The Contractor acknowledges that the College is an existing educational facility and that classes may be in session during construction. The Contractor agrees to conduct its Work with as little disruption as reasonably possible to the College's students, faculty, employees and guests, and will maintain a safe environment for the College's students, faculty, employees and guests, in addition to the Contractor's employees and workers of all tiers. The Contractor and its Subcontractors and employees of all tiers must display courtesy and consideration with and shall refrain from discriminating against or harassing the College's students, faculty, employees, visitors and guests at all times. The Contractor will not allow smoking, vaping, alcohol, drugs, any firearms, or other weapons on the College's property at any time. The Contractor shall abide by all campus traffic regulations.

5.9 Submittals (Shop Drawings, Product Data, Samples).

Prior to the beginning of Work on the Project, the Contractor shall furnish to the Architect and the College for their review and approval, a schedule setting forth all the submittals, including shop drawings, product data and samples required by the Contract Documents, that the Contractor intends to submit to the Architect for review and approval, the date upon which the Contractor shall make each such submittal and the date upon which the Architect shall complete its review of each such submittal, which in no event shall be less than ten (10) days from receipt ("Submittal Schedule"). The Architect and the College shall identify all submittals that will require more than ten (10) days to review and notify the Contractor of the required review period. The Contractor shall adjust the Submittal Schedule to accommodate the extended review period. The Architect shall endeavor to conduct its review and approval of all submittals in accordance with the Submittal Schedule. In the event that a submittal is made that is not set forth on the Submittal Schedule, the Architect shall review and return such submittal within ten (10) working days from receipt.

Submittals shall be complete as to quantities, details, dimensions and design criteria. The Architect will approve and the College will review submittals if they conform to the Contract Documents, the design concept and good industry practice. The Contractor shall note its approval of all submittals and the date for any submittals prepared by any Subcontractor or supplier, and it shall be responsible for determining and verifying all materials, field dimensions, field construction criteria, and coordination requirements pertaining to the submittal.

The Contractor will not be relieved of responsibility of deviations in submittals from the requirements in the Contract Documents by reason of approvals of the submittals unless the Contractor specifically identifies the deviation in the submittal and the Architect and the College expressly approve the deviation in writing. The Contractor shall be responsible for errors or omission in its submittals. No Work or materials included in a submittal shall begin until the submittal is approved by the Architect and the College.

5.10 Layout And Dimensional Control.

The Contractor shall be responsible for locating and laying out the Project components and all of the Project parts on the Project site in strict accordance with the Plans, and shall accurately establish and maintain dimensional control. The Contractor shall employ a competent and licensed New Jersey engineer or land surveyor as appropriate to perform all layout Work and to fix the level and location of excavations, footing base plates, columns, walls, floors and roof lines. The Contractor shall furnish to the College and the Architect certifications that each such level is as required by the Plans as the Work progresses.

The plumb lines of vertical surfaces shall be tested and certified by the Contractor's engineer or surveyor as the Work proceeds. The engineer or surveyor shall establish all points, lines, elevations, grades and bench marks for the proper control and execution of the Work. The engineer or surveyor shall establish a single permanent benchmark to be approved by the Architect, to which all three coordinates of dimensional control can and shall be based. The engineer or surveyor shall verify all topographical and utility survey data, and all points, lines, elevations, grades and benchmarks furnished by the College.

Should any discrepancies be found between information in the Plans and the actual site or field conditions, the Contractor shall notify the Architect and the College in writing, and shall not proceed with any Work affected until it receives written instructions from the College.

The Contractor is required to provide a final “as built” survey from a New Jersey licensed/certified surveyor of the Project site showing all structures, elevations, grades and required information on the Project site and submit to the College in CADD format.

5.11 Construction Access, Roads, Walks, And Parking.

The Contractor shall construct and keep all roadways, drives, walkways and parking areas within or near the site free and clear of debris, gravel, mud or any other site materials, including, for example, the cleaning of muddy wheels and undercarriages on vehicles before they exit the site. The Contractor shall be responsible for any citations, fines, or penalties imposed on it or the College for failing to comply with applicable local rules or laws regarding its use of roads and the like.

The Contractor shall obtain permission in writing from the College before using for construction purposes any existing driveways, parking areas, walkways or areas not specifically designated for such use in the Contract Documents. The Contractor shall maintain such driveways and areas in good and clean condition during construction and not damage them. At Final Completion, the Contractor shall leave them in the same condition as they were at the start of the Work. Conditions of such facilities before use shall be photographed and otherwise documented by the Contractor. The Contractor shall not commence construction of permanent driveways, parking areas or walks on the Project site without the written approval of the College.

Any existing walkways, driveways, aprons, or curbs damaged by the Work of the Contract Documents shall be replaced in kind, at the Contractor’s expense, immediately upon Project completion, or as required to maintain campus safety and campus aesthetics.

5.12 Construction Site Condition, Storage, Dust Control.

The Contractor shall provide reasonable, safe and orderly storage for its equipment, tools and materials, and shall not unreasonably encumber the site. The Contractor shall keep the site and the Project free from the accumulation of refuse, debris and scrap materials caused by its operations so that the site has a neat, orderly and workman-like appearance. Loading, cartage, hauling and dumping will be at the Contractor’s expense. The Contractor shall provide, at its expense, temporary dust-proof partitions around areas of work in existing buildings, and where reasonably required, in new building areas.

5.13 Photographs.

The Contractor shall provide, at its expense, monthly progress photographs of the Project. The photographs shall be 8 inches by 10 inches and shall be submitted to the College in duplicate monthly. Unless otherwise specified in the supplemental general requirements, four photographs

shall be submitted each month which provide views of the Project taken from the same four points each, which points shall be selected by the Architect.

5.14 Project Sign.

The Contractor shall, at its expense, provide, erect and maintain two Project signs at the site, which shall be described in the Contract Documents. The College will specify the location of the signs. The signs shall be painted by a professional sign painter or prepared by a professional graphic artist. No other signage will be permitted at the site. The signs shall include the name and cell phone number of a Contractor-designated project lead that is available for 24-hour contact in case of emergency. The Contractor shall remove the signs when the Project is finally accepted unless the College requests that they be removed earlier.

5.15 Soil Conservation.

The Contractor shall employ reasonable measures to conserve the soil at the site, and determine and comply with all soil conservation measures required by the Mercer County Soil Conservation District.

The Contractor shall coordinate and schedule all soil conservation inspections, shall provide the College with written notice of all such inspections so that the College may attend the inspections if it chooses in its sole discretion to do so, and shall provide the College with all site inspection notes, approvals or notices.

5.16 Temporary Facilities, Services, Electric, Heat And Enclosures.

The Contractor shall provide storage areas, temporary drives and sidewalks, employee parking areas, staging areas, excavation borrow/spoil areas, commercial canteen areas, field offices including a meeting room, telephones, toilet facilities, and other temporary facilities that are necessary to perform the Work or that may be required by the Project Specifications. The Contractor shall locate these facilities on the Project site, and the location shall be subject to the approval of the College.

The Contractor shall provide adequate and clean temporary toilet facilities on the Project site in locations to be approved by the College, and they shall be serviced at least twice a week by a firm qualified and experienced in such functions. The Contractor shall provide such temporary electricity, water, and other utilities that are necessary to perform the Work, or that may be required by the Project Specifications. The Contractor shall also supply such temporary enclosures and heat that are necessary to perform the Work or that may be required by the Project Specifications. The Contractor and the Subcontractors will not enter or use any College facilities not required by the Work of the Contract.

Temporary electric and heat shall be furnished by the Contractor for the benefit of other contractors working on the Project if specified in the Project Specifications.

The Contractor shall not anticipate using the permanent heating or air conditioning system in a building for temporary heat or air conditioning prior to the acceptance of the Project as Substantially Complete unless specified otherwise.

Any natural gas, combustible material, or hazardous material containers utilized by the Contractor must be stored in a safe, ventilated location approved by the College. The Contractor must also submit for approval a reasonable safety plan for the operation of temporary heat equipment. The Contractor shall be solely responsible for any natural gas, combustible material or hazardous materials containers utilized by the Contractor or any of its Subcontractors and shall indemnify, defend and hold harmless the College from any fines, costs, expenses, liabilities, damages, etc. resulting from the Contractor's or any of its Subcontractors' use of such materials.

5.17 Substitutions.

To the extent that the Contractor includes in its bid substitute materials or equipment or construction methods in lieu of those specified in the Contract Documents, it does so at its own risk. Any substitution must be equal in type, function and quality to the item required in the Contract. The Contractor must submit all information required within 20 days of the Contract award to determine if the proposed substitute is equal to the requirements of the Contract Documents, and any substitution must be approved in writing by the Architect and the College.

The College shall have complete discretion to decide whether it will accept any substitution. No substitution shall result in any increase in the Contract Price or Contract Times. The Contractor in its application for the substitution must certify in writing that the substitution is equal to what is specified in the Contract Documents in all material respects and will not increase the Contract Times or Contract Price of the Work.

Should the substitution be rejected, the Contractor will then be required to provide the specified product, material or method at no additional cost to the College and no change in the Project Schedule.

5.18 License Fees.

The Contractor shall be responsible for obtaining the right to use any equipment, design, device or material required to perform the Contract, and shall include in its Contract Price any license fee or royalty required.

ARTICLE 6 **SUBCONTRACTORS**

6.1 The Contractor's Responsibility For Subcontracted Work.

The Contractor shall be fully responsible to the College for the proper performance of the Contract irrespective of whether the Work is performed by the Contractor's own forces or by Subcontractors employed by the Contractor. The Contractor shall be responsible for the acts and

omissions of its Subcontractors and suppliers on the Project and shall take appropriate measures if they are not properly supervising or performing their Work.

6.2 Subcontractor Identification And Approval.

The Contractor shall have included with its bid for the Contract, the names, addresses and license numbers of all Subcontractors that it proposes to utilize on the Project for plumbing and gas fitting work, HVAC work, electrical work, structural steel and ornamental iron work. No Subcontractor may perform Work on the Project until it has been approved in writing by the College.

Within 20 days after issuance of the Notice to Proceed, the Contractor shall furnish to the Architect and the College in writing for review by the Architect and the College a list of the names of all Subcontractors, sub-subcontractors, fabricators, manufacturers, sources of supply, articles, devices, fixtures, pieces of equipment, materials and processes proposed for each item of Work using AIA Document G705-2001, List of Subcontractors. The Architect and the College will notify the Contractor in writing if either the College or the Architect, after due investigation, has reasonable objection to any names on such list.

In submitting the names of Subcontractors, the Contractor shall (1) list the name and address of the Subcontractor, (2) provide the name and address of all sub-subcontractors for each significant subdivision of the trade or work, and (3) reference in the form of a list at least 3 jobs similar in size and quality to the Project performed by the subcontractor in the last 5 years, with name and location of work, dollar value and names of the College and the Architect.

In submitting sources of supply, articles, devices, fixtures, piece of equipment and materials, including those under subcontracts and sub-subcontracts, the Contractor shall list (1) the name and address of the source of supply, and (2) the name of the manufacturer of the items.

If the College disapproves of a proposed Subcontractor, it will provide the reason for its decision in writing. The College will not be liable for any extra cost or delays caused by the reasonable disapproval of proposed Subcontractors. The approval of Subcontractors by the College shall not relieve the Contractor of the responsibility for complying with all of the provisions of the Contract Documents including those performed by the Subcontractors. Subcontractors approved by the College may not be changed without prior notice to and written approval by the College.

Payment to the Contractor shall not be made until the list of Subcontractors (as required above) has been provided to the Architect and College.

6.3 Subcontractor Qualifications.

The College may disapprove of a proposed Subcontractor if (i) it has a reasonable objection to the Subcontractor, (ii) there is evidence of poor performance on other Projects or financial problems, (iii) the Subcontractor has been suspended or debarred by any public agency within the State of New Jersey, (iv) the Subcontractor is not properly licensed and registered to do business in New Jersey or with the New Jersey Department of Labor regarding prevailing

wages, or (v) the Subcontractor has been charged with or convicted of violating any laws, including but not limited to, the New Jersey Prevailing Wage Act, criminal laws, public procurement laws, anti-trust laws, election laws, laws against employment discrimination, environmental laws, tax laws, professional licensing laws, or laws regarding attempts to improperly influence the College or other public officials.

Subcontractors shall utilize qualified, competent craftsmen on the Project.

6.4 Subcontractor Compliance With Contract/Subcontractor Supervisors.

The Contractor shall require its Subcontractors on the Project to comply with all pertinent terms of the Contract Documents, and shall include all appropriate terms and provisions in written subcontracts on the Project to achieve proper Contract performance. Each Subcontractor shall have competent superintendents and foremen supervising their work, and the Contractor shall take appropriate measures if they fail to do so.

6.5 No Contractual Relationship Between The College And Subcontractors.

The Contractor shall enter into written subcontracts with each and every Subcontractor and supplier solely in its own name. No approval by the College of any Subcontractor or supplier and nothing in the Contract Documents shall create any contractual relationship or duties between the Contractor's Subcontractors and the College. Nothing in the Contract Documents shall cause any of the Contractor's Subcontractors or suppliers to be deemed a third- party beneficiary of the Contract between the College and the Contractor, and nothing herein shall give any of the Contractor's Subcontractors or suppliers any rights or claims directly against the College.

6.6 Contingent Assignment of Subcontracts.

Each subcontract agreement for a portion of the Work and any purchase order for materials or equipment may, in the College's sole discretion, be assigned by the Contractor to the College, provided that

- (a) assignment is effective only after termination of the Contract by the College for cause or for convenience and only for those subcontract agreements that the College accepts by notifying the Subcontractor and the Contractor in writing and only on such terms and conditions acceptable to the College;
- (b) assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract;
- (c) if the College elects to take an assignment of any subcontract or purchase order, the Contractor shall execute all papers necessary to effectuate the assignment; and
- (d) the assignment shall not relieve the Contractor of its existing obligations to any Subcontractor or Supplier, nor shall it cause the College to assume

any of the Contractor's obligations to any Subcontractor or Supplier that arose prior to the termination.

When the College accepts the assignment of a subcontract agreement or purchase order, the College assumes the Contractor's rights and obligations under the subcontract going forward. Upon such assignment to the College, the College may further assign the subcontract to a successor contractor or other entity.

ARTICLE 7

TIME, LIQUIDATED DAMAGES, DELAY CLAIMS AGAINST THE COLLEGE.

7.1 Contract Times.

The Contractor shall begin the Work within 10 days after the issuance of a Notice to Proceed by the College, and shall perform the Work in the Contract Documents by the dates specified in the Notice to Proceed, including Construction Start, Milestone, Substantial Completion and Final Completion Dates (collectively, "Contract Times"). As specified in the Contract for Construction, if the Work is to be performed in phases, the College may issue separate Notices to Proceed for each phase, which shall specify the Construction Start, Milestone, Substantial Completion and Final Completion Dates for that phase. The College may, in its sole discretion and at no cost to the College, choose to delay the issuance of a Notice to Proceed and the Construction Start Date for any phase until after the Contractor has achieved Substantial or Final Completion of any other phase.

7.2 Liquidated Damages For Delay.

If the Contractor fails to Substantially Complete any phase of the Work or the entire Work by the Substantial Completion Date(s) set forth in the applicable Notice to Proceed (as extended by Change Order, if applicable), and the delay is not excused by the College, then the Contractor shall pay the College the amounts specified in the Contract for Construction as liquidated damages for delay for each calendar day that the phase of the Work or the entire Work is not Substantially Completed beyond the applicable Substantial Completion Date

7.3 Delay Claims By The Contractor Against The College -- Limitations.

The Contractor may not assert claims against the College for extra compensation by reason of any delays in its Work resulting from acts or omissions of any third parties irrespective of extensions granted under the Contract, including but not limited to delays caused by third parties such as the Architect, other contractors, utilities and governmental authorities.

The College shall only be required to pay additional compensation for delays caused by the College itself, and only to the extent required by N.J.S.A. 2A:58B-3 (delayed performance caused by the College's own negligence, bad faith, active interference or other tortious conduct, but not for reasons contemplated by the parties and not for the negligence of others including

others under contract with the College on the theory that such negligence should be imputed to the College). The College shall not be liable for any period of delay when there is a concurrent delay for which the College is not responsible.

When the Contractor is entitled to extra compensation for delay under the Contract for Construction and these General Conditions, it can only assert claims for extra costs at the job site, and may not assert claims for extra costs for home office expenses, home office overhead, lost profit or revenue, or consequential losses as that term is defined by New Jersey law. Any additional compensation under this Article shall also be subject to the provisions in the Contract for Construction and these General Conditions regarding claims, and the provisions in the Contract for Construction and these General Conditions regarding the maintenance and availability of cost records.

ARTICLE 8

PROJECT SCHEDULE

8.1 General Project Schedule Requirements.

The Contractor shall schedule the construction Work and determine the most feasible means and order for the Work to complete the Project within the times required by the Contract. The Contractor shall prepare a Project Schedule and monthly schedule updates, which must be approved in writing by the College and the Architect. The Contractor shall perform the Contract and the Work in accordance with the Project Schedule. The Project Schedule should include a schedule of submittals for approval as required herein. The Project Schedule must be submitted before any Work (other than mobilization to site and general layout and site preparatory work) on the Project can begin under the Notice to Proceed. When the Contractor's Project Schedule is approved in writing by the College, it shall become an additional Contract Document and the Contractor shall be required by the Contract to comply with it. The Project Schedule and any updates to it shall be used in determining the amount of the monthly progress payments to the Contractor. The College may also use the Project Schedule and updates to determine if the Contractor is adequately planning and performing the Work in accordance with the Contract Documents.

8.2 Form And Content Of Project Schedule.

The Contractor shall prepare the Project Schedule using Critical Path Method (CPM) scheduling techniques. The Contractor shall utilize the latest revision of Primavera P3 or Microsoft Scheduling software. The Contractor shall prepare a detailed schedule which shows how it will plan, organize, execute and complete the Work. The Project Schedule shall be in the form of an activity oriented network diagram (CPM). The principles and definitions used in this Article shall be as set forth in the Associated General Contractors of America (AGC) publication "Construction Planning and Scheduling", copyright 1994.

The detailed network diagram shall provide sufficient detail and clarity of form and technique so that the Contractor can plan, schedule and control the Work properly, and the College and the Architect can readily monitor and follow the progress of all portions of the

Work. The network diagram shall comply with the limitations imposed by the scope of the Work and contractually specified Milestone, Substantial Completion, and Final Completion Dates. The Project Schedule shall include the arrow or network diagram and the computer produced schedule with dates. The Project Schedule shall include and reflect the following factors:

- (a) Project phasing, contract Milestone, Substantial and Final Completion Dates.
- (b) The structural breakdown of the Project.
- (c) The types of Work to be performed and the labor trades involved.
- (d) Reasonable logic and activity durations.
- (e) Reasonable coordination of all activities.
- (f) Purchase, manufacture and delivery activities for all major materials and equipment.
- (g) Deliveries of equipment furnished by the College.
- (h) Allowances for work by separate contractors identified in writing by the College at the time of Contract award.
- (i) Submittals and approvals of shop drawings, material samples, and other required submittals.
- (j) Subcontract Work.
- (k) Crew flows and sizes (manpower).
- (l) Assignment of responsibility for performing all activities.
- (m) Access and availability to Work areas.
- (n) Identification of interfaces and dependencies with preceding, concurrent and follow-on contractors, and sequences and interdependence of activities.
- (o) Testing and inspections.
- (p) Phased or total inspection, acceptance, and takeover by the College.
- (q) Utilization of the Project Schedule to determine amounts of monthly progress payments.
- (r) Activities required of the College and the Architect such as approvals, including reasonable durations for the activities.

Activities should be set forth in working days and have a maximum duration of 60 days, except for non-construction activities such as the procurement and delivery of materials and equipment. All durations shall be the result of definitive manpower and resource planning by the Contractor. The level of detail in the Project Schedule shall be subject to the approval of the College. The Project Schedule shall include a reasonable approach to achieve Milestone, Substantial Completion and Final Completion Dates in the Contract. Any failure of the Contractor to include any element of the Work in the Project Schedule shall not excuse the Contractor from completing that Work and all of the Work needed to complete the Project by the Milestone, Substantial Completion and Final Completion Dates in the Contract.

The network diagram is to be prepared by a computer plotter. The logic diagram will be pure logic and shall not be drawn to time scale. The logic diagram shall be drawn on 30" x 42" size sheets and prepared on a tracing/mylar or similar material suitable for reproducing high quality prints.

8.3 Computerization Of Project Schedule.

The mathematical analysis of the detailed network diagram shall be made by computer, and the tabulation for each activity shall include the following:

- (a) Activity numbers.
- (b) Activity descriptions.
- (c) Durations in work days for each activity.
- (d) Earliest start date (by calendar date).
- (e) Earliest finish date (by calendar date).
- (f) Latest start date (by calendar date).
- (g) Latest finish date (by calendar date).
- (h) Slack or total float in work days.

The following computer documents shall be prepared as part of the initial Project Schedule submission and each update:

- (a) Activity file sort, including sorts listing activities required of the College and the Architect, such as approvals.
- (b) Eight week "lookahead" detailed bar chart.
- (c) Eight week summary bar chart.
- (d) Additional computer sorts requested by the College.
- (e) High density CDs or thumb drives of all computer files.

8.4 Weather Inclusion In Project Schedule.

Seasonal weather conditions shall be included in the Project Schedule, including average precipitation, temperature and other weather conditions typical in the geographic area over a 5 year period by month.

8.5 Project Schedule Updates.

The Contractor shall prepare Project Schedule updates monthly until the Project is completed. The first update shall be issued 30 calendar days after the Construction Start Date specified in the Notice to Proceed. Updates shall include the following information:

- (a) Actual start and completion dates for activities.
- (b) Activity percent completion.
- (c) Remaining durations for activities in progress.

Each Project Schedule update shall also include a narrative report that includes the following information:

- (a) Summary of Work completed during update period.
- (b) Comparison of actual progress and status to activities and dates in original Project Schedule.

- (c) Analysis of critical path including effect of activity progress on the Project critical path.
- (d) Analysis of secondary critical paths, meaning float within 10 days of the Project critical path.
- (e) Analysis of time lost or gained during the update period.
- (f) Identification of problem areas.
- (g) Identification of change orders and delays impacting or delaying the Project under the Project Schedule.
- (h) Solutions or proposed solutions to current problems and delays.
- (i) Extensions requested by the Contractor, including activities affected and the amounts, and the reasons for the requests.
- (j) Extensions granted by the College for delays and changes, including the activities affected and the amounts, and any effect on the critical path and Contract Milestone, Substantial Completion and Final Completion Dates.
- (k) Delays in activities required of the College and the Architect, and activities that they are required to complete in the update period following the issuance of the update.

All Project Schedule updates must be submitted to the College and the Architect for written approval. Project Schedule updates, including the reports which are approved by the College, shall be deemed to be official records of the progress and status of the Project under the Project Schedule and the Contract, and may be utilized by the College in determining if the Contractor is adequately planning and performing the Work under the Contract Documents.

8.6 Meetings/Eight Week Bar Charts.

The Contractor's Project Manager and Scheduler shall arrange for and attend monthly progress and scheduling meetings with the College and the Architect. Monthly progress meetings shall be scheduled 3 to 7 days after monthly Project Schedule updates and reports are issued and provided to the College and the Architect. The purpose of these meetings will be to review past progress, current status, problem areas, delays, measures to reduce delays, future progress, and the Contractor's most recent Project Schedule update and report. At the monthly progress meetings, the Contractor shall provide a look ahead summary and detailed bar charts showing the Work and activities to be performed and/or completed during the 8 week period following the Project Schedule update.

8.7 Project Schedule Documentation For Contract Payments.

The Contractor will not be entitled to payments under the Contract until a Project Schedule has been submitted to and approved in writing by the College. No payment will be made under the Contract if, when the payment is due, a Project Schedule update and narrative report is due under this Article but has not been submitted to and approved in writing by the College. The original Project Schedule shall include a breakdown allocating the total Contract Price among the network activities in the Project Schedule, which must be approved by the College.

8.8 Progress and Recovery Project Schedules.

The Contractor shall perform its Work in accordance with the Project Schedule. If the Contractor's Work falls behind the requirements of the Project Schedule, it shall, at its own cost, institute measures to improve its progress and bring its Work in compliance with the Project Schedule, including but not limited to increasing manpower, increasing work hours per shift, increasing shifts, increasing working days per week, and rescheduling Work activities to perform them concurrently where feasible.

If monthly Project Schedule updates show that the Contractor's progress has fallen behind the Project Schedule so as to jeopardize the achievement of Milestone, Substantial Completion or Final Completion Dates by more than 10 work days, the Contractor shall, if requested by the College in writing, prepare a recovery schedule with acceleration measures to regain the lost time, and shall proceed in accordance with the recovery schedule in addition to the Project Schedule at its own cost.

8.9 The Contractor's Failure to Provide Project Schedule Updates.

If the Contractor fails to provide monthly Project Schedule updates and reports when required, the College can elect in its sole discretion to employ any of the following remedies: (i) not make progress payments; (ii) on 10 days written notice to the Contractor, retain its own consultant to provide Project Schedule updates and reports and deduct the cost from the Contract Price; (iii) terminate the Contract for default in accordance with the termination provisions in the Contract for Construction and these General Conditions and/or (iv) make a claim on the performance bond.

8.10 Scheduler Qualifications.

The Contractor must utilize a Project Scheduler that satisfies the qualification requirements for the Project. If at any time during the Project it appears that the Contractor's Project Scheduler is not competent to provide the scheduling services required in this Article, the Contractor shall, within 10 days after a written notice and demand from the College, retain a replacement scheduler that is competent to provide the services required. The College may also utilize any of the remedies provided in the Contract for Construction or these General Conditions for the Contractor's failure to provide proper Project Schedule updates and reports.

ARTICLE 9

EXTENSIONS, COMPENSATION FOR CERTAIN EXTENSIONS.

9.1 Delays Warranting Extensions Of Contract Times.

If the Contractor is unavoidably prevented from completing any part of the Work within the Milestone, Substantial Completion or Final Completion Dates by causes beyond the control and without the fault of the Contractor or its Subcontractors, those Contract Times will be extended by amounts equal to the time lost due to such delays, provided the Contractor requests extensions in accordance with this Article. Delays warranting extensions of the Contract Times

include unforeseeable and unavoidable delays caused by the College, the Architect, other contractors employed by the College, utility owners or other third parties, acts of God, acts of governmental authorities, wars, abnormally severe weather conditions of unusual duration (specifically excluding weather conditions of the type and duration that have been encountered in the area in which the Project is located) that prevent timely delivery of materials or equipment necessary to the completion of portions of the Work or hamper access to the Work by workmen or Subcontractors, fires, floods, earthquakes, epidemics, plagues, and other unavoidable casualties.

Apart from an extension of time, no payment or allowance of any kind shall be made to the Contractor as compensation for damages on account of hindrance or delay from any cause in the progress of the Work, whether such delay be avoidable or unavoidable. The Contractor agrees that it will make no claim for compensation, damages for any such delays, and will accept in full satisfaction for such delays said extension of time.

9.2 Weather Delays.

The Project Schedule shall take into account normally anticipatable adverse weather plus an additional five (5) days of severe and unusual weather conditions that will materially interfere with the timely prosecution of the Work. No time extensions will be granted for time lost due to weather conditions that do not meet the criteria set forth in Article 9.1, and then only to the extent more than five (5) days of delay result from such severe and unusual weather conditions. Owner shall not be required to keep a record of days of precipitation or low temperatures and the burden of proof with respect to weather delays shall be upon Contractor. No time extensions will be considered for any weather conditions that do not affect Work on the critical path or Contract Times.

9.3 Float Time Use.

Float time in the Project Schedule is not for the exclusive use of either the Contractor or the College. Float time is available for use by both parties to facilitate the effective use of available resources and to minimize the impact of problems and delays that may arise during construction. No time extension will be granted as a result of any problem, change order or delay which only results in the loss of available positive float on the Project Schedule. Float time shown on the Project Schedule shall not be used by the Contractor in a manner that is detrimental to the interests of the College or the Project.

9.4 Calculation Of Extensions.

Extensions will be calculated based on the effect of delays on the Project Schedule and the activities in the Project Schedule. If the Contractor is entitled to an extension for a delay based on the nature of the delay under this Article, the activities in the Project Schedule affected by the delay will be extended by the amount they are affected. If extensions of activities in the Project Schedule affect the critical path and delay the Contract Milestone, Substantial Completion or Final Completion Dates, they too will be extended to the extent affected. The critical path and Contract Times will only be extended to the extent that they are actually

affected under the Project Schedule by a delay for which the Contractor is entitled to an extension.

If, for any scheduled activity or period, there are concurrent delays that include delays for which the Contractor is entitled to an extension and delays for which the Contractor is not entitled to an extension, the Contractor will be given an extension for the delays for which it is entitled to extension so that it will not be liable to pay liquidated damages for delay, unless the College eliminates or reduces that delay. A concurrent delay will not justify an extension to the Contractor if it has minimal effect on the completion of the Project, and/or if it would likely have been avoided if it had become apparent that it was having an effect on the progress of the Project and the Final Completion Date.

9.5 Elimination of Delays and Extensions (Acceleration).

If the effect of a delay for which the Contractor is entitled to an extension can be reduced or eliminated by changes in the Project Schedule or other measures which have no material adverse impact on the Contractor in terms of cost or otherwise, the Contractor shall employ those measures so that no extension is required or so that a shorter extension is required. If the Contractor is entitled to extensions for delays, and if the College (in its sole discretion) notifies the Contractor in writing that it prefers to eliminate the lost time to avoid or reduce the extension required, by changes or additional efforts such as acceleration efforts, the Contractor shall perform those measures as a change to the Contract to be compensated under the change order provisions in the Contract for Construction and these General Conditions.

9.6 Requests For Extensions Required.

The Contractor must provide the College with a written notice of delay and request for an extension within 24 hours of the beginning of a delay. The written notice of delay and request for extension must include the nature and cause of the delay, the known extent of the delay, the Work activities on the Project Schedule affected by the delay, and the extent of the effect to each, and suggestions or proposals to reduce or eliminate the delay. This limited time frame is to provide the College the opportunity to immediately address the issue and limit the amount of time in the potential delay and its potential impact on the Project Schedule.

9.7 Compensation For Certain Extensions And Limitations.

Under the Contract for Construction and these General Conditions, the College does not assume responsibility for many types of delays, including additional costs resulting from extensions granted because of those delays. Where the College is responsible for a delay under the express terms of the Contract for Construction and these General Conditions, it will pay extra compensation for any extension granted because of the delay.

Compensation by the College for delays (and extensions) for which it is responsible under the Contract for Construction and these General Conditions shall only include additional costs actually incurred at the site, and shall not include home office expense, home office overhead, lost profit or consequential losses. Any additional compensation under this Article shall be subject to the provisions in the Contract for Construction and these General Conditions

regarding claims, and the provisions in the Contract for Construction and these General Conditions regarding the maintenance and availability of cost records.

No compensation will be paid if an extension for a delay for which the College is responsible is concurrent with another delay for which the Contractor is not entitled to an extension, or is concurrent with another delay for which the Contractor is entitled to an extension but the College is not responsible for the other delay.

If the College requests a change in the Contract Work, potential delays and extensions that result from the change and any resulting extra compensation for the change shall be addressed under the change order provisions in the Contract for Construction and these General Conditions in addition to this Article.

ARTICLE 10

PAYMENTS TO THE CONTRACTOR.

10.1 Contract Price.

The College will pay the Contractor as full compensation for performing the Work the Contract Price as adjusted by approved change orders that increase or decrease the Contract Price. The College will do so in accordance with this Article, any supplemental General Conditions regarding payment, and the payment terms in the Contract for Construction. Payment provisions in the supplemental General Conditions that add to or modify this Article shall take precedence over this Article. Payment provisions in the Contract for Construction that add to or modify payment terms shall take precedence over the supplemental General Conditions and this Article.

10.2 Monthly Progress Payments.

The College will pay the Contractor monthly progress payments as the Work proceeds and will pay for the Work completed, less retainage. The Contractor shall submit monthly invoices using the College's invoice form for the Work completed in each calendar month, and the monthly invoice shall be submitted in accordance with the Contract. The Contractor shall be entitled to monthly progress payments based on the percentage of the Work completed (less earlier payments), and that amount shall be based on the Unit Schedule Breakdown and the update of the Project Schedule for the billing period showing schedule activities completed and progress on incomplete activities, in conjunction with the values assigned to those activities. If there is a discrepancy between the amount due based on the Unit Schedule Breakdown and the amount due based on the Project Schedule update, the Contractor shall only be entitled to the lesser amount unless the College's Representative, in his/her sole discretion, decides otherwise. Payments made by the College shall be used by the Contractor solely for purposes of this Project and for paying Subcontractors, suppliers, and for labor and materials, and shall not be used to pay debts owed by the Contractor outside of the Project.

10.3 Unit Schedule Breakdown/CPM Activity Price Breakdown.

Before the Contract for Construction is signed, the Contractor shall submit to the College and the Architect a Unit Schedule Breakdown (schedule of values) utilizing the College's form (AIA Documents G702/G703) which reasonably allocates the Contract Price among the principal categories of Work and materials in the Contract. The Unit Schedule Breakdown must be signed by the Contractor and is subject to written approval by the Architect and the College for use in calculating monthly progress payments under the Contract. The Contractor shall not "front end load" the Unit Schedule Breakdown. The Unit Schedule Breakdown may include line items for mobilization, bonds and insurance.

The Contractor's proposed Project Schedule shall reasonably allocate the Contract Price among the activities in the schedule so that monthly Project Schedule updates can be utilized in connection with the Unit Schedule Breakdown in determining the amount of monthly progress payments. The Contractor's Unit Schedule Breakdown and Project Schedule activity price breakdown must be approved in writing by the Architect and the College before any payments are made under the Contract.

10.4 Invoices For Monthly Progress Payments: Form and Content.

The Contractor must utilize the College's invoice form and the invoice forms (AIA Documents G702/G703 and waiver attachments) must be completed before they are submitted for payment. Each invoice must be signed by the Contractor, and shall certify that the Work and materials represented as having been provided have been provided, and that all Subcontractors and suppliers on the Project have been paid all amounts legitimately due for Work and materials billed to the College in earlier invoices that were paid by the College. The Contractor's submission of an invoice constitutes an affirmative representation and warranty by the Contractor that it performed the Work in compliance with the Contract Documents and applicable laws, codes and regulations.

Invoices for monthly Project payments must include the status of the Work in the Unit Schedule Breakdown and the Project Schedule update for the billing period that shows the activities completed or started and the value of them based on the Project Schedule. Invoices must also include certified payrolls for the Contractor and all Subcontractors for the billing period, affirmative action monthly manning reports, a certification of Subcontractor/supplier payments, the College's acknowledgment of progress payment and release of liens and claims form duly executed by the Contractor, the College's acknowledgment of progress payment and release of liens and claims form duly executed by each Subcontractor and supplier who has furnished labor or materials that are the subject of the current invoice, a list of all materials stored to date including descriptions, values, quantities and location, and any other documents required in the Contract Documents.

The Contractor will be entitled to have an invoice paid if the Architect and the College approve in writing the invoice including the percentage of Work completed, and if the quality of the Work and materials conform to the Contract Documents. The approval of invoices shall not waive claims for defects or deficiencies in the Work or materials provided, or the right to subsequently inspect the Project as a complete and functioning whole.

10.5 Payment For Materials And Equipment Procured But Not Installed.

The Contractor may seek payment in monthly invoices for materials and equipment delivered to the Project site but not yet incorporated into the Work. The Contractor shall include with its monthly invoices a list of the stored equipment, the amount and type of stored materials, and the place where they are stored. Each invoice that seeks payment for materials and equipment delivered to the Project site but not installed or incorporated into the Work shall include a signed bill of sale to the College and an invoice from the supplier. All risk of loss or damage for materials and equipment delivered to the Project site shall remain with the Contractor.

The College will only rarely pay for material or equipment stored offsite, and only when it determines, in its sole discretion, that there is good cause. The College will consider no request to pay for materials or equipment stored off site unless the Contractor includes a written request for such payment with its bid for the Project. If the College does agree to pay for material or equipment stored offsite during the performance of the Contract, it will do so when the Contract for Construction is signed.

If the College does agree to pay for materials and equipment stored offsite, such payments shall be subject to any conditions in the signed Contract, and in all cases, a bill of sale to the College, a paid invoice, insurance and proof the storage facility is bonded will have to be provided to the College when each payment is sought. The location will have to be specified in writing and the material or equipment will have to be inspected by the College. The Contractor and its performance bond surety must agree in writing that they retain all risk of loss or damage, and each payment application must contain a consent to payments for materials stored offsite signed by the Contractor's bonding company.

Payments on account of materials or equipment not incorporated into the Work but delivered and suitably stored at the site, or at some other location agreed upon in writing, may be made by the College subject to the following conditions:

- (a) Such materials or equipment shall have been fabricated or assembled specifically for the Project and delivered to storage no earlier than needed for the orderly progress of the Work as demonstrated by the Project Schedule.
- (b) Title to such materials or equipment shall pass to the College pursuant to the Contractor's bill of sale, which shall contain guarantee of replacement thereof in the event of damage thereto or disappearance thereof due to any cause. The Contractor shall also affirm that it will pay for such materials or equipment immediately upon receipt of payment therefore from the College.

In the case of offsite storage, the Contractor shall also provide Consent of Surety to such payment and insurance of such materials or equipment against the perils set forth in these General Conditions both while storage and during transportation to the site. Raw materials or other materials or equipment readily duplicated or usable on other projects will be paid for only

after the materials are incorporated into the construction.

10.6 Retainage.

The College will retain 2% of the amount due on each partial payment pending Final Completion of the Contract.

Retainage amounts being withheld by the College shall be released and paid in full to the Contractor within 45 days of the Final Completion Date agreed upon by the Contractor and the College, without further withholding of any amounts for any purpose whatsoever, provided that the Work has been Finally Completed as indicated.

10.7 Payment For Change Order Work.

The Contractor shall invoice for change order work in the monthly progress payment invoices as the change order work is performed, but may only do so after a written change order has been signed by the appropriate College personnel and a TCNJ Purchase Order is issued by the College.

10.8 Final Payment.

Upon Final Completion of all the Work including all change orders, upon final acceptance of the Work by the Architect and the College, and upon the issuance of the Certificate of Final Completion, the Contractor will be paid the fully adjusted Contract Price including any retainage. The Contractor shall submit an invoice for the final payment. The final invoice must be accompanied by the College's acceptance of final payment and release of liens and claims form duly executed by the Contractor, the College's acceptance of final payment and release of liens and claims form duly executed by each Subcontractor and supplier who has furnished labor or materials that are the subject of the final invoice, all warranties, guarantees, manufacturer literature, approved as-built drawings, shop drawings required, and any other documents that the Contractor is required by the Contract Documents to provide to the College at the time of Final Completion. The final invoice must also include a written signed consent to the final payment signed by the Contractor's bonding company.

10.9 Payment Terms.

All invoices and payments shall be subject to the terms of the Contract for Construction and these General Conditions, including the provisions regarding payments, and to the right of the College to withhold payments or to make deductions from payments for damages, defective work, liquidated damages, third-party claims, failure to complete Work, failure to comply with requirements of the Contract Documents, failure to comply with Prevailing Wage Act requirements set forth in the Contract for Construction and these General Conditions, failure to comply with Project Schedule obligations, or other causes authorized by the Contract Documents.

10.10 Payment Based On Partial Acceptance (Limitation).

The College will not accept portions of the Project as Substantially or Finally Complete unless specified elsewhere in the Contract Documents. If the Specifications authorize partial acceptances, they will also specify the terms and conditions of such acceptances.

10.11 Failure To Pay Amounts In Dispute Not To Affect Performance.

The failure of the College to pay any amount requested by the Contractor in an invoice based on a determination that the invoice is improper or some other dispute shall not entitle the Contractor to stop or slow down the performance of the Work.

10.12 Reasons For Withholding Payment.

In addition to the reasons set forth elsewhere in the Contract for Construction and these General Conditions, the Architect or the College may also withhold payments to the Contractor, or, because of subsequently discovered evidence, may nullify the whole or a part of a payments previously issued to the Contractor, to such extent as may be necessary in the Architect's or the College's opinion to protect the College from loss for which the Contractor is responsible because of

- (a) defective Work not remedied;
- (b) third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the College is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the College or a separate contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Times, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to comply with requirements for monthly progress payments pursuant to Article 10.4; or
- (h) failure to carry out the Work in accordance with the Contract Documents.

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

If the College withholds or the Architect recommends that the College should withhold payment from the Contractor under subsection (c) above, the College may, after providing the Contractor with written notice and an opportunity to cure, 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. However, by doing so, the College is not undertaking any payment obligation on the part of the

Contractor, nor does any Subcontractor have any claims against the College or any right to future joint check payments.

10.13 Set-Off For State Tax Indebtedness.

Pursuant to N.J.S.A. 54:49-19, and notwithstanding any other provision of law to the contrary, if the Contractor or any of its Subcontractors or suppliers are indebted to the State of New Jersey for any State tax, the College may withhold and/or set off any payments due to the Contractor as may be necessary to satisfy such indebtedness and/or pending resolution of the indebtedness.

10.14 Maintenance Of Cost And Accounting Records.

The Contractor shall maintain and retain weekly payroll, material, Subcontractor, supplier, overhead and other cost and accounting records for the Project, and for additional services or extras required by the College, including all costs that the Contractor is entitled to be paid under the Contract. The Contractor shall require its Subcontractors on the Project to do likewise. The Contractor shall also maintain all estimates and takeoffs used in preparing and calculating its bid price for the Contract and change orders. Pursuant to N.J.A.C. 17:44-2.2, the Contractor shall also maintain all documentation related to products, transactions or services under the Contract. The records shall be maintained and shall be made available to the College or its representatives when requested. These records shall be maintained in accordance with generally accepted accounting principles and practices for a period of 5 years after final payment is received by the Contractor, or the duration of any dispute or lawsuit arising out of the Project, whichever is later, and shall be made available to the College or its representatives and the New Jersey Office of the State Comptroller when requested.

Any failure to maintain or produce the records required by this Article shall preclude the Contractor from claiming or being paid or retaining any payments or being paid on any claims that are based on costs or that should be, and expenses or losses incurred by the Contractor or its Subcontractors including extra costs that are or that should be reflected in the records required by this Article or good business practices. This record keeping requirement applies to records related to the basic Contract Price as well as extra compensation for change orders and claims of all kinds.

No claim by the Contractor against the College for payment, whether for Contract Work, extras, changes or claims that is based to any degree on costs that should be recorded in cost records required by this Article or good business practices may be asserted against the College to the extent the cost records do not exist or are not provided to the College upon demand.

The College reserves the right to audit the records of the Contractor and its Subcontractors at any time and for up to 3 years after the Final Completion of the Project. If an audit reveals overpayment by the College, the Contractor shall refund the cost of the audit and the overpayment to the College, or the College may deduct the cost of the audit and the overpayment from future payments under the Contract, or the College may assert claims against the Contractor and/or its surety for the cost of the audit and such overpayments.

10.15 Written Evidence of Payment to Subcontractors.

The College 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 College to the Contractor for subcontracted Work. Such evidence shall include acknowledgment of progress payment and release of liens and claims forms duly executed by each Subcontractor and supplier for payments previously made to the Contractor. If the Contractor fails to furnish the College with the written evidence that it has properly paid Subcontractors and material and equipment suppliers, the College shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the College 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. The College may, in its sole discretion, issue checks made payable jointly to the Contractor and a Subcontractor; however, by doing so, the College is not undertaking any obligation on the part of the Contractor, nor does the Subcontractor have any claims against the College nor any right to future joint check payments.

ARTICLE 11 **CHANGES.**

11.1 Changes Authorized.

The College may at any time authorize and direct changes in the Work or accelerations of the Work that change the scope of the Work and that increase or decrease the Contract Price. All changes including changes in the Contract Price shall be governed by this Article. All changes must be in a written change order signed by the Vice President for Administration, the College's Representative, the Architect and the Contractor. A TCNJ Purchase Order will then be issued by the College and signed by the Contracting Officer, after which time, the Contractor can then bill for the completed change order Work. Any extensions in the Contract Times and increases in the Contract Price because of extensions resulting from changes shall be governed by Article 9 of these General Conditions regarding extensions, but the authorization for the extra compensation itself resulting from an extension must be contained in a change order that complies with this Article as well. The College may elect to have changed Work on the Project that is within the scope of the Contract Documents performed by another contractor. Changes in the Work shall not affect the surety bond protection or insurance coverage required by the Contract Documents.

11.2 Change Request Or Directive.

The College may request a change in the Work or materials to be provided under the Contract Documents by a written Contract Change Directive ("CCD") signed by the College's Representative. If the College is of the opinion that no change in the Contract Price or Contract Times is required because of the change request, it shall so state in the CCD. A CCD may include provisions regarding the scope of the changed Work or materials, and may also include conditions including time parameters. A CCD may provide that specified Work shall stop until further notice, but the Contractor shall not stop or delay any Work because of a CCD unless the CCD provides that Work should stop because of the change. A CCD may provide that the performance of changes shall not commence until a change order is issued and a subsequent

TCNJ Purchase Order is issued and signed by the Contracting Officer, or that changed Work should proceed before a change order and TCNJ Purchase Order are issued by the College to maintain the progress of the Project.

11.3 Change Orders Which Are Protested.

If the Contractor protests the terms of a change order, it shall notify the College of its protest in writing within 2 business days of the issuance of the Change Order. It shall describe the terms that it objects to and the reasons for its protest. It shall include supporting documentation if appropriate, including detailed justification for any Contractor requested additional compensation based upon unavoidable additional costs. The College may elect to direct the Contractor in writing to perform the change order requirements despite the protest. If it does so, the Contractor's right to pursue further relief based on the protest shall be preserved and the Contractor shall immediately proceed with the change Work

11.4 Changes Affecting Contract Times.

Changes and change orders shall not affect or extend any of the Contract Times unless the change order itself specifies that it changes Contract Times. If a change order issued by the College delays the completion of any activity in the Project Schedule, the time allowed for that activity shall be extended, and if a delay in that activity delays other activities, the critical path or the Completion Dates in the Contract, they too will be extended. The Contractor shall make reasonable efforts in scheduling changed Work so that it does not delay or extend activities in the Project Schedule critical path, including any Milestone Dates, the Substantial Completion Date and the Final Completion Date. The Contractor shall also make alternate proposals for change order Work that include acceleration for the changed Work where feasible to achieve this goal, and shall include the cost of such efforts in its change order requests and proposals.

Change orders must specify whether they result in any delay (or extension) to any critical path activities in the Project Schedule, including an identification of the activities and the amount of delay in each. If no delay or extension is set forth in a change order, it will be deemed an agreement by the College and the Contractor that no delay or extension results from the change order.

11.5 Contractor Initiated Change Order Requests.

If the Contractor contends that any directive or communication from the College or Architect, or any condition, event or circumstance entitles it to a change order changing the scope of the Work, terms of the Contract Documents, Contract Price or Contract Times, it shall submit a written change order request to the College's Representative within 5 days of the event upon which the request is based. The written request shall specify the terms of the change order requested, and include all documentation and information that the Contractor seeks to have considered in support of the request, or that is necessary to a proper consideration of the request.

11.6 Change Order Amounts.

All price changes or amounts in change orders shall be based on (i) lump sum, (ii) actual work time and materials plus mark-ups for overhead and profit, or (iii) unit prices times actual quantities that may or may not include separate mark-ups for overhead and profit. If a change order price is to be based on a lump sum price or a unit price, the College may request the submission of such documentation regarding market price or cost which it reasonably deems necessary to determine a lump sum or unit price. If a change order is based on actual work time and material costs, it will include a not-to-exceed price.

Applications for payment for change order Work shall be included in monthly progress payment invoices as the change order work is performed, but only after a TCNJ Purchase Order has been issued to the Contractor by the College. For change orders based on time and material costs or unit prices times actual quantities, the time spent, material provided, and quantities performed shall be recorded in daily time slips, material invoices, and quantity of work performed tickets that are signed by the College's Representative to certify that the Work and materials were provided, and the quantities. Labor costs and material costs for change orders shall be based on actual costs to the Contractor without any mark-ups except as provided in this Article.

Mark-ups may be added to time and material costs where a change order is authorized to be paid on a time and material basis, and also unit price change orders if the change order price term expressly authorizes mark-ups as a separate additional charge to be added to the unit price. When mark-ups for overhead and profit are authorized, the standard mark-up for overhead and profit shall be 15% of net costs properly invoiced in the change order. The schedule for mark ups is as follows:

- 15% of direct costs for overhead, profit, bond, and insurance for Work performed directly by the Contractor;
- 15% of direct costs for overhead, profit, bond, and insurance for Work performed directly by the Subcontractor and 5% of the direct and indirect costs of the Work performed by the Subcontractor for the Contractor; and
- 15% of direct costs for overhead, profit, bond, and insurance for Work performed directly by the Subcontractor's subcontractor and 5% of the direct and indirect costs of the Work performed by the Subcontractor's subcontractor for the Subcontractor and 5% of the direct and indirect costs of the Work performed by the Subcontractor for the Contractor.

There shall be no additional mark-ups for materials or supplies. Bond and insurance costs are included in the noted mark ups above. Refer to Division 1 Specifications also for further delineation of items included in mark-ups.

THE CONTRACTOR MUST USE THE COLLEGE'S CHANGE ORDER FORM INCLUDED IN THE PAYMENT PROCEDURE DOCUMENTS.

11.7 Right To Audit Extra Costs (Before And After Payment).

The College reserves the right to audit all change orders and additional costs claimed and/or paid under the Contract at any time. The obligation of the Contractor, Subcontractors and suppliers to establish, maintain and produce cost records and remedies for failing to do as specified elsewhere in these General Conditions and the Contract for Construction shall govern. If an audit reveals that actual costs invoiced to the College and/or paid by the College in change orders exceed the actual costs incurred, the Contractor shall refund the excess, or the College may deduct the excess from future payments under the Contract, or the College may assert claims against the Contractor and/or its surety for such overpayments.

11.8 Change Orders With Both Price Increases and Decreases.

If a change order reduces the scope of the Work or materials to be provided by the Contractor under the Contract, the change order shall provide for a reduction in the Contract Price in the amount of the actual reduction in cost. If a change order results in both added costs and reduced costs, they shall be combined for a net plus or minus Contract Price adjustment, and when mark-ups are applicable, they shall only be added to a net increase in the Contract Price which results from a combination of additions and deductions in the change order.

11.9 Waiver Of Rights In Connection With Change Orders Issued Without Protest.

The Contractor shall not be entitled to seek any additional compensation or any extension of the Contract Times beyond the amounts and any extensions included in a change order signed by the College or a written change order request submitted by the Contractor to the College for approval, the intent being that the Contractor must disclose all additional costs and delays claimed to result from a change so that the College can take measures in considering the change to effect cost savings and avoid delays. The failure to include extra costs or delays in a change order request will preclude the Contractor from later claiming such costs or delays in connection with the change in any form or fashion.

ARTICLE 12 **COMPLETION.**

12.1 Substantial Completion.

When the Contractor believes that the Project (or a specific phase of the Work, if the Work is to be performed in phases) is Substantially Complete, meaning all essential requirements of the Work have been sufficiently completed so that the Project (or a specific phase) can be occupied and used for its intended purpose (and as further defined in the College's Division 1 specifications for capital projects), it can make a written request to the Architect and the College to conduct an inspection and to issue a Certificate of Substantial Completion. The Contractor's request shall list all Work and requirements of the Contract Documents that remain to be completed or corrected and an estimate of the value of the incomplete items and the dates by which those items of the Work will be completed, but in no event shall it be more than thirty (30) days from Substantial Completion.

The Architect and the College will conduct an inspection, and if they determine the Contractor has Substantially Completed the Project (or a specific phase of the Work, if the Work is to be performed in phases), the College will issue a Certificate of Substantial Completion. If the Architect and the College determine that the Contractor has not achieved Substantial Completion, the College will notify the Contractor in writing and will list the Work and requirements of the Contract Documents that must be completed for Substantial Completion and provide a punchlist. The Architect and the College will also assign a value to the incomplete items to be added to the 2% retainage held after the Certificate of Substantial Completion is issued. The College and the Architect will re-inspect when the Contractor notifies them in writing that those items have been completed.

Any failure of the College or Architect to include incomplete or deficient items in a Certificate of Substantial Completion or a notice regarding a Substantial Completion inspection shall not affect the Contractor's obligation to properly complete all requirements of the Contract.

The College will not issue a Certificate of Substantial Completion unless it can occupy and use the Project (or the phase of the Work) for its intended purpose, and the Contractor agrees that the College's use and occupancy of the Project (or the phase of the Work) shall not affect the Contractor's obligation to complete the Project and requirements of the Contract Documents. The Contractor also agrees that its completion of the Project will not unreasonably interfere with the College's occupancy and use of the Project (or the phase of the Work) and that the College's occupancy will not impede the Contractor's completion of the Work to Final Completion.

Unless otherwise specified in the supplemental General Conditions, a Certificate of Substantial Completion will not be issued unless an unqualified temporary or permanent certificate of occupancy is issued, and the College is able to use and occupy the Project (or the phase of the Work) without interruption.

The issuance of a Certificate of Substantial Completion shall not void or alter any of the other terms of the Contract Documents, including but not limited to terms relating to warranties, or relieve the Contractor of its obligation to complete the Work or remedy defective Work or materials, unless such terms are expressly modified by the Certificate of Substantial Completion.

Guarantee periods for equipment, workmanship and materials shall commence when the Certificate of Substantial Completion is issued or from the completion and acceptance of equipment, workmanship or materials, whichever is later, unless otherwise specified in the supplemental General Conditions or the Certificate of Substantial Completion.

The rights of the Contractor regarding payments upon the issuance of the Certificate of Substantial Completion shall be as provided in the payment provisions of the Contract for Construction and these General Conditions.

12.2 Final Completion.

The Contractor shall notify the Architect and the College in writing when it has completed the entire Project (or a specific phase of the Work, if the Work is to be performed in

phases) and has satisfied all of the requirements of the Contract Documents for Final Completion. The Architect and the College will then conduct an inspection, and if they determine that the Contractor has completed the entire Project (or a specific phase of the Work, if the Work is to be performed in phases) and has satisfied all of the requirements of the Contract Documents for Final Completion, the College will then issue a Certificate of Final Completion. If any items remain incomplete or unsatisfactory, the College will notify the Contractor in writing and list the incomplete or unsatisfactory items. The Contractor shall immediately complete and correct any unfinished items and notify the Architect and the College in writing and request a follow-up inspection for Final Completion.

The Certificate of Final Completion will not be issued until all documents required by the Contract Documents have been provided, including the College's acceptance of final payment and release of liens and claims forms duly executed by the Contractor and any Subcontractors and suppliers who have furnished labor or materials under the Contract, warranties, maintenance and operating instructions, certificates, insurance, shop drawings required, and as-built drawings approved by the Architect. Final Completion must include leaving the entire Project site and the Project (or the phase of the Work) clean, neat and orderly. All distortions, cracks, delaminating and deteriorations of finished surfaces must be remedied. All broken items shall be repaired. All paint spots, stains and plaster must be removed. All unused equipment and excess material shall be removed. The Project and the Project site (or the phase of the Work) shall be clean and finished.

If the Contractor unreasonably delays completing and correcting items needed for the issuance of the Certificate of Final Completion, the College may unilaterally issue a Certificate of Final Completion that lists incomplete and defective items, and that deducts any applicable liquidated damages and the cost of remedying incomplete and defective items from the final amount due to the Contractor under the Contract.

Final payment will not be made until the Certificate of Final Completion is issued, and the final payment shall be subject to the payment provisions in the Contract for Construction and these General Conditions.

ARTICLE 13

SUSPENSION AND TERMINATION OF CONTRACT.

13.1 Suspension By The College.

The College shall have the right to stop or suspend the Work in whole or in part at any time. The Work may only be stopped or suspended by a written directive of the College's Representative, except in an emergency. The College's Representative may stop or suspend the Work in whole or in part on an emergent basis, either verbally or in writing, but any such emergent suspension or stop Work order shall be confirmed by a written directive from the College's Representative within 48 hours. The College may stop or suspend the Work because of any conditions affecting health or safety on or off site, any dangerous condition, any environmental hazard, the convenience of the College, or the public interest. If a directive to

stop or suspend all or part of the Work includes directions to secure the site, the Contractor shall perform the Work required in the directive. The Contractor shall also maintain the safety and security of the Project during the suspension for the protection of the site, Work in place, materials and equipment on site, persons on or near the site, and the College's property.

If all or part of the Work is suspended in response to a problem or condition caused by the Contractor's performance of its Contract, or parties other than the College itself, or conditions over which the College has no control, the Contractor will not be entitled to any additional compensation for the suspension. If the College directs the suspension of Work because of the improper performance of the Contract by the Contractor or those performing its Contract, the Contractor will not be entitled to any extension of any Contract Times or additional compensation by reason of the suspension. If a suspension is directed for reasons other than the fault of the Contractor or others involved in its performance of the Contract, the Contractor will be entitled to an extension under and to the extent authorized in Article 9, and additional compensation under and to the extent authorized by Article 11.

13.2 Termination For Convenience.

The College may, by a written directive, terminate the Contract at any time before completion for the College's convenience or where it concludes that it is in the public interest to do so. The Contractor shall complete any items of Work specified in the notice of termination for convenience and any Work necessary to make the site safe for all persons and property at or near the Project site when the College terminates the Contract for convenience under this Article.

Absent the Contractor fault or violation of the Contract, the Contractor shall be paid in full for all properly completed Work, subject to the payment provisions in the Contract for Construction and these General Conditions. The Contractor will not be entitled to payment for costs and mark-ups for Work or materials not provided before the termination, or costs for Work and materials not provided unless the Contractor cannot avoid liability to pay those costs, or profit or overhead on the portion of the Contract that will not be performed because of the termination, or other types of damages. The extra compensation payable to the Contractor in connection with a termination for convenience may include the cost of materials or equipment purchased for the Project before termination but not installed if the Contractor cannot otherwise use or sell them.

The Contractor will also be entitled to reasonable termination costs in reasonable amounts for additional direct costs in connection with the termination, but not administrative, home office or overhead costs, lost profit, or consequential damages. In addition, any claims shall be subject to the provisions in the Contract for Construction and these General Conditions regarding claims and the maintenance of cost records.

The Contractor shall include provisions similar to this Article in subcontracts and supply contracts for the Project. When a termination for convenience is directed by the College, the Contract shall be closed out in accordance with the provisions of the Contract for Construction and these General Conditions regarding payment and Project completion.

13.3 Termination For Cause.

The College may terminate the Contract for cause if the Contractor (i) commits violations of the Contract Documents, (ii) fails to perform the Work in accordance with the Contract Documents including the Project Schedule, (iii) fails to comply with applicable laws, rules or regulations, (iv) fails to pay Subcontractors or suppliers to the extent reasonably required, (v) becomes insolvent or becomes a debtor in a bankruptcy proceeding, (vi) fails to pay its debts, (vii) is found to have made false or misleading statements to the College in writing in obtaining the Contract or payments, (viii) fails to comply with employment discrimination laws, (ix) fails to pay prevailing wages, (x) fails to maintain or renew the required insurance, (xi) fails to maintain proper protection for the safety of persons or property on the site, (xii) fails to comply with reasonable and authorized directives of the College under the Contract, or (xiii) assigns its rights or interests under the Contract or payments under the Contract to any third party.

If the College terminates the Contract for cause, it shall first send a notice of intent to terminate to the Contractor and the Contractor's surety. The notice shall direct the Contractor to remedy or eliminate the deficiency within a specified time if the problem is one that can be eliminated. If the Contractor fails to reasonably comply with the directive and notice, the College may after 10 days issue a notice of termination to the Contractor and its surety which terminates the Contract effective immediately and specifies the reason for the termination.

If the Contract is terminated, the Contractor shall secure the site and take measures to leave the site safe for persons, material, Work in place and equipment before departing the site, and shall remove all tools and equipment within 5 days of the termination effective date. The Contractor shall not remove any materials or equipment stored on site unless directed to do so by the College. When the Contract is terminated, the Contractor shall deliver materials purchased for the Project and paid for by the College, but not stored on site, together with all appropriate warranties and guaranties to any location designated by the College.

If the Contractor's surety does not take over the completion of the Work in accordance with this Article, the College may appropriate any or all materials on the site that may be suitable and acceptable and may enter into an agreement for the completion of the Work with another contractor, or use other methods to complete the Work.

All damages, costs and charges incurred by the College together with the cost of completing the Work, will be deducted from any monies due or which may become due to the Contractor for Work properly completed by it before the termination. If such expenses exceed the sum available from the unpaid Contract Price, the Contractor and its surety shall be liable and shall pay to the College the amount of such excess in addition to other damages.

The rights and remedies of the College in connection with a termination for cause shall be in addition to other rights and remedies which it has under law, the Contract, and the Contractor's bond.

If the College terminates the Contract for cause and it is subsequently determined by a court that the Contractor was not in default, or that the termination was legally unjustified, the termination will be deemed to be a termination for convenience under this Article, and the rights

and remedies of the Contractor and its surety for the termination will be limited to those which exist in connection with a termination for convenience. If the College terminates the Contract for cause, the Contractor may not file a suit to recover on any claims arising out of the Project before the Work is Substantially Complete.

13.4 Surety Takeover Following Termination For Cause.

If the College terminates the Contractor for cause, the Contractor's performance bond surety may elect to takeover and complete the Contractor's Work and obligations under its Contract. If the surety elects to take over the completion of the Contract, it may only do so on the following conditions:

- (a) The surety must notify the College that it will take over completion of the Contract by a written notice of intent signed by a representative authorized to bind the surety within 5 calendar days of the surety's receipt of the College's notice of termination.
- (b) The surety and the College must execute a written takeover agreement within 10 days after the surety sends its notice of intent to takeover. The takeover agreement signed by the surety and the College, must:
 - i. contain an acknowledgement and agreement by the surety to assume the obligation to complete the balance of the Work under the Contract and to perform all of the Contractor's obligations under the Contract at the surety's sole cost and expense, and to utilize only contractors approved by the College to complete the Work, which approval shall not be unreasonably withheld;
 - ii. provide that the surety is entitled to be paid the unpaid balance under the terminated Contractor's Contract in accordance with and subject to the terms of the Contract for Construction and these General Conditions;
 - iii. provide that the surety is not relieved of any of its obligations under its payment and performance bond for the Project, and that the College retains its right to withhold money for Contract payments to compensate for damages or for other reasons where authorized under the Contract for Construction or these General Conditions; and
 - iv. provide that it is without prejudice to and is subject to all of the rights and remedies of the College, the surety, and the defaulted Contractor, and the surety may not require the College to agree to a takeover agreement that seeks to extinguish any such rights.
- (c) The surety must also pay without delay all obligations of the terminated Contractor for Work and materials on the Project, subject to a reasonable allowance of time to investigate and verify claims.

13.5 Suspension By The Contractor For Non-Payment.

If the Contractor is not paid sums due under an approved invoice within thirty (30) days of the billing date, it may suspend performance without penalty for breach of Contract, but only

after providing the College with 7 days written notice of non-payment, and only in the event that the College fails to furnish the Contractor, within that 7 day period, with a written statement of the amount withheld and the reasons for the withholding. Nothing herein shall be construed to excuse the Contractor's nonperformance, or to limit the College's rights and remedies relating to such nonperformance, with regard to any monies withheld from the Contractor upon the proper notice provided under this Article, or with regard to any Contractor claim disputed by the College.

ARTICLE 14

WARRANTY/DEFECTIVE WORK AND MATERIALS

14.1 General Work One Year Warranty; HVAC Systems Two Year Warranty

The Contractor warrants and guarantees for a one year period that all Work, materials and equipment (and for a two year period that all HVAC work) conform to the Contract Documents and will not fail or manifest defects, that the Project and all its components will be fit for their intended functions, and that all material and equipment will be new and of good quality.

The general one year warranty period (or two year warranty period for HVAC work) shall commence when the Certificate of Substantial Completion is issued, and the one year period (or two year period for HVAC work) shall commence on that date for all components of the Project, including any equipment activated and operated before Substantial Completion, such as HVAC systems, electrical systems and elevators.

During the one year warranty period (or two year warranty period for HVAC work), the Contractor shall repair and remedy at its own expense any premature failure, defects or deficiencies in any Work, materials or equipment that are discovered or that develop during the one year period (or two year period for HVAC work), and shall do so within 5 days after receipt of a written warranty claim from the College. The Contractor shall also repair damages caused by any failure or defect covered by this warranty. A failure to provide the warranty service required shall constitute a breach of this warranty obligation as well as other applicable provisions of the Contract. This warranty shall not cover failures caused solely by substantial misuse or abuse by the College.

This general one year warranty (or two year warranty for HVAC work) is intended to provide the College with prompt warranty service for all aspects of the Project for the one year period (or two year period for HVAC work). It is not intended to limit or extinguish any additional warranties required by any of the Contract Documents, or provided by manufacturers of systems, equipment or materials provided under the Contract. It is not intended to eliminate or reduce the College's rights and remedies under the Contract Documents and law for defects and deficiencies in the Work, materials and equipment, or the time period of the Contractor's general responsibility and liability.

14.2 Defective Work, Materials And Equipment.

Apart from the general one year warranty (or two year warranty for HVAC work) provided for in this Article, the Contractor shall be responsible for defective Work, materials and equipment and any failure of these items to comply with the Contract Documents. This obligation shall extend beyond Substantial Completion, Final Completion and the general one year warranty (or two year warranty for HVAC work) in this Article.

If defects in the Work, materials or equipment or non-conforming items are discovered during construction and before Final Completion, the Contractor shall promptly correct them at its own expense. If the Contractor fails to correct defective or non-conforming Work, material or equipment in response to a written notice from the College, either during construction or after Final Completion, the College may employ others to provide the remedial work and the Contractor and its surety shall be liable for the cost thereof and damages incurred by the College. The Contractor and its surety shall also be liable for the cost of making good all Work and material destroyed or damaged by defects or the correction of defects.

If any portion of the Contractor's Contract Price remains in the custody of the College, either earned or unearned, the College may deduct money paid to others to remedy defects after notice is sent to the Contractor and damages incurred by the College when the Contractor fails to provide a remedy in response. The Contractor's responsibility for defects and non-conforming Work, material and equipment shall not be limited in time except by applicable law.

The Contractor's responsibility for defective Work shall not be affected by either the performance or the lack of performance of inspections by the College or the Architect. The issuance of payments, a Certificate of Substantial Completion or a Certificate of Final Completion shall not constitute acceptance of Work, material or equipment that is deficient or not in compliance with the Contract, or limit the Contractor's warranty or the other Contract obligations.

ARTICLE 15

INDEMNIFICATION/LIABILITY TO THIRD PARTIES.

15.1 The Contractor's Indemnification Obligation.

To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the College, the State of New Jersey, the New Jersey Educational Facilities Authority, Trenton State College Corporation, and any other persons or entities designated by the College, and the officers, directors, principals, attorneys, agents, servants, and employees of any of them (collectively the "Indemnified Parties") from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from: (1) performance of the Work, whether such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting therefrom caused in whole or in part by the negligent or willful acts or omissions of the Contractor, 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 or (2) any one or more of the items set forth in

this Article. 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 Article.

In claims against any person or entity indemnified under this Article by an employee of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Article shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts, nor shall the same be limited by the types or limits of insurance carried or to be carried by the Contractor or any Subcontractor pursuant to the Contract Documents or otherwise.

The indemnity, defense, and hold harmless obligation set forth in this Article shall be supplemented by the following:

- (a) any claims or liens of Subcontractors, except to the extent that the non-payment upon which the claim or lien is predicated resulted solely from the College's wrongful failure to pay the Contractor sums due under the Contract;
- (b) any fines, penalties, liquidated damages, assessments or other executions imposed by any governmental authority having jurisdiction over the Project by reason of the Contractor's failure to comply with any requirement of the Contract;
- (c) any losses, damages, or expenses incurred by reason of the Contractor's failure to obtain and maintain in force or cause to be obtained and maintained, the insurance required by the terms of the Contract;
- (d) any losses, damages, or expenses incurred by reason of any failure (whether or not specifically identified herein) by the Contractor to perform its obligations under the Contract Documents or any breach of the Contract;
- (e) any claims, damages, or expenses incurred by reason of the Contractor's infringement or alleged infringement of any patent, copyright, or other intellectual property or similar rights; and
- (f) any claims, damages, liquidated damages, penalties, or fines assessed against the College, directly or indirectly, solely or partially by reason of the Contractor's failure to comply with any applicable laws, codes, statutes, or regulations.

If any judgment is rendered against the Indemnified Parties for which indemnification is required under this Article, the Contractor shall satisfy and discharge it. The Contractor shall reimburse the College for reasonable attorney fees, costs and expenses incurred by the Indemnified Parties in the defense of such suit or claim.

The College shall give written notice to the Contractor of claims and suits for which indemnification may be claimed pursuant to this Article.

The foregoing obligations shall survive the completion of the Work and final payment to the Contractor (or the sooner termination of the Contract) with respect to all matters accrued during the term of the Contract and such obligations shall not be construed to negate, abridge or reduce any other rights, obligations or indemnity which would otherwise exist as to a party or person indemnified by this Article.

15.2 The Subcontractor's Indemnification Obligation.

The Contractor shall cause the indemnification obligations set forth in this Article to be included in all contracts with its Subcontractors.

ARTICLE 16 **INSURANCE AND BONDS.**

16.1 The Contractor's Insurance.

The Contractor shall purchase from, and maintain with a company or companies lawfully authorized to do business in the State of New Jersey, insurance for protection from claims under workers' compensation and other employee benefit acts which are applicable, claims for damages because of bodily injury, including death, and claims for damages, including the Work itself, to property which may arise out of or result from the Contractor's operations and completed operations under the Contract, whether such operations be by the Contractor or by a Subcontractor or anyone directly or indirectly employed by any of them, until at least 1 year after the Final Completion and acceptance of the Project. This insurance shall be written for not less than the limits set forth below or as required by law, whichever coverage is greater, and shall include contractual liability insurance applicable to the Contractor's obligations under Article 15 (Indemnification). The Contractor expressly agrees that any insurance protection required by the Contract Documents shall in no way limit the Contractor's obligations under the Contract, and shall not be construed to relieve the Contractor from liability in excess of such coverage. Nor shall it preclude the College from taking such actions as are available to it under any other provisions of the Contract for Construction, these General Conditions or the law.

16.1.1 Types and Minimum Amounts of Insurance:

- (a) **Commercial General Liability Insurance (CGL).** Commercial General Liability insurance ISO CG 00 01 12 07 or later occurrence form of insurance including contractual liability with limits of at least **one** million dollars (\$ **1,000,000**) per occurrence, and at least **two** million dollars (\$ **2,000,000**) in the aggregate. The general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. The CGL policy shall also include products/completed operations with limits of at least **one** million (\$ **1,000,000**) in the aggregate. This insurance shall be maintained for at least 1 year after the Final Completion of the Project.
- (b) **Automobile Liability Insurance.** Comprehensive Automobile Liability insurance covering owned, non-owned, and hired vehicles. The limits of liability shall not be less than **one** million dollars (\$ **1,000,000**) combined single limit for bodily injury and property damage for each occurrence.

- (c) **Workers Compensation/ Employer's Liability.** Worker's Compensation Insurance applicable to the laws of the State of New Jersey and other State or Federal jurisdictions required to protect the employees of the Contractor and any Subcontractor, sub-subcontractor or supplier who will be engaged in the performance of the Contract. The certificate must so indicate that no proprietor, partner, executive officer or member is excluded. This insurance shall include Employers' Liability Insurance with a limit of liability not less than one million dollars (\$1,000,000) bodily injury, each occurrence, one million dollars (\$1,000,000) disease, each employee, and one million dollars (\$1,000,000) disease, aggregate limit.

All required insurance coverages must be written by insurance companies acceptable to the College. All insurance companies must have a minimum A.M. Best's financial strength rating of A- or better, or an equivalent rating from another respected rating agency, and an A.M. Best's size rating of VII or greater.

16.1.2 Additional Insureds. All insurance required herein, except Worker's Compensation, shall name The College of New Jersey, the State of New Jersey, the New Jersey Educational Facilities Authority, Trenton State College Corporation and any other persons or entities designated by the College as additional insureds.

16.1.3 Cancellation. The certificates of insurance shall provide for 30 days written notice to the College before any cancellation, expiration or non-renewal during the term the insurance is required by the Contract.

16.1.4 Evidence of Insurance. The Contractor shall when the Contract for Construction is signed and before beginning the Work required under the Contract, provide the College with valid certificates of insurance signed by an insurance provider or authorized agent or underwriter to evidence the Contractor's insurance coverage as required in this Article, and also copies of the policies themselves. The certificates of insurance shall specify that the insurance provided is of the types and in the amounts required in this Article, and that the policies cannot be canceled except after 30 days written notice to the College. The Contractor shall also be required to provide the College with valid certificates of renewal when policies expire. The Contractor shall also, when requested, provide the College with additional copies of each policy and all endorsements required under the Contract, which are certified by an agent or underwriter to be true copies of the policies and endorsements issued to the Contractor.

16.1.5 Remedies for Lack of Insurance. If the Contractor fails to renew any of its required insurance policies, or any policy is canceled, terminated or modified, the College may refuse to pay monies due under the Contract. The College, in its sole discretion and for its sole benefit, may use monies retained under this Article to attempt to renew the Contractor's insurance or obtain substitute coverage if possible for the College's sole benefit, and may invoke other applicable remedies under the Contract for Construction and these General Conditions including claims against the Contractor and its surety. During any period when the required insurance is not in effect, the College may also, in its sole discretion, either suspend the Work under the Contract or terminate the Contract.

16.2 The Subcontractor's Insurance.

The Contractor shall ensure that its Subcontractors purchase and maintain insurance on the same terms and with coverages customary for each trade as required by the Contractor under the Contract. The Contractor shall contractually obligate its Subcontractors to indemnify, defend, and hold harmless the College upon the same terms and conditions that the Contractor is required to do so as provided in Article 15 of these General Conditions (Indemnification).

16.3 Payment And Performance Bond.

The Contractor is required to furnish the College with a payment bond and a performance bond from an approved surety as described in this Article and in the bid documents. The bonds shall conform to N.J.S.A. 2A:44-147. The Contract will not become effective until these bonds are provided to and approved in writing by the College. The bonds must also be accompanied by the surety disclosure statement and certification required by N.J.S.A. 18A:64-68.

ARTICLE 17 **DISPUTE RESOLUTION.**

17.1 Mediation.

If a dispute or claim arises out of or relates to the Contract, or the breach thereof, and if the dispute cannot be settled through negotiation, the dispute or claim may, at the College's sole option, be subject to mediation administered by the American Arbitration Association under its Construction Industry Mediation Rules as a condition precedent to binding dispute resolution. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Mercer County, New Jersey, at the offices of the College's attorneys, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable in any court having jurisdiction thereof.

17.2 Method Of Binding Dispute Resolution.

For any dispute or claim, not resolved by mediation pursuant to this Article, the method of binding dispute resolution shall be litigation in the state or district courts of the State of New Jersey, unless the College, in its sole discretion, decides to submit the dispute or claim to arbitration pursuant to this Article.

17.3 Arbitration (If The College Elects To Arbitrate).

If the College decides, in its sole discretion, to submit a dispute or claim to arbitration rather than litigation as provided above, the arbitration shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Contract unless the parties mutually agree otherwise. 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 arbitrator shall be a New Jersey licensed attorney with at least twenty (20) years' experience practicing in construction law. In the event that the parties mutually agree to use a panel of three arbitrators, then the construction attorney will be the

presiding arbitrator, one of the arbitrators will be a registered architect and the other will be a contractor, all of whom shall be neutral and independent. This Article shall not preclude the College or Contractor from instituting legal action to discharge an invalid construction lien. The arbitration hearing shall be held in Mercer County, New Jersey, at the offices of the College's attorneys, unless another location is mutually agreed upon.

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, dispute or other matter in question 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, dispute or other matter in question.

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

The award rendered by the arbitrator(s) shall be a reasoned award and shall include a statement of findings of fact and conclusions of law and shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

17.4 Consolidation Or Joinder.

The College, in its sole discretion, may consolidate an arbitration conducted under the Contract with any other arbitration to which it is a party provided that (i) the arbitration agreement governing the other arbitration permits consolidation, (ii) the arbitrations to be consolidated substantially involve common questions of law or fact, and (iii) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

The College, in 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.

The College, in its sole discretion, may grant to any person or entity made a party to an arbitration conducted under this Article, whether by joinder or consolidation, the same rights of joinder and consolidation as the College under the Contract.

17.5 Work During Pendency Of Dispute.

Unless otherwise instructed by the College, the Contractor shall carry on its Work during the pendency of any dispute hereunder, and the College shall continue making payments to the Contractor of undisputed amounts.

17.6 Prompt Payment Claims.

Notwithstanding the foregoing, disputes regarding only whether a party has failed to make payments required pursuant to New Jersey's Prompt Payment Act may be submitted to alternative dispute resolution as provided in N.J.S.A. 2A:30a-2(f). In such event, the College and the Contractor shall share equally the fees and expenses of the selected mediator. Provided, however, that nothing herein shall be construed, in whole or in part, as a waiver, release or modification of the provisions of the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1, et seq., as it governs claims against the College.

17.7 The Contractor's Claims: Procedures And Limitations.

Claims by the Contractor against the College shall be subject to the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1, et seq., including the notice and time for suit provisions. For the purpose of determining the time within which the Contractor must file suit under the New Jersey Contractual Liability Act, "completion of the contract" shall be deemed to have occurred upon achievement of Substantial Completion as defined in these General Conditions.

The Contractor also agrees that it shall not be entitled to assert claims against the College for any compensation beyond that provided for in the Contract by reason of the acts or omissions of any third parties, including but not limited to the Architect and any other contractor on the Project. The Contractor may not assert claims for extra costs for home offices expenses, home office overhead, lost profits or revenue, or consequential damages as that term is defined in law. All claims shall also be subject to all other pertinent provisions of the Contract for Construction and the Contract Documents including these General Conditions. The Contractor also agrees that it may not assert any claims for extra costs or damages unless it maintains all the records of its estimated and actual costs as required by the Contract for Construction and these General Conditions.

17.8 Dispute Resolution Process In The Contractor's Subcontracts.

The Contractor shall include this dispute resolution process in all of its contracts with any Subcontractors or suppliers on this Project.

ARTICLE 18 **MISCELLANEOUS.**

18.1 Prevailing Wage.

The Contractor and its Subcontractors shall comply with the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 through 56.57. Workers employed by the Contractor or any Subcontractor or sub-subcontractor in the performance of services directly on the Project must be paid prevailing wages. As required by N.J.S.A. 34:11-56.27 and 56.28, the Contract cannot become effective until the College obtains from the New Jersey Department of Labor a determination of the prevailing wage rates applicable to the Project as of the Contract award date and attaches a copy to the Contract. As required by N.J.S.A. 34:11-56.27, the Contractor or any

Subcontractor may be terminated if any covered worker is not paid prevailing wages on the Project, and the Contractor and its surety shall be liable for any additional costs which result. The Contractor and its Subcontractors must be registered with the New Jersey Department of Labor (N.J.S.A. 34:11-56.51 et seq.), and the prevailing wage rates must be posted at the job site (N.J.S.A. 34:11-56.32). The Contractor and its Subcontractors must prepare accurate certified records of wages paid for each worker on the Project (N.J.S.A. 34:11-56.29), and copies for the period covered by each invoice must be attached to the invoice submitted under the Contract. In accordance with N.J.S.A. 34:11-56.33, the Contractor's final invoice must include a statement of all amounts still then due to workers on the Project. The Contractor is also cautioned that it must use job titles and worker classifications consistent with those approved by the Department of Labor, and that, if it intends to pay apprentice rates, it must comply with the Department of Labor's regulations at N.J.A.C. 12:60-7.1 through 7.4.

If the State's Prevailing Wage Act is amended, or the language stated herein is inconsistent with the language contained in the State's Prevailing Wage Act, the language of the State's Prevailing Wage Act shall control.

18.2 Employment Discrimination.

The Contractor and any Subcontractors employed by it shall comply with N.J.S.A. 10:2-1 through 10:2-4 and N.J.S.A. 10:5-1 et seq., including N.J.S.A. 10:5-31 through 10:5-35, which prohibit discrimination in employment in public contracts. The statute and the rules and regulations promulgated thereunder shall be considered to be part of the Contract and binding upon the Contractor and its Subcontractors. If the College is notified of any violation of the public contract awarding regulations in accordance with N.J.A.C. 17:27-7.4 concerning the financing of minority and women outreach and training programs, the College reserves the right to deduct the outreach and training allocation from the Contract. During the performance of the Contract, the Contractor agrees that:

- (a) In the hiring of persons for the performance of Work under the Contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under the Contract, neither the Contractor, its Subcontractors nor any person acting on behalf of the Contractor or any of its Subcontractors, shall, by reason of race, creed, religion, color, national origin, nationality, ancestry, age, sex (including pregnancy), familial status, marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, and mental or physical disability, perceived disability, and AIDS and HIV status, discriminate against any person who is qualified and available to perform the Work to which the employment relates;
- (b) Neither the Contractor, its Subcontractors, nor any person acting on behalf of the Contractor or any of its Subcontractors shall, in any manner, discriminate against or intimidate any employee engaged in the performance of Work under the Contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any

such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, religion, color, national origin, nationality, ancestry, age, sex (including pregnancy), familial status, marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, and mental or physical disability, perceived disability, and AIDS and HIV status;

- (c) There may be deducted from the amount payable to the Contractor by the College, under the Contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the Contract; and
- (d) The Contract may be canceled or terminated by the College, and all money due or to become due hereunder may be forfeited, for any violation of this Article of the Contract occurring after notice to the Contractor from the College of any prior violation of this Article of the Contract. The Contractor and its Subcontractors shall comply with all laws prohibiting discrimination against employees, and shall comply with the provision in the Contract regarding employment discrimination.

If the State's Law Against Discrimination is amended, or the language stated herein is inconsistent with the language contained in the State's Law Against Discrimination, the language of the State's Law Against Discrimination shall control.

18.3 Patents.

If any design, device, material or process covered by patents or copyright is used in the Work, the Contractor shall provide for such use by a suitable agreement with the patent or copyright owner. The Contractor shall bear all costs arising from the use of patented materials, equipment, or processes and all copyrighted materials used on or incorporated in the Work. The Contractor shall defend, indemnify and hold harmless the College and its representatives from any and all claims for infringement by reason of the use of any such patented or copyrighted items.

18.4 The Contractor's Compliance With Law.

The Contractor shall keep fully informed of all federal, state and local laws, ordinances, regulations and orders of agencies that have jurisdiction or authority that in any manner affect those employed on the Project or the Project. The Contractor shall at all times observe and comply with, and cause its agents and employees to observe and comply with, all such laws, ordinances, regulations, and/or orders. The Contractor shall also protect and indemnify, defend and hold harmless the College and its representatives against any claim or liability arising from the violation of any laws, ordinances, regulations, or orders, whether by the Contractor or its employees, agents, Subcontractors at any tier, suppliers or materialmen.

18.5 Environmental Protection – The Contractor’s Duty To Comply With Applicable Law.

The Contractor shall comply with all applicable federal, state and local laws and regulations and all conditions of permits pertaining to the protection of the environment. Necessary precautions shall be taken to prevent pollution of streams, lakes, ponds, rivers, wetlands, groundwater, reservoirs, and property by chemicals, fuels, oils, bitumens, or other harmful or hazardous materials as defined by law. The Contractor also shall not pollute the atmosphere from particulate or gaseous matter in violation of applicable law.

18.6 No Personal Liability Of College Officials.

In carrying out any of the provisions of the Contract, or in exercising any right or authority granted to them by or in connection with the Contract, there shall be no liability upon any trustee, officer or employee of the College, either personally or as officials of the College, it being agreed that in all such functions they act only as agents and representatives of the College.

18.7 Recovery Of Monies By The College From Other Contracts With The Contractor.

When the Contract Documents authorize the College to withhold or deduct money from any monies due to the Contractor, or require the Contractor to pay or return monies for any reason, the College may in its discretion withhold any monies due the Contractor under any other contracts between the Contractor and the College. This right shall not affect the rights of the College against the Contractor or its surety under the Contract, and the College shall not be obliged to exercise this right as to any other contract as a condition of exercising its rights against the Contractor or surety under the Contract.

18.8 Buy American Requirement.

The Contractor shall comply with N.J.S.A. 52:32-1 and N.J.S.A. 52:33-1 et seq., which prohibit the use by the Contractor or Subcontractors of materials or farm products produced and manufactured outside of the United States on any public Work. Notwithstanding any inconsistent provision of any law, and unless the head of the department, or other public officer charged with the duty by law, shall determine it to be inconsistent with the public interest, or the cost to be unreasonable, only domestic materials shall be acquired or used for any public work. This Article shall not apply with respect to domestic materials to be used for any public work, if domestic materials of the class or kind to be used are not mined, produced or manufactured, as the case may be, in the United States in commercial quantities and of a satisfactory quality. If the State’s “Buy American” laws are amended, or the language stated herein is inconsistent with the language contained in the State’s “Buy American” laws, the language of the State’s “Buy American” laws shall control.

18.9 Compliance With Grant Requirements. The Contractor acknowledges and agrees that if the College receives any grant monies in connection with the Project, the Contractor and its Subcontractors shall comply with all requirements associated with such grant or set forth in such grant agreement.

18.10 Modification Of Contract.

No modification or amendment of the Contract shall be effective unless it is in writing and signed by both the College and the Contractor.

18.11 State Sales Tax Exemption.

Materials, supplies or services for exclusive use in constructing the Project are exempt from the State Sales Tax Act. Rentals of equipment are not exempt from any tax under the State Sales Tax Act.

18.12 Successors and Assigns.

The College and the Contractor respectively bind themselves, their successors and assigns, to the other party hereto and to the successors and assigns of such other party in respect to covenants, agreements and obligations contained in the Contract Documents.

The Contractor shall not assign the Contract, nor shall the Contractor transfer or assign any Contract funds, due or to become due, or claims of any nature it has against the College without the prior written approval of the College. The College in its sole discretion and considering primarily the interests of the College may elect either to grant or to deny such approval. If the Contractor attempts to make such an assignment without the College's prior written approval, the Contractor shall nevertheless remain legally responsible for all obligations under the Contract.

The College shall be entitled to assign its rights hereunder to one or more lenders as collateral for loans which the College may obtain to finance construction of the Project and to a party who presently has or later acquires a legal interest in the premises. The Contractor agrees to execute such certificates, documents and instruments as are reasonably requested by the College, including, without limitation, certificates, documents and instruments that evidence the Contractor's consent to an assignment of the Contract or confirm the absence or existence of a default on the part of the College hereunder.

18.13 Construction Liens.

If any Subcontractor or other person working under the Contractor files a construction lien or claim or notice of intention or right to file a lien for or on account of Work, labor, services, materials, equipment or other items furnished under or in connection with the Contract for which the College has paid the Contractor, the Contractor agrees to discharge or remove such lien, claim or notice at its own expense by bond, payment or otherwise within twenty (20) calendar days from the date of the filing thereof, and upon its failure to do so, the College shall have the right to cause any such lien or claim, notice of intention or stop notice to be removed or discharged by whatever means the College chooses, at the sole cost and expense of the

Contractor (such costs and expenses to include legal fees and disbursements). The Contractor agrees to indemnify, defend and hold harmless the College and its representatives from and against any and all such liens, claims or other filings, and actions brought or judgments rendered thereon, and from and against any and all losses, damages, liabilities, costs and expenses, including legal fees and disbursements, which the College may sustain in connection therewith. Further, if any Subcontractor or other person working under the Contractor files a construction lien or claim or notice of intention or right to file a lien for or on account of Work, labor, services, materials, equipment or other items furnished under or in connection with the Contract for which the College has paid the Contractor, the College may, in the College's sole discretion, pay all wages, damages, recoveries, costs and expenses and reasonable counsel fees arising therefrom and deduct the same from any monies due or to become due to the Contractor.

18.14 Independent Contractor Status.

The relationship of the Contractor to the College is that of an independent contractor. The Contractor agrees that it shall conduct itself consistent with such status, and shall not hold itself out as or claim to be a trustee, officer, employee or agent of the College. The Contractor shall not make any claim or demand for any right or privilege applicable to officers or employees of the College, including but not limited to, workers compensation, unemployment insurance benefits, social security coverage, or retirement benefits.

18.15 Third Party Beneficiary Rights Not Intended.

It is specifically agreed between the College and the Contractor that no provisions of the Contract Documents are intended to make the public or any member thereof a third party beneficiary of the Contract, or to authorize anyone not a party to the Contract to maintain a suit for personal injuries, property damage or other claims under the Contract. It is also the intent of the College and the Contractor that no individual or firm that supplies materials, labor, services, or equipment to the Contractor for the performance of the Work shall be a third party beneficiary of the Contract.

18.16 Gifts To College Employees And Agents Prohibited.

The Contractor shall not give any gifts of any nature, nor any gratuity in any form, nor loan any money or anything of value to any College employee or relative thereof, or any agent of the College. The Contractor shall not rent or purchase any equipment or supplies of any kind from any College employee or relative thereof or any agent of the College.

18.17 Compliance With Procurement Statutes.

The Contractor warrants and represents that the Contract has not been solicited or secured, directly or indirectly, in a manner contrary to the law of New Jersey, and in particular the provisions of N.J.S.A. 18A:64-6.1, 6.2 and 6.3, and that the Contractor has not and shall not violate the law of New Jersey relating to the procurement of or the performance of the Contract by any conduct, including the paying of any gratuity of any kind, directly or indirectly, to any College trustee, employee or officer. Any violation of this Article shall be cause for the College to terminate the Contract, to retain all unpaid and/or unearned monies, and to recover all monies paid. The Contractor shall notify the College in writing of any interest which any trustee, officer,

employee or consultant of the College has in, or association with the Contractor, any other contractor, any Subcontractor, material supplier, consultant, or manufacturer, or other party which has any interest in the Project.

18.18 Conflict Of Interest.

The Contractor shall not pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any State officer or employee or special State officer or employee, as defined by N.J.S.A. 52:13D-13b. and e., in the Department of the Treasury or any other agency with which the Contractor transacts or offers or proposes to transact business, or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee, or any partnership, firm, or corporation with which they are employed or associated, or in which such officer or employee has an interest within the meaning of N.J.S.A. 52:13D-13g.

The solicitation of any fee, commission, compensation, gift, gratuity or other thing of value by any State officer or employee or special State officer or employee from any State vendor shall be reported in writing forthwith by the Contractor to the Attorney General and the Executive Commission on Ethical Standards.

The Contractor may not, directly or indirectly, undertake any private business, commercial or entrepreneurial relationship with, whether or not pursuant to employment, contract or other agreement, express or implied, or sell any interest in the Contractor to, any State officer or employee or special State officer or employee having any duties or responsibilities in connection with the purchase, acquisition or sale of any property or services by or to any State agency or any instrumentality thereof, or with any person, firm or entity with which he is employed or associated or in which he has an interest within the meaning of N.J.S.A. 52:13D-13g. Any relationships subject to this Article shall be reported in writing forthwith to the Executive Commission on Ethical Standards, which may grant a waiver of this restriction upon application of the State officer or employee or special State officer or employee upon a finding that the present or proposed relationship does not present the potential, actuality or appearance of a conflict of interest.

The Contractor shall not influence, or attempt to influence or cause to be influenced, any State officer or employee or special State officer or employee in his official capacity in any manner which might tend to impair the objectivity or independence of judgment of said officer or employee.

The Contractor shall not cause or influence, or attempt to cause or influence, any State officer or employee or special State officer or employee to use, or attempt to use, his official position to secure unwarranted privileges or advantages for the Contractor or any other person.

The provisions cited above shall not be construed to prohibit a State officer or employee or special State officer or employee from receiving gifts from or contracting with the Contractor under the same terms and conditions as are offered or made available to members of the general public subject to any guidelines the Executive Commission on Ethical Standards may promulgate.

The Contractor shall require its Subcontractors and suppliers to comply with the requirements of this Article.

18.19 Confidential Information.

The Contractor shall maintain the confidentiality of information specifically designated as confidential by the College, unless withholding such information would violate applicable law. The Contractor shall require its Subcontractors to maintain the confidentiality of information specifically designated as confidential by the College.

18.20 Publicity.

Publicity and/or public announcements pertaining to the Project must be approved in writing by the College prior to release.